



DAE Instrument Corp.

CC1000_{a06}

Smart Lighting Control System Modbus Gateway

Modbus Reference

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General Information

The CC1000 is a Modbus gateway for the Smart Lighting Control System D-Bus protocol. It can interface with a PC host using either Ethernet or RS485 and communicates using the Modbus/RTU protocol.

The baud rate is fixed at 9600 bauds. The data format is 8 bits, no parity, 1 stop bit.

All numerical data is in integer form and must be scaled by multiplying/dividing with its associated unit to get the final data value.

Reading is executed through function code 3. Writing is executed using function code 16. Most control is executed using function code 5, but some may use function code 16 as well.

Function code 3 can support reading a single register or multiple registers at a time. When reading multiple registers, a maximum of 125 registers (250 bytes) can be requested per command query. Requesting to read more than 125 registers at a time is considered an invalid command and will engender no response.

Function code 16 can write to a single register or multiple registers at a time. When writing to multiple registers, a maximum of 4 registers (8 data bytes) can be written to at a time. Requesting to write more than 4 registers at a time is considered an invalid command and will engender no response.

The CC1000 will not respond to an invalid command, this is to force the host PC doing the reading to time out. The CC1000 has a typical response latency of 100 milliseconds, but as a safety margin, a latency of 300 milliseconds should be allowed for, if this time is exceeded, the host PC should issue a time out.

An invalid command may be any one of the following:

1. The function code is not supported.
2. No register at the given register address for a given function code.
3. The data is malformed or out of range.
4. The CRC is incorrect.

The CC1000 can operate in two modes. The first mode is normal Modbus. The second mode is a variation of the Modbus wherein any valid command will be executed but will not be responded to. The no response behavior for the second mode is not an error but rather a normal behavior as required for certain types of applications.

Object Types and Commands

Object Types

| Object Type | Read | | Write | |
|------------------------|-----------------------------|------------------|------------------------------|-------------------|
| | Command | Func & Reg | Command | Func & Reg |
| Group | ----- | ----- | Set Group On/Off | F5: 1 to 63 |
| Pattern | ----- | ----- | Activate Pattern | F5: 64 to 127 |
| DO | Read DO Status | F3: 0 to 31 | Set DO On/Off | F5: 256 to 767 |
| DI | Read DI Status | F3: 32 to 95 | ----- | ----- |
| Latched DI | Read Latched DI | F3: 96 to 159 | Clear Latched DI | F16: 96 to 159 |
| Single DO Pulse | ----- | ----- | Single DO Pulse Out | F5: 768 to 1279 |
| Dual DO Pulse | ----- | ----- | Dual DO Pulse Out | F5: 1280 to 1535 |
| Group Status Map | Read Group Status Map | F3: 160 to 163 | ----- | ----- |
| Pattern Activation Map | Read Pattern Activation Map | F3: 164 to 167 | Clear Pattern Activation Map | F16: 164 to 167 |
| LT Alive Map | Read LT Alive Status Map | F3: 168 to 171 | ----- | ----- |
| AI Value | Read AI Value | F3: 256 to 511 | ----- | ----- |
| AO Value | Read AO Value | F3: 512 to 767 | Set AO Value | F16: 512 to 767 |
| Authorization Mode | Read Authorization Mode | F3: 768 to 1279 | Set Authorization Mode | F16: 768 to 1279 |
| AO Upper Limit | Read AO Upper Limit | F3: 2816 to 3071 | Set AO Upper Limit | F16: 2816 to 3071 |
| AO Lower Limit | Read AO Lower Limit | F3: 3072 to 3327 | Set AO Lower Limit | F16: 3072 to 3327 |

Commands

| Command | Description |
|---|--|
| Read DO Status | <ul style="list-style-type: none"> Reads the status of a discrete output |
| Read DI Status | <ul style="list-style-type: none"> Reads the real time status of a discrete input |
| Read Latched DI [寫入保全 DI] | <ul style="list-style-type: none"> Reads the status of the latched discrete input. The latched DI is a flag that is set when the DI channel to which it refers to goes from LOW to HIGH. The event is remembered (latched), the flag is not cleared when the DI channel goes back to LOW. It can only be cleared by explicitly issuing the Clear Latched DI command. |
| Read Group Status Map [讀取群狀態表] | <ul style="list-style-type: none"> Reads the bit map representing the on/off status of each group. |
| Read Pattern Activation Map [讀取被觸發場景表] | <ul style="list-style-type: none"> Reads the bit map representing the activation status of each pattern. The bit representing a pattern is sticky, once activated (set to 1), the bit will always remain in that state since a pattern cannot be turned off. To clear the bit, the map must be cleared manually using the Clear Pattern Activation Map command. |
| Read LT Alive Status Map [LT 是否存在表] | <ul style="list-style-type: none"> Reads the bit map representing the alive status of each LT. An LT is alive when it can be communicated to, an LT is not alive when it does not exist on the bus or when it is not responding to commands from the CC1000. |
| Read AI Value [讀取 AI 數值] | <ul style="list-style-type: none"> Reads the value of the analog input. The value is a percentage from 0 to 100, with no decimal place. |
| Read AO Value [讀取 AO 數值] | <ul style="list-style-type: none"> Reads the value of the analog output. The value is a percentage from 0 to 100, with no decimal place. |

| Command | Description |
|--|--|
| Read Authorization Mode [讀取強制模式] | <ul style="list-style-type: none"> • Reads the IR operating mode • Each DO can have its own mode. • There are four possible modes for each DO: Local On, Local Off, Forced On, Forced Off. • Note that reading has 4 possibilities, but setting only has 3 possibilities. • There is a corresponding command to set the authorization mode, see the Set Authorization Mode command for more details. • This command is available for the LT3384 with firmware version 23 or higher only. |
| Read AO Upper Limit [讀取 AO 高階設定] | <ul style="list-style-type: none"> • Reads the value of the upper limit for an AO channel. • See also the Set AO Upper Limit command to set this value. |
| Read AO Lower Limit [讀取 AO 低階設定] | <ul style="list-style-type: none"> • Reads the value of the lower limit for an AO channel. • See also the Set AO Upper Limit command to set this value. |
| Set Group On/Off [控制群控] | <ul style="list-style-type: none"> • Commands all the DO belonging to a given group to turn On or Off at the same time. |
| Activate Pattern [觸發情境] | <ul style="list-style-type: none"> • Commands all the DO belonging to a given pattern to arrange themselves into a formation consisting of On and Off elements. • Note that a pattern can only be activated, a pattern cannot be turned Off. |
| Set DO On/Off [控制單點] | <ul style="list-style-type: none"> • Commands a single DO to turn either On or Off. |
| Single DO Pulse Out [控制單 DO Pulse] | <ul style="list-style-type: none"> • Commands a single DO to output a pulse. The pulse is low->high->low. |
| Dual DO Pulse Out [控制雙 DO Pulse] | <ul style="list-style-type: none"> • Commands a pair of DO to each output a pulse simultaneously. The pulse is low->high->low. |
| Clear Latched DI [清除保全 DI] | <ul style="list-style-type: none"> • Clears the latched DI flag. • The latched DI flag is sticky, it is set when the DI goes high, the flag will remain set even when the DI goes back low. |
| Clear Pattern Activation Map [清除場景] | <ul style="list-style-type: none"> • Clears the bit map representing the activation status of each pattern. • The bit representing a pattern is sticky, once activated (set to 1), the bit will always remain in that state since a pattern cannot be turned off. This command is needed in order to clear this sticky bit. • See also the command Read Pattern Activation Map. |
| Set AO Value [寫入AO數值] | <ul style="list-style-type: none"> • Writes a value to the analog output. • The value can be any percent from 0 to 100. There is no decimal place. |
| Set Authorization Mode [寫入強制模式] | <ul style="list-style-type: none"> • Sets the IR operating mode. • Each DO can have its own mode. • There are three possible modes that can be set for each DO: Local, Forced On, Forced Off. • Note that reading has 4 possibilities, but setting only has 3 possibilities. • There is a corresponding command to read the authorization mode, see the Read Authorization Mode command for more details. • This command is available for LT3384 with firmware version 23 or higher only. |
| Set AO Upper Limit [寫入 AO 高階設定] | <ul style="list-style-type: none"> • Sets the value of the upper limit for an AO channel. • See also the Read AO Upper Limit command to read the value that is set from this command. |
| Set AO Lower Limit [寫入 AO 低階設定] | <ul style="list-style-type: none"> • Sets the value of the lower limit for an AO channel. • See also the Read AO Lower Limit command to read the value that is set from this command. |

LT Commands

| Command | TU104 | LT2504 | LT2508 | LT2544 | LT3050 | LT3504 | LT3506 | LT3000 | LT3100 | LT3384 |
|---------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|------------------|
| Read DO Status [讀取 DO 狀態] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Read DI Status [讀取 DI 狀態] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ |
| Read Latched DI [讀取保全 DI] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ |
| Read AI Value [讀取 AI 數值] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read AO Value [讀取 AO 數值] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read Authorization Mode [讀取強制模式] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ ⁽¹⁾ |
| Read AO Upper Limit [讀取 AO 高階設定] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read AO Lower Limit [讀取 AO 低階設定] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Command | TU104 | LT2504 | LT2508 | LT2544 | LT3050 | LT3504 | LT3506 | LT3000 | LT3100 | LT3384 |
| Set Group On/Off [控制群控] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Activate Pattern [觸發情境] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Set DO On/Off [控制單點] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |
| Single DO Pulse Out [控制單 DO Pulse] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Dual DO Pulse Out [控制雙 DO Pulse] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Command | TU104 | LT2504 | LT2508 | LT2544 | LT3050 | LT3504 | LT3506 | LT3000 | LT3100 | LT3384 |
| Clear Latched DI [清除保全 DI] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | ✓ |
| Set AO Value [寫入AO數值] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Set Authorization Mode [寫入強制模式] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ ⁽²⁾ |
| Set AO Upper Limit [寫入 AO 高階設定] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Set AO Lower Limit [寫入 AO 低階設定] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |

Notes:

- (1) For the LT3384, the function "Read Authorization Mode" only applies to version 23 or higher. Older versions do not support this function.
- (2) For the LT3384, the function "Set Authorization Mode" only applies to version 23 or higher. Older versions do not support this function.

| Command | LT3036 | LT3070 | LT4500 | LT4500-2 | LT4514 | LT4602 | KT454 | KT462 | iRCU | iHCU |
|---------------------------------------|--------|--------|--------|----------|--------|--------|-------|-------|------|------|
| Read DO Status [讀取 DO 狀態] | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ |
| Read DI Status [讀取 DI 狀態] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read Latched DI [讀取保全 DI] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read AI Value [讀取 AI 數值] | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ | ✓ |
| Read AO Value [讀取 AO 數值] | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ |
| Read Authorization Mode [讀取強制模式] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read AO Upper Limit [讀取 AO 高階設定] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Read AO Lower Limit [讀取 AO 低階設定] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Command | LT3036 | LT3070 | LT4500 | LT4500-2 | LT4514 | LT4602 | KT454 | KT462 | iRCU | iHCU |
| Set Group On/Off [控制群控] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Activate Pattern [觸發情境] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Set DO On/Off [控制單點] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Single DO Pulse Out [控制單 DO Pulse] | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dual DO Pulse Out [控制雙 DO Pulse] | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Command | LT3036 | LT3070 | LT4500 | LT4500-2 | LT4514 | LT4602 | KT454 | KT462 | iRCU | iHCU |
| Clear Latched DI [清除保全 DI] | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Set AO Value [寫入AO數值] | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ |
| Set Authorization Mode [寫入強制模式] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Set AO Upper Limit [寫入 AO 高階設定] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Set AO Lower Limit [寫入 AO 低階設定] | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |

Register Tables Summary

| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
|---------------|----------|---------|---|----------------|--------------|-----------------------------|
| 3 | 0 | 03:0001 | Read DO Status [讀取 DO 狀態] | 32 | 1 to 2 | All DO |
| | n | 03:n+1 | | | 2n+1 to 2n+2 | All DO |
| | 31 | 03:0032 | | | 63 to 64 | All DO |
| 3 | 32 | 03:0033 | Read DI Status [讀取 DI 狀態] | 64 | 1 | All DI |
| | n | 03:n+1 | | | n-31 | All DI |
| | 95 | 03:0096 | | | 64 | All DI |
| 3 | 96 | 03:0097 | Read Latched DI [讀取保全 DI] | 64 | 1 | All DI |
| | n | 03:n+1 | | | n-95 | All DI |
| | 159 | 03:0160 | | | 64 | All DI |
| 3 | 160 | 03:0161 | Read Group Status Map [讀取群狀態表] | 4 | All | Groups 1 to 16 |
| | 161 | 03:0162 | | | All | Groups 17 to 32 |
| | 162 | 03:0163 | | | All | Groups 33 to 48 |
| | 163 | 03:0164 | | | All | Groups 49 to 63 |
| 3 | 164 | 03:0165 | Read Pattern Activation Map [讀取被觸發場景表] | 4 | All | Patterns 1 to 16 |
| | 165 | 03:0166 | | | All | Patterns 17 to 32 |
| | 166 | 03:0167 | | | All | Patterns 33 to 48 |
| | 167 | 03:0168 | | | All | Patterns 49 to 64 |
| 3 | 168 | 03:0169 | Read LT Alive Status Map [LT 是否存在表] | 4 | 1 to 16 | --- |
| | 169 | 03:0170 | | | 17 to 32 | --- |
| | 170 | 03:0171 | | | 33 to 48 | --- |
| | 171 | 03:0172 | | | 49 to 64 | --- |
| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
| 3 | 256 | 03:0257 | Read AI Value [讀取 AI 數值] | 256 | 1 | AI 1 |
| | 257 | 03:0258 | | | | AI 2 |
| | 258 | 03:0259 | | | | AI 3 |
| | 259 | 03:0260 | | | | AI 4 |
| | n | 03:n+1 | | | n/4-63 | AI 1 |
| | n+1 | 03:n+2 | | | | AI 2 |
| | n+2 | 03:n+3 | | | | AI 3 |
| | n+3 | 03:n+4 | | | | AI 4 |
| | 508 | 03:0509 | | | 64 | AI 1 |
| | 509 | 03:0510 | | | | AI 2 |
| | 510 | 03:0511 | | | | AI 3 |
| | 511 | 03:0512 | | | | AI 4 |
| | 3 | 512 | | | 03:0513 | Read AO Value [讀取 AO 數值] |
| 513 | | 03:0514 | AO 2 | | | |
| 514 | | 03:0515 | AO 3 | | | |
| 515 | | 03:0516 | AO 4 | | | |
| n | | 03:n+1 | n/4-127 | AO 1 | | |
| n+1 | | 03:n+2 | | AO 2 | | |
| n+2 | | 03:n+3 | | AO 3 | | |
| n+3 | | 03:n+4 | | AO 4 | | |
| 764 | | 03:0765 | 64 | AO 1 | | |
| 765 | | 03:0766 | | AO 2 | | |
| 766 | 03:0767 | AO 3 | | | | |

| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
|---------------|----------|---------|-------------------------------------|----------------|------------|---------|
| | 767 | 03:0768 | | | | AO 4 |
| 3 | 768 | 03:0769 | Read Authorization Mode [讀取強制模式] | 512 | 1 | DO 1 |
| | 769 | 03:0770 | | | | DO 2 |
| | 770 | 03:0771 | | | | DO 3 |
| | 771 | 03:0772 | | | | DO 4 |
| | 772 | 03:0773 | | | | DO 5 |
| | 773 | 03:0774 | | | | DO 6 |
| | 774 | 03:0775 | | | | DO 7 |
| | 775 | 03:0776 | | | | DO 8 |
| | n | 03:n+1 | | | DO 1 | |
| | n+1 | 03:n+2 | | | DO 2 | |
| | n+2 | 03:n+3 | | | DO 3 | |
| | n+3 | 03:n+4 | | | DO 4 | |
| | n+4 | 03:n+5 | | | DO 5 | |
| | n+5 | 03:n+6 | | | DO 6 | |
| | n+6 | 03:n+7 | | | DO 7 | |
| | n+7 | 03:n+8 | | | DO 8 | |
| | 1272 | 03:1273 | | | DO 1 | |
| | 1273 | 03:1274 | | | DO 2 | |
| | 1274 | 03:1275 | | | DO 3 | |
| | 1275 | 03:1276 | | | DO 4 | |
| | 1276 | 03:1277 | | | DO 5 | |
| | 1277 | 03:1278 | | | DO 6 | |
| | 1278 | 03:1279 | | | DO 7 | |
| | 1279 | 03:1280 | | | DO 8 | |
| | | | | | 64 | |
| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
| 3 | 2816 | 03:2817 | Read AO Upper Limit [讀取 AO 高階設定] | 256 | 1 | AO 1 |
| | 2817 | 03:2818 | | | | AO 2 |
| | 2818 | 03:2819 | | | | AO 3 |
| | 2819 | 03:2820 | | | | AO 4 |
| | n | 03:n+1 | | | AO 1 | |
| | n+1 | 03:n+2 | | | AO 2 | |
| | n+2 | 03:n+3 | | | AO 3 | |
| | n+3 | 03:n+4 | | | AO 4 | |
| | 3068 | 03:3069 | | | AO 1 | |
| | 3069 | 03:3070 | | | AO 2 | |
| | 3070 | 03:3071 | | | AO 3 | |
| | 3071 | 03:3072 | | | AO 4 | |
| | | | | | 64 | |
| 3 | 3072 | 03:3073 | Read AO Lower Limit [讀取 AO 低階設定] | 256 | 1 | AO 1 |
| | 3073 | 03:3074 | | | | AO 2 |
| | 3074 | 03:3075 | | | | AO 3 |
| | 3075 | 03:3076 | | | | AO 4 |
| | n | 03:n+1 | | | AO 1 | |
| | n+1 | 03:n+2 | | | AO 2 | |
| | n+2 | 03:n+3 | | | AO 3 | |
| | n+3 | 03:n+4 | | | AO 4 | |
| | 3324 | 03:3325 | | | AO 1 | |
| | 3325 | 03:3326 | | | AO 2 | |
| | 3326 | 03:3327 | | | AO 3 | |
| | 3327 | 03:3328 | | | AO 4 | |
| | | | | | 64 | |

| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel | | | |
|---------------|---------------|----------|----------------------------|----------------|------------|---------------------------------------|----------------|------------|---------|
| 5 | 1 | --- | Set Group On/Off [控制群控] | 63 | All | Group 1 | | | |
| | n | --- | | | All | Group n | | | |
| | 63 | --- | | | All | Group 63 | | | |
| 5 | 64 | --- | Activate Pattern [觸發情境] | 64 | All | Pattern 1 | | | |
| | n | --- | | | All | Pattern n-63 | | | |
| | 127 | --- | | | All | Pattern 64 | | | |
| 5 | 256 | --- | Set DO On/Off [控制單點] | 512 | 1 | DO 1 | | | |
| | 257 | --- | | | | DO 2 | | | |
| | 258 | --- | | | | DO 3 | | | |
| | 259 | --- | | | | DO 4 | | | |
| | 260 | --- | | | | DO 5 | | | |
| | 261 | --- | | | | DO 6 | | | |
| | 262 | --- | | | | DO 7 | | | |
| | 263 | --- | | | | DO 8 | | | |
| | n | --- | | | n/8-31 | DO 1 | | | |
| | n+1 | --- | | | | DO 2 | | | |
| | n+2 | --- | | | | DO 3 | | | |
| | n+3 | --- | | | | DO 4 | | | |
| | n+4 | --- | | | | DO 5 | | | |
| | n+5 | --- | | | | DO 6 | | | |
| | n+6 | --- | | | | DO 7 | | | |
| | n+7 | --- | | | | DO 8 | | | |
| | 760 | --- | | | 64 | DO 1 | | | |
| | 761 | --- | | | | DO 2 | | | |
| | 762 | --- | | | | DO 3 | | | |
| | 763 | --- | | | | DO 4 | | | |
| | 764 | --- | | | | DO 5 | | | |
| | 765 | --- | | | | DO 6 | | | |
| | 766 | --- | | | | DO 7 | | | |
| | 767 | --- | | | | DO 8 | | | |
| | Function Code | Register | | | Modscan | Command | # of Registers | LT Address | Channel |
| | 5 | 768 | | | --- | Single DO Pulse Out [控制單 DO Pulse] | 512 | 1 | DO 1 |
| | | 769 | | | --- | | | | DO 2 |
| | | 770 | | | --- | | | | DO 3 |
| 771 | | --- | DO 4 | | | | | | |
| 772 | | --- | DO 5 | | | | | | |
| 773 | | --- | DO 6 | | | | | | |
| 774 | | --- | DO 7 | | | | | | |
| 775 | | --- | DO 8 | | | | | | |
| n | | --- | n/8-95 | DO 1 | | | | | |
| n+1 | | --- | | DO 2 | | | | | |
| n+2 | | --- | | DO 3 | | | | | |
| n+3 | | --- | | DO 4 | | | | | |
| n+4 | | --- | | DO 5 | | | | | |
| n+5 | | --- | | DO 6 | | | | | |
| n+6 | | --- | | DO 7 | | | | | |
| n+7 | | --- | | DO 8 | | | | | |
| 1272 | | --- | | DO 1 | | | | | |
| 1273 | | --- | | DO 2 | | | | | |
| 1274 | --- | DO 3 | | | | | | | |

| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
|---------------|----------|---------|---|----------------|------------|-------------------|
| | 1275 | --- | | | 64 | DO 4 |
| | 1276 | --- | | | | DO 5 |
| | 1277 | --- | | | | DO 6 |
| | 1278 | --- | | | | DO 7 |
| | 1279 | --- | | | | DO 8 |
| 5 | 1280 | --- | Dual DO Pulse Out [控制雙 DO Pulse] | 256 | 1 | DO 1 to 2 |
| | 1281 | --- | | | | DO 3 to 4 |
| | 1282 | --- | | | | DO 5 to 6 |
| | 1283 | --- | | | | DO 7 to 8 |
| | n | --- | | | DO 1 to 2 | |
| | n+1 | --- | | | DO 3 to 4 | |
| | n+2 | --- | | | DO 5 to 6 | |
| | n+3 | --- | | | DO 7 to 8 | |
| | 1532 | --- | | | DO 1 to 2 | |
| | 1533 | --- | | | DO 3 to 4 | |
| | 1534 | --- | | | DO 5 to 6 | |
| | 1535 | --- | | | DO 7 to 8 | |
| | | | | | 64 | |
| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
| 16 | 96 | --- | Clear Latched DI [清除保全 DI] | 64 | 1 | All DI |
| | n | --- | | | n-95 | All DI |
| | 159 | --- | | | 64 | All DI |
| 16 | 164 | --- | Clear Pattern Activation Map [清除場景] | 4 | All | Patterns 1 to 16 |
| | 165 | --- | | | All | Patterns 17 to 32 |
| | 166 | --- | | | All | Patterns 33 to 48 |
| | 167 | --- | | | All | Patterns 49 to 64 |
| 16 | 512 | --- | Set AO Value [寫入AO數值] | 256 | 1 | AO 1 |
| | 513 | --- | | | | AO 2 |
| | 514 | --- | | | | AO 3 |
| | 515 | --- | | | | AO 4 |
| | n | --- | | | AO 1 | |
| | n+1 | --- | | | AO 2 | |
| | n+2 | --- | | | AO 3 | |
| | n+3 | --- | | | AO 4 | |
| | 764 | --- | | | AO 1 | |
| | 765 | --- | | | AO 2 | |
| | 766 | --- | | | AO 3 | |
| | 767 | --- | | | AO 4 | |
| | | | | | 64 | |
| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
| | 768 | --- | Set Authorization Mode [寫入強制控制模式] | | 1 | DO 1 |
| | 769 | --- | | | | DO 2 |
| | 770 | --- | | | | DO 3 |
| | 771 | --- | | | | DO 4 |
| | 772 | --- | | | | DO 5 |
| | 773 | --- | | | | DO 6 |
| | 774 | --- | | | | DO 7 |
| | 775 | --- | | | | DO 8 |
| | n | --- | | | | DO 1 |
| | n+1 | --- | | | | DO 2 |
| | n+2 | --- | | | | DO 3 |

| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
|---------------|----------|---------|------------------------------------|----------------|------------|---------|
| 16 | n+3 | --- | | 512 | n/8-95 | DO 4 |
| | n+4 | --- | | | | DO 5 |
| | n+5 | --- | | | | DO 6 |
| | n+6 | --- | | | | DO 7 |
| | n+7 | --- | | | | DO 8 |
| | 1272 | --- | | | | DO 1 |
| | 1273 | --- | | | DO 2 | |
| | 1274 | --- | | | 64 | DO 3 |
| | 1275 | --- | | | | DO 4 |
| | 1276 | --- | | | | DO 5 |
| | 1277 | --- | | | | DO 6 |
| | 1278 | --- | | | | DO 7 |
| 1279 | --- | DO 8 | | | | |
| Function Code | Register | Modscan | Command | # of Registers | LT Address | Channel |
| 16 | 2816 | --- | Set AO Upper Limit [寫入 AO 高階設定] | 256 | 1 | AO 1 |
| | 2817 | --- | | | | AO 2 |
| | 2818 | --- | | | | AO 3 |
| | 2819 | --- | | | | AO 4 |
| | n | --- | | | n/4-703 | AO 1 |
| | n+1 | --- | | | | AO 2 |
| | n+2 | --- | | | | AO 3 |
| | n+3 | --- | | | | AO 4 |
| | 3068 | --- | | | 64 | AO 1 |
| | 3069 | --- | | | | AO 2 |
| | 3070 | --- | | | | AO 3 |
| | 3071 | --- | | | | AO 4 |
| 16 | 3072 | --- | Set AO Lower Limit [寫入 AO 低階設定] | 256 | 1 | AO 1 |
| | 3073 | --- | | | | AO 2 |
| | 3074 | --- | | | | AO 3 |
| | 3075 | --- | | | | AO 4 |
| | n | --- | | | n/4-767 | AO 1 |
| | n+1 | --- | | | | AO 2 |
| | n+2 | --- | | | | AO 3 |
| | n+3 | --- | | | | AO 4 |
| | 3324 | --- | | | 64 | AO 1 |
| | 3325 | --- | | | | AO 2 |
| | 3326 | --- | | | | AO 3 |
| | 3327 | --- | | | | AO 4 |

Command & Data Formats

Read DO Status

Command Format

✦ N = 1 to 32

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | Data1-H | Data1-L | ... | DataN-H | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|

Data Format

| Byte | Data-H (high byte) | | | | | | | | Data-L (low byte) | | | | | | | |
|-----------|--------------------|---|---|---|---|---|---|---|-------------------|---|---|---|---|---|---|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Bit State | 0 = Off, 1 = On | | | | | | | | | | | | | | | |
| DO | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| LT | LT n+1 (even) | | | | | | | | LT n (odd) | | | | | | | |

LT to Register Address Conversion

❖ $Reg = (LT-1) \div 2$

Read DI Status

Command Format

✦ N = 1 to 64

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | Data1-H | Data1-L | ... | DataN-H | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|

Data Format

| Byte | High Byte | | | | | | | | Low Byte | | | | | | | |
|-----------|-----------------|----|----|----|----|----|----|---|----------|---|---|---|---|---|---|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Bit State | 0 = Off, 1 = On | | | | | | | | | | | | | | | |
| DI | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

LT to Register Address Conversion

❖ $Reg = LT+31$

Read Latched DI Status

Command Format

✦ N = 1 to 64

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | Data1-H | Data1-L | ... | DataN-H | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|

Data Format

| Byte | High Byte | | | | | | | | Low Byte | | | | | | | |
|-----------|-----------------|----|----|----|----|----|----|---|----------|---|---|---|---|---|---|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Bit State | 0 = Off, 1 = On | | | | | | | | | | | | | | | |
| DI | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

LT to Register Address Conversion

❖ Reg = LT+95

Read Group Status Map

Command Format

✦ N = 1 to 4

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | Data1-H | Data1-L | ... | DataN-H | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|

Data Format

| Byte | Data-H (high byte) | | | | | | | | Data-L (low byte) | | | | | | | |
|-----------------|--------------------|----|----|----|----|----|----|----|-------------------|----|----|----|----|----|----|----|
| | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Bit # | 0 = Off, 1 = On | | | | | | | | | | | | | | | |
| Bit State | | | | | | | | | | | | | | | | |
| Groups 1 to 16 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Groups 17 to 32 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
| Groups 33 to 48 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |
| Groups 49 to 63 | --- | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |

Group to Register Address Conversion

| Groups | Register Address | Note |
|----------|------------------|---|
| 1 to 16 | 160 | Each register has the status of 16 groups |
| 17 to 32 | 161 | |
| 33 to 48 | 162 | |
| 49 to 63 | 163 | This last register has the status of 15 groups only |

Read Pattern Activation Map

Command Format

✦ N = 1 to 4

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | Data1-H | Data1-L | ... | DataN-H | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|

Data Format

| Byte | Data-H (high byte) | | | | | | | | Data-L (low byte) | | | | | | | |
|-------------------|----------------------------------|----|----|----|----|----|----|----|-------------------|----|----|----|----|----|----|----|
| | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Bit # | 0 = Not activated, 1 = Activated | | | | | | | | | | | | | | | |
| Bit State | 0 = Not activated, 1 = Activated | | | | | | | | | | | | | | | |
| Patterns 1 to 16 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Patterns 17 to 32 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
| Patterns 33 to 48 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |
| Patterns 49 to 64 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |

Patterns to Register Address Conversion

| Patterns | Register Address |
|----------|------------------|
| 1 to 16 | 164 |
| 17 to 32 | 165 |
| 33 to 48 | 166 |
| 49 to 64 | 167 |

* Note that there are 64 patterns but only 63 groups.

Read LT Alive Status Map

Command Format

◆ N = 1 to 4

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | Data1-H | Data1-L | ... | DataN-H | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---------|---------|-----|---------|---------|-------|-------|

Data Format

| Byte | Data-H (high byte) | | | | | | | | Data-L (low byte) | | | | | | | |
|-------------|---|----|----|----|----|----|----|----|-------------------|----|----|----|----|----|----|----|
| | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Bit # | 0 = Not alive or not present, 1 = Alive | | | | | | | | | | | | | | | |
| Bit State | 0 = Not alive or not present, 1 = Alive | | | | | | | | | | | | | | | |
| LT 1 to 16 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| LT 17 to 32 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
| LT 33 to 48 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |
| LT 49 to 64 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |

LT to Register Address Conversion

| LT | Register Address |
|----------|------------------|
| 1 to 16 | 168 |
| 17 to 32 | 169 |
| 33 to 48 | 170 |
| 49 to 64 | 171 |

* Note that there are 64 patterns but only 63 groups.

Read AI Value

Command Format

◆ N = 1 to 125

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|

Data Format

◆ AI Value = Data-L x 1%

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 63) \times 4 + (\text{AI} - 1)$

Read AO Value

Command Format

◆ N = 1 to 125

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|

Data Format

◆ AO Value = Data-L x 1%

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 127) \times 4 + (\text{AO} - 1)$

Read Authorization Mode

Command Format

✦ N = 1 to 125

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|

Data Format

| Data-L | Mode |
|--------|---------------------|
| 0 | No LT present |
| 1 | Local Off [本地 Off] |
| 2 | Local On [本地 On] |
| 3 | Forced Off [強制 Off] |
| 4 | Forced On [強制 On] |

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 95) \times 8 + (\text{DO} - 1)$

Read AO Upper Limit

Command Format

◆ N = 1 to 125

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|

Data Format

◆ AO Upper Limit = Data-L x 1%

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 703) \times 4 + (\text{AO} - 1)$

Read AO Lower Limit

Command Format

◆ N = 1 to 125

Query

| | | | | | | | |
|----------------|---|-------|-------|---|---|-------|-------|
| CC1000 Address | 3 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|----------------|---|-------|-------|---|---|-------|-------|

Reply

| | | | | | | | | | |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 3 | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------|---|-----|---|---------|-----|---|---------|-------|-------|

Data Format

◆ AO Lower Limit = Data-L x 1%

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 767) \times 4 + (\text{AO} - 1)$

Set Group On/Off

Data Format

| Set Group To | Value |
|--------------|-------|
| On | 255 |
| Off | 0 |

Command Format

Query and Reply

| | | | | | | | |
|----------------|---|-------|-------|--------------|---|-------|-------|
| CC1000 Address | 5 | Reg-H | Reg-L | Group On/Off | 0 | CRC-L | CRC-H |
|----------------|---|-------|-------|--------------|---|-------|-------|

Group to Register Address Conversion

❖ Reg = Group

Activate Pattern

Data Format

◆ Patterns can only be activated, the activation code is 255, there is no off for a pattern.

Command Format

Query and Reply

| | | | | | | | |
|----------------|---|-------|-------|-----|---|-------|-------|
| CC1000 Address | 5 | Reg-H | Reg-L | 255 | 0 | CRC-L | CRC-H |
|----------------|---|-------|-------|-----|---|-------|-------|

Pattern to Register Address Conversion

❖ Reg = Pattern + 63

Set DO On/Off

Data Format

| Set DO To | Value |
|-----------|-------|
| On | 255 |
| Off | 0 |

Command Format

Query and Reply

| | | | | | | | |
|----------------|---|-------|-------|-----------|---|-------|-------|
| CC1000 Address | 5 | Reg-H | Reg-L | DO On/Off | 0 | CRC-L | CRC-H |
|----------------|---|-------|-------|-----------|---|-------|-------|

LT to Register Address Conversion

❖ Reg = (LT + 31) × 8 + (DO - 1)

Single DO Pulse Out

Command Format

Query and Reply

| | | | | | | | |
|-------------------|---|-------|-------|-----|---|-------|-------|
| CC1000 Address | 5 | Reg-H | Reg-L | 255 | 0 | CRC-L | CRC-H |
|-------------------|---|-------|-------|-----|---|-------|-------|

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 95) \times 8 + (\text{DO} - 1)$

Dual DO Pulse Out

Command Format

Query and Reply

| | | | | | | | |
|-------------------|---|-------|-------|-----|---|-------|-------|
| CC1000 Address | 5 | Reg-H | Reg-L | 255 | 0 | CRC-L | CRC-H |
|-------------------|---|-------|-------|-----|---|-------|-------|

LT to Register Address Conversion

❖ $\text{Reg} = (\text{LT} + 319) \times 4 + (\text{DO} - 1) \text{ div } 2$

Clear Latched DI

Data Format

- ◆ N = 1 to 4
- ◆ The data written is a mask and each DI can be cleared independently.

| | | | | | | | | | | | | | | | | |
|------------------|----------------------------|----|----|----|----|----|----|---|-------------------|---|---|---|---|---|---|---|
| DI | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Bit State | 0 = Clear, 1 = Don't Clear | | | | | | | | | | | | | | | |
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Byte | Data-H (high byte) | | | | | | | | Data-L (low byte) | | | | | | | |

Command Format

Query

| | | | | | | | | | | | | | |
|-------------------|----|-------|-------|---|---|-----|----------------------------|---------------------------|-----|----------------------------|---------------------------|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | Nx2 | Data1-H DI 9~16 Mask | Data1-L DI 1~8 Mask | ... | DataN-H DI 9~16 Mask | DataN-L DI 1~8 Mask | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-----|----------------------------|---------------------------|-----|----------------------------|---------------------------|-------|-------|

Reply

| | | | | | | | |
|-------------------|----|-------|-------|---|---|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-------|-------|

LT to Register Address Conversion

- ❖ Reg = LT + 95

Clear Pattern Activation Map

Data Format

- ◆ There are 64 patterns, which are grouped into 4 registers of 16 patterns each.
- ◆ Each pattern is represented by a bit. Each pattern can be cleared independently.
- ◆ N = 1 to 4

| | | | | | | | | | | | | | | | | |
|--------------------------|----------------------------|----|----|----|----|----|----|----|-------------------|----|----|----|----|----|----|----|
| Patterns 1 to 16 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Patterns 17 to 32 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
| Patterns 33 to 48 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |
| Patterns 49 to 64 | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |
| Bit State | 0 = clear, 1 = don't clear | | | | | | | | | | | | | | | |
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Byte | Data-H | | | | | | | | Data-L (low byte) | | | | | | | |

Command Format

Query

| | | | | | | | | | | | | | |
|-------------------|----|-------|-------|---|---|-----|-----------------|-----------------|-----|-----------------|-----------------|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | Nx2 | Data1-H Mask | Data1-L Mask | ... | DataN-H Mask | DataN-L Mask | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-----|-----------------|-----------------|-----|-----------------|-----------------|-------|-------|

Reply

| | | | | | | | |
|-------------------|----|-------|-------|---|---|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-------|-------|

Patterns to Register Address Conversion

| Patterns | Register Address |
|----------|------------------|
| 1 to 16 | 164 |
| 17 to 32 | 165 |
| 33 to 48 | 166 |
| 49 to 64 | 167 |

Set AO Value

Data Format

- ◆ N = 1 to 4
- ◆ Allowed AO Values: 0 to 100%
- ◆ Data-L = AO Value / 1%

Command Format

Query

| | | | | | | | | | | | | | |
|-------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|

Reply

| | | | | | | | |
|-------------------|----|-------|-------|---|---|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-------|-------|

LT to Register Address Conversion

- ❖ $Reg = (LT + 127) \times 4 + (AO - 1)$

Set Authorization Mode

Data Format

- ◆ N = 1 to 4

| Mode | Data-L |
|-------------------------------|----------|
| Local Mode [本地模式] | 1 |
| | 2 |
| Forced Off [強制 Off 模式] | 3 |
| Forced On [強制 On 模式] | 4 |

Command Format

Query

| | | | | | | | | | | | | | |
|-------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|

Reply

| | | | | | | | |
|-------------------|----|-------|-------|---|---|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-------|-------|

LT to Register Address Conversion

- ❖ $Reg = (LT + 95) \times 8 + (DO - 1)$

Set AO Upper Limit

Data Format

- ◆ N = 1 to 4
- ◆ Allowed AO Upper Limit Values: 0 to 100%
- ◆ Data-L = AO Upper Limit / 1%

Command Format

Query

| | | | | | | | | | | | | | |
|----------------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|
| CC100 0 Address s | 16 | Reg-H | Reg-L | 0 | N | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|

Reply

| | | | | | | | |
|-------------------|----|-------|-------|---|---|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-------|-------|

LT to Register Address Conversion

- ❖ $\text{Reg} = (\text{LT} + 703) \times 4 + (\text{AO} - 1)$

Set AO Lower Limit

Data Format

- ◆ N = 1 to 4
- ◆ Allowed AO Lower Limit Values: 0 to 100%
- ◆ Data-L = AO Lower Limit / 1%

Command Format

Query

| | | | | | | | | | | | | | |
|----------------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|
| CC100 0 Address s | 16 | Reg-H | Reg-L | 0 | N | Nx2 | 0 | Data1-L | ... | 0 | DataN-L | CRC-L | CRC-H |
|----------------------------|----|-------|-------|---|---|-----|---|---------|-----|---|---------|-------|-------|

Reply

| | | | | | | | |
|-------------------|----|-------|-------|---|---|-------|-------|
| CC1000 Address | 16 | Reg-H | Reg-L | 0 | N | CRC-L | CRC-H |
|-------------------|----|-------|-------|---|---|-------|-------|

LT to Register Address Conversion

- ❖ $\text{Reg} = (\text{LT} + 767) \times 4 + (\text{AO} - 1)$

Examples

Read DO Status

- ◆ CC1000 Address 1
- ◆ LT address 15 and 16
 - ➔ Register Address = $(15 - 1) \div 2 = 7$
 - ➔ RH = $7 \div 256 = 0$
 - ➔ RL = $7 \bmod 256 = 7$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 0 | 7 | 0 | 1 | 53 | 203 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0xAB | 0xCD | 6 | 225 |

| Byte | High Byte (DH) | | | | | | | | Low Byte (DL) | | | | | | | |
|--------|----------------|---|---|---|-----|---|---|---|---------------|---|---|---|-----|---|---|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0xA | | | | 0xB | | | | 0xC | | | | 0xD | | | |
| Status | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| DO | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| LT | LT 16 | | | | | | | | LT 15 | | | | | | | |

Read DI Status

- ◆ CC1000 Address 1
- ◆ LT address 26
 - ➔ Register Address = 26 + 31 = 57
 - ➔ RH = 57 div 256 = 0
 - ➔ RL = 57 mod 256 = 57

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 0 | 57 | 0 | 1 | 84 | 7 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0xCD | 0xEF | 173 | 88 |

| Byte | High Byte (DH) | | | | | | | | Low Byte (DL) | | | | | | | |
|--------|----------------|----|-----|-----|-----|----|-----|----|---------------|----|----|-----|-----|----|----|----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0xC | | | | 0xD | | | | 0xE | | | | 0xF | | | |
| Data | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| Status | On | On | Off | Off | On | On | Off | On | On | On | On | Off | On | On | On | On |
| DI | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

Read Latched DI Status

- ◆ CC1000 Address 1
- ◆ LT address 34
 - ➔ Register Address = 34 + 95 = 129
 - ➔ RH = 129 div 256 = 0
 - ➔ RL = 129 mod 256 = 129

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 0 | 129 | 0 | 1 | 212 | 34 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0x78 | 0x9A | 26 | 47 |

| Byte | high byte (DH) | | | | | | | | low byte (DL) | | | | | | | |
|--------|----------------|----|----|----|-----|-----|-----|-----|---------------|-----|-----|----|-----|-----|----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0x7 | | | | 0x8 | | | | 0x9 | | | | 0xA | | | |
| Data | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| Status | Off | On | On | On | On | Off | Off | Off | On | Off | Off | On | On | Off | On | Off |
| DI | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

Read Group Status Map

- ◆ CC1000 Address 1
- ◆ Read Groups 1 to 63
 - ➔ Starting Register Address = 160
 - ➔ RH = 160 div 256 = 0
 - ➔ RL = 160 mod 256 = 160

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 0 | 160 | 0 | 4 | 68 | 43 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | | | |
|----------------|---------------|------------|-----------|------|------|------|-----|
| | | | D1 | D2 | D3 | D4 | |
| 1 | 3 | 2 | 0x12 | 0x34 | 0x56 | 0x78 | ... |

| Read Data | | | | CRC | |
|-----------|------|------|------|-----|------|
| D5 | D6 | D7 | D8 | low | high |
| 0x9A | 0xBC | 0xDE | 0xF0 | 4 | 133 |

| Byte | D1 | | | | | | | | D2 | | | | | | | | |
|--------|-----|-----|-----|----|-----|-----|----|-----|-----|-----|-----|----|-----|-----|----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| Data | 0x1 | | | | 0x2 | | | | 0x3 | | | | 0x4 | | | | |
| | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | |
| Status | Off | Off | Off | On | Off | Off | On | Off | Off | Off | Off | On | On | Off | On | Off | Off |
| Group | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |

| Byte | D3 | | | | | | | | D4 | | | | | | | | |
|--------|-----|----|-----|----|-----|----|----|-----|-----|-----|----|----|-----|----|-----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| Data | 0x5 | | | | 0x6 | | | | 0x7 | | | | 0x8 | | | | |
| | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | |
| Status | Off | On | Off | On | Off | On | On | Off | Off | Off | On | On | On | On | Off | Off | Off |
| Group | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | |

| Byte | D5 | | | | | | | | D6 | | | | | | | |
|--------|-----|-----|-----|----|-----|-----|----|-----|-----|-----|----|----|-----|----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0x9 | | | | 0xA | | | | 0xB | | | | 0xC | | | |
| | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| Status | On | Off | Off | On | On | Off | On | Off | On | Off | On | On | On | On | Off | Off |
| Group | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |

| Byte | D7 | | | | | | | | D8 | | | | | | | |
|--------|-----|----|-----|----|-----|----|----|-----|-----|----|----|----|-----|-----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0xD | | | | 0xE | | | | 0xF | | | | 0x0 | | | |
| | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Status | On | On | Off | On | On | On | On | Off | On | On | On | On | Off | Off | Off | Off |
| Group | --- | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |

Read Pattern Activation Map

- ◆ CC1000 Address 1
- ◆ Read Patterns 1 to 64
 - ➔ Starting Register Address = 164
 - ➔ RH = 164 div 256 = 0
 - ➔ RL = 164 mod 256 = 164

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 0 | 164 | 0 | 4 | 5 | 234 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | | | |
|----------------|---------------|------------|-----------|------|------|------|-----|
| | | | D1 | D2 | D3 | D4 | |
| 1 | 3 | 2 | 0x12 | 0x34 | 0x56 | 0x78 | ... |

| Read Data | | | | CRC | |
|-----------|------|------|------|-----|------|
| D5 | D6 | D7 | D8 | low | high |
| 0x9A | 0xBC | 0xDE | 0xF0 | 4 | 133 |

| Byte | D1 | | | | | | | | D2 | | | | | | | |
|---------|-----|----|----|----|-----|----|----|---|-----|---|---|---|-----|---|---|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0x1 | | | | 0x2 | | | | 0x3 | | | | 0x4 | | | |
| Status | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| Pattern | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

| Byte | D3 | | | | | | | | D4 | | | | | | | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0x5 | | | | 0x6 | | | | 0x7 | | | | 0x8 | | | |
| Status | --- | Act | --- | Act | --- | Act | Act | --- | --- | Act | Act | Act | Act | Act | --- | --- |
| Pattern | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |

| Byte | D5 | | | | | | | | D6 | | | | | | | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0x9 | | | | 0xA | | | | 0xB | | | | 0xC | | | |
| Status | Act | --- | --- | Act | Act | --- | Act | --- | Act | --- | Act | Act | Act | Act | Act | --- |
| Pattern | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 |

| Byte | D7 | | | | | | | | D8 | | | | | | | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Data | 0xD | | | | 0xE | | | | 0xF | | | | 0x0 | | | |
| Status | Act | Act | --- | Act | Act | Act | Act | --- | Act | Act | Act | Act | --- | --- | --- | --- |
| Pattern | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 |

Read LT Alive Status Map

- ◆ CC1000 Address 1
- ◆ Read Alive Status for LT 1 to 64
 - ➔ Starting Register Address = 168
 - ➔ RH = 168 div 256 = 0
 - ➔ RL = 168 mod 256 = 168

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 0 | 168 | 0 | 4 | 197 | 233 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | | | |
|----------------|---------------|------------|-----------|------|------|------|-----|
| | | | D1 | D2 | D3 | D4 | |
| 1 | 3 | 2 | 0x12 | 0x34 | 0x56 | 0x78 | ... |

| Read Data | | | | CRC | |
|-----------|------|------|------|-----|------|
| D5 | D6 | D7 | D8 | low | high |
| 0x9A | 0xBC | 0xDE | 0xF0 | 4 | 133 |

| Byte | D1 | | | | | | | | D2 | | | | | | | | |
|--------|-----|-----|-----|-------|-----|-----|-------|-----|-----|-----|-----|-------|-------|-----|-------|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| Data | 0x1 | | | | 0x2 | | | | 0x3 | | | | 0x4 | | | | |
| Status | --- | --- | --- | Alive | --- | --- | Alive | --- | --- | --- | --- | Alive | Alive | --- | Alive | --- | --- |
| LT | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

| Byte | D3 | | | | | | | | D4 | | | | | | | | |
|--------|-----|-------|-----|-------|-----|-------|-------|-----|-----|-----|-------|-------|-------|-------|-----|-----|-----|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| Data | 0x5 | | | | 0x6 | | | | 0x7 | | | | 0x8 | | | | |
| Status | --- | Alive | --- | Alive | --- | Alive | Alive | --- | --- | --- | Alive | Alive | Alive | Alive | --- | --- | --- |
| LT | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 0 |

| Byte | D5 | | | | | | | | D6 | | | | | | | | |
|--------|-------|-----|-----|-------|-------|-----|-------|-----|-------|-----|-------|-------|-------|-------|-----|-----|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| Data | 0x9 | | | | 0xA | | | | 0xB | | | | 0xC | | | | |
| Status | Alive | --- | --- | Alive | Alive | --- | Alive | --- | Alive | --- | Alive | Alive | Alive | Alive | --- | --- | |
| LT | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 0 |

| Byte | D7 | | | | | | | | D8 | | | | | | | | |
|--------|-------|-------|-----|-------|-------|-------|-------|-----|-------|-------|-------|-------|-----|-----|-----|-----|---|
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| Data | 0xD | | | | 0xE | | | | 0xF | | | | 0x0 | | | | |
| Status | Alive | Alive | --- | Alive | Alive | Alive | Alive | --- | Alive | Alive | Alive | Alive | --- | --- | --- | --- | |
| LT | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 0 |

Read AI Value

- ◆ CC1000 Address 1
- ◆ LT address 36, AI 3
 - ➔ Register Address = $(36 + 63) \times 4 + (3 - 1) = 398$
 - ➔ RH = $152 \div 256 = 1$
 - ➔ RL = $152 \bmod 256 = 142$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 1 | 142 | 0 | 1 | 229 | 221 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0 | 76 | 185 | 177 |

- ◆ DL = 76
 - ➔ AI Value = $76 \times 1\% = 76\%$

Read AO Value

- ◆ CC1000 Address 1
- ◆ LT address 55, AI 4
 - ➔ Register Address = $(55 + 127) \times 4 + (4 - 1) = 731$
 - ➔ RH = $731 \div 256 = 2$
 - ➔ RL = $731 \bmod 256 = 219$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 2 | 219 | 0 | 1 | 245 | 137 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0 | 46 | 56 | 88 |

- ◆ DL = 46
 - ➔ AO Value = $46 \times 1\% = 46\%$

Read Authorization Mode

Example 1 - Read Authorization Mode for One DO

- ◆ CC1000 Address 1
- ◆ LT address 2, read mode for DO 8
 - ➔ Register Address = $(2 + 95) \times 8 + (8 - 1) = 783$
 - ➔ RH = $783 \text{ div } 256 = 3$
 - ➔ RL = $783 \text{ mod } 256 = 15$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 3 | 15 | 0 | 1 | 180 | 77 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high | low (DL) | low | high |
| 1 | 3 | 2 | 0 | 3 | 248 | 69 |

- ◆ DL = 3
 - ➔ DO 8 Mode = Forced Off

Example 2 - Read Authorization Mode for Four DOs

* Note that a maximum of 4 authorization modes can be read at a time.

- ◆ CC1000 Address 1
- ◆ LT address 64, read modes for DO 5 to 8
 - ➔ Register Address = $(64 + 95) \times 8 + (5 - 1) = 1276$
 - ➔ RH = $1276 \text{ div } 256 = 4$
 - ➔ RL = $1276 \text{ mod } 256 = 252$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 4 | 252 | 0 | 4 | 133 | 9 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data 1 | | Read Data 2 | |
|----------------|---------------|------------|-------------|----------|-------------|----------|
| | | | high | low (D1) | high | low (D2) |
| 1 | 3 | 8 | 0 | 1 | 0 | 2 |

...

| Read Data 3 | | Read Data 4 | | CRC | |
|-------------|----------|-------------|----------|-----|------|
| high | low (D3) | high | low (D4) | low | high |
| 0 | 3 | 0 | 4 | 13 | 20 |

...

- ◆ D1 = 1
 - ➔ DO 5 Mode = Local Off
- ◆ D2 = 2
 - ➔ DO 6 Mode = Local On
- ◆ D3 = 3
 - ➔ DO 7 Mode = Forced Off
- ◆ D4 = 4
 - ➔ DO 8 Mode = Forced On

Read AO Upper Limit

- ◆ CC1000 Address 1
- ◆ LT address 51, AO 3
 - ➔ Register Address = $(51 + 703) \times 4 + (3 - 1) = 3018$
 - ➔ RH = $3018 \text{ div } 256 = 11$
 - ➔ RL = $3018 \text{ mod } 256 = 202$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 11 | 202 | 0 | 1 | 166 | 16 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0 | 80 | 184 | 120 |

- ◆ DL = 80
 - ➔ AO Upper Limit = $80 \times 1\% = 80\%$

Read AO Lower Limit

- ◆ CC1000 Address 1
- ◆ LT address 19, AO 1
 - ➔ Register Address = $(19 + 767) \times 4 + (1 - 1) = 3144$
 - ➔ RH = $3144 \text{ div } 256 = 12$
 - ➔ RL = $3144 \text{ mod } 256 = 72$

Query

| CC1000 Address | Function Code | Register Address | | Number of Points | | CRC | |
|----------------|---------------|------------------|----------|------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 3 | 12 | 72 | 0 | 1 | 7 | 76 |

Reply

| CC1000 Address | Function Code | Byte Count | Read Data | | CRC | |
|----------------|---------------|------------|-----------|----------|-----|------|
| | | | high (DH) | low (DL) | low | high |
| 1 | 3 | 2 | 0 | 25 | 121 | 142 |

- ◆ DL = 25
 - ➔ AO Lower Limit = $25 \times 1\% = 25\%$

Set Group On/Off

Example 1 - Set Group to On

- ◆ CC1000 Address 1
- ◆ Set Group 27 To On
 - ➔ Register Address = 27
 - ➔ $RH = 27 \text{ div } 256 = 0$
 - ➔ $RL = 27 \text{ mod } 256 = 27$
 - ➔ Group On
 - ➔ $DH = 255$

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DH) | low | low | high |
| 1 | 5 | 0 | 27 | 255 | 0 | 252 | 61 |

Example 2 - Set Group to Off

- ◆ CC1000 Address 1
- ◆ Set Group 63 To Off
 - ➔ Register Address = 63
 - ➔ $RH = 63 \text{ div } 256 = 0$
 - ➔ $RL = 63 \text{ mod } 256 = 63$
 - ➔ Group Off
 - ➔ $DH = 0$

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DH) | low | low | high |
| 1 | 5 | 0 | 63 | 0 | 0 | 253 | 198 |

Activate Pattern

- ◆ CC1000 Address 1
- ◆ Activate Pattern 7
 - ➔ Register Address = $7 + 63 = 70$
 - ➔ $RH = 70 \text{ div } 256 = 0$
 - ➔ $RL = 70 \text{ mod } 256 = 70$
 - ➔ Activate Pattern
 - ➔ $DH = 255$

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DH) | low | low | high |
| 1 | 5 | 0 | 70 | 255 | 0 | 109 | 239 |

Set DO On/Off

Example 1 - Set DO to On

- ◆ CC1000 Address 1
- ◆ LT address 27, DO 6 to ON
 - ➔ Register Address = $(27 + 31) \times 8 + (6 - 1) = 469$
 - ➔ RH = $469 \text{ div } 256 = 1$
 - ➔ RL = $469 \text{ mod } 256 = 213$
 - ➔ DO On = 255

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DO) | low | low | high |
| 1 | 5 | 1 | 213 | 255 | 0 | 156 | 62 |

Example 2 - Set DO to Off

- ◆ CC1000 Address 1
- ◆ LT address 56, DO 3 to ON
 - ➔ Register Address = $(56 + 31) \times 8 + (3 - 1) = 698$
 - ➔ RH = $698 \text{ div } 256 = 2$
 - ➔ RL = $698 \text{ mod } 256 = 186$
 - ➔ DO Off = 0

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DO) | low | low | high |
| 1 | 5 | 2 | 186 | 0 | 0 | 237 | 151 |

Single DO Pulse Out

- ◆ CC1000 Address 1
- ◆ Send out pulse from LT 15, DO 6
 - ➔ Register Address = $(15 + 95) \times 8 + (6 - 1) = 885$
 - ➔ $RH = 885 \text{ div } 256 = 3$
 - ➔ $RL = 885 \text{ mod } 256 = 117$
 - ➔ Pulse Out
 - ➔ $DH = 255$

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DH) | low | low | high |
| 1 | 5 | 3 | 117 | 255 | 0 | 157 | 164 |

Dual DO Pulse Out

- ◆ CC1000 Address 1
- ◆ Send out a pulse from both DO 7 and 8 simultaneously on LT 64
 - ➔ Register Address = $(64 + 319) \times 4 + (7 - 1) \text{ div } 2 = 1535$
 - ➔ $RH = 1535 \text{ div } 256 = 5$
 - ➔ $RL = 1535 \text{ mod } 256 = 255$
 - ➔ Pulse Out
 - ➔ $DH = 255$

Query and Reply

| CC1000 Address | Function Code | Starting Register | | Force Data | | CRC | |
|----------------|---------------|-------------------|----------|------------|-----|-----|------|
| | | high (RH) | low (RL) | high (DH) | low | low | high |
| 1 | 5 | 5 | 255 | 255 | 0 | 188 | 198 |

Clear Latched DI

Example 1 - Clear Some Latched DIs For One LT

- ◆ CC1000 Address 1
- ◆ LT address 57
 - ➔ Register Address = $57 + 95 = 152$
 - ➔ $RH = 152 \text{ div } 256 = 0$
 - ➔ $RL = 152 \text{ mod } 256 = 152$
- ◆ Data mask for the Latched DIs to be cleared:

| DI | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|-------|----------------|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|-----|-----|-----|-----|-----|
| State | --- | Clr | --- | Clr | --- | Clr | --- | --- | --- | --- | Clr | Clr | --- | --- | Clr | --- |
| Data | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| | 0xA | | | | 0xB | | | | 0xC | | | | 0xD | | | |
| Bit # | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| Byte | high byte (DH) | | | | | | | | low byte (DL) | | | | | | | |

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----------|-----|------|
| | | high (RH) | low (RL) | high | low | | high (DH) | low (DL) | low | high |
| 1 | 16 | 0 | 152 | 0 | 1 | 2 | 0xAB | 0xCD | 4 | 237 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 0 | 152 | 0 | 1 | 128 | 38 |

Example 2 - Clear All Latched DIs For 4 LTs

- * Note that 4 is the maximum number of Latched DIs that can be cleared at a time.
- ◆ CC1000 Address 1
- ◆ LT 21 to 24
 - ➔ Starting Register Address = $21 + 95 = 116$
 - ➔ $RH = 116 \text{ div } 256 = 0$
 - ➔ $RL = 116 \text{ mod } 256 = 116$
 - ➔ Number of Registers = 4
 - ➔ Byte Count = 8
- ◆ Clearing a latched DI sets its bit to zero, so clearing all DIs would set the entire data mask to zero.
 - ➔ $D1, D2, D3, D4, D5, D6, D7, D8 = 0$

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----|-----|
| | | high (RH) | low (RL) | high | low | | D1 | D2 | |
| 1 | 16 | 0 | 116 | 0 | 4 | 8 | 0 | 0 | ... |

| Write Data | | | | | | CRC | |
|------------|----|----|----|----|----|-----|------|
| D3 | D4 | D5 | D6 | D7 | D8 | low | high |
| 0 | 0 | 0 | 0 | 0 | 0 | 6 | 202 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 0 | 116 | 0 | 4 | 20 | 18 |

Clear Pattern Activation Map

- ◆ CC1000 Address 1
- ◆ Patterns 1 to 64
 - ➔ Register Address = 164
 - ➔ RH = 164 div 256 = 0
 - ➔ RL = 164 mod 256 = 164
- ◆ Clear Activation Status for all Patterns
 - ➔ D1, D2, D3, D4, D5, D6, D7, D8 = 0

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----|
| | | high (RH) | low (RL) | high | low | | D1 | D2 |
| 1 | 16 | 0 | 164 | 0 | 4 | 8 | 0 | 0 |

| Write Data | | | | | | CRC | |
|------------|----|----|----|----|----|-----|------|
| D3 | D4 | D5 | D6 | D7 | D8 | low | high |
| 0 | 0 | 0 | 0 | 0 | 0 | 196 | 116 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 0 | 164 | 0 | 4 | 128 | 41 |

Set AO Value

- ◆ CC1000 Address 1
 - ◆ LT address 19, AO 1
 - ➔ Register Address = $(19 + 127) \times 4 + (1 - 1) = 584$
 - ➔ $RH = 584 \text{ div } 256 = 2$
 - ➔ $RL = 584 \text{ mod } 256 = 72$
 - ◆ AO Value = 50%
 - ➔ $DL = 50\% / 1\% = 50$
- * Note that the allowed values for AO is from 0 to 100%.

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----------|-----|------|
| | | high (RH) | low (RL) | high | low | | high (DH) | low (DL) | low | high |
| 1 | 16 | 2 | 72 | 0 | 1 | 2 | 0 | 50 | 11 | 205 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 2 | 72 | 0 | 1 | 128 | 103 |

Set Authorization Mode

- ◆ CC1000 Address 1
- ◆ LT address 1, DO 1
 - ➔ Register Address = $(1 + 95) \times 8 + (1 - 1) = 768$
 - ➔ $RH = 768 \text{ div } 256 = 3$
 - ➔ $RL = 768 \text{ mod } 256 = 0$
- ◆ Set Authorization Mode to Forced On
 - ➔ $DL = 4$

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----------|-----|------|
| | | high (RH) | low (RL) | high | low | | high (DH) | low (DL) | low | high |
| 1 | 16 | 3 | 0 | 0 | 1 | 2 | 0 | 4 | 148 | 147 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 3 | 0 | 0 | 1 | 1 | 141 |

Set AO Upper Limit

- ◆ CC1000 Address 1
- ◆ LT address 1, AO 1
 - ➔ Register Address = $(1 + 703) \times 4 + (1 - 1) = 2816$
 - ➔ RH = $2816 \div 256 = 11$
 - ➔ RL = $2816 \bmod 256 = 0$
- ◆ Set AO Upper Limit to 85%
 - ➔ DL = $85\% / 1\% = 85$

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----------|-----|------|
| | | high (RH) | low (RL) | high | low | | high (DH) | low (DL) | low | high |
| 1 | 16 | 11 | 0 | 0 | 1 | 2 | 0 | 85 | 220 | 175 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 11 | 0 | 0 | 1 | 3 | 237 |

Set AO Lower Limit

- ◆ CC1000 Address 1
- ◆ LT address 64, AO 4
 - ➔ Register Address = $(64 + 767) \times 4 + (4 - 1) = 3327$
 - ➔ RH = $3327 \div 256 = 12$
 - ➔ RL = $3327 \bmod 256 = 255$
- ◆ Set AO Upper Limit to 10%
 - ➔ DL = $10\% / 1\% = 10$

Query

| CC1000 Address | Function Code | Register Address | | Number of Registers | | Byte Count | Write Data | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|------------|------------|----------|-----|------|
| | | high (RH) | low (RL) | high | low | | high (DH) | low (DL) | low | high |
| 1 | 16 | 12 | 255 | 0 | 1 | 2 | 0 | 10 | 254 | 88 |

Reply

| CC1000 Address | Function Code | Register Address | | Number of Registers | | CRC | |
|----------------|---------------|------------------|----------|---------------------|-----|-----|------|
| | | high (RH) | low (RL) | high | low | low | high |
| 1 | 16 | 12 | 255 | 0 | 1 | 50 | 169 |

CRC Computation

The CC1000 conforms to the Modbus/RTU protocol and thus uses CRC16 for its error checking. The computed CRC is appended to the end of the message with the LSB first and then the MSB. Below is the pseudo code for computing the CRC as used by the standard Modbus/RTU. The pseudo code is written in the Ruby language and can be directly used as such.

Definition

```
def get_crc (*byte_array)
  sum = 0xFFFF
  byte_array.each do |byte|
    sum ^= byte
    8.times do
      carry = (1 == sum & 1)
      sum = 0x7FFF & (sum >> 1)
      sum ^= 0xA001 if carry
    end
  end
  return [sum & 0xFF, sum >> 8]
end
```

Usage

```
>> crc = get_crc(1,3,0,141,0,5)
=> [21, 226]          <---- [CRC low byte, CRC high byte]
```

Terms and Abbreviations

div

Operator that gives the quotient after an integer division. Example: $773 \text{ div } 256 = 3$

mod

Operator that gives the remainder after an integer division. Example: $773 \text{ mod } 256 = 5$

Reg-H

Short for Register Address High byte.

Reg-L

Short for Register Address Low byte.

CRC

Short for Cyclic Redundancy Code.

CRC-H

Short for CRC High byte.

CRC-L

Short for CRC Low byte.

-H

Suffix to indicate the high byte of a word-sized data.

-L

Suffix to indicate the lower byte of a word-sized data.

DO

Short for Discrete Output (also known as Digital Output).

DI

Short for Discrete Input (also known as Digital Input).

AO

Short for Analog Output.

AI

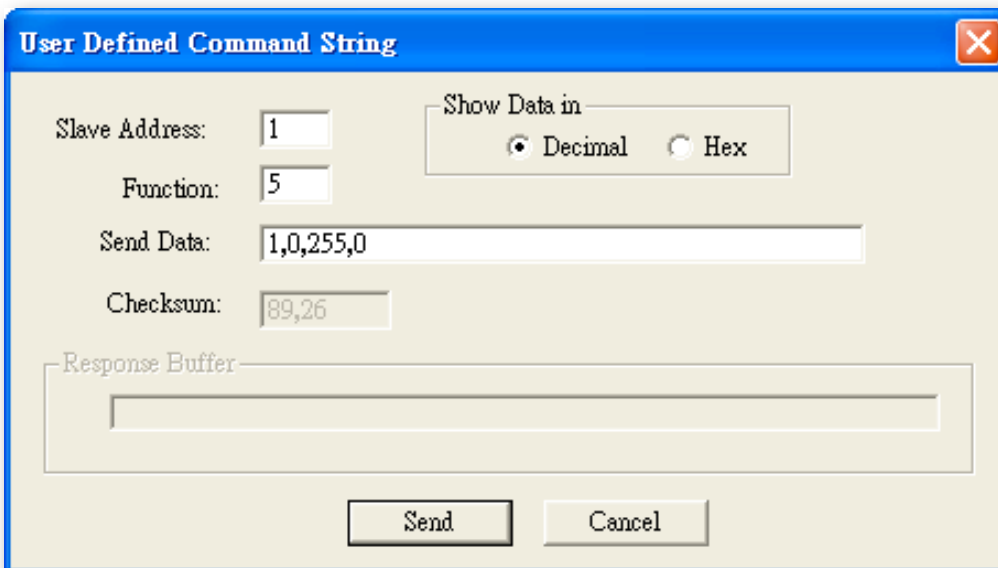
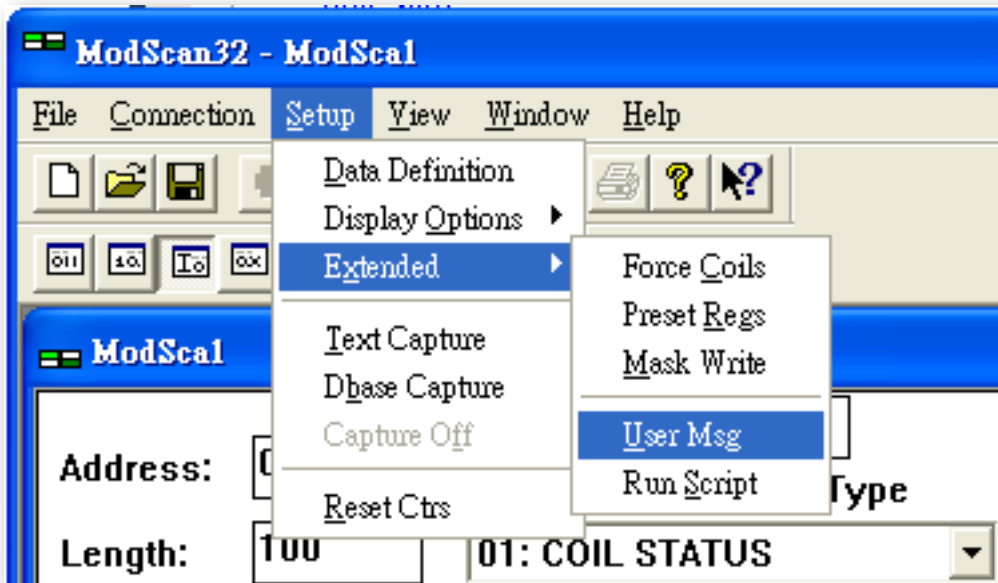
Short for Analog Input.

Notes on Using Modscan

This is not a manual of Modscan, but only a short note describing its manual commands capability.

Most users are familiar with Modscan's ability to read and continuously poll a designated device using Modbus commands 1 to 4. But in addition, Modscan also has the ability to issue other commands as well.

For the CC1000, function code 5 and 16 needs to be issued as well. To issue them, first make sure that the connection has already been established and running then go to the menu and run the dialog box "User Defined Command String" from [Setup->Extended->User Msg] as shown in the screen captures below:



Additional Resources

Although every effort has been taken to ensure that this document is free from errors, some may still remain. If found please send an email to: info@daeinstrument.com, in the subject line write "Errata" and please indicate the name of this document "CC1000 Modbus Reference", revision number, page number and indicate the error with its correction.

We have made sure that this document is as clear and useful to you as possible, but any suggestions on improving this document to serve you even better would be welcome. Send comments and suggestions to: info@daeinstrument.com, in the subject line, write "Comments" and please indicate the name of this document "CC1000 Modbus Reference". Questions are also welcome.

This document only covers the Modbus protocol registers as used by the CC1000 gateway, for hardware interfacing and other information please refer to the other documentation for the CC1000.

Precomputed Tables

These precomputed tables are for control commands function code 5 only. The CC1000 device address is assumed to be set to 1. The CRC is the last two bytes of the command query and is included in the command query.

Set Group Off/On

| Group | Group Off Command Query | Group On Command Query | Group | Group Off Command Query | Group On Command Query |
|-------|-------------------------|------------------------|-------|-------------------------|------------------------|
| 1 | 1,5,0,1,0,0,156,10 | 1,5,0,1,255,0,221,250 | 2 | 1,5,0,2,0,0,108,10 | 1,5,0,2,255,0,45,250 |
| 3 | 1,5,0,3,0,0,61,202 | 1,5,0,3,255,0,124,58 | 4 | 1,5,0,4,0,0,140,11 | 1,5,0,4,255,0,205,251 |
| 5 | 1,5,0,5,0,0,221,203 | 1,5,0,5,255,0,156,59 | 6 | 1,5,0,6,0,0,45,203 | 1,5,0,6,255,0,108,59 |
| 7 | 1,5,0,7,0,0,124,11 | 1,5,0,7,255,0,61,251 | 8 | 1,5,0,8,0,0,76,8 | 1,5,0,8,255,0,13,248 |
| 9 | 1,5,0,9,0,0,29,200 | 1,5,0,9,255,0,92,56 | 10 | 1,5,0,10,0,0,237,200 | 1,5,0,10,255,0,172,56 |
| 11 | 1,5,0,11,0,0,188,8 | 1,5,0,11,255,0,253,248 | 12 | 1,5,0,12,0,0,13,201 | 1,5,0,12,255,0,76,57 |
| 13 | 1,5,0,13,0,0,92,9 | 1,5,0,13,255,0,29,249 | 14 | 1,5,0,14,0,0,172,9 | 1,5,0,14,255,0,237,249 |
| 15 | 1,5,0,15,0,0,253,201 | 1,5,0,15,255,0,188,57 | 16 | 1,5,0,16,0,0,204,15 | 1,5,0,16,255,0,141,255 |
| 17 | 1,5,0,17,0,0,157,207 | 1,5,0,17,255,0,220,63 | 18 | 1,5,0,18,0,0,109,207 | 1,5,0,18,255,0,44,63 |
| 19 | 1,5,0,19,0,0,60,15 | 1,5,0,19,255,0,125,255 | 20 | 1,5,0,20,0,0,141,206 | 1,5,0,20,255,0,204,62 |
| 21 | 1,5,0,21,0,0,220,14 | 1,5,0,21,255,0,157,254 | 22 | 1,5,0,22,0,0,44,14 | 1,5,0,22,255,0,109,254 |
| 23 | 1,5,0,23,0,0,125,206 | 1,5,0,23,255,0,60,62 | 24 | 1,5,0,24,0,0,77,205 | 1,5,0,24,255,0,12,61 |
| 25 | 1,5,0,25,0,0,28,13 | 1,5,0,25,255,0,93,253 | 26 | 1,5,0,26,0,0,236,13 | 1,5,0,26,255,0,173,253 |
| 27 | 1,5,0,27,0,0,189,205 | 1,5,0,27,255,0,252,61 | 28 | 1,5,0,28,0,0,12,12 | 1,5,0,28,255,0,77,252 |
| 29 | 1,5,0,29,0,0,93,204 | 1,5,0,29,255,0,28,60 | 30 | 1,5,0,30,0,0,173,204 | 1,5,0,30,255,0,236,60 |
| 31 | 1,5,0,31,0,0,252,12 | 1,5,0,31,255,0,189,252 | 32 | 1,5,0,32,0,0,204,0 | 1,5,0,32,255,0,141,240 |
| 33 | 1,5,0,33,0,0,157,192 | 1,5,0,33,255,0,220,48 | 34 | 1,5,0,34,0,0,109,192 | 1,5,0,34,255,0,44,48 |
| 35 | 1,5,0,35,0,0,60,0 | 1,5,0,35,255,0,125,240 | 36 | 1,5,0,36,0,0,141,193 | 1,5,0,36,255,0,204,49 |
| 37 | 1,5,0,37,0,0,220,1 | 1,5,0,37,255,0,157,241 | 38 | 1,5,0,38,0,0,44,1 | 1,5,0,38,255,0,109,241 |
| 39 | 1,5,0,39,0,0,125,193 | 1,5,0,39,255,0,60,49 | 40 | 1,5,0,40,0,0,77,194 | 1,5,0,40,255,0,12,50 |
| 41 | 1,5,0,41,0,0,28,2 | 1,5,0,41,255,0,93,242 | 42 | 1,5,0,42,0,0,236,2 | 1,5,0,42,255,0,173,242 |
| 43 | 1,5,0,43,0,0,189,194 | 1,5,0,43,255,0,252,50 | 44 | 1,5,0,44,0,0,12,3 | 1,5,0,44,255,0,77,243 |
| 45 | 1,5,0,45,0,0,93,195 | 1,5,0,45,255,0,28,51 | 46 | 1,5,0,46,0,0,173,195 | 1,5,0,46,255,0,236,51 |
| 47 | 1,5,0,47,0,0,252,3 | 1,5,0,47,255,0,189,243 | 48 | 1,5,0,48,0,0,205,197 | 1,5,0,48,255,0,140,53 |
| 49 | 1,5,0,49,0,0,156,5 | 1,5,0,49,255,0,221,245 | 50 | 1,5,0,50,0,0,108,5 | 1,5,0,50,255,0,45,245 |
| 51 | 1,5,0,51,0,0,61,197 | 1,5,0,51,255,0,124,53 | 52 | 1,5,0,52,0,0,140,4 | 1,5,0,52,255,0,205,244 |
| 53 | 1,5,0,53,0,0,221,196 | 1,5,0,53,255,0,156,52 | 54 | 1,5,0,54,0,0,45,196 | 1,5,0,54,255,0,108,52 |
| 55 | 1,5,0,55,0,0,124,4 | 1,5,0,55,255,0,61,244 | 56 | 1,5,0,56,0,0,76,7 | 1,5,0,56,255,0,13,247 |
| 57 | 1,5,0,57,0,0,29,199 | 1,5,0,57,255,0,92,55 | 58 | 1,5,0,58,0,0,237,199 | 1,5,0,58,255,0,172,55 |
| 59 | 1,5,0,59,0,0,188,7 | 1,5,0,59,255,0,253,247 | 60 | 1,5,0,60,0,0,13,198 | 1,5,0,60,255,0,76,54 |
| 61 | 1,5,0,61,0,0,92,6 | 1,5,0,61,255,0,29,246 | 62 | 1,5,0,62,0,0,172,6 | 1,5,0,62,255,0,237,246 |
| 63 | 1,5,0,63,0,0,253,198 | 1,5,0,63,255,0,188,54 | --- | --- | --- |

Activate Pattern

| Pat | Activate Pattern Command Query | Pat | Activate Pattern Command Query | Pat | Activate Pattern Command Query | Pat | Activate Pattern Command Query |
|-----|--------------------------------|-----|--------------------------------|-----|--------------------------------|-----|--------------------------------|
| 1 | 1,5,0,64,255,0,141,238 | 2 | 1,5,0,65,255,0,220,46 | 3 | 1,5,0,66,255,0,44,46 | 4 | 1,5,0,67,255,0,125,238 |
| 5 | 1,5,0,68,255,0,204,47 | 6 | 1,5,0,69,255,0,157,239 | 7 | 1,5,0,70,255,0,109,239 | 8 | 1,5,0,71,255,0,60,47 |
| 9 | 1,5,0,72,255,0,12,44 | 10 | 1,5,0,73,255,0,93,236 | 11 | 1,5,0,74,255,0,173,236 | 12 | 1,5,0,75,255,0,252,44 |
| 13 | 1,5,0,76,255,0,77,237 | 14 | 1,5,0,77,255,0,28,45 | 15 | 1,5,0,78,255,0,236,45 | 16 | 1,5,0,79,255,0,189,237 |
| 17 | 1,5,0,80,255,0,140,43 | 18 | 1,5,0,81,255,0,221,235 | 19 | 1,5,0,82,255,0,45,235 | 20 | 1,5,0,83,255,0,124,43 |
| 21 | 1,5,0,84,255,0,205,234 | 22 | 1,5,0,85,255,0,156,42 | 23 | 1,5,0,86,255,0,108,42 | 24 | 1,5,0,87,255,0,61,234 |
| 25 | 1,5,0,88,255,0,13,233 | 26 | 1,5,0,89,255,0,92,41 | 27 | 1,5,0,90,255,0,172,41 | 28 | 1,5,0,91,255,0,253,233 |
| 29 | 1,5,0,92,255,0,76,40 | 30 | 1,5,0,93,255,0,29,232 | 31 | 1,5,0,94,255,0,237,232 | 32 | 1,5,0,95,255,0,188,40 |
| 33 | 1,5,0,96,255,0,140,36 | 34 | 1,5,0,97,255,0,221,228 | 35 | 1,5,0,98,255,0,45,228 | 36 | 1,5,0,99,255,0,124,36 |
| 37 | 1,5,0,100,255,0,205,229 | 38 | 1,5,0,101,255,0,156,37 | 39 | 1,5,0,102,255,0,108,37 | 40 | 1,5,0,103,255,0,61,229 |
| 41 | 1,5,0,104,255,0,13,230 | 42 | 1,5,0,105,255,0,92,38 | 43 | 1,5,0,106,255,0,172,38 | 44 | 1,5,0,107,255,0,253,230 |
| 45 | 1,5,0,108,255,0,76,39 | 46 | 1,5,0,109,255,0,29,231 | 47 | 1,5,0,110,255,0,237,231 | 48 | 1,5,0,111,255,0,188,39 |
| 49 | 1,5,0,112,255,0,141,225 | 50 | 1,5,0,113,255,0,220,33 | 51 | 1,5,0,114,255,0,44,33 | 52 | 1,5,0,115,255,0,125,225 |
| 53 | 1,5,0,116,255,0,204,32 | 54 | 1,5,0,117,255,0,157,224 | 55 | 1,5,0,118,255,0,109,224 | 56 | 1,5,0,119,255,0,60,32 |
| 57 | 1,5,0,120,255,0,12,35 | 58 | 1,5,0,121,255,0,93,227 | 59 | 1,5,0,122,255,0,173,227 | 60 | 1,5,0,123,255,0,252,35 |
| 61 | 1,5,0,124,255,0,77,226 | 62 | 1,5,0,125,255,0,28,34 | 63 | 1,5,0,126,255,0,236,34 | 64 | 1,5,0,127,255,0,189,226 |

Set DO Off/On

| LT | DO | Set DO Off Command Query | Set DO On Command Query | LT | DO | Set DO Off Command Query | Set DO On Command Query |
|----|----|--------------------------|-------------------------|----|----|--------------------------|-------------------------|
| 1 | 1 | 1,5,1,0,0,0,204,54 | 1,5,1,0,255,0,141,198 | 2 | 1 | 1,5,1,8,0,0,77,244 | 1,5,1,8,255,0,12,4 |
| | 2 | 1,5,1,1,0,0,157,246 | 1,5,1,1,255,0,220,6 | | 2 | 1,5,1,9,0,0,28,52 | 1,5,1,9,255,0,93,196 |
| | 3 | 1,5,1,2,0,0,109,246 | 1,5,1,2,255,0,44,6 | | 3 | 1,5,1,10,0,0,236,52 | 1,5,1,10,255,0,173,196 |
| | 4 | 1,5,1,3,0,0,60,54 | 1,5,1,3,255,0,125,198 | | 4 | 1,5,1,11,0,0,189,244 | 1,5,1,11,255,0,252,4 |
| | 5 | 1,5,1,4,0,0,141,247 | 1,5,1,4,255,0,204,7 | | 5 | 1,5,1,12,0,0,12,53 | 1,5,1,12,255,0,77,197 |
| | 6 | 1,5,1,5,0,0,220,55 | 1,5,1,5,255,0,157,199 | | 6 | 1,5,1,13,0,0,93,245 | 1,5,1,13,255,0,28,5 |
| | 7 | 1,5,1,6,0,0,44,55 | 1,5,1,6,255,0,109,199 | | 7 | 1,5,1,14,0,0,173,245 | 1,5,1,14,255,0,236,5 |
| | 8 | 1,5,1,7,0,0,125,247 | 1,5,1,7,255,0,60,7 | | 8 | 1,5,1,15,0,0,252,53 | 1,5,1,15,255,0,189,197 |
| 3 | 1 | 1,5,1,16,0,0,205,243 | 1,5,1,16,255,0,140,3 | 4 | 1 | 1,5,1,24,0,0,76,49 | 1,5,1,24,255,0,13,193 |
| | 2 | 1,5,1,17,0,0,156,51 | 1,5,1,17,255,0,221,195 | | 2 | 1,5,1,25,0,0,29,241 | 1,5,1,25,255,0,92,1 |
| | 3 | 1,5,1,18,0,0,108,51 | 1,5,1,18,255,0,45,195 | | 3 | 1,5,1,26,0,0,237,241 | 1,5,1,26,255,0,172,1 |
| | 4 | 1,5,1,19,0,0,61,243 | 1,5,1,19,255,0,124,3 | | 4 | 1,5,1,27,0,0,188,49 | 1,5,1,27,255,0,253,193 |
| | 5 | 1,5,1,20,0,0,140,50 | 1,5,1,20,255,0,205,194 | | 5 | 1,5,1,28,0,0,13,240 | 1,5,1,28,255,0,76,0 |
| | 6 | 1,5,1,21,0,0,221,242 | 1,5,1,21,255,0,156,2 | | 6 | 1,5,1,29,0,0,92,48 | 1,5,1,29,255,0,29,192 |
| | 7 | 1,5,1,22,0,0,45,242 | 1,5,1,22,255,0,108,2 | | 7 | 1,5,1,30,0,0,172,48 | 1,5,1,30,255,0,237,192 |
| | 8 | 1,5,1,23,0,0,124,50 | 1,5,1,23,255,0,61,194 | | 8 | 1,5,1,31,0,0,253,240 | 1,5,1,31,255,0,188,0 |
| 5 | 1 | 1,5,1,32,0,0,205,252 | 1,5,1,32,255,0,140,12 | 6 | 1 | 1,5,1,40,0,0,76,62 | 1,5,1,40,255,0,13,206 |
| | 2 | 1,5,1,33,0,0,156,60 | 1,5,1,33,255,0,221,204 | | 2 | 1,5,1,41,0,0,29,254 | 1,5,1,41,255,0,92,14 |
| | 3 | 1,5,1,34,0,0,108,60 | 1,5,1,34,255,0,45,204 | | 3 | 1,5,1,42,0,0,237,254 | 1,5,1,42,255,0,172,14 |
| | 4 | 1,5,1,35,0,0,61,252 | 1,5,1,35,255,0,124,12 | | 4 | 1,5,1,43,0,0,188,62 | 1,5,1,43,255,0,253,206 |
| | 5 | 1,5,1,36,0,0,140,61 | 1,5,1,36,255,0,205,205 | | 5 | 1,5,1,44,0,0,13,255 | 1,5,1,44,255,0,76,15 |
| | 6 | 1,5,1,37,0,0,221,253 | 1,5,1,37,255,0,156,13 | | 6 | 1,5,1,45,0,0,92,63 | 1,5,1,45,255,0,29,207 |
| | 7 | 1,5,1,38,0,0,45,253 | 1,5,1,38,255,0,108,13 | | 7 | 1,5,1,46,0,0,172,63 | 1,5,1,46,255,0,237,207 |
| | 8 | 1,5,1,39,0,0,124,61 | 1,5,1,39,255,0,61,205 | | 8 | 1,5,1,47,0,0,253,255 | 1,5,1,47,255,0,188,15 |
| 7 | 1 | 1,5,1,48,0,0,204,57 | 1,5,1,48,255,0,141,201 | 8 | 1 | 1,5,1,56,0,0,77,251 | 1,5,1,56,255,0,12,11 |
| | 2 | 1,5,1,49,0,0,157,249 | 1,5,1,49,255,0,220,9 | | 2 | 1,5,1,57,0,0,28,59 | 1,5,1,57,255,0,93,203 |
| | 3 | 1,5,1,50,0,0,109,249 | 1,5,1,50,255,0,44,9 | | 3 | 1,5,1,58,0,0,236,59 | 1,5,1,58,255,0,173,203 |
| | 4 | 1,5,1,51,0,0,60,57 | 1,5,1,51,255,0,125,201 | | 4 | 1,5,1,59,0,0,189,251 | 1,5,1,59,255,0,252,11 |
| | 5 | 1,5,1,52,0,0,141,248 | 1,5,1,52,255,0,204,8 | | 5 | 1,5,1,60,0,0,12,58 | 1,5,1,60,255,0,77,202 |
| | 6 | 1,5,1,53,0,0,220,56 | 1,5,1,53,255,0,157,200 | | 6 | 1,5,1,61,0,0,93,250 | 1,5,1,61,255,0,28,10 |
| | 7 | 1,5,1,54,0,0,44,56 | 1,5,1,54,255,0,109,200 | | 7 | 1,5,1,62,0,0,173,250 | 1,5,1,62,255,0,236,10 |
| | 8 | 1,5,1,55,0,0,125,248 | 1,5,1,55,255,0,60,8 | | 8 | 1,5,1,63,0,0,252,58 | 1,5,1,63,255,0,189,202 |
| 9 | 1 | 1,5,1,64,0,0,205,226 | 1,5,1,64,255,0,140,18 | 10 | 1 | 1,5,1,72,0,0,76,32 | 1,5,1,72,255,0,13,208 |
| | 2 | 1,5,1,65,0,0,156,34 | 1,5,1,65,255,0,221,210 | | 2 | 1,5,1,73,0,0,29,224 | 1,5,1,73,255,0,92,16 |
| | 3 | 1,5,1,66,0,0,108,34 | 1,5,1,66,255,0,45,210 | | 3 | 1,5,1,74,0,0,237,224 | 1,5,1,74,255,0,172,16 |
| | 4 | 1,5,1,67,0,0,61,226 | 1,5,1,67,255,0,124,18 | | 4 | 1,5,1,75,0,0,188,32 | 1,5,1,75,255,0,253,208 |
| | 5 | 1,5,1,68,0,0,140,35 | 1,5,1,68,255,0,205,211 | | 5 | 1,5,1,76,0,0,13,225 | 1,5,1,76,255,0,76,17 |
| | 6 | 1,5,1,69,0,0,221,227 | 1,5,1,69,255,0,156,19 | | 6 | 1,5,1,77,0,0,92,33 | 1,5,1,77,255,0,29,209 |
| | 7 | 1,5,1,70,0,0,45,227 | 1,5,1,70,255,0,108,19 | | 7 | 1,5,1,78,0,0,172,33 | 1,5,1,78,255,0,237,209 |
| | 8 | 1,5,1,71,0,0,124,35 | 1,5,1,71,255,0,61,211 | | 8 | 1,5,1,79,0,0,253,225 | 1,5,1,79,255,0,188,17 |
| 11 | 1 | 1,5,1,80,0,0,204,39 | 1,5,1,80,255,0,141,215 | 12 | 1 | 1,5,1,88,0,0,77,229 | 1,5,1,88,255,0,12,21 |
| | 2 | 1,5,1,81,0,0,157,231 | 1,5,1,81,255,0,220,23 | | 2 | 1,5,1,89,0,0,28,37 | 1,5,1,89,255,0,93,213 |
| | 3 | 1,5,1,82,0,0,109,231 | 1,5,1,82,255,0,44,23 | | 3 | 1,5,1,90,0,0,236,37 | 1,5,1,90,255,0,173,213 |
| | 4 | 1,5,1,83,0,0,60,39 | 1,5,1,83,255,0,125,215 | | 4 | 1,5,1,91,0,0,189,229 | 1,5,1,91,255,0,252,21 |
| | 5 | 1,5,1,84,0,0,141,230 | 1,5,1,84,255,0,204,22 | | 5 | 1,5,1,92,0,0,12,36 | 1,5,1,92,255,0,77,212 |
| | 6 | 1,5,1,85,0,0,220,38 | 1,5,1,85,255,0,157,214 | | 6 | 1,5,1,93,0,0,93,228 | 1,5,1,93,255,0,28,20 |
| | 7 | 1,5,1,86,0,0,44,38 | 1,5,1,86,255,0,109,214 | | 7 | 1,5,1,94,0,0,173,228 | 1,5,1,94,255,0,236,20 |
| | 8 | 1,5,1,87,0,0,125,230 | 1,5,1,87,255,0,60,22 | | 8 | 1,5,1,95,0,0,252,36 | 1,5,1,95,255,0,189,212 |
| 13 | 1 | 1,5,1,96,0,0,204,40 | 1,5,1,96,255,0,141,216 | 14 | 1 | 1,5,1,104,0,0,77,234 | 1,5,1,104,255,0,12,26 |
| | 2 | 1,5,1,97,0,0,157,232 | 1,5,1,97,255,0,220,24 | | 2 | 1,5,1,105,0,0,28,42 | 1,5,1,105,255,0,93,218 |
| | 3 | 1,5,1,98,0,0,109,232 | 1,5,1,98,255,0,44,24 | | 3 | 1,5,1,106,0,0,236,42 | 1,5,1,106,255,0,173,218 |
| | 4 | 1,5,1,99,0,0,60,40 | 1,5,1,99,255,0,125,216 | | 4 | 1,5,1,107,0,0,189,234 | 1,5,1,107,255,0,252,26 |
| | 5 | 1,5,1,100,0,0,141,233 | 1,5,1,100,255,0,204,25 | | 5 | 1,5,1,108,0,0,12,43 | 1,5,1,108,255,0,77,219 |
| | 6 | 1,5,1,101,0,0,220,41 | 1,5,1,101,255,0,157,217 | | 6 | 1,5,1,109,0,0,93,235 | 1,5,1,109,255,0,28,27 |
| | 7 | 1,5,1,102,0,0,44,41 | 1,5,1,102,255,0,109,217 | | 7 | 1,5,1,110,0,0,173,235 | 1,5,1,110,255,0,236,27 |
| | 8 | 1,5,1,103,0,0,125,233 | 1,5,1,103,255,0,60,25 | | 8 | 1,5,1,111,0,0,252,43 | 1,5,1,111,255,0,189,219 |
| | 1 | 1,5,1,112,0,0,205,237 | 1,5,1,112,255,0,140,29 | | 1 | 1,5,1,120,0,0,76,47 | 1,5,1,120,255,0,13,223 |
| | 2 | 1,5,1,113,0,0,156,45 | 1,5,1,113,255,0,221,221 | | 2 | 1,5,1,121,0,0,29,239 | 1,5,1,121,255,0,92,31 |
| | 3 | 1,5,1,114,0,0,108,45 | 1,5,1,114,255,0,45,221 | | 3 | 1,5,1,122,0,0,237,239 | 1,5,1,122,255,0,172,31 |

| LT | DO | Set DO Off Command Query | Set DO On Command Query | LT | DO | Set DO Off Command Query | Set DO On Command Query |
|----|-----------------------|--------------------------|-------------------------|----------------------|------------------------|--------------------------|-------------------------|
| 31 | 3 | 1,5,1,242,0,0,109,197 | 1,5,1,242,255,0,44,53 | 32 | 3 | 1,5,1,250,0,0,236,7 | 1,5,1,250,255,0,173,247 |
| | 4 | 1,5,1,243,0,0,60,5 | 1,5,1,243,255,0,125,245 | | 4 | 1,5,1,251,0,0,189,199 | 1,5,1,251,255,0,252,55 |
| | 5 | 1,5,1,244,0,0,141,196 | 1,5,1,244,255,0,204,52 | | 5 | 1,5,1,252,0,0,12,6 | 1,5,1,252,255,0,77,246 |
| | 6 | 1,5,1,245,0,0,220,4 | 1,5,1,245,255,0,157,244 | | 6 | 1,5,1,253,0,0,93,198 | 1,5,1,253,255,0,28,54 |
| | 7 | 1,5,1,246,0,0,44,4 | 1,5,1,246,255,0,109,244 | | 7 | 1,5,1,254,0,0,173,198 | 1,5,1,254,255,0,236,54 |
| | 8 | 1,5,1,247,0,0,125,196 | 1,5,1,247,255,0,60,52 | | 8 | 1,5,1,255,0,0,252,6 | 1,5,1,255,255,0,189,246 |
| 33 | 1 | 1,5,2,0,0,0,204,114 | 1,5,2,0,255,0,141,130 | 34 | 1 | 1,5,2,8,0,0,77,176 | 1,5,2,8,255,0,12,64 |
| | 2 | 1,5,2,1,0,0,157,178 | 1,5,2,1,255,0,220,66 | | 2 | 1,5,2,9,0,0,28,112 | 1,5,2,9,255,0,93,128 |
| | 3 | 1,5,2,2,0,0,109,178 | 1,5,2,2,255,0,44,66 | | 3 | 1,5,2,10,0,0,236,112 | 1,5,2,10,255,0,173,128 |
| | 4 | 1,5,2,3,0,0,60,114 | 1,5,2,3,255,0,125,130 | | 4 | 1,5,2,11,0,0,189,176 | 1,5,2,11,255,0,252,64 |
| | 5 | 1,5,2,4,0,0,141,179 | 1,5,2,4,255,0,204,67 | | 5 | 1,5,2,12,0,0,12,113 | 1,5,2,12,255,0,77,129 |
| | 6 | 1,5,2,5,0,0,220,115 | 1,5,2,5,255,0,157,131 | | 6 | 1,5,2,13,0,0,93,177 | 1,5,2,13,255,0,28,65 |
| | 7 | 1,5,2,6,0,0,44,115 | 1,5,2,6,255,0,109,131 | | 7 | 1,5,2,14,0,0,173,177 | 1,5,2,14,255,0,236,65 |
| | 8 | 1,5,2,7,0,0,125,179 | 1,5,2,7,255,0,60,67 | | 8 | 1,5,2,15,0,0,252,113 | 1,5,2,15,255,0,189,129 |
| 35 | 1 | 1,5,2,16,0,0,205,183 | 1,5,2,16,255,0,140,71 | 36 | 1 | 1,5,2,24,0,0,76,117 | 1,5,2,24,255,0,13,133 |
| | 2 | 1,5,2,17,0,0,156,119 | 1,5,2,17,255,0,221,135 | | 2 | 1,5,2,25,0,0,29,181 | 1,5,2,25,255,0,92,69 |
| | 3 | 1,5,2,18,0,0,108,119 | 1,5,2,18,255,0,45,135 | | 3 | 1,5,2,26,0,0,237,181 | 1,5,2,26,255,0,172,69 |
| | 4 | 1,5,2,19,0,0,61,183 | 1,5,2,19,255,0,124,71 | | 4 | 1,5,2,27,0,0,188,117 | 1,5,2,27,255,0,253,133 |
| | 5 | 1,5,2,20,0,0,140,118 | 1,5,2,20,255,0,205,134 | | 5 | 1,5,2,28,0,0,13,180 | 1,5,2,28,255,0,76,68 |
| | 6 | 1,5,2,21,0,0,221,182 | 1,5,2,21,255,0,156,70 | | 6 | 1,5,2,29,0,0,92,116 | 1,5,2,29,255,0,29,132 |
| | 7 | 1,5,2,22,0,0,45,182 | 1,5,2,22,255,0,108,70 | | 7 | 1,5,2,30,0,0,172,116 | 1,5,2,30,255,0,237,132 |
| | 8 | 1,5,2,23,0,0,124,118 | 1,5,2,23,255,0,61,134 | | 8 | 1,5,2,31,0,0,253,180 | 1,5,2,31,255,0,188,68 |
| 37 | 1 | 1,5,2,32,0,0,205,184 | 1,5,2,32,255,0,140,72 | 38 | 1 | 1,5,2,40,0,0,76,122 | 1,5,2,40,255,0,13,138 |
| | 2 | 1,5,2,33,0,0,156,120 | 1,5,2,33,255,0,221,136 | | 2 | 1,5,2,41,0,0,29,186 | 1,5,2,41,255,0,92,74 |
| | 3 | 1,5,2,34,0,0,108,120 | 1,5,2,34,255,0,45,136 | | 3 | 1,5,2,42,0,0,237,186 | 1,5,2,42,255,0,172,74 |
| | 4 | 1,5,2,35,0,0,61,184 | 1,5,2,35,255,0,124,72 | | 4 | 1,5,2,43,0,0,188,122 | 1,5,2,43,255,0,253,138 |
| | 5 | 1,5,2,36,0,0,140,121 | 1,5,2,36,255,0,205,137 | | 5 | 1,5,2,44,0,0,13,187 | 1,5,2,44,255,0,76,75 |
| | 6 | 1,5,2,37,0,0,221,185 | 1,5,2,37,255,0,156,73 | | 6 | 1,5,2,45,0,0,92,123 | 1,5,2,45,255,0,29,139 |
| | 7 | 1,5,2,38,0,0,45,185 | 1,5,2,38,255,0,108,73 | | 7 | 1,5,2,46,0,0,172,123 | 1,5,2,46,255,0,237,139 |
| | 8 | 1,5,2,39,0,0,124,121 | 1,5,2,39,255,0,61,137 | | 8 | 1,5,2,47,0,0,253,187 | 1,5,2,47,255,0,188,75 |
| 39 | 1 | 1,5,2,48,0,0,204,125 | 1,5,2,48,255,0,141,141 | 40 | 1 | 1,5,2,56,0,0,77,191 | 1,5,2,56,255,0,12,79 |
| | 2 | 1,5,2,49,0,0,157,189 | 1,5,2,49,255,0,220,77 | | 2 | 1,5,2,57,0,0,28,127 | 1,5,2,57,255,0,93,143 |
| | 3 | 1,5,2,50,0,0,109,189 | 1,5,2,50,255,0,44,77 | | 3 | 1,5,2,58,0,0,236,127 | 1,5,2,58,255,0,173,143 |
| | 4 | 1,5,2,51,0,0,60,125 | 1,5,2,51,255,0,125,141 | | 4 | 1,5,2,59,0,0,189,191 | 1,5,2,59,255,0,252,79 |
| | 5 | 1,5,2,52,0,0,141,188 | 1,5,2,52,255,0,204,76 | | 5 | 1,5,2,60,0,0,12,126 | 1,5,2,60,255,0,77,142 |
| | 6 | 1,5,2,53,0,0,220,124 | 1,5,2,53,255,0,157,140 | | 6 | 1,5,2,61,0,0,93,190 | 1,5,2,61,255,0,28,78 |
| | 7 | 1,5,2,54,0,0,44,124 | 1,5,2,54,255,0,109,140 | | 7 | 1,5,2,62,0,0,173,190 | 1,5,2,62,255,0,236,78 |
| | 8 | 1,5,2,55,0,0,125,188 | 1,5,2,55,255,0,60,76 | | 8 | 1,5,2,63,0,0,252,126 | 1,5,2,63,255,0,189,142 |
| 41 | 1 | 1,5,2,64,0,0,205,166 | 1,5,2,64,255,0,140,86 | 42 | 1 | 1,5,2,72,0,0,76,100 | 1,5,2,72,255,0,13,148 |
| | 2 | 1,5,2,65,0,0,156,102 | 1,5,2,65,255,0,221,150 | | 2 | 1,5,2,73,0,0,29,164 | 1,5,2,73,255,0,92,84 |
| | 3 | 1,5,2,66,0,0,108,102 | 1,5,2,66,255,0,45,150 | | 3 | 1,5,2,74,0,0,237,164 | 1,5,2,74,255,0,172,84 |
| | 4 | 1,5,2,67,0,0,61,166 | 1,5,2,67,255,0,124,86 | | 4 | 1,5,2,75,0,0,188,100 | 1,5,2,75,255,0,253,148 |
| | 5 | 1,5,2,68,0,0,140,103 | 1,5,2,68,255,0,205,151 | | 5 | 1,5,2,76,0,0,13,165 | 1,5,2,76,255,0,76,85 |
| | 6 | 1,5,2,69,0,0,221,167 | 1,5,2,69,255,0,156,87 | | 6 | 1,5,2,77,0,0,92,101 | 1,5,2,77,255,0,29,149 |
| | 7 | 1,5,2,70,0,0,45,167 | 1,5,2,70,255,0,108,87 | | 7 | 1,5,2,78,0,0,172,101 | 1,5,2,78,255,0,237,149 |
| | 8 | 1,5,2,71,0,0,124,103 | 1,5,2,71,255,0,61,151 | | 8 | 1,5,2,79,0,0,253,165 | 1,5,2,79,255,0,188,85 |
| 43 | 1 | 1,5,2,80,0,0,204,99 | 1,5,2,80,255,0,141,147 | 44 | 1 | 1,5,2,88,0,0,77,161 | 1,5,2,88,255,0,12,81 |
| | 2 | 1,5,2,81,0,0,157,163 | 1,5,2,81,255,0,220,83 | | 2 | 1,5,2,89,0,0,28,97 | 1,5,2,89,255,0,93,145 |
| | 3 | 1,5,2,82,0,0,109,163 | 1,5,2,82,255,0,44,83 | | 3 | 1,5,2,90,0,0,236,97 | 1,5,2,90,255,0,173,145 |
| | 4 | 1,5,2,83,0,0,60,99 | 1,5,2,83,255,0,125,147 | | 4 | 1,5,2,91,0,0,189,161 | 1,5,2,91,255,0,252,81 |
| | 5 | 1,5,2,84,0,0,141,162 | 1,5,2,84,255,0,204,82 | | 5 | 1,5,2,92,0,0,12,96 | 1,5,2,92,255,0,77,144 |
| | 6 | 1,5,2,85,0,0,220,98 | 1,5,2,85,255,0,157,146 | | 6 | 1,5,2,93,0,0,93,160 | 1,5,2,93,255,0,28,80 |
| | 7 | 1,5,2,86,0,0,44,98 | 1,5,2,86,255,0,109,146 | | 7 | 1,5,2,94,0,0,173,160 | 1,5,2,94,255,0,236,80 |
| | 8 | 1,5,2,87,0,0,125,162 | 1,5,2,87,255,0,60,82 | | 8 | 1,5,2,95,0,0,252,96 | 1,5,2,95,255,0,189,144 |
| 45 | 1 | 1,5,2,96,0,0,204,108 | 1,5,2,96,255,0,141,156 | 46 | 1 | 1,5,2,104,0,0,77,174 | 1,5,2,104,255,0,12,94 |
| | 2 | 1,5,2,97,0,0,157,172 | 1,5,2,97,255,0,220,92 | | 2 | 1,5,2,105,0,0,28,110 | 1,5,2,105,255,0,93,158 |
| | 3 | 1,5,2,98,0,0,109,172 | 1,5,2,98,255,0,44,92 | | 3 | 1,5,2,106,0,0,236,110 | 1,5,2,106,255,0,173,158 |
| | 4 | 1,5,2,99,0,0,60,108 | 1,5,2,99,255,0,125,156 | | 4 | 1,5,2,107,0,0,189,174 | 1,5,2,107,255,0,252,94 |
| | 5 | 1,5,2,100,0,0,141,173 | 1,5,2,100,255,0,204,93 | | 5 | 1,5,2,108,0,0,12,111 | 1,5,2,108,255,0,77,159 |
| | 6 | 1,5,2,101,0,0,220,109 | 1,5,2,101,255,0,157,157 | | 6 | 1,5,2,109,0,0,93,175 | 1,5,2,109,255,0,28,95 |
| | 7 | 1,5,2,102,0,0,44,109 | 1,5,2,102,255,0,109,157 | | 7 | 1,5,2,110,0,0,173,175 | 1,5,2,110,255,0,236,95 |
| | 8 | 1,5,2,103,0,0,125,173 | 1,5,2,103,255,0,60,93 | | 8 | 1,5,2,111,0,0,252,111 | 1,5,2,111,255,0,189,159 |
| 1 | 1,5,2,112,0,0,205,169 | 1,5,2,112,255,0,140,89 | 1 | 1,5,2,120,0,0,76,107 | 1,5,2,120,255,0,13,155 | | |

| LT | DO | Set DO Off Command Query | Set DO On Command Query | LT | DO | Set DO Off Command Query | Set DO On Command Query |
|-----------|----------|--------------------------|-------------------------|-----------|----------|--------------------------|-------------------------|
| 63 | 1 | 1,5,2,240,0,0,204,65 | 1,5,2,240,255,0,141,177 | 64 | 1 | 1,5,2,248,0,0,77,131 | 1,5,2,248,255,0,12,115 |
| | 2 | 1,5,2,241,0,0,157,129 | 1,5,2,241,255,0,220,113 | | 2 | 1,5,2,249,0,0,28,67 | 1,5,2,249,255,0,93,179 |
| | 3 | 1,5,2,242,0,0,109,129 | 1,5,2,242,255,0,44,113 | | 3 | 1,5,2,250,0,0,236,67 | 1,5,2,250,255,0,173,179 |
| | 4 | 1,5,2,243,0,0,60,65 | 1,5,2,243,255,0,125,177 | | 4 | 1,5,2,251,0,0,189,131 | 1,5,2,251,255,0,252,115 |
| | 5 | 1,5,2,244,0,0,141,128 | 1,5,2,244,255,0,204,112 | | 5 | 1,5,2,252,0,0,12,66 | 1,5,2,252,255,0,77,178 |
| | 6 | 1,5,2,245,0,0,220,64 | 1,5,2,245,255,0,157,176 | | 6 | 1,5,2,253,0,0,93,130 | 1,5,2,253,255,0,28,114 |
| | 7 | 1,5,2,246,0,0,44,64 | 1,5,2,246,255,0,109,176 | | 7 | 1,5,2,254,0,0,173,130 | 1,5,2,254,255,0,236,114 |
| | 8 | 1,5,2,247,0,0,125,128 | 1,5,2,247,255,0,60,112 | | 8 | 1,5,2,255,0,0,252,66 | 1,5,2,255,255,0,189,178 |

Single DO Pulse Out

| LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query |
|----|----|-----------------------------------|----|----|-----------------------------------|----|----|-----------------------------------|----|----|-----------------------------------|
| 1 | 1 | 1,5,3,0,255,0,140,126 | 2 | 1 | 1,5,3,8,255,0,13,188 | 3 | 1 | 1,5,3,16,255,0,141,187 | 4 | 1 | 1,5,3,24,255,0,12,121 |
| | 2 | 1,5,3,1,255,0,221,190 | | 2 | 1,5,3,9,255,0,92,124 | | 2 | 1,5,3,17,255,0,220,123 | | 2 | 1,5,3,25,255,0,93,185 |
| | 3 | 1,5,3,2,255,0,45,190 | | 3 | 1,5,3,10,255,0,172,124 | | 3 | 1,5,3,18,255,0,44,123 | | 3 | 1,5,3,26,255,0,173,185 |
| | 4 | 1,5,3,3,255,0,124,126 | | 4 | 1,5,3,11,255,0,253,188 | | 4 | 1,5,3,19,255,0,125,187 | | 4 | 1,5,3,27,255,0,252,121 |
| | 5 | 1,5,3,4,255,0,205,191 | | 5 | 1,5,3,12,255,0,76,125 | | 5 | 1,5,3,20,255,0,204,122 | | 5 | 1,5,3,28,255,0,77,184 |
| | 6 | 1,5,3,5,255,0,156,127 | | 6 | 1,5,3,13,255,0,29,189 | | 6 | 1,5,3,21,255,0,157,186 | | 6 | 1,5,3,29,255,0,28,120 |
| | 7 | 1,5,3,6,255,0,108,127 | | 7 | 1,5,3,14,255,0,237,189 | | 7 | 1,5,3,22,255,0,109,186 | | 7 | 1,5,3,30,255,0,236,120 |
| | 8 | 1,5,3,7,255,0,61,191 | | 8 | 1,5,3,15,255,0,188,125 | | 8 | 1,5,3,23,255,0,60,122 | | 8 | 1,5,3,31,255,0,189,184 |
| 5 | 1 | 1,5,3,32,255,0,141,180 | 6 | 1 | 1,5,3,40,255,0,12,118 | 7 | 1 | 1,5,3,48,255,0,140,113 | 8 | 1 | 1,5,3,56,255,0,13,179 |
| | 2 | 1,5,3,33,255,0,220,116 | | 2 | 1,5,3,41,255,0,93,182 | | 2 | 1,5,3,49,255,0,221,177 | | 2 | 1,5,3,57,255,0,92,115 |
| | 3 | 1,5,3,34,255,0,44,116 | | 3 | 1,5,3,42,255,0,173,182 | | 3 | 1,5,3,50,255,0,45,177 | | 3 | 1,5,3,58,255,0,172,115 |
| | 4 | 1,5,3,35,255,0,125,180 | | 4 | 1,5,3,43,255,0,252,118 | | 4 | 1,5,3,51,255,0,124,113 | | 4 | 1,5,3,59,255,0,253,179 |
| | 5 | 1,5,3,36,255,0,204,117 | | 5 | 1,5,3,44,255,0,77,183 | | 5 | 1,5,3,52,255,0,205,176 | | 5 | 1,5,3,60,255,0,76,114 |
| | 6 | 1,5,3,37,255,0,157,181 | | 6 | 1,5,3,45,255,0,28,119 | | 6 | 1,5,3,53,255,0,156,112 | | 6 | 1,5,3,61,255,0,29,178 |
| | 7 | 1,5,3,38,255,0,109,181 | | 7 | 1,5,3,46,255,0,236,119 | | 7 | 1,5,3,54,255,0,108,112 | | 7 | 1,5,3,62,255,0,237,178 |
| | 8 | 1,5,3,39,255,0,60,117 | | 8 | 1,5,3,47,255,0,189,183 | | 8 | 1,5,3,55,255,0,61,176 | | 8 | 1,5,3,63,255,0,188,114 |
| 9 | 1 | 1,5,3,64,255,0,141,170 | 10 | 1 | 1,5,3,72,255,0,12,104 | 11 | 1 | 1,5,3,80,255,0,140,111 | 12 | 1 | 1,5,3,88,255,0,13,173 |
| | 2 | 1,5,3,65,255,0,220,106 | | 2 | 1,5,3,73,255,0,93,168 | | 2 | 1,5,3,81,255,0,221,175 | | 2 | 1,5,3,89,255,0,92,109 |
| | 3 | 1,5,3,66,255,0,44,106 | | 3 | 1,5,3,74,255,0,173,168 | | 3 | 1,5,3,82,255,0,45,175 | | 3 | 1,5,3,90,255,0,172,109 |
| | 4 | 1,5,3,67,255,0,125,170 | | 4 | 1,5,3,75,255,0,252,104 | | 4 | 1,5,3,83,255,0,124,111 | | 4 | 1,5,3,91,255,0,253,173 |
| | 5 | 1,5,3,68,255,0,204,107 | | 5 | 1,5,3,76,255,0,77,169 | | 5 | 1,5,3,84,255,0,205,174 | | 5 | 1,5,3,92,255,0,76,108 |
| | 6 | 1,5,3,69,255,0,157,171 | | 6 | 1,5,3,77,255,0,28,105 | | 6 | 1,5,3,85,255,0,156,110 | | 6 | 1,5,3,93,255,0,29,172 |
| | 7 | 1,5,3,70,255,0,109,171 | | 7 | 1,5,3,78,255,0,236,105 | | 7 | 1,5,3,86,255,0,108,110 | | 7 | 1,5,3,94,255,0,237,172 |
| | 8 | 1,5,3,71,255,0,60,107 | | 8 | 1,5,3,79,255,0,189,169 | | 8 | 1,5,3,87,255,0,61,174 | | 8 | 1,5,3,95,255,0,188,108 |
| 13 | 1 | 1,5,3,96,255,0,140,96 | 14 | 1 | 1,5,3,104,255,0,13,162 | 15 | 1 | 1,5,3,112,255,0,141,165 | 16 | 1 | 1,5,3,120,255,0,12,103 |
| | 2 | 1,5,3,97,255,0,221,160 | | 2 | 1,5,3,105,255,0,92,98 | | 2 | 1,5,3,113,255,0,220,101 | | 2 | 1,5,3,121,255,0,93,167 |
| | 3 | 1,5,3,98,255,0,45,160 | | 3 | 1,5,3,106,255,0,172,98 | | 3 | 1,5,3,114,255,0,44,101 | | 3 | 1,5,3,122,255,0,173,167 |
| | 4 | 1,5,3,99,255,0,124,96 | | 4 | 1,5,3,107,255,0,253,162 | | 4 | 1,5,3,115,255,0,125,165 | | 4 | 1,5,3,123,255,0,252,103 |
| | 5 | 1,5,3,100,255,0,205,161 | | 5 | 1,5,3,108,255,0,76,99 | | 5 | 1,5,3,116,255,0,204,100 | | 5 | 1,5,3,124,255,0,77,166 |
| | 6 | 1,5,3,101,255,0,156,97 | | 6 | 1,5,3,109,255,0,29,163 | | 6 | 1,5,3,117,255,0,157,164 | | 6 | 1,5,3,125,255,0,28,102 |
| | 7 | 1,5,3,102,255,0,108,97 | | 7 | 1,5,3,110,255,0,237,163 | | 7 | 1,5,3,118,255,0,109,164 | | 7 | 1,5,3,126,255,0,236,102 |
| | 8 | 1,5,3,103,255,0,61,161 | | 8 | 1,5,3,111,255,0,188,99 | | 8 | 1,5,3,119,255,0,60,100 | | 8 | 1,5,3,127,255,0,189,166 |
| 17 | 1 | 1,5,3,128,255,0,141,150 | 18 | 1 | 1,5,3,136,255,0,12,84 | 19 | 1 | 1,5,3,144,255,0,140,83 | 20 | 1 | 1,5,3,152,255,0,13,145 |
| | 2 | 1,5,3,129,255,0,220,86 | | 2 | 1,5,3,137,255,0,93,148 | | 2 | 1,5,3,145,255,0,221,147 | | 2 | 1,5,3,153,255,0,92,81 |
| | 3 | 1,5,3,130,255,0,44,86 | | 3 | 1,5,3,138,255,0,173,148 | | 3 | 1,5,3,146,255,0,45,147 | | 3 | 1,5,3,154,255,0,172,81 |
| | 4 | 1,5,3,131,255,0,125,150 | | 4 | 1,5,3,139,255,0,252,84 | | 4 | 1,5,3,147,255,0,124,83 | | 4 | 1,5,3,155,255,0,253,145 |
| | 5 | 1,5,3,132,255,0,204,87 | | 5 | 1,5,3,140,255,0,77,149 | | 5 | 1,5,3,148,255,0,205,146 | | 5 | 1,5,3,156,255,0,76,80 |
| | 6 | 1,5,3,133,255,0,157,151 | | 6 | 1,5,3,141,255,0,28,85 | | 6 | 1,5,3,149,255,0,156,82 | | 6 | 1,5,3,157,255,0,29,144 |
| | 7 | 1,5,3,134,255,0,109,151 | | 7 | 1,5,3,142,255,0,236,85 | | 7 | 1,5,3,150,255,0,108,82 | | 7 | 1,5,3,158,255,0,237,144 |
| | 8 | 1,5,3,135,255,0,60,87 | | 8 | 1,5,3,143,255,0,189,149 | | 8 | 1,5,3,151,255,0,61,146 | | 8 | 1,5,3,159,255,0,188,80 |
| 21 | 1 | 1,5,3,160,255,0,140,92 | 22 | 1 | 1,5,3,168,255,0,13,158 | 23 | 1 | 1,5,3,176,255,0,141,153 | 24 | 1 | 1,5,3,184,255,0,12,91 |
| | 2 | 1,5,3,161,255,0,221,156 | | 2 | 1,5,3,169,255,0,92,94 | | 2 | 1,5,3,177,255,0,220,89 | | 2 | 1,5,3,185,255,0,93,155 |
| | 3 | 1,5,3,162,255,0,45,156 | | 3 | 1,5,3,170,255,0,172,94 | | 3 | 1,5,3,178,255,0,44,89 | | 3 | 1,5,3,186,255,0,173,155 |
| | 4 | 1,5,3,163,255,0,124,92 | | 4 | 1,5,3,171,255,0,253,158 | | 4 | 1,5,3,179,255,0,125,153 | | 4 | 1,5,3,187,255,0,252,91 |
| | 5 | 1,5,3,164,255,0,205,157 | | 5 | 1,5,3,172,255,0,76,95 | | 5 | 1,5,3,180,255,0,204,88 | | 5 | 1,5,3,188,255,0,77,154 |
| | 6 | 1,5,3,165,255,0,156,93 | | 6 | 1,5,3,173,255,0,29,159 | | 6 | 1,5,3,181,255,0,157,152 | | 6 | 1,5,3,189,255,0,28,90 |
| | 7 | 1,5,3,166,255,0,108,93 | | 7 | 1,5,3,174,255,0,237,159 | | 7 | 1,5,3,182,255,0,109,152 | | 7 | 1,5,3,190,255,0,236,90 |

| LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query |
|----|----|-----------------------------------|----|----|-----------------------------------|----|----|-----------------------------------|----|----|-----------------------------------|
| | 8 | 1,5,3,167,255,0,61,157 | | 8 | 1,5,3,175,255,0,188,95 | | 8 | 1,5,3,183,255,0,60,88 | | 8 | 1,5,3,191,255,0,189,154 |
| 25 | 1 | 1,5,3,192,255,0,140,66 | 26 | 1 | 1,5,3,200,255,0,13,128 | 27 | 1 | 1,5,3,208,255,0,141,135 | 28 | 1 | 1,5,3,216,255,0,12,69 |
| | 2 | 1,5,3,193,255,0,221,130 | | 2 | 1,5,3,201,255,0,92,64 | | 2 | 1,5,3,209,255,0,220,71 | | 2 | 1,5,3,217,255,0,93,133 |
| | 3 | 1,5,3,194,255,0,45,130 | | 3 | 1,5,3,202,255,0,172,64 | | 3 | 1,5,3,210,255,0,44,71 | | 3 | 1,5,3,218,255,0,173,133 |
| | 4 | 1,5,3,195,255,0,124,66 | | 4 | 1,5,3,203,255,0,253,128 | | 4 | 1,5,3,211,255,0,125,135 | | 4 | 1,5,3,219,255,0,252,69 |
| | 5 | 1,5,3,196,255,0,205,131 | | 5 | 1,5,3,204,255,0,76,65 | | 5 | 1,5,3,212,255,0,204,70 | | 5 | 1,5,3,220,255,0,77,132 |
| | 6 | 1,5,3,197,255,0,156,67 | | 6 | 1,5,3,205,255,0,29,129 | | 6 | 1,5,3,213,255,0,157,134 | | 6 | 1,5,3,221,255,0,28,68 |
| | 7 | 1,5,3,198,255,0,108,67 | | 7 | 1,5,3,206,255,0,237,129 | | 7 | 1,5,3,214,255,0,109,134 | | 7 | 1,5,3,222,255,0,236,68 |
| | 8 | 1,5,3,199,255,0,61,131 | | 8 | 1,5,3,207,255,0,188,65 | | 8 | 1,5,3,215,255,0,60,70 | | 8 | 1,5,3,223,255,0,189,132 |
| 29 | 1 | 1,5,3,224,255,0,141,136 | 30 | 1 | 1,5,3,232,255,0,12,74 | 31 | 1 | 1,5,3,240,255,0,140,77 | 32 | 1 | 1,5,3,248,255,0,13,143 |
| | 2 | 1,5,3,225,255,0,220,72 | | 2 | 1,5,3,233,255,0,93,138 | | 2 | 1,5,3,241,255,0,221,141 | | 2 | 1,5,3,249,255,0,92,79 |
| | 3 | 1,5,3,226,255,0,44,72 | | 3 | 1,5,3,234,255,0,173,138 | | 3 | 1,5,3,242,255,0,45,141 | | 3 | 1,5,3,250,255,0,172,79 |
| | 4 | 1,5,3,227,255,0,125,136 | | 4 | 1,5,3,235,255,0,252,74 | | 4 | 1,5,3,243,255,0,124,77 | | 4 | 1,5,3,251,255,0,253,143 |
| | 5 | 1,5,3,228,255,0,204,73 | | 5 | 1,5,3,236,255,0,77,139 | | 5 | 1,5,3,244,255,0,205,140 | | 5 | 1,5,3,252,255,0,76,78 |
| | 6 | 1,5,3,229,255,0,157,137 | | 6 | 1,5,3,237,255,0,28,75 | | 6 | 1,5,3,245,255,0,156,76 | | 6 | 1,5,3,253,255,0,29,142 |
| | 7 | 1,5,3,230,255,0,109,137 | | 7 | 1,5,3,238,255,0,236,75 | | 7 | 1,5,3,246,255,0,108,76 | | 7 | 1,5,3,254,255,0,237,142 |
| | 8 | 1,5,3,231,255,0,60,73 | | 8 | 1,5,3,239,255,0,189,139 | | 8 | 1,5,3,247,255,0,61,140 | | 8 | 1,5,3,255,255,0,188,78 |
| 33 | 1 | 1,5,4,0,255,0,141,10 | 34 | 1 | 1,5,4,8,255,0,12,200 | 35 | 1 | 1,5,4,16,255,0,140,207 | 36 | 1 | 1,5,4,24,255,0,13,13 |
| | 2 | 1,5,4,1,255,0,220,202 | | 2 | 1,5,4,9,255,0,93,8 | | 2 | 1,5,4,17,255,0,221,15 | | 2 | 1,5,4,25,255,0,92,205 |
| | 3 | 1,5,4,2,255,0,44,202 | | 3 | 1,5,4,10,255,0,173,8 | | 3 | 1,5,4,18,255,0,45,15 | | 3 | 1,5,4,26,255,0,172,205 |
| | 4 | 1,5,4,3,255,0,125,10 | | 4 | 1,5,4,11,255,0,252,200 | | 4 | 1,5,4,19,255,0,124,207 | | 4 | 1,5,4,27,255,0,253,13 |
| | 5 | 1,5,4,4,255,0,204,203 | | 5 | 1,5,4,12,255,0,77,9 | | 5 | 1,5,4,20,255,0,205,14 | | 5 | 1,5,4,28,255,0,76,204 |
| | 6 | 1,5,4,5,255,0,157,11 | | 6 | 1,5,4,13,255,0,28,201 | | 6 | 1,5,4,21,255,0,156,206 | | 6 | 1,5,4,29,255,0,29,12 |
| | 7 | 1,5,4,6,255,0,109,11 | | 7 | 1,5,4,14,255,0,236,201 | | 7 | 1,5,4,22,255,0,108,206 | | 7 | 1,5,4,30,255,0,237,12 |
| | 8 | 1,5,4,7,255,0,60,203 | | 8 | 1,5,4,15,255,0,189,9 | | 8 | 1,5,4,23,255,0,61,14 | | 8 | 1,5,4,31,255,0,188,204 |
| 37 | 1 | 1,5,4,32,255,0,140,192 | 38 | 1 | 1,5,4,40,255,0,13,2 | 39 | 1 | 1,5,4,48,255,0,141,5 | 40 | 1 | 1,5,4,56,255,0,12,199 |
| | 2 | 1,5,4,33,255,0,221,0 | | 2 | 1,5,4,41,255,0,92,194 | | 2 | 1,5,4,49,255,0,220,197 | | 2 | 1,5,4,57,255,0,93,7 |
| | 3 | 1,5,4,34,255,0,45,0 | | 3 | 1,5,4,42,255,0,172,194 | | 3 | 1,5,4,50,255,0,44,197 | | 3 | 1,5,4,58,255,0,173,7 |
| | 4 | 1,5,4,35,255,0,124,192 | | 4 | 1,5,4,43,255,0,253,2 | | 4 | 1,5,4,51,255,0,125,5 | | 4 | 1,5,4,59,255,0,252,199 |
| | 5 | 1,5,4,36,255,0,205,1 | | 5 | 1,5,4,44,255,0,76,195 | | 5 | 1,5,4,52,255,0,204,196 | | 5 | 1,5,4,60,255,0,77,6 |
| | 6 | 1,5,4,37,255,0,156,193 | | 6 | 1,5,4,45,255,0,29,3 | | 6 | 1,5,4,53,255,0,157,4 | | 6 | 1,5,4,61,255,0,28,198 |
| | 7 | 1,5,4,38,255,0,108,193 | | 7 | 1,5,4,46,255,0,237,3 | | 7 | 1,5,4,54,255,0,109,4 | | 7 | 1,5,4,62,255,0,236,198 |
| | 8 | 1,5,4,39,255,0,61,1 | | 8 | 1,5,4,47,255,0,188,195 | | 8 | 1,5,4,55,255,0,60,196 | | 8 | 1,5,4,63,255,0,189,6 |
| 41 | 1 | 1,5,4,64,255,0,140,222 | 42 | 1 | 1,5,4,72,255,0,13,28 | 43 | 1 | 1,5,4,80,255,0,141,27 | 44 | 1 | 1,5,4,88,255,0,12,217 |
| | 2 | 1,5,4,65,255,0,221,30 | | 2 | 1,5,4,73,255,0,92,220 | | 2 | 1,5,4,81,255,0,220,219 | | 2 | 1,5,4,89,255,0,93,25 |
| | 3 | 1,5,4,66,255,0,45,30 | | 3 | 1,5,4,74,255,0,172,220 | | 3 | 1,5,4,82,255,0,44,219 | | 3 | 1,5,4,90,255,0,173,25 |
| | 4 | 1,5,4,67,255,0,124,222 | | 4 | 1,5,4,75,255,0,253,28 | | 4 | 1,5,4,83,255,0,125,27 | | 4 | 1,5,4,91,255,0,252,217 |
| | 5 | 1,5,4,68,255,0,205,31 | | 5 | 1,5,4,76,255,0,76,221 | | 5 | 1,5,4,84,255,0,204,218 | | 5 | 1,5,4,92,255,0,77,24 |
| | 6 | 1,5,4,69,255,0,156,223 | | 6 | 1,5,4,77,255,0,29,29 | | 6 | 1,5,4,85,255,0,157,26 | | 6 | 1,5,4,93,255,0,28,216 |
| | 7 | 1,5,4,70,255,0,108,223 | | 7 | 1,5,4,78,255,0,237,29 | | 7 | 1,5,4,86,255,0,109,26 | | 7 | 1,5,4,94,255,0,236,216 |
| | 8 | 1,5,4,71,255,0,61,31 | | 8 | 1,5,4,79,255,0,188,221 | | 8 | 1,5,4,87,255,0,60,218 | | 8 | 1,5,4,95,255,0,189,24 |
| 45 | 1 | 1,5,4,96,255,0,141,20 | 46 | 1 | 1,5,4,104,255,0,12,214 | 47 | 1 | 1,5,4,112,255,0,140,209 | 48 | 1 | 1,5,4,120,255,0,13,19 |
| | 2 | 1,5,4,97,255,0,220,212 | | 2 | 1,5,4,105,255,0,93,22 | | 2 | 1,5,4,113,255,0,221,17 | | 2 | 1,5,4,121,255,0,92,211 |
| | 3 | 1,5,4,98,255,0,44,212 | | 3 | 1,5,4,106,255,0,173,22 | | 3 | 1,5,4,114,255,0,45,17 | | 3 | 1,5,4,122,255,0,172,211 |
| | 4 | 1,5,4,99,255,0,125,20 | | 4 | 1,5,4,107,255,0,252,214 | | 4 | 1,5,4,115,255,0,124,209 | | 4 | 1,5,4,123,255,0,253,19 |
| | 5 | 1,5,4,100,255,0,204,213 | | 5 | 1,5,4,108,255,0,77,23 | | 5 | 1,5,4,116,255,0,205,16 | | 5 | 1,5,4,124,255,0,76,210 |
| | 6 | 1,5,4,101,255,0,157,21 | | 6 | 1,5,4,109,255,0,28,215 | | 6 | 1,5,4,117,255,0,156,208 | | 6 | 1,5,4,125,255,0,29,18 |
| | 7 | 1,5,4,102,255,0,109,21 | | 7 | 1,5,4,110,255,0,236,215 | | 7 | 1,5,4,118,255,0,108,208 | | 7 | 1,5,4,126,255,0,237,18 |
| | 8 | 1,5,4,103,255,0,60,213 | | 8 | 1,5,4,111,255,0,189,23 | | 8 | 1,5,4,119,255,0,61,16 | | 8 | 1,5,4,127,255,0,188,210 |
| | 1 | 1,5,4,128,255,0,140,226 | | 1 | 1,5,4,136,255,0,13,32 | | 1 | 1,5,4,144,255,0,141,39 | | 1 | 1,5,4,152,255,0,12,229 |
| | 2 | 1,5,4,129,255,0,221,34 | | 2 | 1,5,4,137,255,0,92,224 | | 2 | 1,5,4,145,255,0,220,231 | | 2 | 1,5,4,153,255,0,93,37 |

| LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query | LT | DO | Single DO Pulse Out Command Query |
|----|----|-----------------------------------|----|----|-----------------------------------|----|----|-----------------------------------|----|----|-----------------------------------|
| 49 | 3 | 1,5,4,130,255,0,45,34 | 50 | 3 | 1,5,4,138,255,0,172,224 | 51 | 3 | 1,5,4,146,255,0,44,231 | 52 | 3 | 1,5,4,154,255,0,173,37 |
| | 4 | 1,5,4,131,255,0,124,226 | | 4 | 1,5,4,139,255,0,253,32 | | 4 | 1,5,4,147,255,0,125,39 | | 4 | 1,5,4,155,255,0,252,229 |
| | 5 | 1,5,4,132,255,0,205,35 | | 5 | 1,5,4,140,255,0,76,225 | | 5 | 1,5,4,148,255,0,204,230 | | 5 | 1,5,4,156,255,0,77,36 |
| | 6 | 1,5,4,133,255,0,156,227 | | 6 | 1,5,4,141,255,0,29,33 | | 6 | 1,5,4,149,255,0,157,38 | | 6 | 1,5,4,157,255,0,28,228 |
| | 7 | 1,5,4,134,255,0,108,227 | | 7 | 1,5,4,142,255,0,237,33 | | 7 | 1,5,4,150,255,0,109,38 | | 7 | 1,5,4,158,255,0,236,228 |
| | 8 | 1,5,4,135,255,0,61,35 | | 8 | 1,5,4,143,255,0,188,225 | | 8 | 1,5,4,151,255,0,60,230 | | 8 | 1,5,4,159,255,0,189,36 |
| 53 | 1 | 1,5,4,160,255,0,141,40 | 54 | 1 | 1,5,4,168,255,0,12,234 | 55 | 1 | 1,5,4,176,255,0,140,237 | 56 | 1 | 1,5,4,184,255,0,13,47 |
| | 2 | 1,5,4,161,255,0,220,232 | | 2 | 1,5,4,169,255,0,93,42 | | 2 | 1,5,4,177,255,0,221,45 | | 2 | 1,5,4,185,255,0,92,239 |
| | 3 | 1,5,4,162,255,0,44,232 | | 3 | 1,5,4,170,255,0,173,42 | | 3 | 1,5,4,178,255,0,45,45 | | 3 | 1,5,4,186,255,0,172,239 |
| | 4 | 1,5,4,163,255,0,125,40 | | 4 | 1,5,4,171,255,0,252,234 | | 4 | 1,5,4,179,255,0,124,237 | | 4 | 1,5,4,187,255,0,253,47 |
| | 5 | 1,5,4,164,255,0,204,233 | | 5 | 1,5,4,172,255,0,77,43 | | 5 | 1,5,4,180,255,0,205,44 | | 5 | 1,5,4,188,255,0,76,238 |
| | 6 | 1,5,4,165,255,0,157,41 | | 6 | 1,5,4,173,255,0,28,235 | | 6 | 1,5,4,181,255,0,156,236 | | 6 | 1,5,4,189,255,0,29,46 |
| | 7 | 1,5,4,166,255,0,109,41 | | 7 | 1,5,4,174,255,0,236,235 | | 7 | 1,5,4,182,255,0,108,236 | | 7 | 1,5,4,190,255,0,237,46 |
| | 8 | 1,5,4,167,255,0,60,233 | | 8 | 1,5,4,175,255,0,189,43 | | 8 | 1,5,4,183,255,0,61,44 | | 8 | 1,5,4,191,255,0,188,238 |
| 57 | 1 | 1,5,4,192,255,0,141,54 | 58 | 1 | 1,5,4,200,255,0,12,244 | 59 | 1 | 1,5,4,208,255,0,140,243 | 60 | 1 | 1,5,4,216,255,0,13,49 |
| | 2 | 1,5,4,193,255,0,220,246 | | 2 | 1,5,4,201,255,0,93,52 | | 2 | 1,5,4,209,255,0,221,51 | | 2 | 1,5,4,217,255,0,92,241 |
| | 3 | 1,5,4,194,255,0,44,246 | | 3 | 1,5,4,202,255,0,173,52 | | 3 | 1,5,4,210,255,0,45,51 | | 3 | 1,5,4,218,255,0,172,241 |
| | 4 | 1,5,4,195,255,0,125,54 | | 4 | 1,5,4,203,255,0,252,244 | | 4 | 1,5,4,211,255,0,124,243 | | 4 | 1,5,4,219,255,0,253,49 |
| | 5 | 1,5,4,196,255,0,204,247 | | 5 | 1,5,4,204,255,0,77,53 | | 5 | 1,5,4,212,255,0,205,50 | | 5 | 1,5,4,220,255,0,76,240 |
| | 6 | 1,5,4,197,255,0,157,55 | | 6 | 1,5,4,205,255,0,28,245 | | 6 | 1,5,4,213,255,0,156,242 | | 6 | 1,5,4,221,255,0,29,48 |
| | 7 | 1,5,4,198,255,0,109,55 | | 7 | 1,5,4,206,255,0,236,245 | | 7 | 1,5,4,214,255,0,108,242 | | 7 | 1,5,4,222,255,0,237,48 |
| | 8 | 1,5,4,199,255,0,60,247 | | 8 | 1,5,4,207,255,0,189,53 | | 8 | 1,5,4,215,255,0,61,50 | | 8 | 1,5,4,223,255,0,188,240 |
| 61 | 1 | 1,5,4,224,255,0,140,252 | 62 | 1 | 1,5,4,232,255,0,13,62 | 63 | 1 | 1,5,4,240,255,0,141,57 | 64 | 1 | 1,5,4,248,255,0,12,251 |
| | 2 | 1,5,4,225,255,0,221,60 | | 2 | 1,5,4,233,255,0,92,254 | | 2 | 1,5,4,241,255,0,220,249 | | 2 | 1,5,4,249,255,0,93,59 |
| | 3 | 1,5,4,226,255,0,45,60 | | 3 | 1,5,4,234,255,0,172,254 | | 3 | 1,5,4,242,255,0,44,249 | | 3 | 1,5,4,250,255,0,173,59 |
| | 4 | 1,5,4,227,255,0,124,252 | | 4 | 1,5,4,235,255,0,253,62 | | 4 | 1,5,4,243,255,0,125,57 | | 4 | 1,5,4,251,255,0,252,251 |
| | 5 | 1,5,4,228,255,0,205,61 | | 5 | 1,5,4,236,255,0,76,255 | | 5 | 1,5,4,244,255,0,204,248 | | 5 | 1,5,4,252,255,0,77,58 |
| | 6 | 1,5,4,229,255,0,156,253 | | 6 | 1,5,4,237,255,0,29,63 | | 6 | 1,5,4,245,255,0,157,56 | | 6 | 1,5,4,253,255,0,28,250 |
| | 7 | 1,5,4,230,255,0,108,253 | | 7 | 1,5,4,238,255,0,237,63 | | 7 | 1,5,4,246,255,0,109,56 | | 7 | 1,5,4,254,255,0,236,250 |
| | 8 | 1,5,4,231,255,0,61,61 | | 8 | 1,5,4,239,255,0,188,255 | | 8 | 1,5,4,247,255,0,60,248 | | 8 | 1,5,4,255,255,0,189,58 |

Dual DO Pulse Out

| LT | DO | Dual DO Pulse Out Command Query | LT | DO | Dual DO Pulse Out Command Query | LT | DO | Dual DO Pulse Out Command Query | LT | DO | Dual DO Pulse Out Command Query |
|----|-----|---------------------------------|----|-----|---------------------------------|----|-----|---------------------------------|----|-----|---------------------------------|
| 1 | 1 2 | 1,5,5,0,255,0,140,246 | 2 | 1 2 | 1,5,5,4,255,0,205,55 | 3 | 1 2 | 1,5,5,8,255,0,13,52 | 4 | 1 2 | 1,5,5,12,255,0,76,245 |
| | 3 4 | 1,5,5,1,255,0,221,54 | | 3 4 | 1,5,5,5,255,0,156,247 | | 3 4 | 1,5,5,9,255,0,92,244 | | 3 4 | 1,5,5,13,255,0,29,53 |
| | 5 6 | 1,5,5,2,255,0,45,54 | | 5 6 | 1,5,5,6,255,0,108,247 | | 5 6 | 1,5,5,10,255,0,172,244 | | 5 6 | 1,5,5,14,255,0,237,53 |
| | 7 8 | 1,5,5,3,255,0,124,246 | | 7 8 | 1,5,5,7,255,0,61,55 | | 7 8 | 1,5,5,11,255,0,253,52 | | 7 8 | 1,5,5,15,255,0,188,245 |
| 5 | 1 2 | 1,5,5,16,255,0,141,51 | 6 | 1 2 | 1,5,5,20,255,0,204,242 | 7 | 1 2 | 1,5,5,24,255,0,12,241 | 8 | 1 2 | 1,5,5,28,255,0,77,48 |
| | 3 4 | 1,5,5,17,255,0,220,243 | | 3 4 | 1,5,5,21,255,0,157,50 | | 3 4 | 1,5,5,25,255,0,93,49 | | 3 4 | 1,5,5,29,255,0,28,240 |
| | 5 6 | 1,5,5,18,255,0,44,243 | | 5 6 | 1,5,5,22,255,0,109,50 | | 5 6 | 1,5,5,26,255,0,173,49 | | 5 6 | 1,5,5,30,255,0,236,240 |
| | 7 8 | 1,5,5,19,255,0,125,51 | | 7 8 | 1,5,5,23,255,0,60,242 | | 7 8 | 1,5,5,27,255,0,252,241 | | 7 8 | 1,5,5,31,255,0,189,48 |
| 9 | 1 2 | 1,5,5,32,255,0,141,60 | 10 | 1 2 | 1,5,5,36,255,0,204,253 | 11 | 1 2 | 1,5,5,40,255,0,12,254 | 12 | 1 2 | 1,5,5,44,255,0,77,63 |
| | 3 4 | 1,5,5,33,255,0,220,252 | | 3 4 | 1,5,5,37,255,0,157,61 | | 3 4 | 1,5,5,41,255,0,93,62 | | 3 4 | 1,5,5,45,255,0,28,255 |
| | 5 6 | 1,5,5,34,255,0,44,252 | | 5 6 | 1,5,5,38,255,0,109,61 | | 5 6 | 1,5,5,42,255,0,173,62 | | 5 6 | 1,5,5,46,255,0,236,255 |
| | 7 8 | 1,5,5,35,255,0,125,60 | | 7 8 | 1,5,5,39,255,0,60,253 | | 7 8 | 1,5,5,43,255,0,252,254 | | 7 8 | 1,5,5,47,255,0,189,63 |
| 13 | 1 2 | 1,5,5,48,255,0,140,249 | 14 | 1 2 | 1,5,5,52,255,0,205,56 | 15 | 1 2 | 1,5,5,56,255,0,13,59 | 16 | 1 2 | 1,5,5,60,255,0,76,250 |
| | 3 4 | 1,5,5,49,255,0,221,57 | | 3 4 | 1,5,5,53,255,0,156,248 | | 3 4 | 1,5,5,57,255,0,92,251 | | 3 4 | 1,5,5,61,255,0,29,58 |
| | 5 6 | 1,5,5,50,255,0,45,57 | | 5 6 | 1,5,5,54,255,0,108,248 | | 5 6 | 1,5,5,58,255,0,172,251 | | 5 6 | 1,5,5,62,255,0,237,58 |
| | 7 8 | 1,5,5,51,255,0,124,249 | | 7 8 | 1,5,5,55,255,0,61,56 | | 7 8 | 1,5,5,59,255,0,253,59 | | 7 8 | 1,5,5,63,255,0,188,250 |
| 17 | 1 2 | 1,5,5,64,255,0,141,34 | 18 | 1 2 | 1,5,5,68,255,0,204,227 | 19 | 1 2 | 1,5,5,72,255,0,12,224 | 20 | 1 2 | 1,5,5,76,255,0,77,33 |
| | 3 4 | 1,5,5,65,255,0,220,226 | | 3 4 | 1,5,5,69,255,0,157,35 | | 3 4 | 1,5,5,73,255,0,93,32 | | 3 4 | 1,5,5,77,255,0,28,225 |
| | 5 6 | 1,5,5,66,255,0,44,226 | | 5 6 | 1,5,5,70,255,0,109,35 | | 5 6 | 1,5,5,74,255,0,173,32 | | 5 6 | 1,5,5,78,255,0,236,225 |
| | 7 8 | 1,5,5,67,255,0,125,34 | | 7 8 | 1,5,5,71,255,0,60,227 | | 7 8 | 1,5,5,75,255,0,252,224 | | 7 8 | 1,5,5,79,255,0,189,33 |
| 21 | 1 2 | 1,5,5,80,255,0,140,231 | 22 | 1 2 | 1,5,5,84,255,0,205,38 | 23 | 1 2 | 1,5,5,88,255,0,13,37 | 24 | 1 2 | 1,5,5,92,255,0,76,228 |
| | 3 4 | 1,5,5,81,255,0,221,39 | | 3 4 | 1,5,5,85,255,0,156,230 | | 3 4 | 1,5,5,89,255,0,92,229 | | 3 4 | 1,5,5,93,255,0,29,36 |
| | 5 6 | 1,5,5,82,255,0,45,39 | | 5 6 | 1,5,5,86,255,0,108,230 | | 5 6 | 1,5,5,90,255,0,172,229 | | 5 6 | 1,5,5,94,255,0,237,36 |
| | 7 8 | 1,5,5,83,255,0,124,231 | | 7 8 | 1,5,5,87,255,0,61,38 | | 7 8 | 1,5,5,91,255,0,253,37 | | 7 8 | 1,5,5,95,255,0,188,228 |
| 25 | 1 2 | 1,5,5,96,255,0,140,232 | 26 | 1 2 | 1,5,5,100,255,0,205,41 | 27 | 1 2 | 1,5,5,104,255,0,13,42 | 28 | 1 2 | 1,5,5,108,255,0,76,235 |
| | 3 4 | 1,5,5,97,255,0,221,40 | | 3 4 | 1,5,5,101,255,0,156,233 | | 3 4 | 1,5,5,105,255,0,92,234 | | 3 4 | 1,5,5,109,255,0,29,43 |
| | 5 6 | 1,5,5,98,255,0,45,40 | | 5 6 | 1,5,5,102,255,0,108,233 | | 5 6 | 1,5,5,106,255,0,172,234 | | 5 6 | 1,5,5,110,255,0,237,43 |
| | 7 8 | 1,5,5,99,255,0,124,232 | | 7 8 | 1,5,5,103,255,0,61,41 | | 7 8 | 1,5,5,107,255,0,253,42 | | 7 8 | 1,5,5,111,255,0,188,235 |
| 29 | 1 2 | 1,5,5,112,255,0,141,45 | 30 | 1 2 | 1,5,5,116,255,0,204,236 | 31 | 1 2 | 1,5,5,120,255,0,12,239 | 32 | 1 2 | 1,5,5,124,255,0,77,46 |
| | 3 4 | 1,5,5,113,255,0,220,237 | | 3 4 | 1,5,5,117,255,0,157,44 | | 3 4 | 1,5,5,121,255,0,93,47 | | 3 4 | 1,5,5,125,255,0,28,238 |
| | 5 6 | 1,5,5,114,255,0,44,237 | | 5 6 | 1,5,5,118,255,0,109,44 | | 5 6 | 1,5,5,122,255,0,173,47 | | 5 6 | 1,5,5,126,255,0,236,238 |
| | 7 8 | 1,5,5,115,255,0,125,45 | | 7 8 | 1,5,5,119,255,0,60,236 | | 7 8 | 1,5,5,123,255,0,252,239 | | 7 8 | 1,5,5,127,255,0,189,46 |
| 33 | 1 2 | 1,5,5,128,255,0,141,30 | 34 | 1 2 | 1,5,5,132,255,0,204,223 | 35 | 1 2 | 1,5,5,136,255,0,12,220 | 36 | 1 2 | 1,5,5,140,255,0,77,29 |
| | 3 4 | 1,5,5,129,255,0,220,222 | | 3 4 | 1,5,5,133,255,0,157,31 | | 3 4 | 1,5,5,137,255,0,93,28 | | 3 4 | 1,5,5,141,255,0,28,221 |
| | 5 6 | 1,5,5,130,255,0,44,222 | | 5 6 | 1,5,5,134,255,0,109,31 | | 5 6 | 1,5,5,138,255,0,173,28 | | 5 6 | 1,5,5,142,255,0,236,221 |
| | 7 8 | 1,5,5,131,255,0,125,30 | | 7 8 | 1,5,5,135,255,0,60,223 | | 7 8 | 1,5,5,139,255,0,252,220 | | 7 8 | 1,5,5,143,255,0,189,29 |
| 37 | 1 2 | 1,5,5,144,255,0,140,219 | 38 | 1 2 | 1,5,5,148,255,0,205,26 | 39 | 1 2 | 1,5,5,152,255,0,13,25 | 40 | 1 2 | 1,5,5,156,255,0,76,216 |
| | 3 4 | 1,5,5,145,255,0,221,27 | | 3 4 | 1,5,5,149,255,0,156,218 | | 3 4 | 1,5,5,153,255,0,92,217 | | 3 4 | 1,5,5,157,255,0,29,24 |
| | 5 6 | 1,5,5,146,255,0,45,27 | | 5 6 | 1,5,5,150,255,0,108,218 | | 5 6 | 1,5,5,154,255,0,172,217 | | 5 6 | 1,5,5,158,255,0,237,24 |
| | 7 8 | 1,5,5,147,255,0,124,219 | | 7 8 | 1,5,5,151,255,0,61,26 | | 7 8 | 1,5,5,155,255,0,253,25 | | 7 8 | 1,5,5,159,255,0,188,216 |
| 41 | 1 2 | 1,5,5,160,255,0,140,212 | 42 | 1 2 | 1,5,5,164,255,0,205,21 | 43 | 1 2 | 1,5,5,168,255,0,13,22 | 44 | 1 2 | 1,5,5,172,255,0,76,215 |
| | 3 4 | 1,5,5,161,255,0,221,20 | | 3 4 | 1,5,5,165,255,0,156,213 | | 3 4 | 1,5,5,169,255,0,92,214 | | 3 4 | 1,5,5,173,255,0,29,23 |
| | 5 6 | 1,5,5,162,255,0,45,20 | | 5 6 | 1,5,5,166,255,0,108,213 | | 5 6 | 1,5,5,170,255,0,172,214 | | 5 6 | 1,5,5,174,255,0,237,23 |
| | 7 8 | 1,5,5,163,255,0,124,212 | | 7 8 | 1,5,5,167,255,0,61,21 | | 7 8 | 1,5,5,171,255,0,253,22 | | 7 8 | 1,5,5,175,255,0,188,215 |
| 45 | 1 2 | 1,5,5,176,255,0,141,17 | 46 | 1 2 | 1,5,5,180,255,0,204,208 | 47 | 1 2 | 1,5,5,184,255,0,12,211 | 48 | 1 2 | 1,5,5,188,255,0,77,18 |
| | 3 4 | 1,5,5,177,255,0,220,209 | | 3 4 | 1,5,5,181,255,0,157,16 | | 3 4 | 1,5,5,185,255,0,93,19 | | 3 4 | 1,5,5,189,255,0,28,210 |
| | 5 6 | 1,5,5,178,255,0,44,209 | | 5 6 | 1,5,5,182,255,0,109,16 | | 5 6 | 1,5,5,186,255,0,173,19 | | 5 6 | 1,5,5,190,255,0,236,210 |

| LT | DO | Dual DO Pulse Out Command Query | LT | DO | Dual DO Pulse Out Command Query | LT | DO | Dual DO Pulse Out Command Query | LT | DO | Dual DO Pulse Out Command Query |
|-----------|------------|---------------------------------|-----------|------------|---------------------------------|-----------|------------|---------------------------------|-----------|------------|---------------------------------|
| | 7 8 | 1,5,5,179,255,0,125,17 | | 7 8 | 1,5,5,183,255,0,60,208 | | 7 8 | 1,5,5,187,255,0,252,211 | | 7 8 | 1,5,5,191,255,0,189,18 |
| 49 | 1 2 | 1,5,5,192,255,0,140,202 | 50 | 1 2 | 1,5,5,196,255,0,205,11 | 51 | 1 2 | 1,5,5,200,255,0,13,8 | 52 | 1 2 | 1,5,5,204,255,0,76,201 |
| | 3 4 | 1,5,5,193,255,0,221,10 | | 3 4 | 1,5,5,197,255,0,156,203 | | 3 4 | 1,5,5,201,255,0,92,200 | | 3 4 | 1,5,5,205,255,0,29,9 |
| | 5 6 | 1,5,5,194,255,0,45,10 | | 5 6 | 1,5,5,198,255,0,108,203 | | 5 6 | 1,5,5,202,255,0,172,200 | | 5 6 | 1,5,5,206,255,0,237,9 |
| | 7 8 | 1,5,5,195,255,0,124,202 | | 7 8 | 1,5,5,199,255,0,61,11 | | 7 8 | 1,5,5,203,255,0,253,8 | | 7 8 | 1,5,5,207,255,0,188,201 |
| 53 | 1 2 | 1,5,5,208,255,0,141,15 | 54 | 1 2 | 1,5,5,212,255,0,204,206 | 55 | 1 2 | 1,5,5,216,255,0,12,205 | 56 | 1 2 | 1,5,5,220,255,0,77,12 |
| | 3 4 | 1,5,5,209,255,0,220,207 | | 3 4 | 1,5,5,213,255,0,157,14 | | 3 4 | 1,5,5,217,255,0,93,13 | | 3 4 | 1,5,5,221,255,0,28,204 |
| | 5 6 | 1,5,5,210,255,0,44,207 | | 5 6 | 1,5,5,214,255,0,109,14 | | 5 6 | 1,5,5,218,255,0,173,13 | | 5 6 | 1,5,5,222,255,0,236,204 |
| | 7 8 | 1,5,5,211,255,0,125,15 | | 7 8 | 1,5,5,215,255,0,60,206 | | 7 8 | 1,5,5,219,255,0,252,205 | | 7 8 | 1,5,5,223,255,0,189,12 |
| 57 | 1 2 | 1,5,5,224,255,0,141,0 | 58 | 1 2 | 1,5,5,228,255,0,204,193 | 59 | 1 2 | 1,5,5,232,255,0,12,194 | 60 | 1 2 | 1,5,5,236,255,0,77,3 |
| | 3 4 | 1,5,5,225,255,0,220,192 | | 3 4 | 1,5,5,229,255,0,157,1 | | 3 4 | 1,5,5,233,255,0,93,2 | | 3 4 | 1,5,5,237,255,0,28,195 |
| | 5 6 | 1,5,5,226,255,0,44,192 | | 5 6 | 1,5,5,230,255,0,109,1 | | 5 6 | 1,5,5,234,255,0,173,2 | | 5 6 | 1,5,5,238,255,0,236,195 |
| | 7 8 | 1,5,5,227,255,0,125,0 | | 7 8 | 1,5,5,231,255,0,60,193 | | 7 8 | 1,5,5,235,255,0,252,194 | | 7 8 | 1,5,5,239,255,0,189,3 |
| 61 | 1 2 | 1,5,5,240,255,0,140,197 | 62 | 1 2 | 1,5,5,244,255,0,205,4 | 63 | 1 2 | 1,5,5,248,255,0,13,7 | 64 | 1 2 | 1,5,5,252,255,0,76,198 |
| | 3 4 | 1,5,5,241,255,0,221,5 | | 3 4 | 1,5,5,245,255,0,156,196 | | 3 4 | 1,5,5,249,255,0,92,199 | | 3 4 | 1,5,5,253,255,0,29,6 |
| | 5 6 | 1,5,5,242,255,0,45,5 | | 5 6 | 1,5,5,246,255,0,108,196 | | 5 6 | 1,5,5,250,255,0,172,199 | | 5 6 | 1,5,5,254,255,0,237,6 |
| | 7 8 | 1,5,5,243,255,0,124,197 | | 7 8 | 1,5,5,247,255,0,61,4 | | 7 8 | 1,5,5,251,255,0,253,7 | | 7 8 | 1,5,5,255,255,0,188,198 |

Complete Register Table For R/W Address

Use function code 3 to read, use function code 16 to write.

Register Addresses 0 to 767

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------------------------|-----------|-----|
| 0 | 30000 | 1 | LT 1: DO 1~8 LT 2: DO 1~8 | DO Status | R |
| 1 | 30001 | 1 | LT 3: DO 1~8 LT 4: DO 1~8 | DO Status | R |
| 2 | 30002 | 1 | LT 5: DO 1~8 LT 6: DO 1~8 | DO Status | R |
| 3 | 30003 | 1 | LT 7: DO 1~8 LT 8: DO 1~8 | DO Status | R |
| 4 | 30004 | 1 | LT 9: DO 1~8 LT 10: DO 1~8 | DO Status | R |
| 5 | 30005 | 1 | LT 11: DO 1~8 LT 12: DO 1~8 | DO Status | R |
| 6 | 30006 | 1 | LT 13: DO 1~8 LT 14: DO 1~8 | DO Status | R |
| 7 | 30007 | 1 | LT 15: DO 1~8 LT 16: DO 1~8 | DO Status | R |
| 8 | 30008 | 1 | LT 17: DO 1~8 LT 18: DO 1~8 | DO Status | R |
| 9 | 30009 | 1 | LT 19: DO 1~8 LT 20: DO 1~8 | DO Status | R |
| 10 | 30010 | 1 | LT 21: DO 1~8 LT 22: DO 1~8 | DO Status | R |
| 11 | 30011 | 1 | LT 23: DO 1~8 LT 24: DO 1~8 | DO Status | R |
| 12 | 30012 | 1 | LT 25: DO 1~8 LT 26: DO 1~8 | DO Status | R |
| 13 | 30013 | 1 | LT 27: DO 1~8 LT 28: DO 1~8 | DO Status | R |
| 14 | 30014 | 1 | LT 29: DO 1~8 LT 30: DO 1~8 | DO Status | R |
| 15 | 30015 | 1 | LT 31: DO 1~8 LT 32: DO 1~8 | DO Status | R |
| 16 | 30016 | 1 | LT 33: DO 1~8 LT 34: DO 1~8 | DO Status | R |
| 17 | 30017 | 1 | LT 35: DO 1~8 LT 36: DO 1~8 | DO Status | R |
| 18 | 30018 | 1 | LT 37: DO 1~8 LT 38: DO 1~8 | DO Status | R |
| 19 | 30019 | 1 | LT 39: DO 1~8 LT 40: DO 1~8 | DO Status | R |
| 20 | 30020 | 1 | LT 41: DO 1~8 LT 42: DO 1~8 | DO Status | R |
| 21 | 30021 | 1 | LT 43: DO 1~8 LT 44: DO 1~8 | DO Status | R |
| 22 | 30022 | 1 | LT 45: DO 1~8 LT 46: DO 1~8 | DO Status | R |
| 23 | 30023 | 1 | LT 47: DO 1~8 LT 48: DO 1~8 | DO Status | R |
| 24 | 30024 | 1 | LT 49: DO 1~8 LT 50: DO 1~8 | DO Status | R |
| 25 | 30025 | 1 | LT 51: DO 1~8 LT 52: DO 1~8 | DO Status | R |
| 26 | 30026 | 1 | LT 53: DO 1~8 LT 54: DO 1~8 | DO Status | R |
| 27 | 30027 | 1 | LT 55: DO 1~8 LT 56: DO 1~8 | DO Status | R |
| 28 | 30028 | 1 | LT 57: DO 1~8 LT 58: DO 1~8 | DO Status | R |
| 29 | 30029 | 1 | LT 59: DO 1~8 LT 60: DO 1~8 | DO Status | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------------------------|-----------|-----|
| 30 | 30030 | 1 | LT 61: DO 1~8 LT 62: DO 1~8 | DO Status | R |
| 31 | 30031 | 1 | LT 63: DO 1~8 LT 64: DO 1~8 | DO Status | R |
| 32 | 30032 | 1 | LT 1: DO 1~16 | DI Status | R |
| 33 | 30033 | 1 | LT 2: DO 1~16 | DI Status | R |
| 34 | 30034 | 1 | LT 3: DO 1~16 | DI Status | R |
| 35 | 30035 | 1 | LT 4: DO 1~16 | DI Status | R |
| 36 | 30036 | 1 | LT 5: DO 1~16 | DI Status | R |
| 37 | 30037 | 1 | LT 6: DO 1~16 | DI Status | R |
| 38 | 30038 | 1 | LT 7: DO 1~16 | DI Status | R |
| 39 | 30039 | 1 | LT 8: DO 1~16 | DI Status | R |
| 40 | 30040 | 1 | LT 9: DO 1~16 | DI Status | R |
| 41 | 30041 | 1 | LT 10: DO 1~16 | DI Status | R |
| 42 | 30042 | 1 | LT 11: DO 1~16 | DI Status | R |
| 43 | 30043 | 1 | LT 12: DO 1~16 | DI Status | R |
| 44 | 30044 | 1 | LT 13: DO 1~16 | DI Status | R |
| 45 | 30045 | 1 | LT 14: DO 1~16 | DI Status | R |
| 46 | 30046 | 1 | LT 15: DO 1~16 | DI Status | R |
| 47 | 30047 | 1 | LT 16: DO 1~16 | DI Status | R |
| 48 | 30048 | 1 | LT 17: DO 1~16 | DI Status | R |
| 49 | 30049 | 1 | LT 18: DO 1~16 | DI Status | R |
| 50 | 30050 | 1 | LT 19: DO 1~16 | DI Status | R |
| 51 | 30051 | 1 | LT 20: DO 1~16 | DI Status | R |
| 52 | 30052 | 1 | LT 21: DO 1~16 | DI Status | R |
| 53 | 30053 | 1 | LT 22: DO 1~16 | DI Status | R |
| 54 | 30054 | 1 | LT 23: DO 1~16 | DI Status | R |
| 55 | 30055 | 1 | LT 24: DO 1~16 | DI Status | R |
| 56 | 30056 | 1 | LT 25: DO 1~16 | DI Status | R |
| 57 | 30057 | 1 | LT 26: DO 1~16 | DI Status | R |
| 58 | 30058 | 1 | LT 27: DO 1~16 | DI Status | R |
| 59 | 30059 | 1 | LT 28: DO 1~16 | DI Status | R |
| 60 | 30060 | 1 | LT 29: DO 1~16 | DI Status | R |
| 61 | 30061 | 1 | LT 30: DO 1~16 | DI Status | R |
| 62 | 30062 | 1 | LT 31: DO 1~16 | DI Status | R |
| 63 | 30063 | 1 | LT 32: DO 1~16 | DI Status | R |
| 64 | 30064 | 1 | LT 33: DO 1~16 | DI Status | R |
| 65 | 30065 | 1 | LT 34: DO 1~16 | DI Status | R |
| 66 | 30066 | 1 | LT 35: DO 1~16 | DI Status | R |
| 67 | 30067 | 1 | LT 36: DO 1~16 | DI Status | R |
| 68 | 30068 | 1 | LT 37: DO 1~16 | DI Status | R |
| 69 | 30069 | 1 | LT 38: DO 1~16 | DI Status | R |
| 70 | 30070 | 1 | LT 39: DO 1~16 | DI Status | R |
| 71 | 30071 | 1 | LT 40: DO 1~16 | DI Status | R |
| 72 | 30072 | 1 | LT 41: DO 1~16 | DI Status | R |
| 73 | 30073 | 1 | LT 42: DO 1~16 | DI Status | R |
| 74 | 30074 | 1 | LT 43: DO 1~16 | DI Status | R |
| 75 | 30075 | 1 | LT 44: DO 1~16 | DI Status | R |
| 76 | 30076 | 1 | LT 45: DO 1~16 | DI Status | R |
| 77 | 30077 | 1 | LT 46: DO 1~16 | DI Status | R |
| 78 | 30078 | 1 | LT 47: DO 1~16 | DI Status | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|----------------|-------------------|-----|
| 79 | 30079 | 1 | LT 48: DO 1~16 | DI Status | R |
| 80 | 30080 | 1 | LT 49: DO 1~16 | DI Status | R |
| 81 | 30081 | 1 | LT 50: DO 1~16 | DI Status | R |
| 82 | 30082 | 1 | LT 51: DO 1~16 | DI Status | R |
| 83 | 30083 | 1 | LT 52: DO 1~16 | DI Status | R |
| 84 | 30084 | 1 | LT 53: DO 1~16 | DI Status | R |
| 85 | 30085 | 1 | LT 54: DO 1~16 | DI Status | R |
| 86 | 30086 | 1 | LT 55: DO 1~16 | DI Status | R |
| 87 | 30087 | 1 | LT 56: DO 1~16 | DI Status | R |
| 88 | 30088 | 1 | LT 57: DO 1~16 | DI Status | R |
| 89 | 30089 | 1 | LT 58: DO 1~16 | DI Status | R |
| 90 | 30090 | 1 | LT 59: DO 1~16 | DI Status | R |
| 91 | 30091 | 1 | LT 60: DO 1~16 | DI Status | R |
| 92 | 30092 | 1 | LT 61: DO 1~16 | DI Status | R |
| 93 | 30093 | 1 | LT 62: DO 1~16 | DI Status | R |
| 94 | 30094 | 1 | LT 63: DO 1~16 | DI Status | R |
| 95 | 30095 | 1 | LT 64: DO 1~16 | DI Status | R |
| 96 | 30096 | 1 | LT 1: DI 1~16 | Latched DI Status | R/W |
| 97 | 30097 | 1 | LT 2: DI 1~16 | Latched DI Status | R/W |
| 98 | 30098 | 1 | LT 3: DI 1~16 | Latched DI Status | R/W |
| 99 | 30099 | 1 | LT 4: DI 1~16 | Latched DI Status | R/W |
| 100 | 30100 | 1 | LT 5: DI 1~16 | Latched DI Status | R/W |
| 101 | 30101 | 1 | LT 6: DI 1~16 | Latched DI Status | R/W |
| 102 | 30102 | 1 | LT 7: DI 1~16 | Latched DI Status | R/W |
| 103 | 30103 | 1 | LT 8: DI 1~16 | Latched DI Status | R/W |
| 104 | 30104 | 1 | LT 9: DI 1~16 | Latched DI Status | R/W |
| 105 | 30105 | 1 | LT 10: DI 1~16 | Latched DI Status | R/W |
| 106 | 30106 | 1 | LT 11: DI 1~16 | Latched DI Status | R/W |
| 107 | 30107 | 1 | LT 12: DI 1~16 | Latched DI Status | R/W |
| 108 | 30108 | 1 | LT 13: DI 1~16 | Latched DI Status | R/W |
| 109 | 30109 | 1 | LT 14: DI 1~16 | Latched DI Status | R/W |
| 110 | 30110 | 1 | LT 15: DI 1~16 | Latched DI Status | R/W |
| 111 | 30111 | 1 | LT 16: DI 1~16 | Latched DI Status | R/W |
| 112 | 30112 | 1 | LT 17: DI 1~16 | Latched DI Status | R/W |
| 113 | 30113 | 1 | LT 18: DI 1~16 | Latched DI Status | R/W |
| 114 | 30114 | 1 | LT 19: DI 1~16 | Latched DI Status | R/W |
| 115 | 30115 | 1 | LT 20: DI 1~16 | Latched DI Status | R/W |
| 116 | 30116 | 1 | LT 21: DI 1~16 | Latched DI Status | R/W |
| 117 | 30117 | 1 | LT 22: DI 1~16 | Latched DI Status | R/W |
| 118 | 30118 | 1 | LT 23: DI 1~16 | Latched DI Status | R/W |
| 119 | 30119 | 1 | LT 24: DI 1~16 | Latched DI Status | R/W |
| 120 | 30120 | 1 | LT 25: DI 1~16 | Latched DI Status | R/W |
| 121 | 30121 | 1 | LT 26: DI 1~16 | Latched DI Status | R/W |
| 122 | 30122 | 1 | LT 27: DI 1~16 | Latched DI Status | R/W |
| 123 | 30123 | 1 | LT 28: DI 1~16 | Latched DI Status | R/W |
| 124 | 30124 | 1 | LT 29: DI 1~16 | Latched DI Status | R/W |
| 125 | 30125 | 1 | LT 30: DI 1~16 | Latched DI Status | R/W |
| 126 | 30126 | 1 | LT 31: DI 1~16 | Latched DI Status | R/W |
| 127 | 30127 | 1 | LT 32: DI 1~16 | Latched DI Status | R/W |
| 128 | 30128 | 1 | LT 33: DI 1~16 | Latched DI Status | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|-------------------|------------------------|-----|
| 129 | 30129 | 1 | LT 34: DI 1-16 | Latched DI Status | R/W |
| 130 | 30130 | 1 | LT 35: DI 1-16 | Latched DI Status | R/W |
| 131 | 30131 | 1 | LT 36: DI 1-16 | Latched DI Status | R/W |
| 132 | 30132 | 1 | LT 37: DI 1-16 | Latched DI Status | R/W |
| 133 | 30133 | 1 | LT 38: DI 1-16 | Latched DI Status | R/W |
| 134 | 30134 | 1 | LT 39: DI 1-16 | Latched DI Status | R/W |
| 135 | 30135 | 1 | LT 40: DI 1-16 | Latched DI Status | R/W |
| 136 | 30136 | 1 | LT 41: DI 1-16 | Latched DI Status | R/W |
| 137 | 30137 | 1 | LT 42: DI 1-16 | Latched DI Status | R/W |
| 138 | 30138 | 1 | LT 43: DI 1-16 | Latched DI Status | R/W |
| 139 | 30139 | 1 | LT 44: DI 1-16 | Latched DI Status | R/W |
| 140 | 30140 | 1 | LT 45: DI 1-16 | Latched DI Status | R/W |
| 141 | 30141 | 1 | LT 46: DI 1-16 | Latched DI Status | R/W |
| 142 | 30142 | 1 | LT 47: DI 1-16 | Latched DI Status | R/W |
| 143 | 30143 | 1 | LT 48: DI 1-16 | Latched DI Status | R/W |
| 144 | 30144 | 1 | LT 49: DI 1-16 | Latched DI Status | R/W |
| 145 | 30145 | 1 | LT 50: DI 1-16 | Latched DI Status | R/W |
| 146 | 30146 | 1 | LT 51: DI 1-16 | Latched DI Status | R/W |
| 147 | 30147 | 1 | LT 52: DI 1-16 | Latched DI Status | R/W |
| 148 | 30148 | 1 | LT 53: DI 1-16 | Latched DI Status | R/W |
| 149 | 30149 | 1 | LT 54: DI 1-16 | Latched DI Status | R/W |
| 150 | 30150 | 1 | LT 55: DI 1-16 | Latched DI Status | R/W |
| 151 | 30151 | 1 | LT 56: DI 1-16 | Latched DI Status | R/W |
| 152 | 30152 | 1 | LT 57: DI 1-16 | Latched DI Status | R/W |
| 153 | 30153 | 1 | LT 58: DI 1-16 | Latched DI Status | R/W |
| 154 | 30154 | 1 | LT 59: DI 1-16 | Latched DI Status | R/W |
| 155 | 30155 | 1 | LT 60: DI 1-16 | Latched DI Status | R/W |
| 156 | 30156 | 1 | LT 61: DI 1-16 | Latched DI Status | R/W |
| 157 | 30157 | 1 | LT 62: DI 1-16 | Latched DI Status | R/W |
| 158 | 30158 | 1 | LT 63: DI 1-16 | Latched DI Status | R/W |
| 159 | 30159 | 1 | LT 64: DI 1-16 | Latched DI Status | R/W |
| 160 | 30160 | 1 | Groups 1 to 16 | Group Status Map | R |
| 161 | 30161 | 1 | Groups 17 to 32 | Group Status Map | R |
| 162 | 30162 | 1 | Groups 33 to 48 | Group Status Map | R |
| 163 | 30163 | 1 | Groups 49 to 63 | Group Status Map | R |
| 164 | 30164 | 1 | Patterns 1 to 16 | Pattern Activation Map | R/W |
| 165 | 30165 | 1 | Patterns 17 to 32 | Pattern Activation Map | R/W |
| 166 | 30166 | 1 | Patterns 33 to 48 | Pattern Activation Map | R/W |
| 167 | 30167 | 1 | Patterns 49 to 64 | Pattern Activation Map | R/W |
| 168 | 30168 | 1 | LT 1 to 16 | LT Alive Status Map | R |
| 169 | 30169 | 1 | LT 17 to 32 | LT Alive Status Map | R |
| 170 | 30170 | 1 | LT 33 to 48 | LT Alive Status Map | R |
| 171 | 30171 | 1 | LT 49 to 64 | LT Alive Status Map | R |
| 256 | 30256 | 1 | LT 1: AI 1 | AI Value | R |
| 257 | 30257 | 1 | LT 1: AI 2 | | R |
| 258 | 30258 | 1 | LT 1: AI 3 | | R |
| 259 | 30259 | 1 | LT 1: AI 4 | | R |
| 260 | 30260 | 1 | LT 2: AI 1 | AI Value | R |
| 261 | 30261 | 1 | LT 2: AI 2 | | R |
| 262 | 30262 | 1 | LT 2: AI 3 | | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 263 | 30263 | 1 | LT 2: AI 4 | | R |
| 264 | 30264 | 1 | LT 3: AI 1 | AI Value | R |
| 265 | 30265 | 1 | LT 3: AI 2 | | R |
| 266 | 30266 | 1 | LT 3: AI 3 | | R |
| 267 | 30267 | 1 | LT 3: AI 4 | | R |
| 268 | 30268 | 1 | LT 4: AI 1 | AI Value | R |
| 269 | 30269 | 1 | LT 4: AI 2 | | R |
| 270 | 30270 | 1 | LT 4: AI 3 | | R |
| 271 | 30271 | 1 | LT 4: AI 4 | | R |
| 272 | 30272 | 1 | LT 5: AI 1 | AI Value | R |
| 273 | 30273 | 1 | LT 5: AI 2 | | R |
| 274 | 30274 | 1 | LT 5: AI 3 | | R |
| 275 | 30275 | 1 | LT 5: AI 4 | | R |
| 276 | 30276 | 1 | LT 6: AI 1 | AI Value | R |
| 277 | 30277 | 1 | LT 6: AI 2 | | R |
| 278 | 30278 | 1 | LT 6: AI 3 | | R |
| 279 | 30279 | 1 | LT 6: AI 4 | | R |
| 280 | 30280 | 1 | LT 7: AI 1 | AI Value | R |
| 281 | 30281 | 1 | LT 7: AI 2 | | R |
| 282 | 30282 | 1 | LT 7: AI 3 | | R |
| 283 | 30283 | 1 | LT 7: AI 4 | | R |
| 284 | 30284 | 1 | LT 8: AI 1 | AI Value | R |
| 285 | 30285 | 1 | LT 8: AI 2 | | R |
| 286 | 30286 | 1 | LT 8: AI 3 | | R |
| 287 | 30287 | 1 | LT 8: AI 4 | | R |
| 288 | 30288 | 1 | LT 9: AI 1 | AI Value | R |
| 289 | 30289 | 1 | LT 9: AI 2 | | R |
| 290 | 30290 | 1 | LT 9: AI 3 | | R |
| 291 | 30291 | 1 | LT 9: AI 4 | | R |
| 292 | 30292 | 1 | LT 10: AI 1 | AI Value | R |
| 293 | 30293 | 1 | LT 10: AI 2 | | R |
| 294 | 30294 | 1 | LT 10: AI 3 | | R |
| 295 | 30295 | 1 | LT 10: AI 4 | | R |
| 296 | 30296 | 1 | LT 11: AI 1 | AI Value | R |
| 297 | 30297 | 1 | LT 11: AI 2 | | R |
| 298 | 30298 | 1 | LT 11: AI 3 | | R |
| 299 | 30299 | 1 | LT 11: AI 4 | | R |
| 300 | 30300 | 1 | LT 12: AI 1 | AI Value | R |
| 301 | 30301 | 1 | LT 12: AI 2 | | R |
| 302 | 30302 | 1 | LT 12: AI 3 | | R |
| 303 | 30303 | 1 | LT 12: AI 4 | | R |
| 304 | 30304 | 1 | LT 13: AI 1 | AI Value | R |
| 305 | 30305 | 1 | LT 13: AI 2 | | R |
| 306 | 30306 | 1 | LT 13: AI 3 | | R |
| 307 | 30307 | 1 | LT 13: AI 4 | | R |
| 308 | 30308 | 1 | LT 14: AI 1 | AI Value | R |
| 309 | 30309 | 1 | LT 14: AI 2 | | R |
| 310 | 30310 | 1 | LT 14: AI 3 | | R |
| 311 | 30311 | 1 | LT 14: AI 4 | | R |
| 312 | 30312 | 1 | LT 15: AI 1 | | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 313 | 30313 | 1 | LT 15: AI 2 | AI Value | R |
| 314 | 30314 | 1 | LT 15: AI 3 | | R |
| 315 | 30315 | 1 | LT 15: AI 4 | | R |
| 316 | 30316 | 1 | LT 16: AI 1 | AI Value | R |
| 317 | 30317 | 1 | LT 16: AI 2 | | R |
| 318 | 30318 | 1 | LT 16: AI 3 | | R |
| 319 | 30319 | 1 | LT 16: AI 4 | | R |
| 320 | 30320 | 1 | LT 17: AI 4 | AI Value | R |
| 321 | 30321 | 1 | LT 17: AI 4 | | R |
| 322 | 30322 | 1 | LT 17: AI 4 | | R |
| 323 | 30323 | 1 | LT 17: AI 4 | | R |
| 324 | 30324 | 1 | LT 18: AI 4 | AI Value | R |
| 325 | 30325 | 1 | LT 18: AI 4 | | R |
| 326 | 30326 | 1 | LT 18: AI 4 | | R |
| 327 | 30327 | 1 | LT 18: AI 4 | | R |
| 328 | 30328 | 1 | LT 19: AI 4 | AI Value | R |
| 329 | 30329 | 1 | LT 19: AI 4 | | R |
| 330 | 30330 | 1 | LT 19: AI 4 | | R |
| 331 | 30331 | 1 | LT 19: AI 4 | | R |
| 332 | 30332 | 1 | LT 20: AI 4 | AI Value | R |
| 333 | 30333 | 1 | LT 20: AI 4 | | R |
| 334 | 30334 | 1 | LT 20: AI 4 | | R |
| 335 | 30335 | 1 | LT 20: AI 4 | | R |
| 336 | 30336 | 1 | LT 21: AI 4 | AI Value | R |
| 337 | 30337 | 1 | LT 21: AI 4 | | R |
| 338 | 30338 | 1 | LT 21: AI 4 | | R |
| 339 | 30339 | 1 | LT 21: AI 4 | | R |
| 340 | 30340 | 1 | LT 22: AI 4 | AI Value | R |
| 341 | 30341 | 1 | LT 22: AI 4 | | R |
| 342 | 30342 | 1 | LT 22: AI 4 | | R |
| 343 | 30343 | 1 | LT 22: AI 4 | | R |
| 344 | 30344 | 1 | LT 23: AI 4 | AI Value | R |
| 345 | 30345 | 1 | LT 23: AI 4 | | R |
| 346 | 30346 | 1 | LT 23: AI 4 | | R |
| 347 | 30347 | 1 | LT 23: AI 4 | | R |
| 348 | 30348 | 1 | LT 24: AI 4 | AI Value | R |
| 349 | 30349 | 1 | LT 24: AI 4 | | R |
| 350 | 30350 | 1 | LT 24: AI 4 | | R |
| 351 | 30351 | 1 | LT 24: AI 4 | | R |
| 352 | 30352 | 1 | LT 25: AI 4 | AI Value | R |
| 353 | 30353 | 1 | LT 25: AI 4 | | R |
| 354 | 30354 | 1 | LT 25: AI 4 | | R |
| 355 | 30355 | 1 | LT 25: AI 4 | | R |
| 356 | 30356 | 1 | LT 26: AI 4 | AI Value | R |
| 357 | 30357 | 1 | LT 26: AI 4 | | R |
| 358 | 30358 | 1 | LT 26: AI 4 | | R |
| 359 | 30359 | 1 | LT 26: AI 4 | | R |
| 360 | 30360 | 1 | LT 27: AI 4 | AI Value | R |
| 361 | 30361 | 1 | LT 27: AI 4 | | R |
| 362 | 30362 | 1 | LT 27: AI 4 | | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 363 | 30363 | 1 | LT 27: AI 4 | | R |
| 364 | 30364 | 1 | LT 28: AI 4 | AI Value | R |
| 365 | 30365 | 1 | LT 28: AI 4 | | R |
| 366 | 30366 | 1 | LT 28: AI 4 | | R |
| 367 | 30367 | 1 | LT 28: AI 4 | | R |
| 368 | 30368 | 1 | LT 29: AI 4 | AI Value | R |
| 369 | 30369 | 1 | LT 29: AI 4 | | R |
| 370 | 30370 | 1 | LT 29: AI 4 | | R |
| 371 | 30371 | 1 | LT 29: AI 4 | | R |
| 372 | 30372 | 1 | LT 30: AI 4 | AI Value | R |
| 373 | 30373 | 1 | LT 30: AI 4 | | R |
| 374 | 30374 | 1 | LT 30: AI 4 | | R |
| 375 | 30375 | 1 | LT 30: AI 4 | | R |
| 376 | 30376 | 1 | LT 31: AI 4 | AI Value | R |
| 377 | 30377 | 1 | LT 31: AI 4 | | R |
| 378 | 30378 | 1 | LT 31: AI 4 | | R |
| 379 | 30379 | 1 | LT 31: AI 4 | | R |
| 380 | 30380 | 1 | LT 32: AI 4 | AI Value | R |
| 381 | 30381 | 1 | LT 32: AI 4 | | R |
| 382 | 30382 | 1 | LT 32: AI 4 | | R |
| 383 | 30383 | 1 | LT 32: AI 4 | | R |
| 384 | 30384 | 1 | LT 33: AI 4 | AI Value | R |
| 385 | 30385 | 1 | LT 33: AI 4 | | R |
| 386 | 30386 | 1 | LT 33: AI 4 | | R |
| 387 | 30387 | 1 | LT 33: AI 4 | | R |
| 388 | 30388 | 1 | LT 34: AI 4 | AI Value | R |
| 389 | 30389 | 1 | LT 34: AI 4 | | R |
| 390 | 30390 | 1 | LT 34: AI 4 | | R |
| 391 | 30391 | 1 | LT 34: AI 4 | | R |
| 392 | 30392 | 1 | LT 35: AI 4 | AI Value | R |
| 393 | 30393 | 1 | LT 35: AI 4 | | R |
| 394 | 30394 | 1 | LT 35: AI 4 | | R |
| 395 | 30395 | 1 | LT 35: AI 4 | | R |
| 396 | 30396 | 1 | LT 36: AI 4 | AI Value | R |
| 397 | 30397 | 1 | LT 36: AI 4 | | R |
| 398 | 30398 | 1 | LT 36: AI 4 | | R |
| 399 | 30399 | 1 | LT 36: AI 4 | | R |
| 400 | 30400 | 1 | LT 37: AI 4 | AI Value | R |
| 401 | 30401 | 1 | LT 37: AI 4 | | R |
| 402 | 30402 | 1 | LT 37: AI 4 | | R |
| 403 | 30403 | 1 | LT 37: AI 4 | | R |
| 404 | 30404 | 1 | LT 38: AI 4 | AI Value | R |
| 405 | 30405 | 1 | LT 38: AI 4 | | R |
| 406 | 30406 | 1 | LT 38: AI 4 | | R |
| 407 | 30407 | 1 | LT 38: AI 4 | | R |
| 408 | 30408 | 1 | LT 39: AI 4 | AI Value | R |
| 409 | 30409 | 1 | LT 39: AI 4 | | R |
| 410 | 30410 | 1 | LT 39: AI 4 | | R |
| 411 | 30411 | 1 | LT 39: AI 4 | | R |
| 412 | 30412 | 1 | LT 40: AI 4 | | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 413 | 30413 | 1 | LT 40: AI 4 | AI Value | R |
| 414 | 30414 | 1 | LT 40: AI 4 | | R |
| 415 | 30415 | 1 | LT 40: AI 4 | | R |
| 416 | 30416 | 1 | LT 41: AI 4 | AI Value | R |
| 417 | 30417 | 1 | LT 41: AI 4 | | R |
| 418 | 30418 | 1 | LT 41: AI 4 | | R |
| 419 | 30419 | 1 | LT 41: AI 4 | | R |
| 420 | 30420 | 1 | LT 42: AI 4 | AI Value | R |
| 421 | 30421 | 1 | LT 42: AI 4 | | R |
| 422 | 30422 | 1 | LT 42: AI 4 | | R |
| 423 | 30423 | 1 | LT 42: AI 4 | | R |
| 424 | 30424 | 1 | LT 43: AI 4 | AI Value | R |
| 425 | 30425 | 1 | LT 43: AI 4 | | R |
| 426 | 30426 | 1 | LT 43: AI 4 | | R |
| 427 | 30427 | 1 | LT 43: AI 4 | | R |
| 428 | 30428 | 1 | LT 44: AI 4 | AI Value | R |
| 429 | 30429 | 1 | LT 44: AI 4 | | R |
| 430 | 30430 | 1 | LT 44: AI 4 | | R |
| 431 | 30431 | 1 | LT 44: AI 4 | | R |
| 432 | 30432 | 1 | LT 45: AI 4 | AI Value | R |
| 433 | 30433 | 1 | LT 45: AI 4 | | R |
| 434 | 30434 | 1 | LT 45: AI 4 | | R |
| 435 | 30435 | 1 | LT 45: AI 4 | | R |
| 436 | 30436 | 1 | LT 46: AI 4 | AI Value | R |
| 437 | 30437 | 1 | LT 46: AI 4 | | R |
| 438 | 30438 | 1 | LT 46: AI 4 | | R |
| 439 | 30439 | 1 | LT 46: AI 4 | | R |
| 440 | 30440 | 1 | LT 47: AI 4 | AI Value | R |
| 441 | 30441 | 1 | LT 47: AI 4 | | R |
| 442 | 30442 | 1 | LT 47: AI 4 | | R |
| 443 | 30443 | 1 | LT 47: AI 4 | | R |
| 444 | 30444 | 1 | LT 48: AI 4 | AI Value | R |
| 445 | 30445 | 1 | LT 48: AI 4 | | R |
| 446 | 30446 | 1 | LT 48: AI 4 | | R |
| 447 | 30447 | 1 | LT 48: AI 4 | | R |
| 448 | 30448 | 1 | LT 49: AI 4 | AI Value | R |
| 449 | 30449 | 1 | LT 49: AI 4 | | R |
| 450 | 30450 | 1 | LT 49: AI 4 | | R |
| 451 | 30451 | 1 | LT 49: AI 4 | | R |
| 452 | 30452 | 1 | LT 50: AI 4 | AI Value | R |
| 453 | 30453 | 1 | LT 50: AI 4 | | R |
| 454 | 30454 | 1 | LT 50: AI 4 | | R |
| 455 | 30455 | 1 | LT 50: AI 4 | | R |
| 456 | 30456 | 1 | LT 51: AI 4 | AI Value | R |
| 457 | 30457 | 1 | LT 51: AI 4 | | R |
| 458 | 30458 | 1 | LT 51: AI 4 | | R |
| 459 | 30459 | 1 | LT 51: AI 4 | | R |
| 460 | 30460 | 1 | LT 52: AI 4 | AI Value | R |
| 461 | 30461 | 1 | LT 52: AI 4 | | R |
| 462 | 30462 | 1 | LT 52: AI 4 | | R |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 463 | 30463 | 1 | LT 52: AI 4 | | R |
| 464 | 30464 | 1 | LT 53: AI 4 | AI Value | R |
| 465 | 30465 | 1 | LT 53: AI 4 | | R |
| 466 | 30466 | 1 | LT 53: AI 4 | | R |
| 467 | 30467 | 1 | LT 53: AI 4 | | R |
| 468 | 30468 | 1 | LT 54: AI 4 | AI Value | R |
| 469 | 30469 | 1 | LT 54: AI 4 | | R |
| 470 | 30470 | 1 | LT 54: AI 4 | | R |
| 471 | 30471 | 1 | LT 54: AI 4 | | R |
| 472 | 30472 | 1 | LT 55: AI 4 | AI Value | R |
| 473 | 30473 | 1 | LT 55: AI 4 | | R |
| 474 | 30474 | 1 | LT 55: AI 4 | | R |
| 475 | 30475 | 1 | LT 55: AI 4 | | R |
| 476 | 30476 | 1 | LT 56: AI 4 | AI Value | R |
| 477 | 30477 | 1 | LT 56: AI 4 | | R |
| 478 | 30478 | 1 | LT 56: AI 4 | | R |
| 479 | 30479 | 1 | LT 56: AI 4 | | R |
| 480 | 30480 | 1 | LT 57: AI 4 | AI Value | R |
| 481 | 30481 | 1 | LT 57: AI 4 | | R |
| 482 | 30482 | 1 | LT 57: AI 4 | | R |
| 483 | 30483 | 1 | LT 57: AI 4 | | R |
| 484 | 30484 | 1 | LT 58: AI 4 | AI Value | R |
| 485 | 30485 | 1 | LT 58: AI 4 | | R |
| 486 | 30486 | 1 | LT 58: AI 4 | | R |
| 487 | 30487 | 1 | LT 58: AI 4 | | R |
| 488 | 30488 | 1 | LT 59: AI 4 | AI Value | R |
| 489 | 30489 | 1 | LT 59: AI 4 | | R |
| 490 | 30490 | 1 | LT 59: AI 4 | | R |
| 491 | 30491 | 1 | LT 59: AI 4 | | R |
| 492 | 30492 | 1 | LT 60: AI 4 | AI Value | R |
| 493 | 30493 | 1 | LT 60: AI 4 | | R |
| 494 | 30494 | 1 | LT 60: AI 4 | | R |
| 495 | 30495 | 1 | LT 60: AI 4 | | R |
| 496 | 30496 | 1 | LT 61: AI 4 | AI Value | R |
| 497 | 30497 | 1 | LT 61: AI 4 | | R |
| 498 | 30498 | 1 | LT 61: AI 4 | | R |
| 499 | 30499 | 1 | LT 61: AI 4 | | R |
| 500 | 30500 | 1 | LT 62: AI 4 | AI Value | R |
| 501 | 30501 | 1 | LT 62: AI 4 | | R |
| 502 | 30502 | 1 | LT 62: AI 4 | | R |
| 503 | 30503 | 1 | LT 62: AI 4 | | R |
| 504 | 30504 | 1 | LT 63: AI 4 | AI Value | R |
| 505 | 30505 | 1 | LT 63: AI 4 | | R |
| 506 | 30506 | 1 | LT 63: AI 4 | | R |
| 507 | 30507 | 1 | LT 63: AI 4 | | R |
| 508 | 30508 | 1 | LT 64: AI 4 | AI Value | R |
| 509 | 30509 | 1 | LT 64: AI 4 | | R |
| 510 | 30510 | 1 | LT 64: AI 4 | | R |
| 511 | 30511 | 1 | LT 64: AI 4 | | R |
| 512 | 30512 | 1 | LT 1: AO 1 | | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 513 | 30513 | 1 | LT 1: AO 2 | AO Value | R/W |
| 514 | 30514 | 1 | LT 1: AO 3 | | R/W |
| 515 | 30515 | 1 | LT 1: AO 4 | | R/W |
| 516 | 30516 | 1 | LT 2: AO 1 | AO Value | R/W |
| 517 | 30517 | 1 | LT 2: AO 2 | | R/W |
| 518 | 30518 | 1 | LT 2: AO 3 | | R/W |
| 519 | 30519 | 1 | LT 2: AO 4 | | R/W |
| 520 | 30520 | 1 | LT 3: AO 1 | AO Value | R/W |
| 521 | 30521 | 1 | LT 3: AO 2 | | R/W |
| 522 | 30522 | 1 | LT 3: AO 3 | | R/W |
| 523 | 30523 | 1 | LT 3: AO 4 | | R/W |
| 524 | 30524 | 1 | LT 4: AO 1 | AO Value | R/W |
| 525 | 30525 | 1 | LT 4: AO 2 | | R/W |
| 526 | 30526 | 1 | LT 4: AO 3 | | R/W |
| 527 | 30527 | 1 | LT 4: AO 4 | | R/W |
| 528 | 30528 | 1 | LT 5: AO 1 | AO Value | R/W |
| 529 | 30529 | 1 | LT 5: AO 2 | | R/W |
| 530 | 30530 | 1 | LT 5: AO 3 | | R/W |
| 531 | 30531 | 1 | LT 5: AO 4 | | R/W |
| 532 | 30532 | 1 | LT 6: AO 1 | AO Value | R/W |
| 533 | 30533 | 1 | LT 6: AO 2 | | R/W |
| 534 | 30534 | 1 | LT 6: AO 3 | | R/W |
| 535 | 30535 | 1 | LT 6: AO 4 | | R/W |
| 536 | 30536 | 1 | LT 7: AO 1 | AO Value | R/W |
| 537 | 30537 | 1 | LT 7: AO 2 | | R/W |
| 538 | 30538 | 1 | LT 7: AO 3 | | R/W |
| 539 | 30539 | 1 | LT 7: AO 4 | | R/W |
| 540 | 30540 | 1 | LT 8: AO 1 | AO Value | R/W |
| 541 | 30541 | 1 | LT 8: AO 2 | | R/W |
| 542 | 30542 | 1 | LT 8: AO 3 | | R/W |
| 543 | 30543 | 1 | LT 8: AO 4 | | R/W |
| 544 | 30544 | 1 | LT 9: AO 1 | AO Value | R/W |
| 545 | 30545 | 1 | LT 9: AO 2 | | R/W |
| 546 | 30546 | 1 | LT 9: AO 3 | | R/W |
| 547 | 30547 | 1 | LT 9: AO 4 | | R/W |
| 548 | 30548 | 1 | LT 10: AO 1 | AO Value | R/W |
| 549 | 30549 | 1 | LT 10: AO 2 | | R/W |
| 550 | 30550 | 1 | LT 10: AO 3 | | R/W |
| 551 | 30551 | 1 | LT 10: AO 4 | | R/W |
| 552 | 30552 | 1 | LT 11: AO 1 | AO Value | R/W |
| 553 | 30553 | 1 | LT 11: AO 2 | | R/W |
| 554 | 30554 | 1 | LT 11: AO 3 | | R/W |
| 555 | 30555 | 1 | LT 11: AO 4 | | R/W |
| 556 | 30556 | 1 | LT 12: AO 1 | AO Value | R/W |
| 557 | 30557 | 1 | LT 12: AO 2 | | R/W |
| 558 | 30558 | 1 | LT 12: AO 3 | | R/W |
| 559 | 30559 | 1 | LT 12: AO 4 | | R/W |
| 560 | 30560 | 1 | LT 13: AO 1 | AO Value | R/W |
| 561 | 30561 | 1 | LT 13: AO 2 | | R/W |
| 562 | 30562 | 1 | LT 13: AO 3 | | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 563 | 30563 | 1 | LT 13: AO 4 | | R/W |
| 564 | 30564 | 1 | LT 14: AO 1 | AO Value | R/W |
| 565 | 30565 | 1 | LT 14: AO 2 | | R/W |
| 566 | 30566 | 1 | LT 14: AO 3 | | R/W |
| 567 | 30567 | 1 | LT 14: AO 4 | | R/W |
| 568 | 30568 | 1 | LT 15: AO 1 | AO Value | R/W |
| 569 | 30569 | 1 | LT 15: AO 2 | | R/W |
| 570 | 30570 | 1 | LT 15: AO 3 | | R/W |
| 571 | 30571 | 1 | LT 15: AO 4 | | R/W |
| 572 | 30572 | 1 | LT 16: AO 1 | AO Value | R/W |
| 573 | 30573 | 1 | LT 16: AO 2 | | R/W |
| 574 | 30574 | 1 | LT 16: AO 3 | | R/W |
| 575 | 30575 | 1 | LT 16: AO 4 | | R/W |
| 576 | 30576 | 1 | LT 17: AO 4 | AO Value | R/W |
| 577 | 30577 | 1 | LT 17: AO 4 | | R/W |
| 578 | 30578 | 1 | LT 17: AO 4 | | R/W |
| 579 | 30579 | 1 | LT 17: AO 4 | | R/W |
| 580 | 30580 | 1 | LT 18: AO 4 | AO Value | R/W |
| 581 | 30581 | 1 | LT 18: AO 4 | | R/W |
| 582 | 30582 | 1 | LT 18: AO 4 | | R/W |
| 583 | 30583 | 1 | LT 18: AO 4 | | R/W |
| 584 | 30584 | 1 | LT 19: AO 4 | AO Value | R/W |
| 585 | 30585 | 1 | LT 19: AO 4 | | R/W |
| 586 | 30586 | 1 | LT 19: AO 4 | | R/W |
| 587 | 30587 | 1 | LT 19: AO 4 | | R/W |
| 588 | 30588 | 1 | LT 20: AO 4 | AO Value | R/W |
| 589 | 30589 | 1 | LT 20: AO 4 | | R/W |
| 590 | 30590 | 1 | LT 20: AO 4 | | R/W |
| 591 | 30591 | 1 | LT 20: AO 4 | | R/W |
| 592 | 30592 | 1 | LT 21: AO 4 | AO Value | R/W |
| 593 | 30593 | 1 | LT 21: AO 4 | | R/W |
| 594 | 30594 | 1 | LT 21: AO 4 | | R/W |
| 595 | 30595 | 1 | LT 21: AO 4 | | R/W |
| 596 | 30596 | 1 | LT 22: AO 4 | AO Value | R/W |
| 597 | 30597 | 1 | LT 22: AO 4 | | R/W |
| 598 | 30598 | 1 | LT 22: AO 4 | | R/W |
| 599 | 30599 | 1 | LT 22: AO 4 | | R/W |
| 600 | 30600 | 1 | LT 23: AO 4 | AO Value | R/W |
| 601 | 30601 | 1 | LT 23: AO 4 | | R/W |
| 602 | 30602 | 1 | LT 23: AO 4 | | R/W |
| 603 | 30603 | 1 | LT 23: AO 4 | | R/W |
| 604 | 30604 | 1 | LT 24: AO 4 | AO Value | R/W |
| 605 | 30605 | 1 | LT 24: AO 4 | | R/W |
| 606 | 30606 | 1 | LT 24: AO 4 | | R/W |
| 607 | 30607 | 1 | LT 24: AO 4 | | R/W |
| 608 | 30608 | 1 | LT 25: AO 4 | AO Value | R/W |
| 609 | 30609 | 1 | LT 25: AO 4 | | R/W |
| 610 | 30610 | 1 | LT 25: AO 4 | | R/W |
| 611 | 30611 | 1 | LT 25: AO 4 | | R/W |
| 612 | 30612 | 1 | LT 26: AO 4 | | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 613 | 30613 | 1 | LT 26: AO 4 | AO Value | R/W |
| 614 | 30614 | 1 | LT 26: AO 4 | | R/W |
| 615 | 30615 | 1 | LT 26: AO 4 | | R/W |
| 616 | 30616 | 1 | LT 27: AO 4 | AO Value | R/W |
| 617 | 30617 | 1 | LT 27: AO 4 | | R/W |
| 618 | 30618 | 1 | LT 27: AO 4 | | R/W |
| 619 | 30619 | 1 | LT 27: AO 4 | | R/W |
| 620 | 30620 | 1 | LT 28: AO 4 | AO Value | R/W |
| 621 | 30621 | 1 | LT 28: AO 4 | | R/W |
| 622 | 30622 | 1 | LT 28: AO 4 | | R/W |
| 623 | 30623 | 1 | LT 28: AO 4 | | R/W |
| 624 | 30624 | 1 | LT 29: AO 4 | AO Value | R/W |
| 625 | 30625 | 1 | LT 29: AO 4 | | R/W |
| 626 | 30626 | 1 | LT 29: AO 4 | | R/W |
| 627 | 30627 | 1 | LT 29: AO 4 | | R/W |
| 628 | 30628 | 1 | LT 30: AO 4 | AO Value | R/W |
| 629 | 30629 | 1 | LT 30: AO 4 | | R/W |
| 630 | 30630 | 1 | LT 30: AO 4 | | R/W |
| 631 | 30631 | 1 | LT 30: AO 4 | | R/W |
| 632 | 30632 | 1 | LT 31: AO 4 | AO Value | R/W |
| 633 | 30633 | 1 | LT 31: AO 4 | | R/W |
| 634 | 30634 | 1 | LT 31: AO 4 | | R/W |
| 635 | 30635 | 1 | LT 31: AO 4 | | R/W |
| 636 | 30636 | 1 | LT 32: AO 4 | AO Value | R/W |
| 637 | 30637 | 1 | LT 32: AO 4 | | R/W |
| 638 | 30638 | 1 | LT 32: AO 4 | | R/W |
| 639 | 30639 | 1 | LT 32: AO 4 | | R/W |
| 640 | 30640 | 1 | LT 33: AO 4 | AO Value | R/W |
| 641 | 30641 | 1 | LT 33: AO 4 | | R/W |
| 642 | 30642 | 1 | LT 33: AO 4 | | R/W |
| 643 | 30643 | 1 | LT 33: AO 4 | | R/W |
| 644 | 30644 | 1 | LT 34: AO 4 | AO Value | R/W |
| 645 | 30645 | 1 | LT 34: AO 4 | | R/W |
| 646 | 30646 | 1 | LT 34: AO 4 | | R/W |
| 647 | 30647 | 1 | LT 34: AO 4 | | R/W |
| 648 | 30648 | 1 | LT 35: AO 4 | AO Value | R/W |
| 649 | 30649 | 1 | LT 35: AO 4 | | R/W |
| 650 | 30650 | 1 | LT 35: AO 4 | | R/W |
| 651 | 30651 | 1 | LT 35: AO 4 | | R/W |
| 652 | 30652 | 1 | LT 36: AO 4 | AO Value | R/W |
| 653 | 30653 | 1 | LT 36: AO 4 | | R/W |
| 654 | 30654 | 1 | LT 36: AO 4 | | R/W |
| 655 | 30655 | 1 | LT 36: AO 4 | | R/W |
| 656 | 30656 | 1 | LT 37: AO 4 | AO Value | R/W |
| 657 | 30657 | 1 | LT 37: AO 4 | | R/W |
| 658 | 30658 | 1 | LT 37: AO 4 | | R/W |
| 659 | 30659 | 1 | LT 37: AO 4 | | R/W |
| 660 | 30660 | 1 | LT 38: AO 4 | AO Value | R/W |
| 661 | 30661 | 1 | LT 38: AO 4 | | R/W |
| 662 | 30662 | 1 | LT 38: AO 4 | | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|----------|
| 663 | 30663 | 1 | LT 38: AO 4 | | R/W |
| 664 | 30664 | 1 | LT 39: AO 4 | AO Value | R/W |
| 665 | 30665 | 1 | LT 39: AO 4 | | R/W |
| 666 | 30666 | 1 | LT 39: AO 4 | | R/W |
| 667 | 30667 | 1 | LT 39: AO 4 | | R/W |
| 668 | 30668 | 1 | LT 40: AO 4 | | AO Value |
| 669 | 30669 | 1 | LT 40: AO 4 | R/W | |
| 670 | 30670 | 1 | LT 40: AO 4 | R/W | |
| 671 | 30671 | 1 | LT 40: AO 4 | R/W | |
| 672 | 30672 | 1 | LT 41: AO 4 | AO Value | R/W |
| 673 | 30673 | 1 | LT 41: AO 4 | | R/W |
| 674 | 30674 | 1 | LT 41: AO 4 | | R/W |
| 675 | 30675 | 1 | LT 41: AO 4 | | R/W |
| 676 | 30676 | 1 | LT 42: AO 4 | AO Value | R/W |
| 677 | 30677 | 1 | LT 42: AO 4 | | R/W |
| 678 | 30678 | 1 | LT 42: AO 4 | | R/W |
| 679 | 30679 | 1 | LT 42: AO 4 | | R/W |
| 680 | 30680 | 1 | LT 43: AO 4 | AO Value | R/W |
| 681 | 30681 | 1 | LT 43: AO 4 | | R/W |
| 682 | 30682 | 1 | LT 43: AO 4 | | R/W |
| 683 | 30683 | 1 | LT 43: AO 4 | | R/W |
| 684 | 30684 | 1 | LT 44: AO 4 | AO Value | R/W |
| 685 | 30685 | 1 | LT 44: AO 4 | | R/W |
| 686 | 30686 | 1 | LT 44: AO 4 | | R/W |
| 687 | 30687 | 1 | LT 44: AO 4 | | R/W |
| 688 | 30688 | 1 | LT 45: AO 4 | AO Value | R/W |
| 689 | 30689 | 1 | LT 45: AO 4 | | R/W |
| 690 | 30690 | 1 | LT 45: AO 4 | | R/W |
| 691 | 30691 | 1 | LT 45: AO 4 | | R/W |
| 692 | 30692 | 1 | LT 46: AO 4 | AO Value | R/W |
| 693 | 30693 | 1 | LT 46: AO 4 | | R/W |
| 694 | 30694 | 1 | LT 46: AO 4 | | R/W |
| 695 | 30695 | 1 | LT 46: AO 4 | | R/W |
| 696 | 30696 | 1 | LT 47: AO 4 | AO Value | R/W |
| 697 | 30697 | 1 | LT 47: AO 4 | | R/W |
| 698 | 30698 | 1 | LT 47: AO 4 | | R/W |
| 699 | 30699 | 1 | LT 47: AO 4 | | R/W |
| 700 | 30700 | 1 | LT 48: AO 4 | AO Value | R/W |
| 701 | 30701 | 1 | LT 48: AO 4 | | R/W |
| 702 | 30702 | 1 | LT 48: AO 4 | | R/W |
| 703 | 30703 | 1 | LT 48: AO 4 | | R/W |
| 704 | 30704 | 1 | LT 49: AO 4 | AO Value | R/W |
| 705 | 30705 | 1 | LT 49: AO 4 | | R/W |
| 706 | 30706 | 1 | LT 49: AO 4 | | R/W |
| 707 | 30707 | 1 | LT 49: AO 4 | | R/W |
| 708 | 30708 | 1 | LT 50: AO 4 | AO Value | R/W |
| 709 | 30709 | 1 | LT 50: AO 4 | | R/W |
| 710 | 30710 | 1 | LT 50: AO 4 | | R/W |
| 711 | 30711 | 1 | LT 50: AO 4 | | R/W |
| 712 | 30712 | 1 | LT 51: AO 4 | | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 713 | 30713 | 1 | LT 51: AO 4 | AO Value | R/W |
| 714 | 30714 | 1 | LT 51: AO 4 | | R/W |
| 715 | 30715 | 1 | LT 51: AO 4 | | R/W |
| 716 | 30716 | 1 | LT 52: AO 4 | AO Value | R/W |
| 717 | 30717 | 1 | LT 52: AO 4 | | R/W |
| 718 | 30718 | 1 | LT 52: AO 4 | | R/W |
| 719 | 30719 | 1 | LT 52: AO 4 | | R/W |
| 720 | 30720 | 1 | LT 53: AO 4 | AO Value | R/W |
| 721 | 30721 | 1 | LT 53: AO 4 | | R/W |
| 722 | 30722 | 1 | LT 53: AO 4 | | R/W |
| 723 | 30723 | 1 | LT 53: AO 4 | | R/W |
| 724 | 30724 | 1 | LT 54: AO 4 | AO Value | R/W |
| 725 | 30725 | 1 | LT 54: AO 4 | | R/W |
| 726 | 30726 | 1 | LT 54: AO 4 | | R/W |
| 727 | 30727 | 1 | LT 54: AO 4 | | R/W |
| 728 | 30728 | 1 | LT 55: AO 4 | AO Value | R/W |
| 729 | 30729 | 1 | LT 55: AO 4 | | R/W |
| 730 | 30730 | 1 | LT 55: AO 4 | | R/W |
| 731 | 30731 | 1 | LT 55: AO 4 | | R/W |
| 732 | 30732 | 1 | LT 56: AO 4 | AO Value | R/W |
| 733 | 30733 | 1 | LT 56: AO 4 | | R/W |
| 734 | 30734 | 1 | LT 56: AO 4 | | R/W |
| 735 | 30735 | 1 | LT 56: AO 4 | | R/W |
| 736 | 30736 | 1 | LT 57: AO 4 | AO Value | R/W |
| 737 | 30737 | 1 | LT 57: AO 4 | | R/W |
| 738 | 30738 | 1 | LT 57: AO 4 | | R/W |
| 739 | 30739 | 1 | LT 57: AO 4 | | R/W |
| 740 | 30740 | 1 | LT 58: AO 4 | AO Value | R/W |
| 741 | 30741 | 1 | LT 58: AO 4 | | R/W |
| 742 | 30742 | 1 | LT 58: AO 4 | | R/W |
| 743 | 30743 | 1 | LT 58: AO 4 | | R/W |
| 744 | 30744 | 1 | LT 59: AO 4 | AO Value | R/W |
| 745 | 30745 | 1 | LT 59: AO 4 | | R/W |
| 746 | 30746 | 1 | LT 59: AO 4 | | R/W |
| 747 | 30747 | 1 | LT 59: AO 4 | | R/W |
| 748 | 30748 | 1 | LT 60: AO 4 | AO Value | R/W |
| 749 | 30749 | 1 | LT 60: AO 4 | | R/W |
| 750 | 30750 | 1 | LT 60: AO 4 | | R/W |
| 751 | 30751 | 1 | LT 60: AO 4 | | R/W |
| 752 | 30752 | 1 | LT 61: AO 4 | AO Value | R/W |
| 753 | 30753 | 1 | LT 61: AO 4 | | R/W |
| 754 | 30754 | 1 | LT 61: AO 4 | | R/W |
| 755 | 30755 | 1 | LT 61: AO 4 | | R/W |
| 756 | 30756 | 1 | LT 62: AO 4 | AO Value | R/W |
| 757 | 30757 | 1 | LT 62: AO 4 | | R/W |
| 758 | 30758 | 1 | LT 62: AO 4 | | R/W |
| 759 | 30759 | 1 | LT 62: AO 4 | | R/W |
| 760 | 30760 | 1 | LT 63: AO 4 | AO Value | R/W |
| 761 | 30761 | 1 | LT 63: AO 4 | | R/W |
| 762 | 30762 | 1 | LT 63: AO 4 | | R/W |

| Register | Modscan Read | Size | LT & Channel | Parameter | R/W |
|----------|--------------|------|--------------|-----------|-----|
| 763 | 30763 | 1 | LT 63: AO 4 | AO Value | R/W |
| 764 | 30764 | 1 | LT 64: AO 4 | | R/W |
| 765 | 30765 | 1 | LT 64: AO 4 | | R/W |
| 766 | 30766 | 1 | LT 64: AO 4 | | R/W |
| 767 | 30767 | 1 | LT 64: AO 4 | | R/W |

Register Addresses 768 to 1279

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 768 | 30768 | 1 | LT 1: DO 1 | DO Authorization Mode | R/W |
| 769 | 30769 | 1 | LT 1: DO 2 | | R/W |
| 770 | 30770 | 1 | LT 1: DO 3 | | R/W |
| 771 | 30771 | 1 | LT 1: DO 4 | | R/W |
| 772 | 30772 | 1 | LT 1: DO 5 | | R/W |
| 773 | 30773 | 1 | LT 1: DO 6 | | R/W |
| 774 | 30774 | 1 | LT 1: DO 7 | | R/W |
| 775 | 30775 | 1 | LT 1: DO 8 | | R/W |
| 776 | 30776 | 1 | LT 2: DO 1 | DO Authorization Mode | R/W |
| 777 | 30777 | 1 | LT 2: DO 2 | | R/W |
| 778 | 30778 | 1 | LT 2: DO 3 | | R/W |
| 779 | 30779 | 1 | LT 2: DO 4 | | R/W |
| 780 | 30780 | 1 | LT 2: DO 5 | | R/W |
| 781 | 30781 | 1 | LT 2: DO 6 | | R/W |
| 782 | 30782 | 1 | LT 2: DO 7 | | R/W |
| 783 | 30783 | 1 | LT 2: DO 8 | | R/W |
| 784 | 30784 | 1 | LT 3: DO 1 | DO Authorization Mode | R/W |
| 785 | 30785 | 1 | LT 3: DO 2 | | R/W |
| 786 | 30786 | 1 | LT 3: DO 3 | | R/W |
| 787 | 30787 | 1 | LT 3: DO 4 | | R/W |
| 788 | 30788 | 1 | LT 3: DO 5 | | R/W |
| 789 | 30789 | 1 | LT 3: DO 6 | | R/W |
| 790 | 30790 | 1 | LT 3: DO 7 | | R/W |
| 791 | 30791 | 1 | LT 3: DO 8 | | R/W |
| 792 | 30792 | 1 | LT 4: DO 1 | DO Authorization Mode | R/W |
| 793 | 30793 | 1 | LT 4: DO 2 | | R/W |
| 794 | 30794 | 1 | LT 4: DO 3 | | R/W |
| 795 | 30795 | 1 | LT 4: DO 4 | | R/W |
| 796 | 30796 | 1 | LT 4: DO 5 | | R/W |
| 797 | 30797 | 1 | LT 4: DO 6 | | R/W |
| 798 | 30798 | 1 | LT 4: DO 7 | | R/W |
| 799 | 30799 | 1 | LT 4: DO 8 | | R/W |
| 800 | 30800 | 1 | LT 5: DO 1 | DO Authorization Mode | R/W |
| 801 | 30801 | 1 | LT 5: DO 2 | | R/W |
| 802 | 30802 | 1 | LT 5: DO 3 | | R/W |
| 803 | 30803 | 1 | LT 5: DO 4 | | R/W |
| 804 | 30804 | 1 | LT 5: DO 5 | | R/W |
| 805 | 30805 | 1 | LT 5: DO 6 | | R/W |
| 806 | 30806 | 1 | LT 5: DO 7 | | R/W |
| 807 | 30807 | 1 | LT 5: DO 8 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 808 | 30808 | 1 | LT 6: DO 1 | DO Authorization Mode | R/W |
| 809 | 30809 | 1 | LT 6: DO 2 | | R/W |
| 810 | 30810 | 1 | LT 6: DO 3 | | R/W |
| 811 | 30811 | 1 | LT 6: DO 4 | | R/W |
| 812 | 30812 | 1 | LT 6: DO 5 | | R/W |
| 813 | 30813 | 1 | LT 6: DO 6 | | R/W |
| 814 | 30814 | 1 | LT 6: DO 7 | | R/W |
| 815 | 30815 | 1 | LT 6: DO 8 | | R/W |
| 816 | 30816 | 1 | LT 7: DO 1 | DO Authorization Mode | R/W |
| 817 | 30817 | 1 | LT 7: DO 2 | | R/W |
| 818 | 30818 | 1 | LT 7: DO 3 | | R/W |
| 819 | 30819 | 1 | LT 7: DO 4 | | R/W |
| 820 | 30820 | 1 | LT 7: DO 5 | | R/W |
| 821 | 30821 | 1 | LT 7: DO 6 | | R/W |
| 822 | 30822 | 1 | LT 7: DO 7 | | R/W |
| 823 | 30823 | 1 | LT 7: DO 8 | | R/W |
| 824 | 30824 | 1 | LT 8: DO 1 | DO Authorization Mode | R/W |
| 825 | 30825 | 1 | LT 8: DO 2 | | R/W |
| 826 | 30826 | 1 | LT 8: DO 3 | | R/W |
| 827 | 30827 | 1 | LT 8: DO 4 | | R/W |
| 828 | 30828 | 1 | LT 8: DO 5 | | R/W |
| 829 | 30829 | 1 | LT 8: DO 6 | | R/W |
| 830 | 30830 | 1 | LT 8: DO 7 | | R/W |
| 831 | 30831 | 1 | LT 8: DO 8 | | R/W |
| 832 | 30832 | 1 | LT 9: DO 1 | DO Authorization Mode | R/W |
| 833 | 30833 | 1 | LT 9: DO 2 | | R/W |
| 834 | 30834 | 1 | LT 9: DO 3 | | R/W |
| 835 | 30835 | 1 | LT 9: DO 4 | | R/W |
| 836 | 30836 | 1 | LT 9: DO 5 | | R/W |
| 837 | 30837 | 1 | LT 9: DO 6 | | R/W |
| 838 | 30838 | 1 | LT 9: DO 7 | | R/W |
| 839 | 30839 | 1 | LT 9: DO 8 | | R/W |
| 840 | 30840 | 1 | LT 10: DO 1 | DO Authorization Mode | R/W |
| 841 | 30841 | 1 | LT 10: DO 2 | | R/W |
| 842 | 30842 | 1 | LT 10: DO 3 | | R/W |
| 843 | 30843 | 1 | LT 10: DO 4 | | R/W |
| 844 | 30844 | 1 | LT 10: DO 5 | | R/W |
| 845 | 30845 | 1 | LT 10: DO 6 | | R/W |
| 846 | 30846 | 1 | LT 10: DO 7 | | R/W |
| 847 | 30847 | 1 | LT 10: DO 8 | | R/W |
| 848 | 30848 | 1 | LT 11: DO 1 | DO Authorization Mode | R/W |
| 849 | 30849 | 1 | LT 11: DO 2 | | R/W |
| 850 | 30850 | 1 | LT 11: DO 3 | | R/W |
| 851 | 30851 | 1 | LT 11: DO 4 | | R/W |
| 852 | 30852 | 1 | LT 11: DO 5 | | R/W |
| 853 | 30853 | 1 | LT 11: DO 6 | | R/W |
| 854 | 30854 | 1 | LT 11: DO 7 | | R/W |
| 855 | 30855 | 1 | LT 11: DO 8 | | R/W |
| 856 | 30856 | 1 | LT 12: DO 1 | | R/W |
| 857 | 30857 | 1 | LT 12: DO 2 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 858 | 30858 | 1 | LT 12: DO 3 | DO Authorization Mode | R/W |
| 859 | 30859 | 1 | LT 12: DO 4 | | R/W |
| 860 | 30860 | 1 | LT 12: DO 5 | | R/W |
| 861 | 30861 | 1 | LT 12: DO 6 | | R/W |
| 862 | 30862 | 1 | LT 12: DO 7 | | R/W |
| 863 | 30863 | 1 | LT 12: DO 8 | | R/W |
| 864 | 30864 | 1 | LT 13: DO 1 | DO Authorization Mode | R/W |
| 865 | 30865 | 1 | LT 13: DO 2 | | R/W |
| 866 | 30866 | 1 | LT 13: DO 3 | | R/W |
| 867 | 30867 | 1 | LT 13: DO 4 | | R/W |
| 868 | 30868 | 1 | LT 13: DO 5 | | R/W |
| 869 | 30869 | 1 | LT 13: DO 6 | | R/W |
| 870 | 30870 | 1 | LT 13: DO 7 | R/W | |
| 871 | 30871 | 1 | LT 13: DO 8 | R/W | |
| 872 | 30872 | 1 | LT 14: DO 1 | DO Authorization Mode | R/W |
| 873 | 30873 | 1 | LT 14: DO 2 | | R/W |
| 874 | 30874 | 1 | LT 14: DO 3 | | R/W |
| 875 | 30875 | 1 | LT 14: DO 4 | | R/W |
| 876 | 30876 | 1 | LT 14: DO 5 | | R/W |
| 877 | 30877 | 1 | LT 14: DO 6 | | R/W |
| 878 | 30878 | 1 | LT 14: DO 7 | R/W | |
| 879 | 30879 | 1 | LT 14: DO 8 | R/W | |
| 880 | 30880 | 1 | LT 15: DO 1 | DO Authorization Mode | R/W |
| 881 | 30881 | 1 | LT 15: DO 2 | | R/W |
| 882 | 30882 | 1 | LT 15: DO 3 | | R/W |
| 883 | 30883 | 1 | LT 15: DO 4 | | R/W |
| 884 | 30884 | 1 | LT 15: DO 5 | | R/W |
| 885 | 30885 | 1 | LT 15: DO 6 | | R/W |
| 886 | 30886 | 1 | LT 15: DO 7 | R/W | |
| 887 | 30887 | 1 | LT 15: DO 8 | R/W | |
| 888 | 30888 | 1 | LT 16: DO 1 | DO Authorization Mode | R/W |
| 889 | 30889 | 1 | LT 16: DO 2 | | R/W |
| 890 | 30890 | 1 | LT 16: DO 3 | | R/W |
| 891 | 30891 | 1 | LT 16: DO 4 | | R/W |
| 892 | 30892 | 1 | LT 16: DO 5 | | R/W |
| 893 | 30893 | 1 | LT 16: DO 6 | | R/W |
| 894 | 30894 | 1 | LT 16: DO 7 | R/W | |
| 895 | 30895 | 1 | LT 16: DO 8 | R/W | |
| 896 | 30896 | 1 | LT 17: DO 1 | DO Authorization Mode | R/W |
| 897 | 30897 | 1 | LT 17: DO 2 | | R/W |
| 898 | 30898 | 1 | LT 17: DO 3 | | R/W |
| 899 | 30899 | 1 | LT 17: DO 4 | | R/W |
| 900 | 30900 | 1 | LT 17: DO 5 | | R/W |
| 901 | 30901 | 1 | LT 17: DO 6 | | R/W |
| 902 | 30902 | 1 | LT 17: DO 7 | R/W | |
| 903 | 30903 | 1 | LT 17: DO 8 | R/W | |
| 904 | 30904 | 1 | LT 18: DO 1 | DO Authorization Mode | R/W |
| 905 | 30905 | 1 | LT 18: DO 2 | | R/W |
| 906 | 30906 | 1 | LT 18: DO 3 | | R/W |
| 907 | 30907 | 1 | LT 18: DO 4 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 908 | 30908 | 1 | LT 18: DO 5 | DO Authorization Mode | R/W |
| 909 | 30909 | 1 | LT 18: DO 6 | | R/W |
| 910 | 30910 | 1 | LT 18: DO 7 | | R/W |
| 911 | 30911 | 1 | LT 18: DO 8 | | R/W |
| 912 | 30912 | 1 | LT 19: DO 1 | DO Authorization Mode | R/W |
| 913 | 30913 | 1 | LT 19: DO 2 | | R/W |
| 914 | 30914 | 1 | LT 19: DO 3 | | R/W |
| 915 | 30915 | 1 | LT 19: DO 4 | | R/W |
| 916 | 30916 | 1 | LT 19: DO 5 | | R/W |
| 917 | 30917 | 1 | LT 19: DO 6 | | R/W |
| 918 | 30918 | 1 | LT 19: DO 7 | | R/W |
| 919 | 30919 | 1 | LT 19: DO 8 | | R/W |
| 920 | 30920 | 1 | LT 20: DO 1 | DO Authorization Mode | R/W |
| 921 | 30921 | 1 | LT 20: DO 2 | | R/W |
| 922 | 30922 | 1 | LT 20: DO 3 | | R/W |
| 923 | 30923 | 1 | LT 20: DO 4 | | R/W |
| 924 | 30924 | 1 | LT 20: DO 5 | | R/W |
| 925 | 30925 | 1 | LT 20: DO 6 | | R/W |
| 926 | 30926 | 1 | LT 20: DO 7 | | R/W |
| 927 | 30927 | 1 | LT 20: DO 8 | | R/W |
| 928 | 30928 | 1 | LT 21: DO 1 | DO Authorization Mode | R/W |
| 929 | 30929 | 1 | LT 21: DO 2 | | R/W |
| 930 | 30930 | 1 | LT 21: DO 3 | | R/W |
| 931 | 30931 | 1 | LT 21: DO 4 | | R/W |
| 932 | 30932 | 1 | LT 21: DO 5 | | R/W |
| 933 | 30933 | 1 | LT 21: DO 6 | | R/W |
| 934 | 30934 | 1 | LT 21: DO 7 | | R/W |
| 935 | 30935 | 1 | LT 21: DO 8 | | R/W |
| 936 | 30936 | 1 | LT 22: DO 1 | DO Authorization Mode | R/W |
| 937 | 30937 | 1 | LT 22: DO 2 | | R/W |
| 938 | 30938 | 1 | LT 22: DO 3 | | R/W |
| 939 | 30939 | 1 | LT 22: DO 4 | | R/W |
| 940 | 30940 | 1 | LT 22: DO 5 | | R/W |
| 941 | 30941 | 1 | LT 22: DO 6 | | R/W |
| 942 | 30942 | 1 | LT 22: DO 7 | | R/W |
| 943 | 30943 | 1 | LT 22: DO 8 | | R/W |
| 944 | 30944 | 1 | LT 23: DO 1 | DO Authorization Mode | R/W |
| 945 | 30945 | 1 | LT 23: DO 2 | | R/W |
| 946 | 30946 | 1 | LT 23: DO 3 | | R/W |
| 947 | 30947 | 1 | LT 23: DO 4 | | R/W |
| 948 | 30948 | 1 | LT 23: DO 5 | | R/W |
| 949 | 30949 | 1 | LT 23: DO 6 | | R/W |
| 950 | 30950 | 1 | LT 23: DO 7 | | R/W |
| 951 | 30951 | 1 | LT 23: DO 8 | | R/W |
| 952 | 30952 | 1 | LT 24: DO 1 | DO Authorization Mode | R/W |
| 953 | 30953 | 1 | LT 24: DO 2 | | R/W |
| 954 | 30954 | 1 | LT 24: DO 3 | | R/W |
| 955 | 30955 | 1 | LT 24: DO 4 | | R/W |
| 956 | 30956 | 1 | LT 24: DO 5 | | R/W |
| 957 | 30957 | 1 | LT 24: DO 6 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 958 | 30958 | 1 | LT 24: DO 7 | DO Authorization Mode | R/W |
| 959 | 30959 | 1 | LT 24: DO 8 | | R/W |
| 960 | 30960 | 1 | LT 25: DO 1 | | R/W |
| 961 | 30961 | 1 | LT 25: DO 2 | | R/W |
| 962 | 30962 | 1 | LT 25: DO 3 | | R/W |
| 963 | 30963 | 1 | LT 25: DO 4 | | R/W |
| 964 | 30964 | 1 | LT 25: DO 5 | | R/W |
| 965 | 30965 | 1 | LT 25: DO 6 | | R/W |
| 966 | 30966 | 1 | LT 25: DO 7 | R/W | |
| 967 | 30967 | 1 | LT 25: DO 8 | R/W | |
| 968 | 30968 | 1 | LT 26: DO 1 | DO Authorization Mode | R/W |
| 969 | 30969 | 1 | LT 26: DO 2 | | R/W |
| 970 | 30970 | 1 | LT 26: DO 3 | | R/W |
| 971 | 30971 | 1 | LT 26: DO 4 | | R/W |
| 972 | 30972 | 1 | LT 26: DO 5 | | R/W |
| 973 | 30973 | 1 | LT 26: DO 6 | | R/W |
| 974 | 30974 | 1 | LT 26: DO 7 | | R/W |
| 975 | 30975 | 1 | LT 26: DO 8 | | R/W |
| 976 | 30976 | 1 | LT 27: DO 1 | DO Authorization Mode | R/W |
| 977 | 30977 | 1 | LT 27: DO 2 | | R/W |
| 978 | 30978 | 1 | LT 27: DO 3 | | R/W |
| 979 | 30979 | 1 | LT 27: DO 4 | | R/W |
| 980 | 30980 | 1 | LT 27: DO 5 | | R/W |
| 981 | 30981 | 1 | LT 27: DO 6 | | R/W |
| 982 | 30982 | 1 | LT 27: DO 7 | | R/W |
| 983 | 30983 | 1 | LT 27: DO 8 | | R/W |
| 984 | 30984 | 1 | LT 28: DO 1 | DO Authorization Mode | R/W |
| 985 | 30985 | 1 | LT 28: DO 2 | | R/W |
| 986 | 30986 | 1 | LT 28: DO 3 | | R/W |
| 987 | 30987 | 1 | LT 28: DO 4 | | R/W |
| 988 | 30988 | 1 | LT 28: DO 5 | | R/W |
| 989 | 30989 | 1 | LT 28: DO 6 | | R/W |
| 990 | 30990 | 1 | LT 28: DO 7 | | R/W |
| 991 | 30991 | 1 | LT 28: DO 8 | | R/W |
| 992 | 30992 | 1 | LT 29: DO 1 | DO Authorization Mode | R/W |
| 993 | 30993 | 1 | LT 29: DO 2 | | R/W |
| 994 | 30994 | 1 | LT 29: DO 3 | | R/W |
| 995 | 30995 | 1 | LT 29: DO 4 | | R/W |
| 996 | 30996 | 1 | LT 29: DO 5 | | R/W |
| 997 | 30997 | 1 | LT 29: DO 6 | | R/W |
| 998 | 30998 | 1 | LT 29: DO 7 | | R/W |
| 999 | 30999 | 1 | LT 29: DO 8 | | R/W |
| 1000 | 31000 | 1 | LT 30: DO 1 | DO Authorization Mode | R/W |
| 1001 | 31001 | 1 | LT 30: DO 2 | | R/W |
| 1002 | 31002 | 1 | LT 30: DO 3 | | R/W |
| 1003 | 31003 | 1 | LT 30: DO 4 | | R/W |
| 1004 | 31004 | 1 | LT 30: DO 5 | | R/W |
| 1005 | 31005 | 1 | LT 30: DO 6 | | R/W |
| 1006 | 31006 | 1 | LT 30: DO 7 | | R/W |
| 1007 | 31007 | 1 | LT 30: DO 8 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 1008 | 31008 | 1 | LT 31: DO 1 | DO Authorization Mode | R/W |
| 1009 | 31009 | 1 | LT 31: DO 2 | | R/W |
| 1010 | 31010 | 1 | LT 31: DO 3 | | R/W |
| 1011 | 31011 | 1 | LT 31: DO 4 | | R/W |
| 1012 | 31012 | 1 | LT 31: DO 5 | | R/W |
| 1013 | 31013 | 1 | LT 31: DO 6 | | R/W |
| 1014 | 31014 | 1 | LT 31: DO 7 | | R/W |
| 1015 | 31015 | 1 | LT 31: DO 8 | | R/W |
| 1016 | 31016 | 1 | LT 32: DO 1 | DO Authorization Mode | R/W |
| 1017 | 31017 | 1 | LT 32: DO 2 | | R/W |
| 1018 | 31018 | 1 | LT 32: DO 3 | | R/W |
| 1019 | 31019 | 1 | LT 32: DO 4 | | R/W |
| 1020 | 31020 | 1 | LT 32: DO 5 | | R/W |
| 1021 | 31021 | 1 | LT 32: DO 6 | | R/W |
| 1022 | 31022 | 1 | LT 32: DO 7 | | R/W |
| 1023 | 31023 | 1 | LT 32: DO 8 | | R/W |
| 1024 | 31024 | 1 | LT 33: DO 1 | DO Authorization Mode | R/W |
| 1025 | 31025 | 1 | LT 33: DO 2 | | R/W |
| 1026 | 31026 | 1 | LT 33: DO 3 | | R/W |
| 1027 | 31027 | 1 | LT 33: DO 4 | | R/W |
| 1028 | 31028 | 1 | LT 33: DO 5 | | R/W |
| 1029 | 31029 | 1 | LT 33: DO 6 | | R/W |
| 1030 | 31030 | 1 | LT 33: DO 7 | | R/W |
| 1031 | 31031 | 1 | LT 33: DO 8 | | R/W |
| 1032 | 31032 | 1 | LT 34: DO 1 | DO Authorization Mode | R/W |
| 1033 | 31033 | 1 | LT 34: DO 2 | | R/W |
| 1034 | 31034 | 1 | LT 34: DO 3 | | R/W |
| 1035 | 31035 | 1 | LT 34: DO 4 | | R/W |
| 1036 | 31036 | 1 | LT 34: DO 5 | | R/W |
| 1037 | 31037 | 1 | LT 34: DO 6 | | R/W |
| 1038 | 31038 | 1 | LT 34: DO 7 | | R/W |
| 1039 | 31039 | 1 | LT 34: DO 8 | | R/W |
| 1040 | 31040 | 1 | LT 35: DO 1 | DO Authorization Mode | R/W |
| 1041 | 31041 | 1 | LT 35: DO 2 | | R/W |
| 1042 | 31042 | 1 | LT 35: DO 3 | | R/W |
| 1043 | 31043 | 1 | LT 35: DO 4 | | R/W |
| 1044 | 31044 | 1 | LT 35: DO 5 | | R/W |
| 1045 | 31045 | 1 | LT 35: DO 6 | | R/W |
| 1046 | 31046 | 1 | LT 35: DO 7 | | R/W |
| 1047 | 31047 | 1 | LT 35: DO 8 | | R/W |
| 1048 | 31048 | 1 | LT 36: DO 1 | DO Authorization Mode | R/W |
| 1049 | 31049 | 1 | LT 36: DO 2 | | R/W |
| 1050 | 31050 | 1 | LT 36: DO 3 | | R/W |
| 1051 | 31051 | 1 | LT 36: DO 4 | | R/W |
| 1052 | 31052 | 1 | LT 36: DO 5 | | R/W |
| 1053 | 31053 | 1 | LT 36: DO 6 | | R/W |
| 1054 | 31054 | 1 | LT 36: DO 7 | | R/W |
| 1055 | 31055 | 1 | LT 36: DO 8 | | R/W |
| 1056 | 31056 | 1 | LT 37: DO 1 | DO Authorization Mode | R/W |
| 1057 | 31057 | 1 | LT 37: DO 2 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 1058 | 31058 | 1 | LT 37: DO 3 | DO Authorization Mode | R/W |
| 1059 | 31059 | 1 | LT 37: DO 4 | | R/W |
| 1060 | 31060 | 1 | LT 37: DO 5 | | R/W |
| 1061 | 31061 | 1 | LT 37: DO 6 | | R/W |
| 1062 | 31062 | 1 | LT 37: DO 7 | | R/W |
| 1063 | 31063 | 1 | LT 37: DO 8 | | R/W |
| 1064 | 31064 | 1 | LT 38: DO 1 | DO Authorization Mode | R/W |
| 1065 | 31065 | 1 | LT 38: DO 2 | | R/W |
| 1066 | 31066 | 1 | LT 38: DO 3 | | R/W |
| 1067 | 31067 | 1 | LT 38: DO 4 | | R/W |
| 1068 | 31068 | 1 | LT 38: DO 5 | | R/W |
| 1069 | 31069 | 1 | LT 38: DO 6 | | R/W |
| 1070 | 31070 | 1 | LT 38: DO 7 | | R/W |
| 1071 | 31071 | 1 | LT 38: DO 8 | | R/W |
| 1072 | 31072 | 1 | LT 39: DO 1 | DO Authorization Mode | R/W |
| 1073 | 31073 | 1 | LT 39: DO 2 | | R/W |
| 1074 | 31074 | 1 | LT 39: DO 3 | | R/W |
| 1075 | 31075 | 1 | LT 39: DO 4 | | R/W |
| 1076 | 31076 | 1 | LT 39: DO 5 | | R/W |
| 1077 | 31077 | 1 | LT 39: DO 6 | | R/W |
| 1078 | 31078 | 1 | LT 39: DO 7 | | R/W |
| 1079 | 31079 | 1 | LT 39: DO 8 | | R/W |
| 1080 | 31080 | 1 | LT 40: DO 1 | DO Authorization Mode | R/W |
| 1081 | 31081 | 1 | LT 40: DO 2 | | R/W |
| 1082 | 31082 | 1 | LT 40: DO 3 | | R/W |
| 1083 | 31083 | 1 | LT 40: DO 4 | | R/W |
| 1084 | 31084 | 1 | LT 40: DO 5 | | R/W |
| 1085 | 31085 | 1 | LT 40: DO 6 | | R/W |
| 1086 | 31086 | 1 | LT 40: DO 7 | | R/W |
| 1087 | 31087 | 1 | LT 40: DO 8 | | R/W |
| 1088 | 31088 | 1 | LT 41: DO 1 | DO Authorization Mode | R/W |
| 1089 | 31089 | 1 | LT 41: DO 2 | | R/W |
| 1090 | 31090 | 1 | LT 41: DO 3 | | R/W |
| 1091 | 31091 | 1 | LT 41: DO 4 | | R/W |
| 1092 | 31092 | 1 | LT 41: DO 5 | | R/W |
| 1093 | 31093 | 1 | LT 41: DO 6 | | R/W |
| 1094 | 31094 | 1 | LT 41: DO 7 | | R/W |
| 1095 | 31095 | 1 | LT 41: DO 8 | | R/W |
| 1096 | 31096 | 1 | LT 42: DO 1 | DO Authorization Mode | R/W |
| 1097 | 31097 | 1 | LT 42: DO 2 | | R/W |
| 1098 | 31098 | 1 | LT 42: DO 3 | | R/W |
| 1099 | 31099 | 1 | LT 42: DO 4 | | R/W |
| 1100 | 31100 | 1 | LT 42: DO 5 | | R/W |
| 1101 | 31101 | 1 | LT 42: DO 6 | | R/W |
| 1102 | 31102 | 1 | LT 42: DO 7 | | R/W |
| 1103 | 31103 | 1 | LT 42: DO 8 | | R/W |
| 1104 | 31104 | 1 | LT 43: DO 1 | DO Authorization Mode | R/W |
| 1105 | 31105 | 1 | LT 43: DO 2 | | R/W |
| 1106 | 31106 | 1 | LT 43: DO 3 | | R/W |
| 1107 | 31107 | 1 | LT 43: DO 4 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 1108 | 31108 | 1 | LT 43: DO 5 | DO Authorization Mode | R/W |
| 1109 | 31109 | 1 | LT 43: DO 6 | | R/W |
| 1110 | 31110 | 1 | LT 43: DO 7 | | R/W |
| 1111 | 31111 | 1 | LT 43: DO 8 | | R/W |
| 1112 | 31112 | 1 | LT 44: DO 1 | DO Authorization Mode | R/W |
| 1113 | 31113 | 1 | LT 44: DO 2 | | R/W |
| 1114 | 31114 | 1 | LT 44: DO 3 | | R/W |
| 1115 | 31115 | 1 | LT 44: DO 4 | | R/W |
| 1116 | 31116 | 1 | LT 44: DO 5 | | R/W |
| 1117 | 31117 | 1 | LT 44: DO 6 | | R/W |
| 1118 | 31118 | 1 | LT 44: DO 7 | | R/W |
| 1119 | 31119 | 1 | LT 44: DO 8 | | R/W |
| 1120 | 31120 | 1 | LT 45: DO 1 | DO Authorization Mode | R/W |
| 1121 | 31121 | 1 | LT 45: DO 2 | | R/W |
| 1122 | 31122 | 1 | LT 45: DO 3 | | R/W |
| 1123 | 31123 | 1 | LT 45: DO 4 | | R/W |
| 1124 | 31124 | 1 | LT 45: DO 5 | | R/W |
| 1125 | 31125 | 1 | LT 45: DO 6 | | R/W |
| 1126 | 31126 | 1 | LT 45: DO 7 | | R/W |
| 1127 | 31127 | 1 | LT 45: DO 8 | | R/W |
| 1128 | 31128 | 1 | LT 46: DO 1 | DO Authorization Mode | R/W |
| 1129 | 31129 | 1 | LT 46: DO 2 | | R/W |
| 1130 | 31130 | 1 | LT 46: DO 3 | | R/W |
| 1131 | 31131 | 1 | LT 46: DO 4 | | R/W |
| 1132 | 31132 | 1 | LT 46: DO 5 | | R/W |
| 1133 | 31133 | 1 | LT 46: DO 6 | | R/W |
| 1134 | 31134 | 1 | LT 46: DO 7 | | R/W |
| 1135 | 31135 | 1 | LT 46: DO 8 | | R/W |
| 1136 | 31136 | 1 | LT 47: DO 1 | DO Authorization Mode | R/W |
| 1137 | 31137 | 1 | LT 47: DO 2 | | R/W |
| 1138 | 31138 | 1 | LT 47: DO 3 | | R/W |
| 1139 | 31139 | 1 | LT 47: DO 4 | | R/W |
| 1140 | 31140 | 1 | LT 47: DO 5 | | R/W |
| 1141 | 31141 | 1 | LT 47: DO 6 | | R/W |
| 1142 | 31142 | 1 | LT 47: DO 7 | | R/W |
| 1143 | 31143 | 1 | LT 47: DO 8 | | R/W |
| 1144 | 31144 | 1 | LT 48: DO 1 | DO Authorization Mode | R/W |
| 1145 | 31145 | 1 | LT 48: DO 2 | | R/W |
| 1146 | 31146 | 1 | LT 48: DO 3 | | R/W |
| 1147 | 31147 | 1 | LT 48: DO 4 | | R/W |
| 1148 | 31148 | 1 | LT 48: DO 5 | | R/W |
| 1149 | 31149 | 1 | LT 48: DO 6 | | R/W |
| 1150 | 31150 | 1 | LT 48: DO 7 | | R/W |
| 1151 | 31151 | 1 | LT 48: DO 8 | | R/W |
| 1152 | 31152 | 1 | LT 49: DO 1 | DO Authorization Mode | R/W |
| 1153 | 31153 | 1 | LT 49: DO 2 | | R/W |
| 1154 | 31154 | 1 | LT 49: DO 3 | | R/W |
| 1155 | 31155 | 1 | LT 49: DO 4 | | R/W |
| 1156 | 31156 | 1 | LT 49: DO 5 | | R/W |
| 1157 | 31157 | 1 | LT 49: DO 6 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 1158 | 31158 | 1 | LT 49: DO 7 | DO Authorization Mode | R/W |
| 1159 | 31159 | 1 | LT 49: DO 8 | | R/W |
| 1160 | 31160 | 1 | LT 50: DO 1 | | R/W |
| 1161 | 31161 | 1 | LT 50: DO 2 | | R/W |
| 1162 | 31162 | 1 | LT 50: DO 3 | | R/W |
| 1163 | 31163 | 1 | LT 50: DO 4 | | R/W |
| 1164 | 31164 | 1 | LT 50: DO 5 | | R/W |
| 1165 | 31165 | 1 | LT 50: DO 6 | | R/W |
| 1166 | 31166 | 1 | LT 50: DO 7 | R/W | |
| 1167 | 31167 | 1 | LT 50: DO 8 | R/W | |
| 1168 | 31168 | 1 | LT 51: DO 1 | DO Authorization Mode | R/W |
| 1169 | 31169 | 1 | LT 51: DO 2 | | R/W |
| 1170 | 31170 | 1 | LT 51: DO 3 | | R/W |
| 1171 | 31171 | 1 | LT 51: DO 4 | | R/W |
| 1172 | 31172 | 1 | LT 51: DO 5 | | R/W |
| 1173 | 31173 | 1 | LT 51: DO 6 | | R/W |
| 1174 | 31174 | 1 | LT 51: DO 7 | | R/W |
| 1175 | 31175 | 1 | LT 51: DO 8 | | R/W |
| 1176 | 31176 | 1 | LT 52: DO 1 | DO Authorization Mode | R/W |
| 1177 | 31177 | 1 | LT 52: DO 2 | | R/W |
| 1178 | 31178 | 1 | LT 52: DO 3 | | R/W |
| 1179 | 31179 | 1 | LT 52: DO 4 | | R/W |
| 1180 | 31180 | 1 | LT 52: DO 5 | | R/W |
| 1181 | 31181 | 1 | LT 52: DO 6 | | R/W |
| 1182 | 31182 | 1 | LT 52: DO 7 | | R/W |
| 1183 | 31183 | 1 | LT 52: DO 8 | | R/W |
| 1184 | 31184 | 1 | LT 53: DO 1 | DO Authorization Mode | R/W |
| 1185 | 31185 | 1 | LT 53: DO 2 | | R/W |
| 1186 | 31186 | 1 | LT 53: DO 3 | | R/W |
| 1187 | 31187 | 1 | LT 53: DO 4 | | R/W |
| 1188 | 31188 | 1 | LT 53: DO 5 | | R/W |
| 1189 | 31189 | 1 | LT 53: DO 6 | | R/W |
| 1190 | 31190 | 1 | LT 53: DO 7 | | R/W |
| 1191 | 31191 | 1 | LT 53: DO 8 | | R/W |
| 1192 | 31192 | 1 | LT 54: DO 1 | DO Authorization Mode | R/W |
| 1193 | 31193 | 1 | LT 54: DO 2 | | R/W |
| 1194 | 31194 | 1 | LT 54: DO 3 | | R/W |
| 1195 | 31195 | 1 | LT 54: DO 4 | | R/W |
| 1196 | 31196 | 1 | LT 54: DO 5 | | R/W |
| 1197 | 31197 | 1 | LT 54: DO 6 | | R/W |
| 1198 | 31198 | 1 | LT 54: DO 7 | | R/W |
| 1199 | 31199 | 1 | LT 54: DO 8 | | R/W |
| 1200 | 31200 | 1 | LT 55: DO 1 | DO Authorization Mode | R/W |
| 1201 | 31201 | 1 | LT 55: DO 2 | | R/W |
| 1202 | 31202 | 1 | LT 55: DO 3 | | R/W |
| 1203 | 31203 | 1 | LT 55: DO 4 | | R/W |
| 1204 | 31204 | 1 | LT 55: DO 5 | | R/W |
| 1205 | 31205 | 1 | LT 55: DO 6 | | R/W |
| 1206 | 31206 | 1 | LT 55: DO 7 | | R/W |
| 1207 | 31207 | 1 | LT 55: DO 8 | | R/W |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W |
|----------|-------------|------|--------------|-----------------------|-----|
| 1208 | 31208 | 1 | LT 56: DO 1 | DO Authorization Mode | R/W |
| 1209 | 31209 | 1 | LT 56: DO 2 | | R/W |
| 1210 | 31210 | 1 | LT 56: DO 3 | | R/W |
| 1211 | 31211 | 1 | LT 56: DO 4 | | R/W |
| 1212 | 31212 | 1 | LT 56: DO 5 | | R/W |
| 1213 | 31213 | 1 | LT 56: DO 6 | | R/W |
| 1214 | 31214 | 1 | LT 56: DO 7 | | R/W |
| 1215 | 31215 | 1 | LT 56: DO 8 | | R/W |
| 1216 | 31216 | 1 | LT 57: DO 1 | DO Authorization Mode | R/W |
| 1217 | 31217 | 1 | LT 57: DO 2 | | R/W |
| 1218 | 31218 | 1 | LT 57: DO 3 | | R/W |
| 1219 | 31219 | 1 | LT 57: DO 4 | | R/W |
| 1220 | 31220 | 1 | LT 57: DO 5 | | R/W |
| 1221 | 31221 | 1 | LT 57: DO 6 | | R/W |
| 1222 | 31222 | 1 | LT 57: DO 7 | | R/W |
| 1223 | 31223 | 1 | LT 57: DO 8 | | R/W |
| 1224 | 31224 | 1 | LT 58: DO 1 | DO Authorization Mode | R/W |
| 1225 | 31225 | 1 | LT 58: DO 2 | | R/W |
| 1226 | 31226 | 1 | LT 58: DO 3 | | R/W |
| 1227 | 31227 | 1 | LT 58: DO 4 | | R/W |
| 1228 | 31228 | 1 | LT 58: DO 5 | | R/W |
| 1229 | 31229 | 1 | LT 58: DO 6 | | R/W |
| 1230 | 31230 | 1 | LT 58: DO 7 | | R/W |
| 1231 | 31231 | 1 | LT 58: DO 8 | | R/W |
| 1232 | 31232 | 1 | LT 59: DO 1 | DO Authorization Mode | R/W |
| 1233 | 31233 | 1 | LT 59: DO 2 | | R/W |
| 1234 | 31234 | 1 | LT 59: DO 3 | | R/W |
| 1235 | 31235 | 1 | LT 59: DO 4 | | R/W |
| 1236 | 31236 | 1 | LT 59: DO 5 | | R/W |
| 1237 | 31237 | 1 | LT 59: DO 6 | | R/W |
| 1238 | 31238 | 1 | LT 59: DO 7 | | R/W |
| 1239 | 31239 | 1 | LT 59: DO 8 | | R/W |
| 1240 | 31240 | 1 | LT 60: DO 1 | DO Authorization Mode | R/W |
| 1241 | 31241 | 1 | LT 60: DO 2 | | R/W |
| 1242 | 31242 | 1 | LT 60: DO 3 | | R/W |
| 1243 | 31243 | 1 | LT 60: DO 4 | | R/W |
| 1244 | 31244 | 1 | LT 60: DO 5 | | R/W |
| 1245 | 31245 | 1 | LT 60: DO 6 | | R/W |
| 1246 | 31246 | 1 | LT 60: DO 7 | | R/W |
| 1247 | 31247 | 1 | LT 60: DO 8 | | R/W |
| 1248 | 31248 | 1 | LT 61: DO 1 | DO Authorization Mode | R/W |
| 1249 | 31249 | 1 | LT 61: DO 2 | | R/W |
| 1250 | 31250 | 1 | LT 61: DO 3 | | R/W |
| 1251 | 31251 | 1 | LT 61: DO 4 | | R/W |
| 1252 | 31252 | 1 | LT 61: DO 5 | | R/W |
| 1253 | 31253 | 1 | LT 61: DO 6 | | R/W |
| 1254 | 31254 | 1 | LT 61: DO 7 | | R/W |
| 1255 | 31255 | 1 | LT 61: DO 8 | | R/W |
| 1256 | 31256 | 1 | LT 62: DO 1 | R/W | |
| 1257 | 31257 | 1 | LT 62: DO 2 | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | |
|----------|-------------|------|--------------|-----------------------|-----------------------|-----|
| 1258 | 31258 | 1 | LT 62: DO 3 | DO Authorization Mode | R/W | |
| 1259 | 31259 | 1 | LT 62: DO 4 | | R/W | |
| 1260 | 31260 | 1 | LT 62: DO 5 | | R/W | |
| 1261 | 31261 | 1 | LT 62: DO 6 | | R/W | |
| 1262 | 31262 | 1 | LT 62: DO 7 | | R/W | |
| 1263 | 31263 | 1 | LT 62: DO 8 | | R/W | |
| 1264 | 31264 | 1 | LT 63: DO 1 | | DO Authorization Mode | R/W |
| 1265 | 31265 | 1 | LT 63: DO 2 | | | R/W |
| 1266 | 31266 | 1 | LT 63: DO 3 | R/W | | |
| 1267 | 31267 | 1 | LT 63: DO 4 | R/W | | |
| 1268 | 31268 | 1 | LT 63: DO 5 | R/W | | |
| 1269 | 31269 | 1 | LT 63: DO 6 | R/W | | |
| 1270 | 31270 | 1 | LT 63: DO 7 | R/W | | |
| 1271 | 31271 | 1 | LT 63: DO 8 | R/W | | |
| 1272 | 31272 | 1 | LT 64: DO 1 | DO Authorization Mode | R/W | |
| 1273 | 31273 | 1 | LT 64: DO 2 | | R/W | |
| 1274 | 31274 | 1 | LT 64: DO 3 | | R/W | |
| 1275 | 31275 | 1 | LT 64: DO 4 | | R/W | |
| 1276 | 31276 | 1 | LT 64: DO 5 | | R/W | |
| 1277 | 31277 | 1 | LT 64: DO 6 | | R/W | |
| 1278 | 31278 | 1 | LT 64: DO 7 | | R/W | |
| 1279 | 31279 | 1 | LT 64: DO 8 | | R/W | |

Register Addresses 2816 to 3327

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 2816 | 32816 | 1 | LT 1: AO 1 | AO Upper Limit | R/W | |
| 2817 | 32817 | 1 | LT 1: AO 2 | | R/W | |
| 2818 | 32818 | 1 | LT 1: AO 3 | | R/W | |
| 2819 | 32819 | 1 | LT 1: AO 4 | | R/W | |
| 2820 | 32820 | 1 | LT 2: AO 1 | AO Upper Limit | R/W | |
| 2821 | 32821 | 1 | LT 2: AO 2 | | R/W | |
| 2822 | 32822 | 1 | LT 2: AO 3 | | R/W | |
| 2823 | 32823 | 1 | LT 2: AO 4 | | R/W | |
| 2824 | 32824 | 1 | LT 3: AO 1 | AO Upper Limit | R/W | |
| 2825 | 32825 | 1 | LT 3: AO 2 | | R/W | |
| 2826 | 32826 | 1 | LT 3: AO 3 | | R/W | |
| 2827 | 32827 | 1 | LT 3: AO 4 | | R/W | |
| 2828 | 32828 | 1 | LT 4: AO 1 | AO Upper Limit | R/W | |
| 2829 | 32829 | 1 | LT 4: AO 2 | | R/W | |
| 2830 | 32830 | 1 | LT 4: AO 3 | | R/W | |
| 2831 | 32831 | 1 | LT 4: AO 4 | | R/W | |
| 2832 | 32832 | 1 | LT 5: AO 1 | AO Upper Limit | R/W | |
| 2833 | 32833 | 1 | LT 5: AO 2 | | R/W | |
| 2834 | 32834 | 1 | LT 5: AO 3 | | R/W | |
| 2835 | 32835 | 1 | LT 5: AO 4 | | R/W | |
| 2836 | 32836 | 1 | LT 6: AO 1 | AO Upper Limit | R/W | |
| 2837 | 32837 | 1 | LT 6: AO 2 | | R/W | |
| 2838 | 32838 | 1 | LT 6: AO 3 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 2839 | 32839 | 1 | LT 6: AO 4 | | R/W | |
| 2840 | 32840 | 1 | LT 7: AO 1 | AO Upper Limit | R/W | |
| 2841 | 32841 | 1 | LT 7: AO 2 | | R/W | |
| 2842 | 32842 | 1 | LT 7: AO 3 | | R/W | |
| 2843 | 32843 | 1 | LT 7: AO 4 | | R/W | |
| 2844 | 32844 | 1 | LT 8: AO 1 | AO Upper Limit | R/W | |
| 2845 | 32845 | 1 | LT 8: AO 2 | | R/W | |
| 2846 | 32846 | 1 | LT 8: AO 3 | | R/W | |
| 2847 | 32847 | 1 | LT 8: AO 4 | | R/W | |
| 2848 | 32848 | 1 | LT 9: AO 1 | AO Upper Limit | R/W | |
| 2849 | 32849 | 1 | LT 9: AO 2 | | R/W | |
| 2850 | 32850 | 1 | LT 9: AO 3 | | R/W | |
| 2851 | 32851 | 1 | LT 9: AO 4 | | R/W | |
| 2852 | 32852 | 1 | LT 10: AO 1 | AO Upper Limit | R/W | |
| 2853 | 32853 | 1 | LT 10: AO 2 | | R/W | |
| 2854 | 32854 | 1 | LT 10: AO 3 | | R/W | |
| 2855 | 32855 | 1 | LT 10: AO 4 | | R/W | |
| 2856 | 32856 | 1 | LT 11: AO 1 | AO Upper Limit | R/W | |
| 2857 | 32857 | 1 | LT 11: AO 2 | | R/W | |
| 2858 | 32858 | 1 | LT 11: AO 3 | | R/W | |
| 2859 | 32859 | 1 | LT 11: AO 4 | | R/W | |
| 2860 | 32860 | 1 | LT 12: AO 1 | AO Upper Limit | R/W | |
| 2861 | 32861 | 1 | LT 12: AO 2 | | R/W | |
| 2862 | 32862 | 1 | LT 12: AO 3 | | R/W | |
| 2863 | 32863 | 1 | LT 12: AO 4 | | R/W | |
| 2864 | 32864 | 1 | LT 13: AO 1 | AO Upper Limit | R/W | |
| 2865 | 32865 | 1 | LT 13: AO 2 | | R/W | |
| 2866 | 32866 | 1 | LT 13: AO 3 | | R/W | |
| 2867 | 32867 | 1 | LT 13: AO 4 | | R/W | |
| 2868 | 32868 | 1 | LT 14: AO 1 | AO Upper Limit | R/W | |
| 2869 | 32869 | 1 | LT 14: AO 2 | | R/W | |
| 2870 | 32870 | 1 | LT 14: AO 3 | | R/W | |
| 2871 | 32871 | 1 | LT 14: AO 4 | | R/W | |
| 2872 | 32872 | 1 | LT 15: AO 1 | AO Upper Limit | R/W | |
| 2873 | 32873 | 1 | LT 15: AO 2 | | R/W | |
| 2874 | 32874 | 1 | LT 15: AO 3 | | R/W | |
| 2875 | 32875 | 1 | LT 15: AO 4 | | R/W | |
| 2876 | 32876 | 1 | LT 16: AO 1 | AO Upper Limit | R/W | |
| 2877 | 32877 | 1 | LT 16: AO 2 | | R/W | |
| 2878 | 32878 | 1 | LT 16: AO 3 | | R/W | |
| 2879 | 32879 | 1 | LT 16: AO 4 | | R/W | |
| 2880 | 32880 | 1 | LT 17: AO 4 | AO Upper Limit | R/W | |
| 2881 | 32881 | 1 | LT 17: AO 4 | | R/W | |
| 2882 | 32882 | 1 | LT 17: AO 4 | | R/W | |
| 2883 | 32883 | 1 | LT 17: AO 4 | | R/W | |
| 2884 | 32884 | 1 | LT 18: AO 4 | AO Upper Limit | R/W | |
| 2885 | 32885 | 1 | LT 18: AO 4 | | R/W | |
| 2886 | 32886 | 1 | LT 18: AO 4 | | R/W | |
| 2887 | 32887 | 1 | LT 18: AO 4 | | R/W | |
| 2888 | 32888 | 1 | LT 19: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 2889 | 32889 | 1 | LT 19: AO 4 | AO Upper Limit | R/W | |
| 2890 | 32890 | 1 | LT 19: AO 4 | | R/W | |
| 2891 | 32891 | 1 | LT 19: AO 4 | | R/W | |
| 2892 | 32892 | 1 | LT 20: AO 4 | AO Upper Limit | R/W | |
| 2893 | 32893 | 1 | LT 20: AO 4 | | R/W | |
| 2894 | 32894 | 1 | LT 20: AO 4 | | R/W | |
| 2895 | 32895 | 1 | LT 20: AO 4 | | R/W | |
| 2896 | 32896 | 1 | LT 21: AO 4 | AO Upper Limit | R/W | |
| 2897 | 32897 | 1 | LT 21: AO 4 | | R/W | |
| 2898 | 32898 | 1 | LT 21: AO 4 | | R/W | |
| 2899 | 32899 | 1 | LT 21: AO 4 | | R/W | |
| 2900 | 32900 | 1 | LT 22: AO 4 | AO Upper Limit | R/W | |
| 2901 | 32901 | 1 | LT 22: AO 4 | | R/W | |
| 2902 | 32902 | 1 | LT 22: AO 4 | | R/W | |
| 2903 | 32903 | 1 | LT 22: AO 4 | | R/W | |
| 2904 | 32904 | 1 | LT 23: AO 4 | AO Upper Limit | R/W | |
| 2905 | 32905 | 1 | LT 23: AO 4 | | R/W | |
| 2906 | 32906 | 1 | LT 23: AO 4 | | R/W | |
| 2907 | 32907 | 1 | LT 23: AO 4 | | R/W | |
| 2908 | 32908 | 1 | LT 24: AO 4 | AO Upper Limit | R/W | |
| 2909 | 32909 | 1 | LT 24: AO 4 | | R/W | |
| 2910 | 32910 | 1 | LT 24: AO 4 | | R/W | |
| 2911 | 32911 | 1 | LT 24: AO 4 | | R/W | |
| 2912 | 32912 | 1 | LT 25: AO 4 | AO Upper Limit | R/W | |
| 2913 | 32913 | 1 | LT 25: AO 4 | | R/W | |
| 2914 | 32914 | 1 | LT 25: AO 4 | | R/W | |
| 2915 | 32915 | 1 | LT 25: AO 4 | | R/W | |
| 2916 | 32916 | 1 | LT 26: AO 4 | AO Upper Limit | R/W | |
| 2917 | 32917 | 1 | LT 26: AO 4 | | R/W | |
| 2918 | 32918 | 1 | LT 26: AO 4 | | R/W | |
| 2919 | 32919 | 1 | LT 26: AO 4 | | R/W | |
| 2920 | 32920 | 1 | LT 27: AO 4 | AO Upper Limit | R/W | |
| 2921 | 32921 | 1 | LT 27: AO 4 | | R/W | |
| 2922 | 32922 | 1 | LT 27: AO 4 | | R/W | |
| 2923 | 32923 | 1 | LT 27: AO 4 | | R/W | |
| 2924 | 32924 | 1 | LT 28: AO 4 | AO Upper Limit | R/W | |
| 2925 | 32925 | 1 | LT 28: AO 4 | | R/W | |
| 2926 | 32926 | 1 | LT 28: AO 4 | | R/W | |
| 2927 | 32927 | 1 | LT 28: AO 4 | | R/W | |
| 2928 | 32928 | 1 | LT 29: AO 4 | AO Upper Limit | R/W | |
| 2929 | 32929 | 1 | LT 29: AO 4 | | R/W | |
| 2930 | 32930 | 1 | LT 29: AO 4 | | R/W | |
| 2931 | 32931 | 1 | LT 29: AO 4 | | R/W | |
| 2932 | 32932 | 1 | LT 30: AO 4 | AO Upper Limit | R/W | |
| 2933 | 32933 | 1 | LT 30: AO 4 | | R/W | |
| 2934 | 32934 | 1 | LT 30: AO 4 | | R/W | |
| 2935 | 32935 | 1 | LT 30: AO 4 | | R/W | |
| 2936 | 32936 | 1 | LT 31: AO 4 | AO Upper Limit | R/W | |
| 2937 | 32937 | 1 | LT 31: AO 4 | | R/W | |
| 2938 | 32938 | 1 | LT 31: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 2939 | 32939 | 1 | LT 31: AO 4 | AO Upper Limit | R/W | |
| 2940 | 32940 | 1 | LT 32: AO 4 | | R/W | |
| 2941 | 32941 | 1 | LT 32: AO 4 | | R/W | |
| 2942 | 32942 | 1 | LT 32: AO 4 | | R/W | |
| 2943 | 32943 | 1 | LT 32: AO 4 | | R/W | |
| 2944 | 32944 | 1 | LT 33: AO 4 | AO Upper Limit | R/W | |
| 2945 | 32945 | 1 | LT 33: AO 4 | | R/W | |
| 2946 | 32946 | 1 | LT 33: AO 4 | | R/W | |
| 2947 | 32947 | 1 | LT 33: AO 4 | | R/W | |
| 2948 | 32948 | 1 | LT 34: AO 4 | AO Upper Limit | R/W | |
| 2949 | 32949 | 1 | LT 34: AO 4 | | R/W | |
| 2950 | 32950 | 1 | LT 34: AO 4 | | R/W | |
| 2951 | 32951 | 1 | LT 34: AO 4 | | R/W | |
| 2952 | 32952 | 1 | LT 35: AO 4 | AO Upper Limit | R/W | |
| 2953 | 32953 | 1 | LT 35: AO 4 | | R/W | |
| 2954 | 32954 | 1 | LT 35: AO 4 | | R/W | |
| 2955 | 32955 | 1 | LT 35: AO 4 | | R/W | |
| 2956 | 32956 | 1 | LT 36: AO 4 | AO Upper Limit | R/W | |
| 2957 | 32957 | 1 | LT 36: AO 4 | | R/W | |
| 2958 | 32958 | 1 | LT 36: AO 4 | | R/W | |
| 2959 | 32959 | 1 | LT 36: AO 4 | | R/W | |
| 2960 | 32960 | 1 | LT 37: AO 4 | AO Upper Limit | R/W | |
| 2961 | 32961 | 1 | LT 37: AO 4 | | R/W | |
| 2962 | 32962 | 1 | LT 37: AO 4 | | R/W | |
| 2963 | 32963 | 1 | LT 37: AO 4 | | R/W | |
| 2964 | 32964 | 1 | LT 38: AO 4 | AO Upper Limit | R/W | |
| 2965 | 32965 | 1 | LT 38: AO 4 | | R/W | |
| 2966 | 32966 | 1 | LT 38: AO 4 | | R/W | |
| 2967 | 32967 | 1 | LT 38: AO 4 | | R/W | |
| 2968 | 32968 | 1 | LT 39: AO 4 | AO Upper Limit | R/W | |
| 2969 | 32969 | 1 | LT 39: AO 4 | | R/W | |
| 2970 | 32970 | 1 | LT 39: AO 4 | | R/W | |
| 2971 | 32971 | 1 | LT 39: AO 4 | | R/W | |
| 2972 | 32972 | 1 | LT 40: AO 4 | AO Upper Limit | R/W | |
| 2973 | 32973 | 1 | LT 40: AO 4 | | R/W | |
| 2974 | 32974 | 1 | LT 40: AO 4 | | R/W | |
| 2975 | 32975 | 1 | LT 40: AO 4 | | R/W | |
| 2976 | 32976 | 1 | LT 41: AO 4 | AO Upper Limit | R/W | |
| 2977 | 32977 | 1 | LT 41: AO 4 | | R/W | |
| 2978 | 32978 | 1 | LT 41: AO 4 | | R/W | |
| 2979 | 32979 | 1 | LT 41: AO 4 | | R/W | |
| 2980 | 32980 | 1 | LT 42: AO 4 | AO Upper Limit | R/W | |
| 2981 | 32981 | 1 | LT 42: AO 4 | | R/W | |
| 2982 | 32982 | 1 | LT 42: AO 4 | | R/W | |
| 2983 | 32983 | 1 | LT 42: AO 4 | | R/W | |
| 2984 | 32984 | 1 | LT 43: AO 4 | AO Upper Limit | R/W | |
| 2985 | 32985 | 1 | LT 43: AO 4 | | R/W | |
| 2986 | 32986 | 1 | LT 43: AO 4 | | R/W | |
| 2987 | 32987 | 1 | LT 43: AO 4 | | R/W | |
| 2988 | 32988 | 1 | LT 44: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 2989 | 32989 | 1 | LT 44: AO 4 | AO Upper Limit | R/W | |
| 2990 | 32990 | 1 | LT 44: AO 4 | | R/W | |
| 2991 | 32991 | 1 | LT 44: AO 4 | | R/W | |
| 2992 | 32992 | 1 | LT 45: AO 4 | AO Upper Limit | R/W | |
| 2993 | 32993 | 1 | LT 45: AO 4 | | R/W | |
| 2994 | 32994 | 1 | LT 45: AO 4 | | R/W | |
| 2995 | 32995 | 1 | LT 45: AO 4 | | R/W | |
| 2996 | 32996 | 1 | LT 46: AO 4 | AO Upper Limit | R/W | |
| 2997 | 32997 | 1 | LT 46: AO 4 | | R/W | |
| 2998 | 32998 | 1 | LT 46: AO 4 | | R/W | |
| 2999 | 32999 | 1 | LT 46: AO 4 | | R/W | |
| 3000 | 33000 | 1 | LT 47: AO 4 | AO Upper Limit | R/W | |
| 3001 | 33001 | 1 | LT 47: AO 4 | | R/W | |
| 3002 | 33002 | 1 | LT 47: AO 4 | | R/W | |
| 3003 | 33003 | 1 | LT 47: AO 4 | | R/W | |
| 3004 | 33004 | 1 | LT 48: AO 4 | AO Upper Limit | R/W | |
| 3005 | 33005 | 1 | LT 48: AO 4 | | R/W | |
| 3006 | 33006 | 1 | LT 48: AO 4 | | R/W | |
| 3007 | 33007 | 1 | LT 48: AO 4 | | R/W | |
| 3008 | 33008 | 1 | LT 49: AO 4 | AO Upper Limit | R/W | |
| 3009 | 33009 | 1 | LT 49: AO 4 | | R/W | |
| 3010 | 33010 | 1 | LT 49: AO 4 | | R/W | |
| 3011 | 33011 | 1 | LT 49: AO 4 | | R/W | |
| 3012 | 33012 | 1 | LT 50: AO 4 | AO Upper Limit | R/W | |
| 3013 | 33013 | 1 | LT 50: AO 4 | | R/W | |
| 3014 | 33014 | 1 | LT 50: AO 4 | | R/W | |
| 3015 | 33015 | 1 | LT 50: AO 4 | | R/W | |
| 3016 | 33016 | 1 | LT 51: AO 4 | AO Upper Limit | R/W | |
| 3017 | 33017 | 1 | LT 51: AO 4 | | R/W | |
| 3018 | 33018 | 1 | LT 51: AO 4 | | R/W | |
| 3019 | 33019 | 1 | LT 51: AO 4 | | R/W | |
| 3020 | 33020 | 1 | LT 52: AO 4 | AO Upper Limit | R/W | |
| 3021 | 33021 | 1 | LT 52: AO 4 | | R/W | |
| 3022 | 33022 | 1 | LT 52: AO 4 | | R/W | |
| 3023 | 33023 | 1 | LT 52: AO 4 | | R/W | |
| 3024 | 33024 | 1 | LT 53: AO 4 | AO Upper Limit | R/W | |
| 3025 | 33025 | 1 | LT 53: AO 4 | | R/W | |
| 3026 | 33026 | 1 | LT 53: AO 4 | | R/W | |
| 3027 | 33027 | 1 | LT 53: AO 4 | | R/W | |
| 3028 | 33028 | 1 | LT 54: AO 4 | AO Upper Limit | R/W | |
| 3029 | 33029 | 1 | LT 54: AO 4 | | R/W | |
| 3030 | 33030 | 1 | LT 54: AO 4 | | R/W | |
| 3031 | 33031 | 1 | LT 54: AO 4 | | R/W | |
| 3032 | 33032 | 1 | LT 55: AO 4 | AO Upper Limit | R/W | |
| 3033 | 33033 | 1 | LT 55: AO 4 | | R/W | |
| 3034 | 33034 | 1 | LT 55: AO 4 | | R/W | |
| 3035 | 33035 | 1 | LT 55: AO 4 | | R/W | |
| 3036 | 33036 | 1 | LT 56: AO 4 | AO Upper Limit | R/W | |
| 3037 | 33037 | 1 | LT 56: AO 4 | | R/W | |
| 3038 | 33038 | 1 | LT 56: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 3039 | 33039 | 1 | LT 56: AO 4 | AO Upper Limit | R/W | |
| 3040 | 33040 | 1 | LT 57: AO 4 | | R/W | |
| 3041 | 33041 | 1 | LT 57: AO 4 | | R/W | |
| 3042 | 33042 | 1 | LT 57: AO 4 | | R/W | |
| 3043 | 33043 | 1 | LT 57: AO 4 | | R/W | |
| 3044 | 33044 | 1 | LT 58: AO 4 | AO Upper Limit | R/W | |
| 3045 | 33045 | 1 | LT 58: AO 4 | | R/W | |
| 3046 | 33046 | 1 | LT 58: AO 4 | | R/W | |
| 3047 | 33047 | 1 | LT 58: AO 4 | | R/W | |
| 3048 | 33048 | 1 | LT 59: AO 4 | AO Upper Limit | R/W | |
| 3049 | 33049 | 1 | LT 59: AO 4 | | R/W | |
| 3050 | 33050 | 1 | LT 59: AO 4 | | R/W | |
| 3051 | 33051 | 1 | LT 59: AO 4 | | R/W | |
| 3052 | 33052 | 1 | LT 60: AO 4 | AO Upper Limit | R/W | |
| 3053 | 33053 | 1 | LT 60: AO 4 | | R/W | |
| 3054 | 33054 | 1 | LT 60: AO 4 | | R/W | |
| 3055 | 33055 | 1 | LT 60: AO 4 | | R/W | |
| 3056 | 33056 | 1 | LT 61: AO 4 | AO Upper Limit | R/W | |
| 3057 | 33057 | 1 | LT 61: AO 4 | | R/W | |
| 3058 | 33058 | 1 | LT 61: AO 4 | | R/W | |
| 3059 | 33059 | 1 | LT 61: AO 4 | | R/W | |
| 3060 | 33060 | 1 | LT 62: AO 4 | AO Upper Limit | R/W | |
| 3061 | 33061 | 1 | LT 62: AO 4 | | R/W | |
| 3062 | 33062 | 1 | LT 62: AO 4 | | R/W | |
| 3063 | 33063 | 1 | LT 62: AO 4 | | R/W | |
| 3064 | 33064 | 1 | LT 63: AO 4 | AO Upper Limit | R/W | |
| 3065 | 33065 | 1 | LT 63: AO 4 | | R/W | |
| 3066 | 33066 | 1 | LT 63: AO 4 | | R/W | |
| 3067 | 33067 | 1 | LT 63: AO 4 | | R/W | |
| 3068 | 33068 | 1 | LT 64: AO 4 | AO Upper Limit | R/W | |
| 3069 | 33069 | 1 | LT 64: AO 4 | | R/W | |
| 3070 | 33070 | 1 | LT 64: AO 4 | | R/W | |
| 3071 | 33071 | 1 | LT 64: AO 4 | | R/W | |
| 3072 | 33072 | 1 | LT 1: AO 1 | AO Lower Limit | R/W | |
| 3073 | 33073 | 1 | LT 1: AO 2 | | R/W | |
| 3074 | 33074 | 1 | LT 1: AO 3 | | R/W | |
| 3075 | 33075 | 1 | LT 1: AO 4 | | R/W | |
| 3076 | 33076 | 1 | LT 2: AO 1 | AO Lower Limit | R/W | |
| 3077 | 33077 | 1 | LT 2: AO 2 | | R/W | |
| 3078 | 33078 | 1 | LT 2: AO 3 | | R/W | |
| 3079 | 33079 | 1 | LT 2: AO 4 | | R/W | |
| 3080 | 33080 | 1 | LT 3: AO 1 | AO Lower Limit | R/W | |
| 3081 | 33081 | 1 | LT 3: AO 2 | | R/W | |
| 3082 | 33082 | 1 | LT 3: AO 3 | | R/W | |
| 3083 | 33083 | 1 | LT 3: AO 4 | | R/W | |
| 3084 | 33084 | 1 | LT 4: AO 1 | AO Lower Limit | R/W | |
| 3085 | 33085 | 1 | LT 4: AO 2 | | R/W | |
| 3086 | 33086 | 1 | LT 4: AO 3 | | R/W | |
| 3087 | 33087 | 1 | LT 4: AO 4 | | R/W | |
| 3088 | 33088 | 1 | LT 5: AO 1 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 3089 | 33089 | 1 | LT 5: AO 2 | AO Lower Limit | R/W | |
| 3090 | 33090 | 1 | LT 5: AO 3 | | R/W | |
| 3091 | 33091 | 1 | LT 5: AO 4 | | R/W | |
| 3092 | 33092 | 1 | LT 6: AO 1 | AO Lower Limit | R/W | |
| 3093 | 33093 | 1 | LT 6: AO 2 | | R/W | |
| 3094 | 33094 | 1 | LT 6: AO 3 | | R/W | |
| 3095 | 33095 | 1 | LT 6: AO 4 | | R/W | |
| 3096 | 33096 | 1 | LT 7: AO 1 | AO Lower Limit | R/W | |
| 3097 | 33097 | 1 | LT 7: AO 2 | | R/W | |
| 3098 | 33098 | 1 | LT 7: AO 3 | | R/W | |
| 3099 | 33099 | 1 | LT 7: AO 4 | | R/W | |
| 3100 | 33100 | 1 | LT 8: AO 1 | AO Lower Limit | R/W | |
| 3101 | 33101 | 1 | LT 8: AO 2 | | R/W | |
| 3102 | 33102 | 1 | LT 8: AO 3 | | R/W | |
| 3103 | 33103 | 1 | LT 8: AO 4 | | R/W | |
| 3104 | 33104 | 1 | LT 9: AO 1 | AO Lower Limit | R/W | |
| 3105 | 33105 | 1 | LT 9: AO 2 | | R/W | |
| 3106 | 33106 | 1 | LT 9: AO 3 | | R/W | |
| 3107 | 33107 | 1 | LT 9: AO 4 | | R/W | |
| 3108 | 33108 | 1 | LT 10: AO 1 | AO Lower Limit | R/W | |
| 3109 | 33109 | 1 | LT 10: AO 2 | | R/W | |
| 3110 | 33110 | 1 | LT 10: AO 3 | | R/W | |
| 3111 | 33111 | 1 | LT 10: AO 4 | | R/W | |
| 3112 | 33112 | 1 | LT 11: AO 1 | AO Lower Limit | R/W | |
| 3113 | 33113 | 1 | LT 11: AO 2 | | R/W | |
| 3114 | 33114 | 1 | LT 11: AO 3 | | R/W | |
| 3115 | 33115 | 1 | LT 11: AO 4 | | R/W | |
| 3116 | 33116 | 1 | LT 12: AO 1 | AO Lower Limit | R/W | |
| 3117 | 33117 | 1 | LT 12: AO 2 | | R/W | |
| 3118 | 33118 | 1 | LT 12: AO 3 | | R/W | |
| 3119 | 33119 | 1 | LT 12: AO 4 | | R/W | |
| 3120 | 33120 | 1 | LT 13: AO 1 | AO Lower Limit | R/W | |
| 3121 | 33121 | 1 | LT 13: AO 2 | | R/W | |
| 3122 | 33122 | 1 | LT 13: AO 3 | | R/W | |
| 3123 | 33123 | 1 | LT 13: AO 4 | | R/W | |
| 3124 | 33124 | 1 | LT 14: AO 1 | AO Lower Limit | R/W | |
| 3125 | 33125 | 1 | LT 14: AO 2 | | R/W | |
| 3126 | 33126 | 1 | LT 14: AO 3 | | R/W | |
| 3127 | 33127 | 1 | LT 14: AO 4 | | R/W | |
| 3128 | 33128 | 1 | LT 15: AO 1 | AO Lower Limit | R/W | |
| 3129 | 33129 | 1 | LT 15: AO 2 | | R/W | |
| 3130 | 33130 | 1 | LT 15: AO 3 | | R/W | |
| 3131 | 33131 | 1 | LT 15: AO 4 | | R/W | |
| 3132 | 33132 | 1 | LT 16: AO 1 | AO Lower Limit | R/W | |
| 3133 | 33133 | 1 | LT 16: AO 2 | | R/W | |
| 3134 | 33134 | 1 | LT 16: AO 3 | | R/W | |
| 3135 | 33135 | 1 | LT 16: AO 4 | | R/W | |
| 3136 | 33136 | 1 | LT 17: AO 4 | AO Lower Limit | R/W | |
| 3137 | 33137 | 1 | LT 17: AO 4 | | R/W | |
| 3138 | 33138 | 1 | LT 17: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|----------------|------------------|
| 3139 | 33139 | 1 | LT 17: AO 4 | | R/W | |
| 3140 | 33140 | 1 | LT 18: AO 4 | AO Lower Limit | R/W | |
| 3141 | 33141 | 1 | LT 18: AO 4 | | R/W | |
| 3142 | 33142 | 1 | LT 18: AO 4 | | R/W | |
| 3143 | 33143 | 1 | LT 18: AO 4 | | R/W | |
| 3144 | 33144 | 1 | LT 19: AO 4 | | AO Lower Limit | R/W |
| 3145 | 33145 | 1 | LT 19: AO 4 | R/W | | |
| 3146 | 33146 | 1 | LT 19: AO 4 | R/W | | |
| 3147 | 33147 | 1 | LT 19: AO 4 | R/W | | |
| 3148 | 33148 | 1 | LT 20: AO 4 | AO Lower Limit | R/W | |
| 3149 | 33149 | 1 | LT 20: AO 4 | | R/W | |
| 3150 | 33150 | 1 | LT 20: AO 4 | | R/W | |
| 3151 | 33151 | 1 | LT 20: AO 4 | | R/W | |
| 3152 | 33152 | 1 | LT 21: AO 4 | AO Lower Limit | R/W | |
| 3153 | 33153 | 1 | LT 21: AO 4 | | R/W | |
| 3154 | 33154 | 1 | LT 21: AO 4 | | R/W | |
| 3155 | 33155 | 1 | LT 21: AO 4 | | R/W | |
| 3156 | 33156 | 1 | LT 22: AO 4 | AO Lower Limit | R/W | |
| 3157 | 33157 | 1 | LT 22: AO 4 | | R/W | |
| 3158 | 33158 | 1 | LT 22: AO 4 | | R/W | |
| 3159 | 33159 | 1 | LT 22: AO 4 | | R/W | |
| 3160 | 33160 | 1 | LT 23: AO 4 | AO Lower Limit | R/W | |
| 3161 | 33161 | 1 | LT 23: AO 4 | | R/W | |
| 3162 | 33162 | 1 | LT 23: AO 4 | | R/W | |
| 3163 | 33163 | 1 | LT 23: AO 4 | | R/W | |
| 3164 | 33164 | 1 | LT 24: AO 4 | AO Lower Limit | R/W | |
| 3165 | 33165 | 1 | LT 24: AO 4 | | R/W | |
| 3166 | 33166 | 1 | LT 24: AO 4 | | R/W | |
| 3167 | 33167 | 1 | LT 24: AO 4 | | R/W | |
| 3168 | 33168 | 1 | LT 25: AO 4 | AO Lower Limit | R/W | |
| 3169 | 33169 | 1 | LT 25: AO 4 | | R/W | |
| 3170 | 33170 | 1 | LT 25: AO 4 | | R/W | |
| 3171 | 33171 | 1 | LT 25: AO 4 | | R/W | |
| 3172 | 33172 | 1 | LT 26: AO 4 | AO Lower Limit | R/W | |
| 3173 | 33173 | 1 | LT 26: AO 4 | | R/W | |
| 3174 | 33174 | 1 | LT 26: AO 4 | | R/W | |
| 3175 | 33175 | 1 | LT 26: AO 4 | | R/W | |
| 3176 | 33176 | 1 | LT 27: AO 4 | AO Lower Limit | R/W | |
| 3177 | 33177 | 1 | LT 27: AO 4 | | R/W | |
| 3178 | 33178 | 1 | LT 27: AO 4 | | R/W | |
| 3179 | 33179 | 1 | LT 27: AO 4 | | R/W | |
| 3180 | 33180 | 1 | LT 28: AO 4 | AO Lower Limit | R/W | |
| 3181 | 33181 | 1 | LT 28: AO 4 | | R/W | |
| 3182 | 33182 | 1 | LT 28: AO 4 | | R/W | |
| 3183 | 33183 | 1 | LT 28: AO 4 | | R/W | |
| 3184 | 33184 | 1 | LT 29: AO 4 | AO Lower Limit | R/W | |
| 3185 | 33185 | 1 | LT 29: AO 4 | | R/W | |
| 3186 | 33186 | 1 | LT 29: AO 4 | | R/W | |
| 3187 | 33187 | 1 | LT 29: AO 4 | | R/W | |
| 3188 | 33188 | 1 | LT 30: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|----------------|------------------|
| 3189 | 33189 | 1 | LT 30: AO 4 | AO Lower Limit | R/W | |
| 3190 | 33190 | 1 | LT 30: AO 4 | | R/W | |
| 3191 | 33191 | 1 | LT 30: AO 4 | | R/W | |
| 3192 | 33192 | 1 | LT 31: AO 4 | AO Lower Limit | R/W | |
| 3193 | 33193 | 1 | LT 31: AO 4 | | R/W | |
| 3194 | 33194 | 1 | LT 31: AO 4 | | R/W | |
| 3195 | 33195 | 1 | LT 31: AO 4 | AO Lower Limit | R/W | |
| 3196 | 33196 | 1 | LT 32: AO 4 | | R/W | |
| 3197 | 33197 | 1 | LT 32: AO 4 | | R/W | |
| 3198 | 33198 | 1 | LT 32: AO 4 | AO Lower Limit | R/W | |
| 3199 | 33199 | 1 | LT 32: AO 4 | | R/W | |
| 3200 | 33200 | 1 | LT 33: AO 4 | | AO Lower Limit | |
| 3201 | 33201 | 1 | LT 33: AO 4 | R/W | | |
| 3202 | 33202 | 1 | LT 33: AO 4 | R/W | | |
| 3203 | 33203 | 1 | LT 33: AO 4 | AO Lower Limit | R/W | |
| 3204 | 33204 | 1 | LT 34: AO 4 | | R/W | |
| 3205 | 33205 | 1 | LT 34: AO 4 | | R/W | |
| 3206 | 33206 | 1 | LT 34: AO 4 | AO Lower Limit | R/W | |
| 3207 | 33207 | 1 | LT 34: AO 4 | | R/W | |
| 3208 | 33208 | 1 | LT 35: AO 4 | | AO Lower Limit | |
| 3209 | 33209 | 1 | LT 35: AO 4 | R/W | | |
| 3210 | 33210 | 1 | LT 35: AO 4 | R/W | | |
| 3211 | 33211 | 1 | LT 35: AO 4 | AO Lower Limit | R/W | |
| 3212 | 33212 | 1 | LT 36: AO 4 | | R/W | |
| 3213 | 33213 | 1 | LT 36: AO 4 | | R/W | |
| 3214 | 33214 | 1 | LT 36: AO 4 | AO Lower Limit | R/W | |
| 3215 | 33215 | 1 | LT 36: AO 4 | | R/W | |
| 3216 | 33216 | 1 | LT 37: AO 4 | | AO Lower Limit | |
| 3217 | 33217 | 1 | LT 37: AO 4 | R/W | | |
| 3218 | 33218 | 1 | LT 37: AO 4 | R/W | | |
| 3219 | 33219 | 1 | LT 37: AO 4 | AO Lower Limit | R/W | |
| 3220 | 33220 | 1 | LT 38: AO 4 | | R/W | |
| 3221 | 33221 | 1 | LT 38: AO 4 | | R/W | |
| 3222 | 33222 | 1 | LT 38: AO 4 | AO Lower Limit | R/W | |
| 3223 | 33223 | 1 | LT 38: AO 4 | | R/W | |
| 3224 | 33224 | 1 | LT 39: AO 4 | | AO Lower Limit | R/W |
| 3225 | 33225 | 1 | LT 39: AO 4 | R/W | | |
| 3226 | 33226 | 1 | LT 39: AO 4 | R/W | | |
| 3227 | 33227 | 1 | LT 39: AO 4 | AO Lower Limit | R/W | |
| 3228 | 33228 | 1 | LT 40: AO 4 | | R/W | |
| 3229 | 33229 | 1 | LT 40: AO 4 | | R/W | |
| 3230 | 33230 | 1 | LT 40: AO 4 | AO Lower Limit | R/W | |
| 3231 | 33231 | 1 | LT 40: AO 4 | | R/W | |
| 3232 | 33232 | 1 | LT 41: AO 4 | | AO Lower Limit | R/W |
| 3233 | 33233 | 1 | LT 41: AO 4 | R/W | | |
| 3234 | 33234 | 1 | LT 41: AO 4 | R/W | | |
| 3235 | 33235 | 1 | LT 41: AO 4 | AO Lower Limit | R/W | |
| 3236 | 33236 | 1 | LT 42: AO 4 | | R/W | |
| 3237 | 33237 | 1 | LT 42: AO 4 | | R/W | |
| 3238 | 33238 | 1 | LT 42: AO 4 | AO Lower Limit | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 3239 | 33239 | 1 | LT 42: AO 4 | AO Lower Limit | R/W | |
| 3240 | 33240 | 1 | LT 43: AO 4 | | R/W | |
| 3241 | 33241 | 1 | LT 43: AO 4 | | R/W | |
| 3242 | 33242 | 1 | LT 43: AO 4 | | R/W | |
| 3243 | 33243 | 1 | LT 43: AO 4 | | R/W | |
| 3244 | 33244 | 1 | LT 44: AO 4 | AO Lower Limit | R/W | |
| 3245 | 33245 | 1 | LT 44: AO 4 | | R/W | |
| 3246 | 33246 | 1 | LT 44: AO 4 | | R/W | |
| 3247 | 33247 | 1 | LT 44: AO 4 | | R/W | |
| 3248 | 33248 | 1 | LT 45: AO 4 | AO Lower Limit | R/W | |
| 3249 | 33249 | 1 | LT 45: AO 4 | | R/W | |
| 3250 | 33250 | 1 | LT 45: AO 4 | | R/W | |
| 3251 | 33251 | 1 | LT 45: AO 4 | | R/W | |
| 3252 | 33252 | 1 | LT 46: AO 4 | AO Lower Limit | R/W | |
| 3253 | 33253 | 1 | LT 46: AO 4 | | R/W | |
| 3254 | 33254 | 1 | LT 46: AO 4 | | R/W | |
| 3255 | 33255 | 1 | LT 46: AO 4 | | R/W | |
| 3256 | 33256 | 1 | LT 47: AO 4 | AO Lower Limit | R/W | |
| 3257 | 33257 | 1 | LT 47: AO 4 | | R/W | |
| 3258 | 33258 | 1 | LT 47: AO 4 | | R/W | |
| 3259 | 33259 | 1 | LT 47: AO 4 | | R/W | |
| 3260 | 33260 | 1 | LT 48: AO 4 | AO Lower Limit | R/W | |
| 3261 | 33261 | 1 | LT 48: AO 4 | | R/W | |
| 3262 | 33262 | 1 | LT 48: AO 4 | | R/W | |
| 3263 | 33263 | 1 | LT 48: AO 4 | | R/W | |
| 3264 | 33264 | 1 | LT 49: AO 4 | AO Lower Limit | R/W | |
| 3265 | 33265 | 1 | LT 49: AO 4 | | R/W | |
| 3266 | 33266 | 1 | LT 49: AO 4 | | R/W | |
| 3267 | 33267 | 1 | LT 49: AO 4 | | R/W | |
| 3268 | 33268 | 1 | LT 50: AO 4 | AO Lower Limit | R/W | |
| 3269 | 33269 | 1 | LT 50: AO 4 | | R/W | |
| 3270 | 33270 | 1 | LT 50: AO 4 | | R/W | |
| 3271 | 33271 | 1 | LT 50: AO 4 | | R/W | |
| 3272 | 33272 | 1 | LT 51: AO 4 | AO Lower Limit | R/W | |
| 3273 | 33273 | 1 | LT 51: AO 4 | | R/W | |
| 3274 | 33274 | 1 | LT 51: AO 4 | | R/W | |
| 3275 | 33275 | 1 | LT 51: AO 4 | | R/W | |
| 3276 | 33276 | 1 | LT 52: AO 4 | AO Lower Limit | R/W | |
| 3277 | 33277 | 1 | LT 52: AO 4 | | R/W | |
| 3278 | 33278 | 1 | LT 52: AO 4 | | R/W | |
| 3279 | 33279 | 1 | LT 52: AO 4 | | R/W | |
| 3280 | 33280 | 1 | LT 53: AO 4 | AO Lower Limit | R/W | |
| 3281 | 33281 | 1 | LT 53: AO 4 | | R/W | |
| 3282 | 33282 | 1 | LT 53: AO 4 | | R/W | |
| 3283 | 33283 | 1 | LT 53: AO 4 | | R/W | |
| 3284 | 33284 | 1 | LT 54: AO 4 | AO Lower Limit | R/W | |
| 3285 | 33285 | 1 | LT 54: AO 4 | | R/W | |
| 3286 | 33286 | 1 | LT 54: AO 4 | | R/W | |
| 3287 | 33287 | 1 | LT 54: AO 4 | | R/W | |
| 3288 | 33288 | 1 | LT 55: AO 4 | | R/W | |

| Register | Modbus Read | Size | LT & Channel | Parameter | R/W | Return Data Type |
|----------|-------------|------|--------------|----------------|-----|------------------|
| 3289 | 33289 | 1 | LT 55: AO 4 | AO Lower Limit | R/W | |
| 3290 | 33290 | 1 | LT 55: AO 4 | | R/W | |
| 3291 | 33291 | 1 | LT 55: AO 4 | | R/W | |
| 3292 | 33292 | 1 | LT 56: AO 4 | AO Lower Limit | R/W | |
| 3293 | 33293 | 1 | LT 56: AO 4 | | R/W | |
| 3294 | 33294 | 1 | LT 56: AO 4 | | R/W | |
| 3295 | 33295 | 1 | LT 56: AO 4 | AO Lower Limit | R/W | |
| 3296 | 33296 | 1 | LT 57: AO 4 | | R/W | |
| 3297 | 33297 | 1 | LT 57: AO 4 | | R/W | |
| 3298 | 33298 | 1 | LT 57: AO 4 | | R/W | |
| 3299 | 33299 | 1 | LT 57: AO 4 | AO Lower Limit | R/W | |
| 3300 | 33300 | 1 | LT 58: AO 4 | | R/W | |
| 3301 | 33301 | 1 | LT 58: AO 4 | | R/W | |
| 3302 | 33302 | 1 | LT 58: AO 4 | | R/W | |
| 3303 | 33303 | 1 | LT 58: AO 4 | AO Lower Limit | R/W | |
| 3304 | 33304 | 1 | LT 59: AO 4 | | R/W | |
| 3305 | 33305 | 1 | LT 59: AO 4 | | R/W | |
| 3306 | 33306 | 1 | LT 59: AO 4 | | R/W | |
| 3307 | 33307 | 1 | LT 59: AO 4 | AO Lower Limit | R/W | |
| 3308 | 33308 | 1 | LT 60: AO 4 | | R/W | |
| 3309 | 33309 | 1 | LT 60: AO 4 | | R/W | |
| 3310 | 33310 | 1 | LT 60: AO 4 | | R/W | |
| 3311 | 33311 | 1 | LT 60: AO 4 | AO Lower Limit | R/W | |
| 3312 | 33312 | 1 | LT 61: AO 4 | | R/W | |
| 3313 | 33313 | 1 | LT 61: AO 4 | | R/W | |
| 3314 | 33314 | 1 | LT 61: AO 4 | | R/W | |
| 3315 | 33315 | 1 | LT 61: AO 4 | AO Lower Limit | R/W | |
| 3316 | 33316 | 1 | LT 62: AO 4 | | R/W | |
| 3317 | 33317 | 1 | LT 62: AO 4 | | R/W | |
| 3318 | 33318 | 1 | LT 62: AO 4 | | R/W | |
| 3319 | 33319 | 1 | LT 62: AO 4 | AO Lower Limit | R/W | |
| 3320 | 33320 | 1 | LT 63: AO 4 | | R/W | |
| 3321 | 33321 | 1 | LT 63: AO 4 | | R/W | |
| 3322 | 33322 | 1 | LT 63: AO 4 | | R/W | |
| 3323 | 33323 | 1 | LT 63: AO 4 | AO Lower Limit | R/W | |
| 3324 | 33324 | 1 | LT 64: AO 4 | | R/W | |
| 3325 | 33325 | 1 | LT 64: AO 4 | | R/W | |
| 3326 | 33326 | 1 | LT 64: AO 4 | | R/W | |
| 3327 | 33327 | 1 | LT 64: AO 4 | | R/W | |

Complete Register Table For Control Address

Use function code 5 to issue the control command.

Register Addresses 1 to 767

| Register | Size | Command | LT & Channel |
|----------|------|------------------|------------------|
| 1 | 1 | Set Group On/Off | All LT: Group 1 |
| 2 | 1 | Set Group On/Off | All LT: Group 2 |
| 3 | 1 | Set Group On/Off | All LT: Group 3 |
| 4 | 1 | Set Group On/Off | All LT: Group 4 |
| 5 | 1 | Set Group On/Off | All LT: Group 5 |
| 6 | 1 | Set Group On/Off | All LT: Group 6 |
| 7 | 1 | Set Group On/Off | All LT: Group 7 |
| 8 | 1 | Set Group On/Off | All LT: Group 8 |
| 9 | 1 | Set Group On/Off | All LT: Group 9 |
| 10 | 1 | Set Group On/Off | All LT: Group 10 |
| 11 | 1 | Set Group On/Off | All LT: Group 11 |
| 12 | 1 | Set Group On/Off | All LT: Group 12 |
| 13 | 1 | Set Group On/Off | All LT: Group 13 |
| 14 | 1 | Set Group On/Off | All LT: Group 14 |
| 15 | 1 | Set Group On/Off | All LT: Group 15 |
| 16 | 1 | Set Group On/Off | All LT: Group 16 |
| 17 | 1 | Set Group On/Off | All LT: Group 17 |
| 18 | 1 | Set Group On/Off | All LT: Group 18 |
| 19 | 1 | Set Group On/Off | All LT: Group 19 |
| 20 | 1 | Set Group On/Off | All LT: Group 20 |
| 21 | 1 | Set Group On/Off | All LT: Group 21 |
| 22 | 1 | Set Group On/Off | All LT: Group 22 |
| 23 | 1 | Set Group On/Off | All LT: Group 23 |
| 24 | 1 | Set Group On/Off | All LT: Group 24 |
| 25 | 1 | Set Group On/Off | All LT: Group 25 |
| 26 | 1 | Set Group On/Off | All LT: Group 26 |
| 27 | 1 | Set Group On/Off | All LT: Group 27 |
| 28 | 1 | Set Group On/Off | All LT: Group 28 |
| 29 | 1 | Set Group On/Off | All LT: Group 29 |
| 30 | 1 | Set Group On/Off | All LT: Group 30 |
| 31 | 1 | Set Group On/Off | All LT: Group 31 |
| 32 | 1 | Set Group On/Off | All LT: Group 32 |
| 33 | 1 | Set Group On/Off | All LT: Group 33 |
| 34 | 1 | Set Group On/Off | All LT: Group 34 |
| 35 | 1 | Set Group On/Off | All LT: Group 35 |
| 36 | 1 | Set Group On/Off | All LT: Group 36 |
| 37 | 1 | Set Group On/Off | All LT: Group 37 |
| 38 | 1 | Set Group On/Off | All LT: Group 38 |
| 39 | 1 | Set Group On/Off | All LT: Group 39 |
| 40 | 1 | Set Group On/Off | All LT: Group 40 |
| 41 | 1 | Set Group On/Off | All LT: Group 41 |
| 42 | 1 | Set Group On/Off | All LT: Group 42 |
| 43 | 1 | Set Group On/Off | All LT: Group 43 |
| 44 | 1 | Set Group On/Off | All LT: Group 44 |

| Register | Size | Command | LT & Channel |
|----------|------|------------------|--------------------|
| 45 | 1 | Set Group On/Off | All LT: Group 45 |
| 46 | 1 | Set Group On/Off | All LT: Group 46 |
| 47 | 1 | Set Group On/Off | All LT: Group 47 |
| 48 | 1 | Set Group On/Off | All LT: Group 48 |
| 49 | 1 | Set Group On/Off | All LT: Group 49 |
| 50 | 1 | Set Group On/Off | All LT: Group 50 |
| 51 | 1 | Set Group On/Off | All LT: Group 51 |
| 52 | 1 | Set Group On/Off | All LT: Group 52 |
| 53 | 1 | Set Group On/Off | All LT: Group 53 |
| 54 | 1 | Set Group On/Off | All LT: Group 54 |
| 55 | 1 | Set Group On/Off | All LT: Group 55 |
| 56 | 1 | Set Group On/Off | All LT: Group 56 |
| 57 | 1 | Set Group On/Off | All LT: Group 57 |
| 58 | 1 | Set Group On/Off | All LT: Group 58 |
| 59 | 1 | Set Group On/Off | All LT: Group 59 |
| 60 | 1 | Set Group On/Off | All LT: Group 60 |
| 61 | 1 | Set Group On/Off | All LT: Group 61 |
| 62 | 1 | Set Group On/Off | All LT: Group 62 |
| 63 | 1 | Set Group On/Off | All LT: Group 63 |
| 64 | 1 | Activate Pattern | All LT: Pattern 1 |
| 65 | 1 | Activate Pattern | All LT: Pattern 2 |
| 66 | 1 | Activate Pattern | All LT: Pattern 3 |
| 67 | 1 | Activate Pattern | All LT: Pattern 4 |
| 68 | 1 | Activate Pattern | All LT: Pattern 5 |
| 69 | 1 | Activate Pattern | All LT: Pattern 6 |
| 70 | 1 | Activate Pattern | All LT: Pattern 7 |
| 71 | 1 | Activate Pattern | All LT: Pattern 8 |
| 72 | 1 | Activate Pattern | All LT: Pattern 9 |
| 73 | 1 | Activate Pattern | All LT: Pattern 10 |
| 74 | 1 | Activate Pattern | All LT: Pattern 11 |
| 75 | 1 | Activate Pattern | All LT: Pattern 12 |
| 76 | 1 | Activate Pattern | All LT: Pattern 13 |
| 77 | 1 | Activate Pattern | All LT: Pattern 14 |
| 78 | 1 | Activate Pattern | All LT: Pattern 15 |
| 79 | 1 | Activate Pattern | All LT: Pattern 16 |
| 80 | 1 | Activate Pattern | All LT: Pattern 17 |
| 81 | 1 | Activate Pattern | All LT: Pattern 18 |
| 82 | 1 | Activate Pattern | All LT: Pattern 19 |
| 83 | 1 | Activate Pattern | All LT: Pattern 20 |
| 84 | 1 | Activate Pattern | All LT: Pattern 21 |
| 85 | 1 | Activate Pattern | All LT: Pattern 22 |
| 86 | 1 | Activate Pattern | All LT: Pattern 23 |
| 87 | 1 | Activate Pattern | All LT: Pattern 24 |
| 88 | 1 | Activate Pattern | All LT: Pattern 25 |
| 89 | 1 | Activate Pattern | All LT: Pattern 26 |
| 90 | 1 | Activate Pattern | All LT: Pattern 27 |
| 91 | 1 | Activate Pattern | All LT: Pattern 28 |
| 92 | 1 | Activate Pattern | All LT: Pattern 29 |
| 93 | 1 | Activate Pattern | All LT: Pattern 30 |
| 94 | 1 | Activate Pattern | All LT: Pattern 31 |
| 95 | 1 | Activate Pattern | All LT: Pattern 32 |

| Register | Size | Command | LT & Channel |
|----------|------|------------------|--------------------|
| 96 | 1 | Activate Pattern | All LT: Pattern 33 |
| 97 | 1 | Activate Pattern | All LT: Pattern 34 |
| 98 | 1 | Activate Pattern | All LT: Pattern 35 |
| 99 | 1 | Activate Pattern | All LT: Pattern 36 |
| 100 | 1 | Activate Pattern | All LT: Pattern 37 |
| 101 | 1 | Activate Pattern | All LT: Pattern 38 |
| 102 | 1 | Activate Pattern | All LT: Pattern 39 |
| 103 | 1 | Activate Pattern | All LT: Pattern 40 |
| 104 | 1 | Activate Pattern | All LT: Pattern 41 |
| 105 | 1 | Activate Pattern | All LT: Pattern 42 |
| 106 | 1 | Activate Pattern | All LT: Pattern 43 |
| 107 | 1 | Activate Pattern | All LT: Pattern 44 |
| 108 | 1 | Activate Pattern | All LT: Pattern 45 |
| 109 | 1 | Activate Pattern | All LT: Pattern 46 |
| 110 | 1 | Activate Pattern | All LT: Pattern 47 |
| 111 | 1 | Activate Pattern | All LT: Pattern 48 |
| 112 | 1 | Activate Pattern | All LT: Pattern 49 |
| 113 | 1 | Activate Pattern | All LT: Pattern 50 |
| 114 | 1 | Activate Pattern | All LT: Pattern 51 |
| 115 | 1 | Activate Pattern | All LT: Pattern 52 |
| 116 | 1 | Activate Pattern | All LT: Pattern 53 |
| 117 | 1 | Activate Pattern | All LT: Pattern 54 |
| 118 | 1 | Activate Pattern | All LT: Pattern 55 |
| 119 | 1 | Activate Pattern | All LT: Pattern 56 |
| 120 | 1 | Activate Pattern | All LT: Pattern 57 |
| 121 | 1 | Activate Pattern | All LT: Pattern 58 |
| 122 | 1 | Activate Pattern | All LT: Pattern 59 |
| 123 | 1 | Activate Pattern | All LT: Pattern 60 |
| 124 | 1 | Activate Pattern | All LT: Pattern 61 |
| 125 | 1 | Activate Pattern | All LT: Pattern 62 |
| 126 | 1 | Activate Pattern | All LT: Pattern 63 |
| 127 | 1 | Activate Pattern | All LT: Pattern 64 |
| 256 | 1 | Set DO On/Off | LT : DO |
| 257 | 1 | | LT : DO |
| 258 | 1 | | LT : DO |
| 259 | 1 | | LT : DO |
| 260 | 1 | | LT : DO |
| 261 | 1 | | LT : DO |
| 262 | 1 | | LT : DO |
| 263 | 1 | | LT : DO |
| 264 | 1 | Set DO On/Off | LT : DO |
| 265 | 1 | | LT : DO |
| 266 | 1 | | LT : DO |
| 267 | 1 | | LT : DO |
| 268 | 1 | | LT : DO |
| 269 | 1 | | LT : DO |
| 270 | 1 | | LT : DO |
| 271 | 1 | | LT : DO |
| 272 | 1 | | LT : DO |
| 273 | 1 | | LT : DO |
| 274 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 275 | 1 | Set DO On/Off | LT : DO |
| 276 | 1 | | LT : DO |
| 277 | 1 | | LT : DO |
| 278 | 1 | | LT : DO |
| 279 | 1 | | LT : DO |
| 280 | 1 | Set DO On/Off | LT : DO |
| 281 | 1 | | LT : DO |
| 282 | 1 | | LT : DO |
| 283 | 1 | | LT : DO |
| 284 | 1 | | LT : DO |
| 285 | 1 | | LT : DO |
| 286 | 1 | | LT : DO |
| 287 | 1 | LT : DO | |
| 288 | 1 | Set DO On/Off | LT : DO |
| 289 | 1 | | LT : DO |
| 290 | 1 | | LT : DO |
| 291 | 1 | | LT : DO |
| 292 | 1 | | LT : DO |
| 293 | 1 | | LT : DO |
| 294 | 1 | | LT : DO |
| 295 | 1 | LT : DO | |
| 296 | 1 | Set DO On/Off | LT : DO |
| 297 | 1 | | LT : DO |
| 298 | 1 | | LT : DO |
| 299 | 1 | | LT : DO |
| 300 | 1 | | LT : DO |
| 301 | 1 | | LT : DO |
| 302 | 1 | | LT : DO |
| 303 | 1 | LT : DO | |
| 304 | 1 | Set DO On/Off | LT : DO |
| 305 | 1 | | LT : DO |
| 306 | 1 | | LT : DO |
| 307 | 1 | | LT : DO |
| 308 | 1 | | LT : DO |
| 309 | 1 | | LT : DO |
| 310 | 1 | | LT : DO |
| 311 | 1 | LT : DO | |
| 312 | 1 | Set DO On/Off | LT : DO |
| 313 | 1 | | LT : DO |
| 314 | 1 | | LT : DO |
| 315 | 1 | | LT : DO |
| 316 | 1 | | LT : DO |
| 317 | 1 | | LT : DO |
| 318 | 1 | | LT : DO |
| 319 | 1 | LT : DO | |
| 320 | 1 | Set DO On/Off | LT : DO |
| 321 | 1 | | LT : DO |
| 322 | 1 | | LT : DO |
| 323 | 1 | | LT : DO |
| 324 | 1 | | LT : DO |
| 325 | 1 | LT : DO | |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 326 | 1 | Set DO On/Off | LT : DO |
| 327 | 1 | | LT : DO |
| 328 | 1 | | LT : DO |
| 329 | 1 | | LT : DO |
| 330 | 1 | | LT : DO |
| 331 | 1 | | LT : DO |
| 332 | 1 | | LT : DO |
| 333 | 1 | LT : DO | |
| 334 | 1 | LT : DO | |
| 335 | 1 | LT : DO | |
| 336 | 1 | Set DO On/Off | LT : DO |
| 337 | 1 | | LT : DO |
| 338 | 1 | | LT : DO |
| 339 | 1 | | LT : DO |
| 340 | 1 | | LT : DO |
| 341 | 1 | | LT : DO |
| 342 | 1 | | LT : DO |
| 343 | 1 | LT : DO | |
| 344 | 1 | Set DO On/Off | LT : DO |
| 345 | 1 | | LT : DO |
| 346 | 1 | | LT : DO |
| 347 | 1 | | LT : DO |
| 348 | 1 | | LT : DO |
| 349 | 1 | | LT : DO |
| 350 | 1 | | LT : DO |
| 351 | 1 | LT : DO | |
| 352 | 1 | Set DO On/Off | LT : DO |
| 353 | 1 | | LT : DO |
| 354 | 1 | | LT : DO |
| 355 | 1 | | LT : DO |
| 356 | 1 | | LT : DO |
| 357 | 1 | | LT : DO |
| 358 | 1 | | LT : DO |
| 359 | 1 | LT : DO | |
| 360 | 1 | Set DO On/Off | LT : DO |
| 361 | 1 | | LT : DO |
| 362 | 1 | | LT : DO |
| 363 | 1 | | LT : DO |
| 364 | 1 | | LT : DO |
| 365 | 1 | | LT : DO |
| 366 | 1 | | LT : DO |
| 367 | 1 | LT : DO | |
| 368 | 1 | Set DO On/Off | LT : DO |
| 369 | 1 | | LT : DO |
| 370 | 1 | | LT : DO |
| 371 | 1 | | LT : DO |
| 372 | 1 | | LT : DO |
| 373 | 1 | | LT : DO |
| 374 | 1 | | LT : DO |
| 375 | 1 | LT : DO | |
| 376 | 1 | LT : DO | |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 377 | 1 | Set DO On/Off | LT : DO |
| 378 | 1 | | LT : DO |
| 379 | 1 | | LT : DO |
| 380 | 1 | | LT : DO |
| 381 | 1 | | LT : DO |
| 382 | 1 | | LT : DO |
| 383 | 1 | | LT : DO |
| 384 | 1 | Set DO On/Off | LT : DO |
| 385 | 1 | | LT : DO |
| 386 | 1 | | LT : DO |
| 387 | 1 | | LT : DO |
| 388 | 1 | | LT : DO |
| 389 | 1 | | LT : DO |
| 390 | 1 | | LT : DO |
| 391 | 1 | LT : DO | |
| 392 | 1 | Set DO On/Off | LT : DO |
| 393 | 1 | | LT : DO |
| 394 | 1 | | LT : DO |
| 395 | 1 | | LT : DO |
| 396 | 1 | | LT : DO |
| 397 | 1 | | LT : DO |
| 398 | 1 | | LT : DO |
| 399 | 1 | LT : DO | |
| 400 | 1 | Set DO On/Off | LT : DO |
| 401 | 1 | | LT : DO |
| 402 | 1 | | LT : DO |
| 403 | 1 | | LT : DO |
| 404 | 1 | | LT : DO |
| 405 | 1 | | LT : DO |
| 406 | 1 | | LT : DO |
| 407 | 1 | LT : DO | |
| 408 | 1 | Set DO On/Off | LT : DO |
| 409 | 1 | | LT : DO |
| 410 | 1 | | LT : DO |
| 411 | 1 | | LT : DO |
| 412 | 1 | | LT : DO |
| 413 | 1 | | LT : DO |
| 414 | 1 | | LT : DO |
| 415 | 1 | LT : DO | |
| 416 | 1 | Set DO On/Off | LT : DO |
| 417 | 1 | | LT : DO |
| 418 | 1 | | LT : DO |
| 419 | 1 | | LT : DO |
| 420 | 1 | | LT : DO |
| 421 | 1 | | LT : DO |
| 422 | 1 | | LT : DO |
| 423 | 1 | LT : DO | |
| 424 | 1 | Set DO On/Off | LT : DO |
| 425 | 1 | | LT : DO |
| 426 | 1 | | LT : DO |
| 427 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 428 | 1 | Set DO On/Off | LT : DO |
| 429 | 1 | | LT : DO |
| 430 | 1 | | LT : DO |
| 431 | 1 | | LT : DO |
| 432 | 1 | Set DO On/Off | LT : DO |
| 433 | 1 | | LT : DO |
| 434 | 1 | | LT : DO |
| 435 | 1 | | LT : DO |
| 436 | 1 | | LT : DO |
| 437 | 1 | | LT : DO |
| 438 | 1 | | LT : DO |
| 439 | 1 | LT : DO | |
| 440 | 1 | Set DO On/Off | LT : DO |
| 441 | 1 | | LT : DO |
| 442 | 1 | | LT : DO |
| 443 | 1 | | LT : DO |
| 444 | 1 | | LT : DO |
| 445 | 1 | | LT : DO |
| 446 | 1 | | LT : DO |
| 447 | 1 | | LT : DO |
| 448 | 1 | Set DO On/Off | LT : DO |
| 449 | 1 | | LT : DO |
| 450 | 1 | | LT : DO |
| 451 | 1 | | LT : DO |
| 452 | 1 | | LT : DO |
| 453 | 1 | | LT : DO |
| 454 | 1 | | LT : DO |
| 455 | 1 | LT : DO | |
| 456 | 1 | Set DO On/Off | LT : DO |
| 457 | 1 | | LT : DO |
| 458 | 1 | | LT : DO |
| 459 | 1 | | LT : DO |
| 460 | 1 | | LT : DO |
| 461 | 1 | | LT : DO |
| 462 | 1 | | LT : DO |
| 463 | 1 | | LT : DO |
| 464 | 1 | Set DO On/Off | LT : DO |
| 465 | 1 | | LT : DO |
| 466 | 1 | | LT : DO |
| 467 | 1 | | LT : DO |
| 468 | 1 | | LT : DO |
| 469 | 1 | | LT : DO |
| 470 | 1 | | LT : DO |
| 471 | 1 | LT : DO | |
| 472 | 1 | Set DO On/Off | LT : DO |
| 473 | 1 | | LT : DO |
| 474 | 1 | | LT : DO |
| 475 | 1 | | LT : DO |
| 476 | 1 | | LT : DO |
| 477 | 1 | | LT : DO |
| 478 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 479 | 1 | | LT : DO |
| 480 | 1 | Set DO On/Off | LT : DO |
| 481 | 1 | | LT : DO |
| 482 | 1 | | LT : DO |
| 483 | 1 | | LT : DO |
| 484 | 1 | | LT : DO |
| 485 | 1 | | LT : DO |
| 486 | 1 | | LT : DO |
| 487 | 1 | | LT : DO |
| 488 | 1 | Set DO On/Off | LT : DO |
| 489 | 1 | | LT : DO |
| 490 | 1 | | LT : DO |
| 491 | 1 | | LT : DO |
| 492 | 1 | | LT : DO |
| 493 | 1 | | LT : DO |
| 494 | 1 | | LT : DO |
| 495 | 1 | | LT : DO |
| 496 | 1 | Set DO On/Off | LT : DO |
| 497 | 1 | | LT : DO |
| 498 | 1 | | LT : DO |
| 499 | 1 | | LT : DO |
| 500 | 1 | | LT : DO |
| 501 | 1 | | LT : DO |
| 502 | 1 | | LT : DO |
| 503 | 1 | | LT : DO |
| 504 | 1 | Set DO On/Off | LT : DO |
| 505 | 1 | | LT : DO |
| 506 | 1 | | LT : DO |
| 507 | 1 | | LT : DO |
| 508 | 1 | | LT : DO |
| 509 | 1 | | LT : DO |
| 510 | 1 | | LT : DO |
| 511 | 1 | | LT : DO |
| 512 | 1 | Set DO On/Off | LT : DO |
| 513 | 1 | | LT : DO |
| 514 | 1 | | LT : DO |
| 515 | 1 | | LT : DO |
| 516 | 1 | | LT : DO |
| 517 | 1 | | LT : DO |
| 518 | 1 | | LT : DO |
| 519 | 1 | | LT : DO |
| 520 | 1 | Set DO On/Off | LT : DO |
| 521 | 1 | | LT : DO |
| 522 | 1 | | LT : DO |
| 523 | 1 | | LT : DO |
| 524 | 1 | | LT : DO |
| 525 | 1 | | LT : DO |
| 526 | 1 | | LT : DO |
| 527 | 1 | | LT : DO |
| 528 | 1 | | LT : DO |
| 529 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 530 | 1 | Set DO On/Off | LT : DO |
| 531 | 1 | | LT : DO |
| 532 | 1 | | LT : DO |
| 533 | 1 | | LT : DO |
| 534 | 1 | | LT : DO |
| 535 | 1 | | LT : DO |
| 536 | 1 | Set DO On/Off | LT : DO |
| 537 | 1 | | LT : DO |
| 538 | 1 | | LT : DO |
| 539 | 1 | | LT : DO |
| 540 | 1 | | LT : DO |
| 541 | 1 | | LT : DO |
| 542 | 1 | Set DO On/Off | LT : DO |
| 543 | 1 | | LT : DO |
| 544 | 1 | | LT : DO |
| 545 | 1 | | LT : DO |
| 546 | 1 | | LT : DO |
| 547 | 1 | | LT : DO |
| 548 | 1 | Set DO On/Off | LT : DO |
| 549 | 1 | | LT : DO |
| 550 | 1 | | LT : DO |
| 551 | 1 | | LT : DO |
| 552 | 1 | | LT : DO |
| 553 | 1 | | LT : DO |
| 554 | 1 | Set DO On/Off | LT : DO |
| 555 | 1 | | LT : DO |
| 556 | 1 | | LT : DO |
| 557 | 1 | | LT : DO |
| 558 | 1 | | LT : DO |
| 559 | 1 | | LT : DO |
| 560 | 1 | Set DO On/Off | LT : DO |
| 561 | 1 | | LT : DO |
| 562 | 1 | | LT : DO |
| 563 | 1 | | LT : DO |
| 564 | 1 | | LT : DO |
| 565 | 1 | | LT : DO |
| 566 | 1 | Set DO On/Off | LT : DO |
| 567 | 1 | | LT : DO |
| 568 | 1 | | LT : DO |
| 569 | 1 | | LT : DO |
| 570 | 1 | | LT : DO |
| 571 | 1 | | LT : DO |
| 572 | 1 | Set DO On/Off | LT : DO |
| 573 | 1 | | LT : DO |
| 574 | 1 | | LT : DO |
| 575 | 1 | | LT : DO |
| 576 | 1 | | LT : DO |
| 577 | 1 | | LT : DO |
| 578 | 1 | Set DO On/Off | LT : DO |
| 579 | 1 | | LT : DO |
| 580 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 581 | 1 | | LT : DO |
| 582 | 1 | | LT : DO |
| 583 | 1 | | LT : DO |
| 584 | 1 | Set DO On/Off | LT : DO |
| 585 | 1 | | LT : DO |
| 586 | 1 | | LT : DO |
| 587 | 1 | | LT : DO |
| 588 | 1 | | LT : DO |
| 589 | 1 | | LT : DO |
| 590 | 1 | | LT : DO |
| 591 | 1 | | LT : DO |
| 592 | 1 | Set DO On/Off | LT : DO |
| 593 | 1 | | LT : DO |
| 594 | 1 | | LT : DO |
| 595 | 1 | | LT : DO |
| 596 | 1 | | LT : DO |
| 597 | 1 | | LT : DO |
| 598 | 1 | | LT : DO |
| 599 | 1 | | LT : DO |
| 600 | 1 | Set DO On/Off | LT : DO |
| 601 | 1 | | LT : DO |
| 602 | 1 | | LT : DO |
| 603 | 1 | | LT : DO |
| 604 | 1 | | LT : DO |
| 605 | 1 | | LT : DO |
| 606 | 1 | | LT : DO |
| 607 | 1 | | LT : DO |
| 608 | 1 | Set DO On/Off | LT : DO |
| 609 | 1 | | LT : DO |
| 610 | 1 | | LT : DO |
| 611 | 1 | | LT : DO |
| 612 | 1 | | LT : DO |
| 613 | 1 | | LT : DO |
| 614 | 1 | | LT : DO |
| 615 | 1 | | LT : DO |
| 616 | 1 | Set DO On/Off | LT : DO |
| 617 | 1 | | LT : DO |
| 618 | 1 | | LT : DO |
| 619 | 1 | | LT : DO |
| 620 | 1 | | LT : DO |
| 621 | 1 | | LT : DO |
| 622 | 1 | | LT : DO |
| 623 | 1 | | LT : DO |
| 624 | 1 | Set DO On/Off | LT : DO |
| 625 | 1 | | LT : DO |
| 626 | 1 | | LT : DO |
| 627 | 1 | | LT : DO |
| 628 | 1 | | LT : DO |
| 629 | 1 | | LT : DO |
| 630 | 1 | | LT : DO |
| 631 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 632 | 1 | Set DO On/Off | LT : DO |
| 633 | 1 | | LT : DO |
| 634 | 1 | | LT : DO |
| 635 | 1 | | LT : DO |
| 636 | 1 | | LT : DO |
| 637 | 1 | | LT : DO |
| 638 | 1 | | LT : DO |
| 639 | 1 | | LT : DO |
| 640 | 1 | Set DO On/Off | LT : DO |
| 641 | 1 | | LT : DO |
| 642 | 1 | | LT : DO |
| 643 | 1 | | LT : DO |
| 644 | 1 | | LT : DO |
| 645 | 1 | | LT : DO |
| 646 | 1 | | LT : DO |
| 647 | 1 | | LT : DO |
| 648 | 1 | Set DO On/Off | LT : DO |
| 649 | 1 | | LT : DO |
| 650 | 1 | | LT : DO |
| 651 | 1 | | LT : DO |
| 652 | 1 | | LT : DO |
| 653 | 1 | | LT : DO |
| 654 | 1 | | LT : DO |
| 655 | 1 | | LT : DO |
| 656 | 1 | Set DO On/Off | LT : DO |
| 657 | 1 | | LT : DO |
| 658 | 1 | | LT : DO |
| 659 | 1 | | LT : DO |
| 660 | 1 | | LT : DO |
| 661 | 1 | | LT : DO |
| 662 | 1 | | LT : DO |
| 663 | 1 | | LT : DO |
| 664 | 1 | Set DO On/Off | LT : DO |
| 665 | 1 | | LT : DO |
| 666 | 1 | | LT : DO |
| 667 | 1 | | LT : DO |
| 668 | 1 | | LT : DO |
| 669 | 1 | | LT : DO |
| 670 | 1 | | LT : DO |
| 671 | 1 | | LT : DO |
| 672 | 1 | Set DO On/Off | LT : DO |
| 673 | 1 | | LT : DO |
| 674 | 1 | | LT : DO |
| 675 | 1 | | LT : DO |
| 676 | 1 | | LT : DO |
| 677 | 1 | | LT : DO |
| 678 | 1 | | LT : DO |
| 679 | 1 | | LT : DO |
| 680 | 1 | | LT : DO |
| 681 | 1 | | LT : DO |
| 682 | 1 | | LT : DO |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 683 | 1 | Set DO On/Off | LT : DO |
| 684 | 1 | | LT : DO |
| 685 | 1 | | LT : DO |
| 686 | 1 | | LT : DO |
| 687 | 1 | | LT : DO |
| 688 | 1 | Set DO On/Off | LT : DO |
| 689 | 1 | | LT : DO |
| 690 | 1 | | LT : DO |
| 691 | 1 | | LT : DO |
| 692 | 1 | | LT : DO |
| 693 | 1 | | LT : DO |
| 694 | 1 | | LT : DO |
| 695 | 1 | | LT : DO |
| 696 | 1 | Set DO On/Off | LT : DO |
| 697 | 1 | | LT : DO |
| 698 | 1 | | LT : DO |
| 699 | 1 | | LT : DO |
| 700 | 1 | | LT : DO |
| 701 | 1 | | LT : DO |
| 702 | 1 | | LT : DO |
| 703 | 1 | LT : DO | |
| 704 | 1 | Set DO On/Off | LT : DO |
| 705 | 1 | | LT : DO |
| 706 | 1 | | LT : DO |
| 707 | 1 | | LT : DO |
| 708 | 1 | | LT : DO |
| 709 | 1 | | LT : DO |
| 710 | 1 | | LT : DO |
| 711 | 1 | | LT : DO |
| 712 | 1 | Set DO On/Off | LT : DO |
| 713 | 1 | | LT : DO |
| 714 | 1 | | LT : DO |
| 715 | 1 | | LT : DO |
| 716 | 1 | | LT : DO |
| 717 | 1 | | LT : DO |
| 718 | 1 | | LT : DO |
| 719 | 1 | LT : DO | |
| 720 | 1 | Set DO On/Off | LT : DO |
| 721 | 1 | | LT : DO |
| 722 | 1 | | LT : DO |
| 723 | 1 | | LT : DO |
| 724 | 1 | | LT : DO |
| 725 | 1 | | LT : DO |
| 726 | 1 | | LT : DO |
| 727 | 1 | | LT : DO |
| 728 | 1 | Set DO On/Off | LT : DO |
| 729 | 1 | | LT : DO |
| 730 | 1 | | LT : DO |
| 731 | 1 | | LT : DO |
| 732 | 1 | | LT : DO |
| 733 | 1 | LT : DO | |

| Register | Size | Command | LT & Channel |
|----------|------|---------------|--------------|
| 734 | 1 | Set DO On/Off | LT : DO |
| 735 | 1 | | LT : DO |
| 736 | 1 | | LT : DO |
| 737 | 1 | | LT : DO |
| 738 | 1 | | LT : DO |
| 739 | 1 | | LT : DO |
| 740 | 1 | | LT : DO |
| 741 | 1 | LT : DO | |
| 742 | 1 | LT : DO | |
| 743 | 1 | LT : DO | |
| 744 | 1 | Set DO On/Off | LT : DO |
| 745 | 1 | | LT : DO |
| 746 | 1 | | LT : DO |
| 747 | 1 | | LT : DO |
| 748 | 1 | | LT : DO |
| 749 | 1 | | LT : DO |
| 750 | 1 | | LT : DO |
| 751 | 1 | LT : DO | |
| 752 | 1 | Set DO On/Off | LT : DO |
| 753 | 1 | | LT : DO |
| 754 | 1 | | LT : DO |
| 755 | 1 | | LT : DO |
| 756 | 1 | | LT : DO |
| 757 | 1 | | LT : DO |
| 758 | 1 | | LT : DO |
| 759 | 1 | LT : DO | |
| 760 | 1 | Set DO On/Off | LT : DO |
| 761 | 1 | | LT : DO |
| 762 | 1 | | LT : DO |
| 763 | 1 | | LT : DO |
| 764 | 1 | | LT : DO |
| 765 | 1 | | LT : DO |
| 766 | 1 | | LT : DO |
| 767 | 1 | LT : DO | |

Register Addresses 768 to 1535

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 768 | 1 | Single DO Pulse Out | LT 1: DO 1 |
| 769 | 1 | | LT 1: DO 2 |
| 770 | 1 | | LT 1: DO 3 |
| 771 | 1 | | LT 1: DO 4 |
| 772 | 1 | | LT 1: DO 5 |
| 773 | 1 | | LT 1: DO 6 |
| 774 | 1 | | LT 1: DO 7 |
| 775 | 1 | | LT 1: DO 8 |
| 776 | 1 | Single DO Pulse Out | LT 2: DO 1 |
| 777 | 1 | | LT 2: DO 2 |
| 778 | 1 | | LT 2: DO 3 |
| 779 | 1 | | LT 2: DO 4 |
| 780 | 1 | | LT 2: DO 5 |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 781 | 1 | | LT 2: DO 6 |
| 782 | 1 | | LT 2: DO 7 |
| 783 | 1 | | LT 2: DO 8 |
| 784 | 1 | Single DO Pulse Out | LT 3: DO 1 |
| 785 | 1 | | LT 3: DO 2 |
| 786 | 1 | | LT 3: DO 3 |
| 787 | 1 | | LT 3: DO 4 |
| 788 | 1 | | LT 3: DO 5 |
| 789 | 1 | | LT 3: DO 6 |
| 790 | 1 | | LT 3: DO 7 |
| 791 | 1 | | LT 3: DO 8 |
| 792 | 1 | Single DO Pulse Out | LT 4: DO 1 |
| 793 | 1 | | LT 4: DO 2 |
| 794 | 1 | | LT 4: DO 3 |
| 795 | 1 | | LT 4: DO 4 |
| 796 | 1 | | LT 4: DO 5 |
| 797 | 1 | | LT 4: DO 6 |
| 798 | 1 | | LT 4: DO 7 |
| 799 | 1 | | LT 4: DO 8 |
| 800 | 1 | Single DO Pulse Out | LT 5: DO 1 |
| 801 | 1 | | LT 5: DO 2 |
| 802 | 1 | | LT 5: DO 3 |
| 803 | 1 | | LT 5: DO 4 |
| 804 | 1 | | LT 5: DO 5 |
| 805 | 1 | | LT 5: DO 6 |
| 806 | 1 | | LT 5: DO 7 |
| 807 | 1 | | LT 5: DO 8 |
| 808 | 1 | Single DO Pulse Out | LT 6: DO 1 |
| 809 | 1 | | LT 6: DO 2 |
| 810 | 1 | | LT 6: DO 3 |
| 811 | 1 | | LT 6: DO 4 |
| 812 | 1 | | LT 6: DO 5 |
| 813 | 1 | | LT 6: DO 6 |
| 814 | 1 | | LT 6: DO 7 |
| 815 | 1 | | LT 6: DO 8 |
| 816 | 1 | Single DO Pulse Out | LT 7: DO 1 |
| 817 | 1 | | LT 7: DO 2 |
| 818 | 1 | | LT 7: DO 3 |
| 819 | 1 | | LT 7: DO 4 |
| 820 | 1 | | LT 7: DO 5 |
| 821 | 1 | | LT 7: DO 6 |
| 822 | 1 | | LT 7: DO 7 |
| 823 | 1 | | LT 7: DO 8 |
| 824 | 1 | Single DO Pulse Out | LT 8: DO 1 |
| 825 | 1 | | LT 8: DO 2 |
| 826 | 1 | | LT 8: DO 3 |
| 827 | 1 | | LT 8: DO 4 |
| 828 | 1 | | LT 8: DO 5 |
| 829 | 1 | | LT 8: DO 6 |
| 830 | 1 | | LT 8: DO 7 |
| 831 | 1 | | LT 8: DO 8 |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 832 | 1 | Single DO Pulse Out | LT 9: DO 1 |
| 833 | 1 | | LT 9: DO 2 |
| 834 | 1 | | LT 9: DO 3 |
| 835 | 1 | | LT 9: DO 4 |
| 836 | 1 | | LT 9: DO 5 |
| 837 | 1 | | LT 9: DO 6 |
| 838 | 1 | | LT 9: DO 7 |
| 839 | 1 | | LT 9: DO 8 |
| 840 | 1 | Single DO Pulse Out | LT 10: DO 1 |
| 841 | 1 | | LT 10: DO 2 |
| 842 | 1 | | LT 10: DO 3 |
| 843 | 1 | | LT 10: DO 4 |
| 844 | 1 | | LT 10: DO 5 |
| 845 | 1 | | LT 10: DO 6 |
| 846 | 1 | | LT 10: DO 7 |
| 847 | 1 | | LT 10: DO 8 |
| 848 | 1 | Single DO Pulse Out | LT 11: DO 1 |
| 849 | 1 | | LT 11: DO 2 |
| 850 | 1 | | LT 11: DO 3 |
| 851 | 1 | | LT 11: DO 4 |
| 852 | 1 | | LT 11: DO 5 |
| 853 | 1 | | LT 11: DO 6 |
| 854 | 1 | | LT 11: DO 7 |
| 855 | 1 | | LT 11: DO 8 |
| 856 | 1 | Single DO Pulse Out | LT 12: DO 1 |
| 857 | 1 | | LT 12: DO 2 |
| 858 | 1 | | LT 12: DO 3 |
| 859 | 1 | | LT 12: DO 4 |
| 860 | 1 | | LT 12: DO 5 |
| 861 | 1 | | LT 12: DO 6 |
| 862 | 1 | | LT 12: DO 7 |
| 863 | 1 | | LT 12: DO 8 |
| 864 | 1 | Single DO Pulse Out | LT 13: DO 1 |
| 865 | 1 | | LT 13: DO 2 |
| 866 | 1 | | LT 13: DO 3 |
| 867 | 1 | | LT 13: DO 4 |
| 868 | 1 | | LT 13: DO 5 |
| 869 | 1 | | LT 13: DO 6 |
| 870 | 1 | | LT 13: DO 7 |
| 871 | 1 | | LT 13: DO 8 |
| 872 | 1 | Single DO Pulse Out | LT 14: DO 1 |
| 873 | 1 | | LT 14: DO 2 |
| 874 | 1 | | LT 14: DO 3 |
| 875 | 1 | | LT 14: DO 4 |
| 876 | 1 | | LT 14: DO 5 |
| 877 | 1 | | LT 14: DO 6 |
| 878 | 1 | | LT 14: DO 7 |
| 879 | 1 | | LT 14: DO 8 |
| 880 | 1 | | LT 15: DO 1 |
| 881 | 1 | | LT 15: DO 2 |
| 882 | 1 | | LT 15: DO 3 |

| Register | Size | Command | LT & Channel | |
|----------|------|---------------------|---------------------|-------------|
| 883 | 1 | Single DO Pulse Out | LT 15: DO 4 | |
| 884 | 1 | | LT 15: DO 5 | |
| 885 | 1 | | LT 15: DO 6 | |
| 886 | 1 | | LT 15: DO 7 | |
| 887 | 1 | | LT 15: DO 8 | |
| 888 | 1 | | Single DO Pulse Out | LT 16: DO 1 |
| 889 | 1 | | | LT 16: DO 2 |
| 890 | 1 | | | LT 16: DO 3 |
| 891 | 1 | LT 16: DO 4 | | |
| 892 | 1 | LT 16: DO 5 | | |
| 893 | 1 | LT 16: DO 6 | | |
| 894 | 1 | LT 16: DO 7 | | |
| 895 | 1 | LT 16: DO 8 | | |
| 896 | 1 | Single DO Pulse Out | LT 17: DO 1 | |
| 897 | 1 | | LT 17: DO 2 | |
| 898 | 1 | | LT 17: DO 3 | |
| 899 | 1 | | LT 17: DO 4 | |
| 900 | 1 | | LT 17: DO 5 | |
| 901 | 1 | | LT 17: DO 6 | |
| 902 | 1 | | LT 17: DO 7 | |
| 903 | 1 | | LT 17: DO 8 | |
| 904 | 1 | Single DO Pulse Out | LT 18: DO 1 | |
| 905 | 1 | | LT 18: DO 2 | |
| 906 | 1 | | LT 18: DO 3 | |
| 907 | 1 | | LT 18: DO 4 | |
| 908 | 1 | | LT 18: DO 5 | |
| 909 | 1 | | LT 18: DO 6 | |
| 910 | 1 | | LT 18: DO 7 | |
| 911 | 1 | | LT 18: DO 8 | |
| 912 | 1 | Single DO Pulse Out | LT 19: DO 1 | |
| 913 | 1 | | LT 19: DO 2 | |
| 914 | 1 | | LT 19: DO 3 | |
| 915 | 1 | | LT 19: DO 4 | |
| 916 | 1 | | LT 19: DO 5 | |
| 917 | 1 | | LT 19: DO 6 | |
| 918 | 1 | | LT 19: DO 7 | |
| 919 | 1 | | LT 19: DO 8 | |
| 920 | 1 | Single DO Pulse Out | LT 20: DO 1 | |
| 921 | 1 | | LT 20: DO 2 | |
| 922 | 1 | | LT 20: DO 3 | |
| 923 | 1 | | LT 20: DO 4 | |
| 924 | 1 | | LT 20: DO 5 | |
| 925 | 1 | | LT 20: DO 6 | |
| 926 | 1 | | LT 20: DO 7 | |
| 927 | 1 | | LT 20: DO 8 | |
| 928 | 1 | Single DO Pulse Out | LT 21: DO 1 | |
| 929 | 1 | | LT 21: DO 2 | |
| 930 | 1 | | LT 21: DO 3 | |
| 931 | 1 | | LT 21: DO 4 | |
| 932 | 1 | | LT 21: DO 5 | |
| 933 | 1 | | LT 21: DO 6 | |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 934 | 1 | Single DO Pulse Out | LT 21: DO 7 |
| 935 | 1 | | LT 21: DO 8 |
| 936 | 1 | | LT 22: DO 1 |
| 937 | 1 | | LT 22: DO 2 |
| 938 | 1 | | LT 22: DO 3 |
| 939 | 1 | | LT 22: DO 4 |
| 940 | 1 | | LT 22: DO 5 |
| 941 | 1 | | LT 22: DO 6 |
| 942 | 1 | LT 22: DO 7 | |
| 943 | 1 | LT 22: DO 8 | |
| 944 | 1 | Single DO Pulse Out | LT 23: DO 1 |
| 945 | 1 | | LT 23: DO 2 |
| 946 | 1 | | LT 23: DO 3 |
| 947 | 1 | | LT 23: DO 4 |
| 948 | 1 | | LT 23: DO 5 |
| 949 | 1 | | LT 23: DO 6 |
| 950 | 1 | | LT 23: DO 7 |
| 951 | 1 | | LT 23: DO 8 |
| 952 | 1 | Single DO Pulse Out | LT 24: DO 1 |
| 953 | 1 | | LT 24: DO 2 |
| 954 | 1 | | LT 24: DO 3 |
| 955 | 1 | | LT 24: DO 4 |
| 956 | 1 | | LT 24: DO 5 |
| 957 | 1 | | LT 24: DO 6 |
| 958 | 1 | | LT 24: DO 7 |
| 959 | 1 | | LT 24: DO 8 |
| 960 | 1 | Single DO Pulse Out | LT 25: DO 1 |
| 961 | 1 | | LT 25: DO 2 |
| 962 | 1 | | LT 25: DO 3 |
| 963 | 1 | | LT 25: DO 4 |
| 964 | 1 | | LT 25: DO 5 |
| 965 | 1 | | LT 25: DO 6 |
| 966 | 1 | | LT 25: DO 7 |
| 967 | 1 | | LT 25: DO 8 |
| 968 | 1 | Single DO Pulse Out | LT 26: DO 1 |
| 969 | 1 | | LT 26: DO 2 |
| 970 | 1 | | LT 26: DO 3 |
| 971 | 1 | | LT 26: DO 4 |
| 972 | 1 | | LT 26: DO 5 |
| 973 | 1 | | LT 26: DO 6 |
| 974 | 1 | | LT 26: DO 7 |
| 975 | 1 | | LT 26: DO 8 |
| 976 | 1 | Single DO Pulse Out | LT 27: DO 1 |
| 977 | 1 | | LT 27: DO 2 |
| 978 | 1 | | LT 27: DO 3 |
| 979 | 1 | | LT 27: DO 4 |
| 980 | 1 | | LT 27: DO 5 |
| 981 | 1 | | LT 27: DO 6 |
| 982 | 1 | | LT 27: DO 7 |
| 983 | 1 | | LT 27: DO 8 |
| 984 | 1 | | LT 28: DO 1 |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|---------------------|
| 985 | 1 | Single DO Pulse Out | LT 28: DO 2 |
| 986 | 1 | | LT 28: DO 3 |
| 987 | 1 | | LT 28: DO 4 |
| 988 | 1 | | LT 28: DO 5 |
| 989 | 1 | | LT 28: DO 6 |
| 990 | 1 | | LT 28: DO 7 |
| 991 | 1 | | LT 28: DO 8 |
| 992 | 1 | | Single DO Pulse Out |
| 993 | 1 | LT 29: DO 2 | |
| 994 | 1 | LT 29: DO 3 | |
| 995 | 1 | LT 29: DO 4 | |
| 996 | 1 | LT 29: DO 5 | |
| 997 | 1 | LT 29: DO 6 | |
| 998 | 1 | LT 29: DO 7 | |
| 999 | 1 | LT 29: DO 8 | |
| 1000 | 1 | Single DO Pulse Out | LT 30: DO 1 |
| 1001 | 1 | | LT 30: DO 2 |
| 1002 | 1 | | LT 30: DO 3 |
| 1003 | 1 | | LT 30: DO 4 |
| 1004 | 1 | | LT 30: DO 5 |
| 1005 | 1 | | LT 30: DO 6 |
| 1006 | 1 | | LT 30: DO 7 |
| 1007 | 1 | | LT 30: DO 8 |
| 1008 | 1 | Single DO Pulse Out | LT 31: DO 1 |
| 1009 | 1 | | LT 31: DO 2 |
| 1010 | 1 | | LT 31: DO 3 |
| 1011 | 1 | | LT 31: DO 4 |
| 1012 | 1 | | LT 31: DO 5 |
| 1013 | 1 | | LT 31: DO 6 |
| 1014 | 1 | | LT 31: DO 7 |
| 1015 | 1 | | LT 31: DO 8 |
| 1016 | 1 | Single DO Pulse Out | LT 32: DO 1 |
| 1017 | 1 | | LT 32: DO 2 |
| 1018 | 1 | | LT 32: DO 3 |
| 1019 | 1 | | LT 32: DO 4 |
| 1020 | 1 | | LT 32: DO 5 |
| 1021 | 1 | | LT 32: DO 6 |
| 1022 | 1 | | LT 32: DO 7 |
| 1023 | 1 | | LT 32: DO 8 |
| 1024 | 1 | Single DO Pulse Out | LT 33: DO 1 |
| 1025 | 1 | | LT 33: DO 2 |
| 1026 | 1 | | LT 33: DO 3 |
| 1027 | 1 | | LT 33: DO 4 |
| 1028 | 1 | | LT 33: DO 5 |
| 1029 | 1 | | LT 33: DO 6 |
| 1030 | 1 | | LT 33: DO 7 |
| 1031 | 1 | | LT 33: DO 8 |
| 1032 | 1 | Single DO Pulse Out | LT 34: DO 1 |
| 1033 | 1 | | LT 34: DO 2 |
| 1034 | 1 | | LT 34: DO 3 |
| 1035 | 1 | | LT 34: DO 4 |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 1036 | 1 | Single DO Pulse Out | LT 34: DO 5 |
| 1037 | 1 | | LT 34: DO 6 |
| 1038 | 1 | | LT 34: DO 7 |
| 1039 | 1 | | LT 34: DO 8 |
| 1040 | 1 | Single DO Pulse Out | LT 35: DO 1 |
| 1041 | 1 | | LT 35: DO 2 |
| 1042 | 1 | | LT 35: DO 3 |
| 1043 | 1 | | LT 35: DO 4 |
| 1044 | 1 | | LT 35: DO 5 |
| 1045 | 1 | | LT 35: DO 6 |
| 1046 | 1 | | LT 35: DO 7 |
| 1047 | 1 | | LT 35: DO 8 |
| 1048 | 1 | Single DO Pulse Out | LT 36: DO 1 |
| 1049 | 1 | | LT 36: DO 2 |
| 1050 | 1 | | LT 36: DO 3 |
| 1051 | 1 | | LT 36: DO 4 |
| 1052 | 1 | | LT 36: DO 5 |
| 1053 | 1 | | LT 36: DO 6 |
| 1054 | 1 | | LT 36: DO 7 |
| 1055 | 1 | | LT 36: DO 8 |
| 1056 | 1 | Single DO Pulse Out | LT 37: DO 1 |
| 1057 | 1 | | LT 37: DO 2 |
| 1058 | 1 | | LT 37: DO 3 |
| 1059 | 1 | | LT 37: DO 4 |
| 1060 | 1 | | LT 37: DO 5 |
| 1061 | 1 | | LT 37: DO 6 |
| 1062 | 1 | | LT 37: DO 7 |
| 1063 | 1 | | LT 37: DO 8 |
| 1064 | 1 | Single DO Pulse Out | LT 38: DO 1 |
| 1065 | 1 | | LT 38: DO 2 |
| 1066 | 1 | | LT 38: DO 3 |
| 1067 | 1 | | LT 38: DO 4 |
| 1068 | 1 | | LT 38: DO 5 |
| 1069 | 1 | | LT 38: DO 6 |
| 1070 | 1 | | LT 38: DO 7 |
| 1071 | 1 | | LT 38: DO 8 |
| 1072 | 1 | Single DO Pulse Out | LT 39: DO 1 |
| 1073 | 1 | | LT 39: DO 2 |
| 1074 | 1 | | LT 39: DO 3 |
| 1075 | 1 | | LT 39: DO 4 |
| 1076 | 1 | | LT 39: DO 5 |
| 1077 | 1 | | LT 39: DO 6 |
| 1078 | 1 | | LT 39: DO 7 |
| 1079 | 1 | | LT 39: DO 8 |
| 1080 | 1 | Single DO Pulse Out | LT 40: DO 1 |
| 1081 | 1 | | LT 40: DO 2 |
| 1082 | 1 | | LT 40: DO 3 |
| 1083 | 1 | | LT 40: DO 4 |
| 1084 | 1 | | LT 40: DO 5 |
| 1085 | 1 | | LT 40: DO 6 |
| 1086 | 1 | | LT 40: DO 7 |

| Register | Size | Command | LT & Channel | |
|----------|------|---------------------|---------------------|-------------|
| 1087 | 1 | | LT 40: DO 8 | |
| 1088 | 1 | | LT 41: DO 1 | |
| 1089 | 1 | | LT 41: DO 2 | |
| 1090 | 1 | | LT 41: DO 3 | |
| 1091 | 1 | Single DO Pulse Out | LT 41: DO 4 | |
| 1092 | 1 | | LT 41: DO 5 | |
| 1093 | 1 | | LT 41: DO 6 | |
| 1094 | 1 | | LT 41: DO 7 | |
| 1095 | 1 | | LT 41: DO 8 | |
| 1096 | 1 | | Single DO Pulse Out | LT 42: DO 1 |
| 1097 | 1 | | | LT 42: DO 2 |
| 1098 | 1 | | | LT 42: DO 3 |
| 1099 | 1 | LT 42: DO 4 | | |
| 1100 | 1 | LT 42: DO 5 | | |
| 1101 | 1 | LT 42: DO 6 | | |
| 1102 | 1 | LT 42: DO 7 | | |
| 1103 | 1 | LT 42: DO 8 | | |
| 1104 | 1 | Single DO Pulse Out | LT 43: DO 1 | |
| 1105 | 1 | | LT 43: DO 2 | |
| 1106 | 1 | | LT 43: DO 3 | |
| 1107 | 1 | | LT 43: DO 4 | |
| 1108 | 1 | | LT 43: DO 5 | |
| 1109 | 1 | | LT 43: DO 6 | |
| 1110 | 1 | | LT 43: DO 7 | |
| 1111 | 1 | | LT 43: DO 8 | |
| 1112 | 1 | Single DO Pulse Out | LT 44: DO 1 | |
| 1113 | 1 | | LT 44: DO 2 | |
| 1114 | 1 | | LT 44: DO 3 | |
| 1115 | 1 | | LT 44: DO 4 | |
| 1116 | 1 | | LT 44: DO 5 | |
| 1117 | 1 | | LT 44: DO 6 | |
| 1118 | 1 | | LT 44: DO 7 | |
| 1119 | 1 | | LT 44: DO 8 | |
| 1120 | 1 | Single DO Pulse Out | LT 45: DO 1 | |
| 1121 | 1 | | LT 45: DO 2 | |
| 1122 | 1 | | LT 45: DO 3 | |
| 1123 | 1 | | LT 45: DO 4 | |
| 1124 | 1 | | LT 45: DO 5 | |
| 1125 | 1 | | LT 45: DO 6 | |
| 1126 | 1 | | LT 45: DO 7 | |
| 1127 | 1 | | LT 45: DO 8 | |
| 1128 | 1 | Single DO Pulse Out | LT 46: DO 1 | |
| 1129 | 1 | | LT 46: DO 2 | |
| 1130 | 1 | | LT 46: DO 3 | |
| 1131 | 1 | | LT 46: DO 4 | |
| 1132 | 1 | | LT 46: DO 5 | |
| 1133 | 1 | | LT 46: DO 6 | |
| 1134 | 1 | | LT 46: DO 7 | |
| 1135 | 1 | | LT 46: DO 8 | |
| 1136 | 1 | | LT 47: DO 1 | |
| 1137 | 1 | | LT 47: DO 2 | |

| Register | Size | Command | LT & Channel | |
|----------|------|---------------------|---------------------|-------------|
| 1138 | 1 | Single DO Pulse Out | LT 47: DO 3 | |
| 1139 | 1 | | LT 47: DO 4 | |
| 1140 | 1 | | LT 47: DO 5 | |
| 1141 | 1 | | LT 47: DO 6 | |
| 1142 | 1 | | LT 47: DO 7 | |
| 1143 | 1 | | LT 47: DO 8 | |
| 1144 | 1 | | Single DO Pulse Out | LT 48: DO 1 |
| 1145 | 1 | | | LT 48: DO 2 |
| 1146 | 1 | LT 48: DO 3 | | |
| 1147 | 1 | LT 48: DO 4 | | |
| 1148 | 1 | LT 48: DO 5 | | |
| 1149 | 1 | LT 48: DO 6 | | |
| 1150 | 1 | LT 48: DO 7 | | |
| 1151 | 1 | LT 48: DO 8 | | |
| 1152 | 1 | Single DO Pulse Out | LT 49: DO 1 | |
| 1153 | 1 | | LT 49: DO 2 | |
| 1154 | 1 | | LT 49: DO 3 | |
| 1155 | 1 | | LT 49: DO 4 | |
| 1156 | 1 | | LT 49: DO 5 | |
| 1157 | 1 | | LT 49: DO 6 | |
| 1158 | 1 | | LT 49: DO 7 | |
| 1159 | 1 | | LT 49: DO 8 | |
| 1160 | 1 | Single DO Pulse Out | LT 50: DO 1 | |
| 1161 | 1 | | LT 50: DO 2 | |
| 1162 | 1 | | LT 50: DO 3 | |
| 1163 | 1 | | LT 50: DO 4 | |
| 1164 | 1 | | LT 50: DO 5 | |
| 1165 | 1 | | LT 50: DO 6 | |
| 1166 | 1 | | LT 50: DO 7 | |
| 1167 | 1 | | LT 50: DO 8 | |
| 1168 | 1 | Single DO Pulse Out | LT 51: DO 1 | |
| 1169 | 1 | | LT 51: DO 2 | |
| 1170 | 1 | | LT 51: DO 3 | |
| 1171 | 1 | | LT 51: DO 4 | |
| 1172 | 1 | | LT 51: DO 5 | |
| 1173 | 1 | | LT 51: DO 6 | |
| 1174 | 1 | | LT 51: DO 7 | |
| 1175 | 1 | | LT 51: DO 8 | |
| 1176 | 1 | Single DO Pulse Out | LT 52: DO 1 | |
| 1177 | 1 | | LT 52: DO 2 | |
| 1178 | 1 | | LT 52: DO 3 | |
| 1179 | 1 | | LT 52: DO 4 | |
| 1180 | 1 | | LT 52: DO 5 | |
| 1181 | 1 | | LT 52: DO 6 | |
| 1182 | 1 | | LT 52: DO 7 | |
| 1183 | 1 | | LT 52: DO 8 | |
| 1184 | 1 | Single DO Pulse Out | LT 53: DO 1 | |
| 1185 | 1 | | LT 53: DO 2 | |
| 1186 | 1 | | LT 53: DO 3 | |
| 1187 | 1 | | LT 53: DO 4 | |
| 1188 | 1 | | LT 53: DO 5 | |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 1189 | 1 | | LT 53: DO 6 |
| 1190 | 1 | | LT 53: DO 7 |
| 1191 | 1 | | LT 53: DO 8 |
| 1192 | 1 | Single DO Pulse Out | LT 54: DO 1 |
| 1193 | 1 | | LT 54: DO 2 |
| 1194 | 1 | | LT 54: DO 3 |
| 1195 | 1 | | LT 54: DO 4 |
| 1196 | 1 | | LT 54: DO 5 |
| 1197 | 1 | | LT 54: DO 6 |
| 1198 | 1 | | LT 54: DO 7 |
| 1199 | 1 | | LT 54: DO 8 |
| 1200 | 1 | Single DO Pulse Out | LT 55: DO 1 |
| 1201 | 1 | | LT 55: DO 2 |
| 1202 | 1 | | LT 55: DO 3 |
| 1203 | 1 | | LT 55: DO 4 |
| 1204 | 1 | | LT 55: DO 5 |
| 1205 | 1 | | LT 55: DO 6 |
| 1206 | 1 | | LT 55: DO 7 |
| 1207 | 1 | | LT 55: DO 8 |
| 1208 | 1 | Single DO Pulse Out | LT 56: DO 1 |
| 1209 | 1 | | LT 56: DO 2 |
| 1210 | 1 | | LT 56: DO 3 |
| 1211 | 1 | | LT 56: DO 4 |
| 1212 | 1 | | LT 56: DO 5 |
| 1213 | 1 | | LT 56: DO 6 |
| 1214 | 1 | | LT 56: DO 7 |
| 1215 | 1 | | LT 56: DO 8 |
| 1216 | 1 | Single DO Pulse Out | LT 57: DO 1 |
| 1217 | 1 | | LT 57: DO 2 |
| 1218 | 1 | | LT 57: DO 3 |
| 1219 | 1 | | LT 57: DO 4 |
| 1220 | 1 | | LT 57: DO 5 |
| 1221 | 1 | | LT 57: DO 6 |
| 1222 | 1 | | LT 57: DO 7 |
| 1223 | 1 | | LT 57: DO 8 |
| 1224 | 1 | Single DO Pulse Out | LT 58: DO 1 |
| 1225 | 1 | | LT 58: DO 2 |
| 1226 | 1 | | LT 58: DO 3 |
| 1227 | 1 | | LT 58: DO 4 |
| 1228 | 1 | | LT 58: DO 5 |
| 1229 | 1 | | LT 58: DO 6 |
| 1230 | 1 | | LT 58: DO 7 |
| 1231 | 1 | | LT 58: DO 8 |
| 1232 | 1 | Single DO Pulse Out | LT 59: DO 1 |
| 1233 | 1 | | LT 59: DO 2 |
| 1234 | 1 | | LT 59: DO 3 |
| 1235 | 1 | | LT 59: DO 4 |
| 1236 | 1 | | LT 59: DO 5 |
| 1237 | 1 | | LT 59: DO 6 |
| 1238 | 1 | | LT 59: DO 7 |
| 1239 | 1 | | LT 59: DO 8 |

| Register | Size | Command | LT & Channel |
|----------|------|---------------------|--------------|
| 1240 | 1 | Single DO Pulse Out | LT 60: DO 1 |
| 1241 | 1 | | LT 60: DO 2 |
| 1242 | 1 | | LT 60: DO 3 |
| 1243 | 1 | | LT 60: DO 4 |
| 1244 | 1 | | LT 60: DO 5 |
| 1245 | 1 | | LT 60: DO 6 |
| 1246 | 1 | | LT 60: DO 7 |
| 1247 | 1 | | LT 60: DO 8 |
| 1248 | 1 | Single DO Pulse Out | LT 61: DO 1 |
| 1249 | 1 | | LT 61: DO 2 |
| 1250 | 1 | | LT 61: DO 3 |
| 1251 | 1 | | LT 61: DO 4 |
| 1252 | 1 | | LT 61: DO 5 |
| 1253 | 1 | | LT 61: DO 6 |
| 1254 | 1 | | LT 61: DO 7 |
| 1255 | 1 | | LT 61: DO 8 |
| 1256 | 1 | Single DO Pulse Out | LT 62: DO 1 |
| 1257 | 1 | | LT 62: DO 2 |
| 1258 | 1 | | LT 62: DO 3 |
| 1259 | 1 | | LT 62: DO 4 |
| 1260 | 1 | | LT 62: DO 5 |
| 1261 | 1 | | LT 62: DO 6 |
| 1262 | 1 | | LT 62: DO 7 |
| 1263 | 1 | | LT 62: DO 8 |
| 1264 | 1 | Single DO Pulse Out | LT 63: DO 1 |
| 1265 | 1 | | LT 63: DO 2 |
| 1266 | 1 | | LT 63: DO 3 |
| 1267 | 1 | | LT 63: DO 4 |
| 1268 | 1 | | LT 63: DO 5 |
| 1269 | 1 | | LT 63: DO 6 |
| 1270 | 1 | | LT 63: DO 7 |
| 1271 | 1 | | LT 63: DO 8 |
| 1272 | 1 | Single DO Pulse Out | LT 64: DO 1 |
| 1273 | 1 | | LT 64: DO 2 |
| 1274 | 1 | | LT 64: DO 3 |
| 1275 | 1 | | LT 64: DO 4 |
| 1276 | 1 | | LT 64: DO 5 |
| 1277 | 1 | | LT 64: DO 6 |
| 1278 | 1 | | LT 64: DO 7 |
| 1279 | 1 | | LT 64: DO 8 |
| 1280 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1281 | 1 | | LT : DO 3~4 |
| 1282 | 1 | | LT : DO 5~6 |
| 1283 | 1 | | LT : DO 7~8 |
| 1284 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1285 | 1 | | LT : DO 3~4 |
| 1286 | 1 | | LT : DO 5~6 |
| 1287 | 1 | | LT : DO 7~8 |
| 1288 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1289 | 1 | | LT : DO 3~4 |
| 1290 | 1 | | LT : DO 5~6 |

| Register | Size | Command | LT & Channel |
|----------|------|-------------------|--------------|
| 1291 | 1 | | LT : DO 7~8 |
| 1292 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1293 | 1 | | LT : DO 3~4 |
| 1294 | 1 | | LT : DO 5~6 |
| 1295 | 1 | | LT : DO 7~8 |
| 1296 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1297 | 1 | | LT : DO 3~4 |
| 1298 | 1 | | LT : DO 5~6 |
| 1299 | 1 | | LT : DO 7~8 |
| 1300 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1301 | 1 | | LT : DO 3~4 |
| 1302 | 1 | | LT : DO 5~6 |
| 1303 | 1 | | LT : DO 7~8 |
| 1304 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1305 | 1 | | LT : DO 3~4 |
| 1306 | 1 | | LT : DO 5~6 |
| 1307 | 1 | | LT : DO 7~8 |
| 1308 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1309 | 1 | | LT : DO 3~4 |
| 1310 | 1 | | LT : DO 5~6 |
| 1311 | 1 | | LT : DO 7~8 |
| 1312 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1313 | 1 | | LT : DO 3~4 |
| 1314 | 1 | | LT : DO 5~6 |
| 1315 | 1 | | LT : DO 7~8 |
| 1316 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1317 | 1 | | LT : DO 3~4 |
| 1318 | 1 | | LT : DO 5~6 |
| 1319 | 1 | | LT : DO 7~8 |
| 1320 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1321 | 1 | | LT : DO 3~4 |
| 1322 | 1 | | LT : DO 5~6 |
| 1323 | 1 | | LT : DO 7~8 |
| 1324 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1325 | 1 | | LT : DO 3~4 |
| 1326 | 1 | | LT : DO 5~6 |
| 1327 | 1 | | LT : DO 7~8 |
| 1328 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1329 | 1 | | LT : DO 3~4 |
| 1330 | 1 | | LT : DO 5~6 |
| 1331 | 1 | | LT : DO 7~8 |
| 1332 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1333 | 1 | | LT : DO 3~4 |
| 1334 | 1 | | LT : DO 5~6 |
| 1335 | 1 | | LT : DO 7~8 |
| 1336 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1337 | 1 | | LT : DO 3~4 |
| 1338 | 1 | | LT : DO 5~6 |
| 1339 | 1 | | LT : DO 7~8 |
| 1340 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1341 | 1 | | LT : DO 3~4 |

| Register | Size | Command | LT & Channel |
|----------|------|-------------------|--------------|
| 1342 | 1 | Dual DO Pulse Out | LT : DO 5~6 |
| 1343 | 1 | | LT : DO 7~8 |
| 1344 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1345 | 1 | | LT : DO 3~4 |
| 1346 | 1 | | LT : DO 5~6 |
| 1347 | 1 | | LT : DO 7~8 |
| 1348 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1349 | 1 | | LT : DO 3~4 |
| 1350 | 1 | | LT : DO 5~6 |
| 1351 | 1 | | LT : DO 7~8 |
| 1352 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1353 | 1 | | LT : DO 3~4 |
| 1354 | 1 | | LT : DO 5~6 |
| 1355 | 1 | | LT : DO 7~8 |
| 1356 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1357 | 1 | | LT : DO 3~4 |
| 1358 | 1 | | LT : DO 5~6 |
| 1359 | 1 | | LT : DO 7~8 |
| 1360 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1361 | 1 | | LT : DO 3~4 |
| 1362 | 1 | | LT : DO 5~6 |
| 1363 | 1 | | LT : DO 7~8 |
| 1364 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1365 | 1 | | LT : DO 3~4 |
| 1366 | 1 | | LT : DO 5~6 |
| 1367 | 1 | | LT : DO 7~8 |
| 1368 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1369 | 1 | | LT : DO 3~4 |
| 1370 | 1 | | LT : DO 5~6 |
| 1371 | 1 | | LT : DO 7~8 |
| 1372 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1373 | 1 | | LT : DO 3~4 |
| 1374 | 1 | | LT : DO 5~6 |
| 1375 | 1 | | LT : DO 7~8 |
| 1376 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1377 | 1 | | LT : DO 3~4 |
| 1378 | 1 | | LT : DO 5~6 |
| 1379 | 1 | | LT : DO 7~8 |
| 1380 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1381 | 1 | | LT : DO 3~4 |
| 1382 | 1 | | LT : DO 5~6 |
| 1383 | 1 | | LT : DO 7~8 |
| 1384 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1385 | 1 | | LT : DO 3~4 |
| 1386 | 1 | | LT : DO 5~6 |
| 1387 | 1 | | LT : DO 7~8 |
| 1388 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1389 | 1 | | LT : DO 3~4 |
| 1390 | 1 | | LT : DO 5~6 |
| 1391 | 1 | | LT : DO 7~8 |
| 1392 | 1 | | LT : DO 1~2 |

| Register | Size | Command | LT & Channel |
|----------|------|-------------------|--------------|
| 1393 | 1 | Dual DO Pulse Out | LT : DO 3~4 |
| 1394 | 1 | | LT : DO 5~6 |
| 1395 | 1 | | LT : DO 7~8 |
| 1396 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1397 | 1 | | LT : DO 3~4 |
| 1398 | 1 | | LT : DO 5~6 |
| 1399 | 1 | | LT : DO 7~8 |
| 1400 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1401 | 1 | | LT : DO 3~4 |
| 1402 | 1 | | LT : DO 5~6 |
| 1403 | 1 | | LT : DO 7~8 |
| 1404 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1405 | 1 | | LT : DO 3~4 |
| 1406 | 1 | | LT : DO 5~6 |
| 1407 | 1 | | LT : DO 7~8 |
| 1408 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1409 | 1 | | LT : DO 3~4 |
| 1410 | 1 | | LT : DO 5~6 |
| 1411 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1412 | 1 | | LT : DO 1~2 |
| 1413 | 1 | | LT : DO 3~4 |
| 1414 | 1 | | LT : DO 5~6 |
| 1415 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1416 | 1 | | LT : DO 1~2 |
| 1417 | 1 | | LT : DO 3~4 |
| 1418 | 1 | | LT : DO 5~6 |
| 1419 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1420 | 1 | | LT : DO 1~2 |
| 1421 | 1 | | LT : DO 3~4 |
| 1422 | 1 | | LT : DO 5~6 |
| 1423 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1424 | 1 | | LT : DO 1~2 |
| 1425 | 1 | | LT : DO 3~4 |
| 1426 | 1 | | LT : DO 5~6 |
| 1427 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1428 | 1 | | LT : DO 1~2 |
| 1429 | 1 | | LT : DO 3~4 |
| 1430 | 1 | | LT : DO 5~6 |
| 1431 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1432 | 1 | | LT : DO 1~2 |
| 1433 | 1 | | LT : DO 3~4 |
| 1434 | 1 | | LT : DO 5~6 |
| 1435 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1436 | 1 | | LT : DO 1~2 |
| 1437 | 1 | | LT : DO 3~4 |
| 1438 | 1 | | LT : DO 5~6 |
| 1439 | 1 | Dual DO Pulse Out | LT : DO 7~8 |
| 1440 | 1 | | LT : DO 1~2 |
| 1441 | 1 | | LT : DO 3~4 |
| 1442 | 1 | | LT : DO 5~6 |
| 1443 | 1 | Dual DO Pulse Out | LT : DO 7~8 |

| Register | Size | Command | LT & Channel |
|----------|------|-------------------|--------------|
| 1444 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1445 | 1 | | LT : DO 3~4 |
| 1446 | 1 | | LT : DO 5~6 |
| 1447 | 1 | | LT : DO 7~8 |
| 1448 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1449 | 1 | | LT : DO 3~4 |
| 1450 | 1 | | LT : DO 5~6 |
| 1451 | 1 | | LT : DO 7~8 |
| 1452 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1453 | 1 | | LT : DO 3~4 |
| 1454 | 1 | | LT : DO 5~6 |
| 1455 | 1 | | LT : DO 7~8 |
| 1456 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1457 | 1 | | LT : DO 3~4 |
| 1458 | 1 | | LT : DO 5~6 |
| 1459 | 1 | | LT : DO 7~8 |
| 1460 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1461 | 1 | | LT : DO 3~4 |
| 1462 | 1 | | LT : DO 5~6 |
| 1463 | 1 | | LT : DO 7~8 |
| 1464 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1465 | 1 | | LT : DO 3~4 |
| 1466 | 1 | | LT : DO 5~6 |
| 1467 | 1 | | LT : DO 7~8 |
| 1468 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1469 | 1 | | LT : DO 3~4 |
| 1470 | 1 | | LT : DO 5~6 |
| 1471 | 1 | | LT : DO 7~8 |
| 1472 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1473 | 1 | | LT : DO 3~4 |
| 1474 | 1 | | LT : DO 5~6 |
| 1475 | 1 | | LT : DO 7~8 |
| 1476 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1477 | 1 | | LT : DO 3~4 |
| 1478 | 1 | | LT : DO 5~6 |
| 1479 | 1 | | LT : DO 7~8 |
| 1480 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1481 | 1 | | LT : DO 3~4 |
| 1482 | 1 | | LT : DO 5~6 |
| 1483 | 1 | | LT : DO 7~8 |
| 1484 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1485 | 1 | | LT : DO 3~4 |
| 1486 | 1 | | LT : DO 5~6 |
| 1487 | 1 | | LT : DO 7~8 |
| 1488 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1489 | 1 | | LT : DO 3~4 |
| 1490 | 1 | | LT : DO 5~6 |
| 1491 | 1 | | LT : DO 7~8 |
| 1492 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1493 | 1 | | LT : DO 3~4 |
| 1494 | 1 | | LT : DO 5~6 |

| Register | Size | Command | LT & Channel |
|----------|------|-------------------|--------------|
| 1495 | 1 | | LT : DO 7~8 |
| 1496 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1497 | 1 | | LT : DO 3~4 |
| 1498 | 1 | | LT : DO 5~6 |
| 1499 | 1 | | LT : DO 7~8 |
| 1500 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1501 | 1 | | LT : DO 3~4 |
| 1502 | 1 | | LT : DO 5~6 |
| 1503 | 1 | | LT : DO 7~8 |
| 1504 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1505 | 1 | | LT : DO 3~4 |
| 1506 | 1 | | LT : DO 5~6 |
| 1507 | 1 | | LT : DO 7~8 |
| 1508 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1509 | 1 | | LT : DO 3~4 |
| 1510 | 1 | | LT : DO 5~6 |
| 1511 | 1 | | LT : DO 7~8 |
| 1512 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1513 | 1 | | LT : DO 3~4 |
| 1514 | 1 | | LT : DO 5~6 |
| 1515 | 1 | | LT : DO 7~8 |
| 1516 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1517 | 1 | | LT : DO 3~4 |
| 1518 | 1 | | LT : DO 5~6 |
| 1519 | 1 | | LT : DO 7~8 |
| 1520 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1521 | 1 | | LT : DO 3~4 |
| 1522 | 1 | | LT : DO 5~6 |
| 1523 | 1 | | LT : DO 7~8 |
| 1524 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1525 | 1 | | LT : DO 3~4 |
| 1526 | 1 | | LT : DO 5~6 |
| 1527 | 1 | | LT : DO 7~8 |
| 1528 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1529 | 1 | | LT : DO 3~4 |
| 1530 | 1 | | LT : DO 5~6 |
| 1531 | 1 | | LT : DO 7~8 |
| 1532 | 1 | Dual DO Pulse Out | LT : DO 1~2 |
| 1533 | 1 | | LT : DO 3~4 |
| 1534 | 1 | | LT : DO 5~6 |
| 1535 | 1 | | LT : DO 7~8 |