

Technote

For use when using the DL-250/DL-350/DL-450 CPU as a Master:

The PLC as a master uses the RX/WX instructions to communicate to other Devices. This instruction requires an octal address. When the port is setup for Modbus the RX/WX instruction will take this octal address and request the equivalent Modbus Decimal address. Use the chart below for Ref.

Function 1 = Read Coils (1)

PLC Octal Starting Address	Function Code	Hex Range	Modbus Start Range	
RX GY0	1	0000	1	Min

Function 2 = Read Inputs (10001)

PLC Octal Starting Address	Function Code	Hex Range	Modbus Start Range	
RX GX0	2	0000	10001	Min
RX GX3777	2	07F8	12041	
Gap 07F9-07FF		12042	12048	
RX X0	2	0800	12049	
RX X1777	2	0BF8	13065	
Gap 0BF9-0BFF		13066	13072	
RX SP0	2	0C00	13073	
RX SP777	2	0DF8	13577	Max

Function 3 = Read Holding Registers (40001)

PLC Octal Starting Address	Function Code	Hex Range	Modbus Start Range	
RX V0	3	0000	40001	Min
RX V1000	3	0200	40513	
RX V1400	3	0300	40769	
RX V10000	3	1000	44097	
RX V20000	3	2000	48193	
RX V30000	3	3000	52289	
RX V40000	3	4000	56385	
RX V41237	3	429F	57056	Max

Function 04= Read Input Registers (30001)

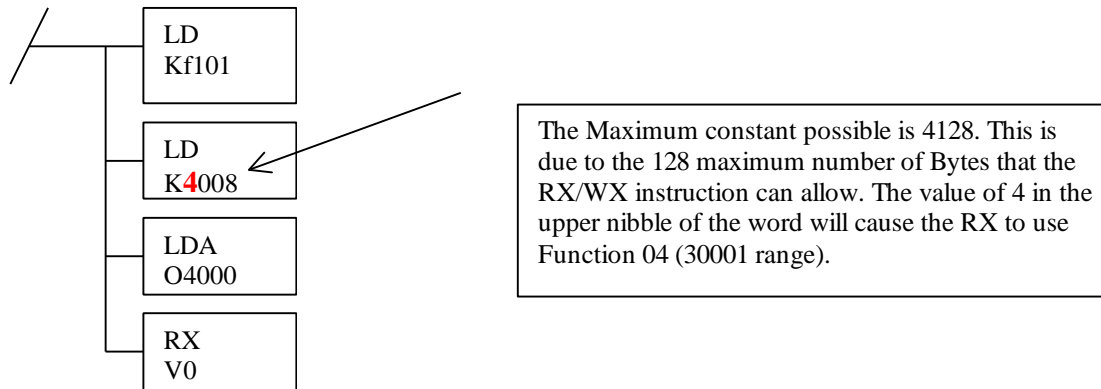
Until recently the RX instruction could not use function code 04 (Read Input Registers) to read from the 30001 range. The default was Function 03(read Holding Registers 40001) To read data from Modbus 30001 Range the CPU must know that the user wants to use Function 04 and not the default (function 03). The next page will show how to use Ladder logic to accomplish this. The CPU must have the following firmware version or later:

- DL-250 = version 1.25
- DL-350 = version 1.15
- DL-450 = H8 version 1.84 with SH1437

Technote

1. MODBUS: Function 04 (New Feature)

The DL-250,DL-350 and the DL-450 will support function 04 read input register (Address 30001). To use function 04, put the number '4' into the most significant position (4xxx). Four digits must to be entered for the instruction to work properly with this mode.



NOTE: To use this function the CPU must have the following firmware version:
DL-250 = version 1.25
DL-350 = version 1.15
DL-450 = version H81.84 with SH1437