



OMRON CJ_CS_CP Series Ethernet(UDP)

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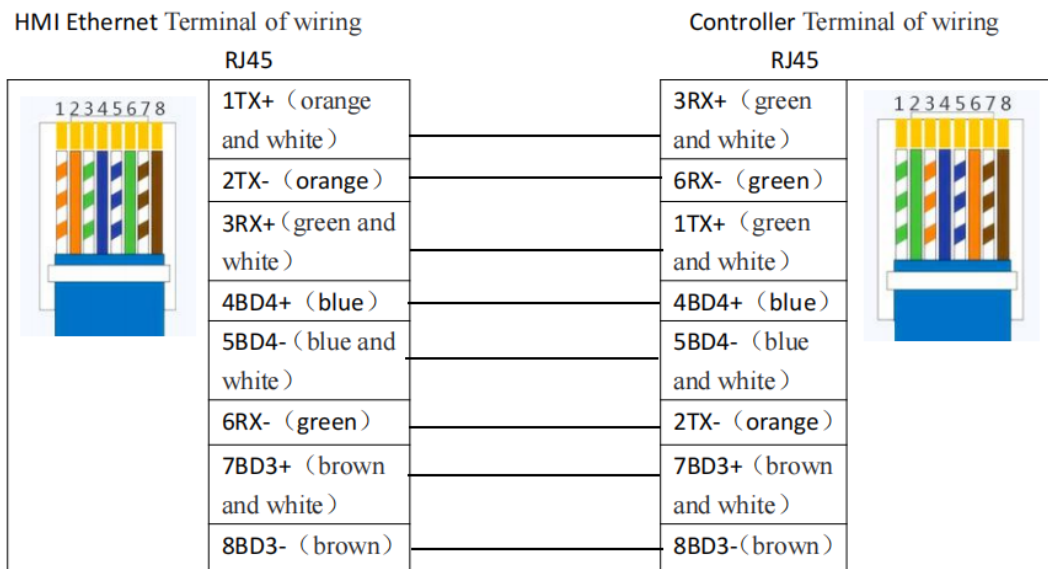
❖ 1 Introduction to Driver

Drive Protocol	OMRON_OMRON CJ_CS_CP Series Ethernet(UDP)
PLC Model	Omron CJ/CP/NX
Means of communication	1:1 、 1:n 、 n:1(The number of connected HMI depends on the external controller)
PLC interface	Ethernet
PLC station number	9600
On line simulation	Support

Hardware wiring method:

PLC does not communicate with HMI directly through HUB or SWITCH, then use crossover network cable; if it communicates with HMI through HUB or SWITCH, then use either direct connection or crossover network cable.

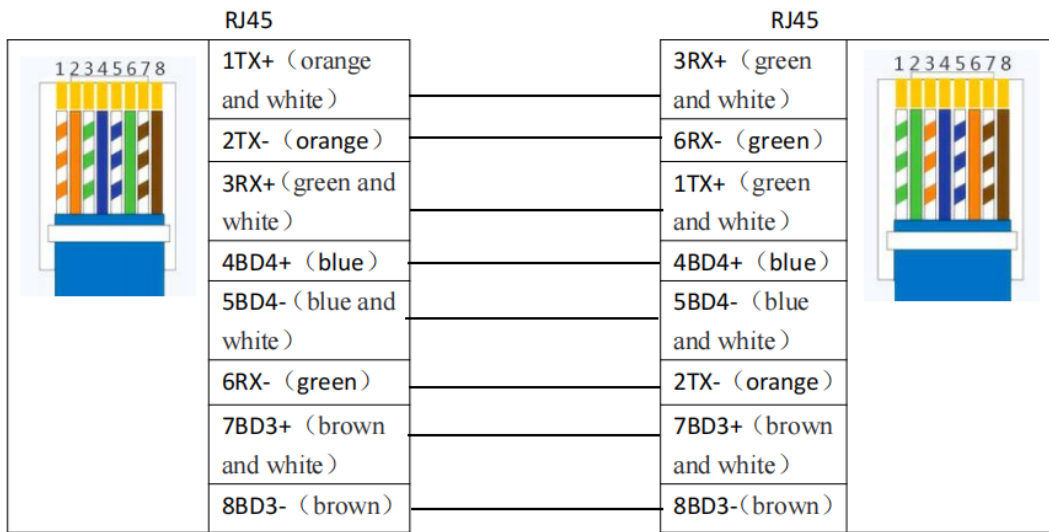
A. Crossover cable wiring diagram



B. Wiring diagram of the direct cable

HMI Ethernet Terminal of wiring

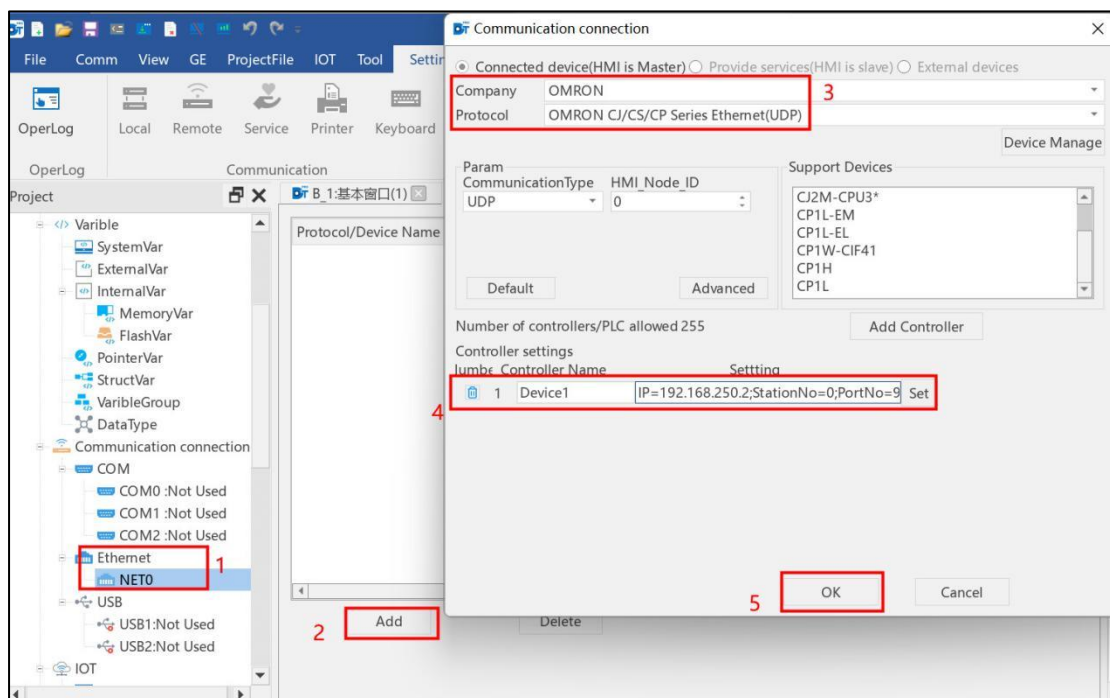
Controller Terminal of wiring

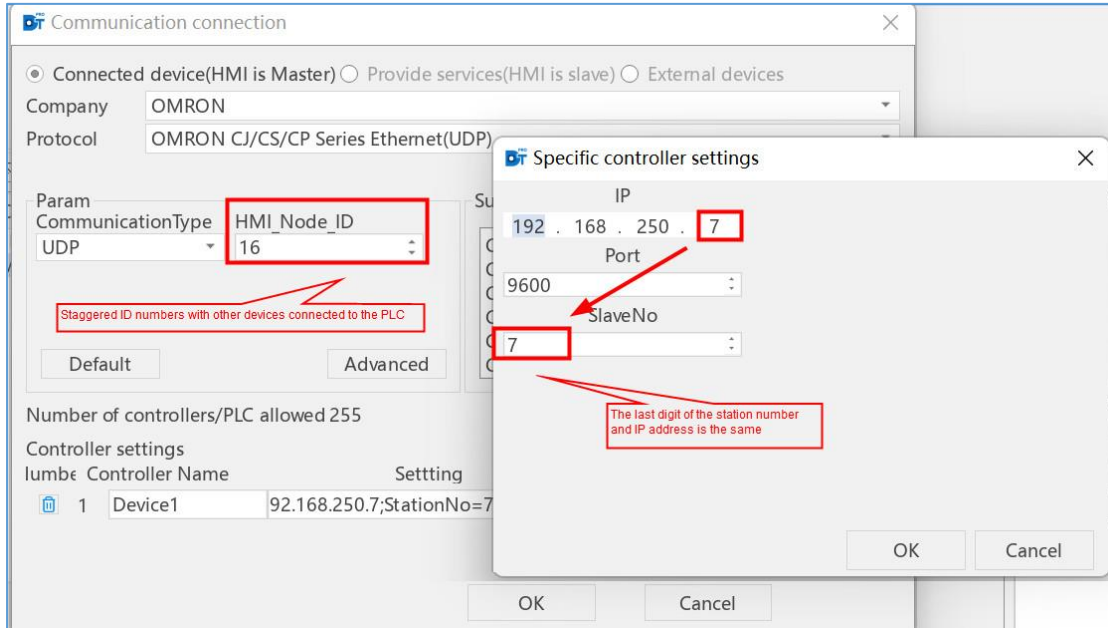


❖ 2 HMI Configuration

➤ Add driver protocol

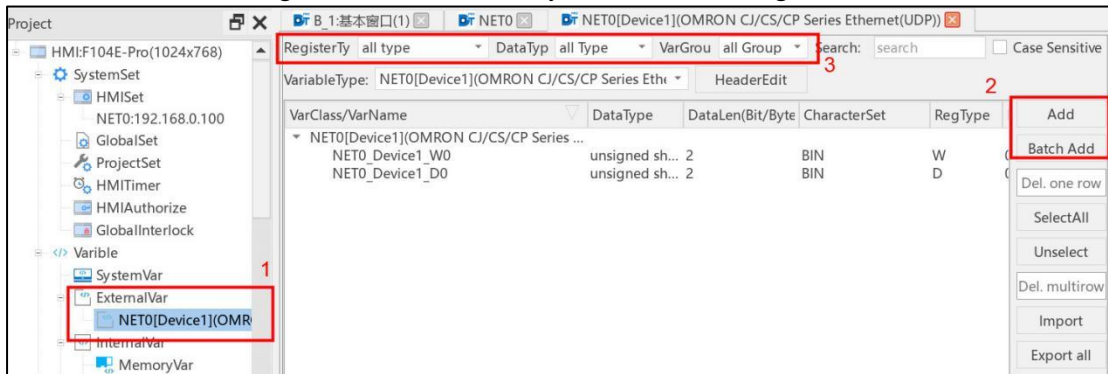
- (1) Project-Communication Connections-Ethernet: Select the network port to which the driver needs to be added
- (2) Select the company brand of the external controller: OMRON
- (3) Select the OMRON_OMRON CJ_CS_CP Series Ethernet(UDP) protocol.
- (4) Configure the controller name
- (5) Configure the controller IP/station number/port number --- just keep the same parameters with the actual controller





➤ Creates variables

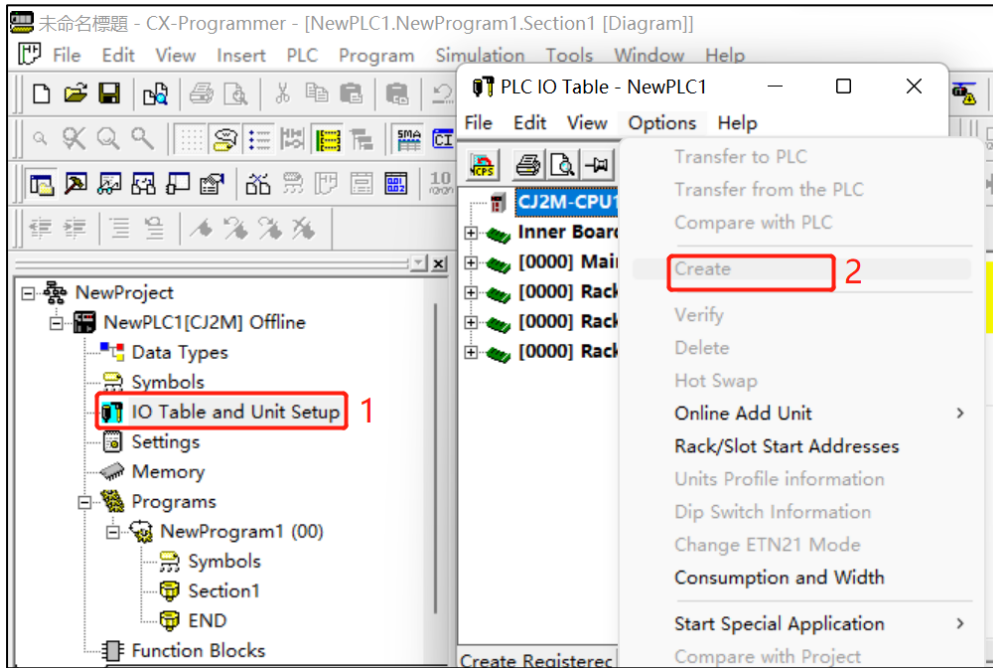
- (1) Variables - External Variables select the PLC for which you want to create a variable
- (2) Click Create on the right to create according to the desired data type
- (3) Information filtering view, can be filtered by each data screening above



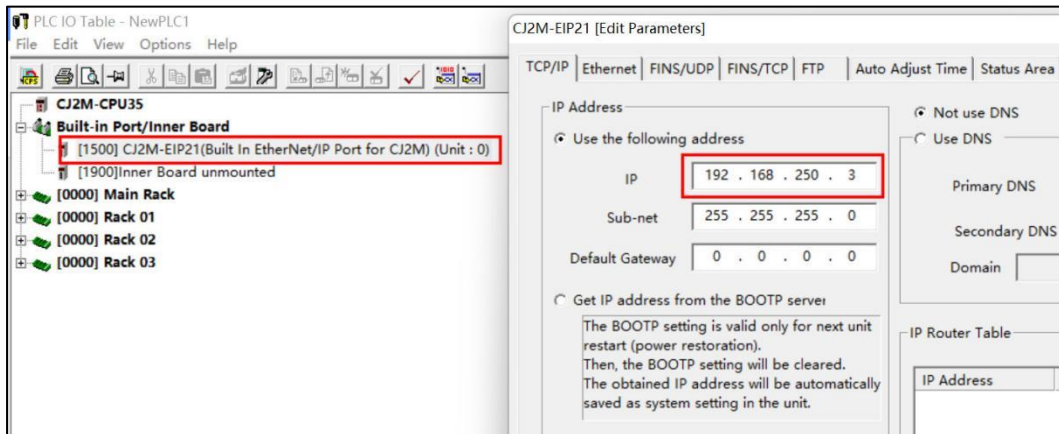
❖ 3 External Controller Configuration

CJ Series

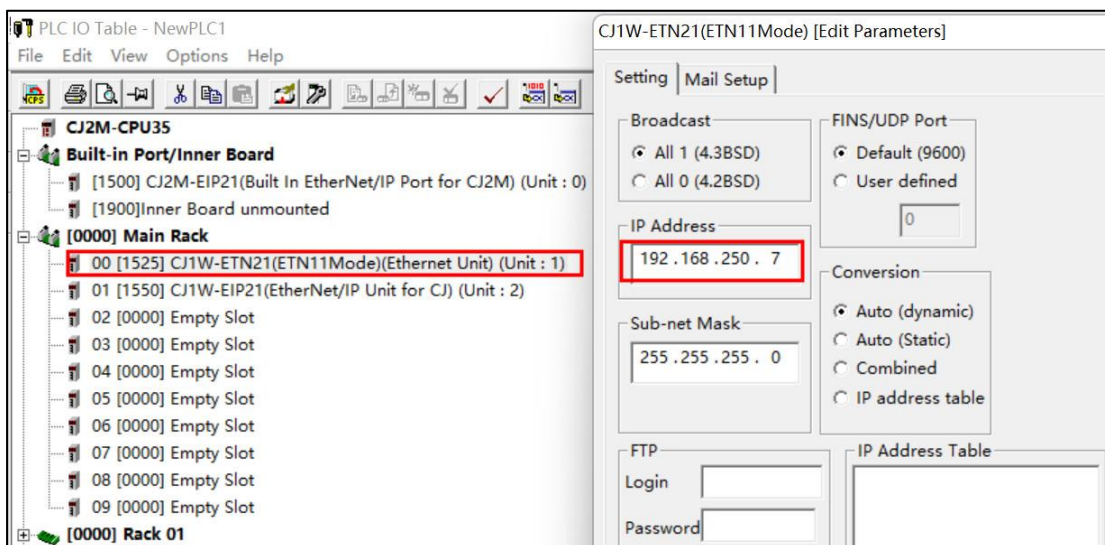
Set PLC to edit mode, create IO table and transfer from PLC

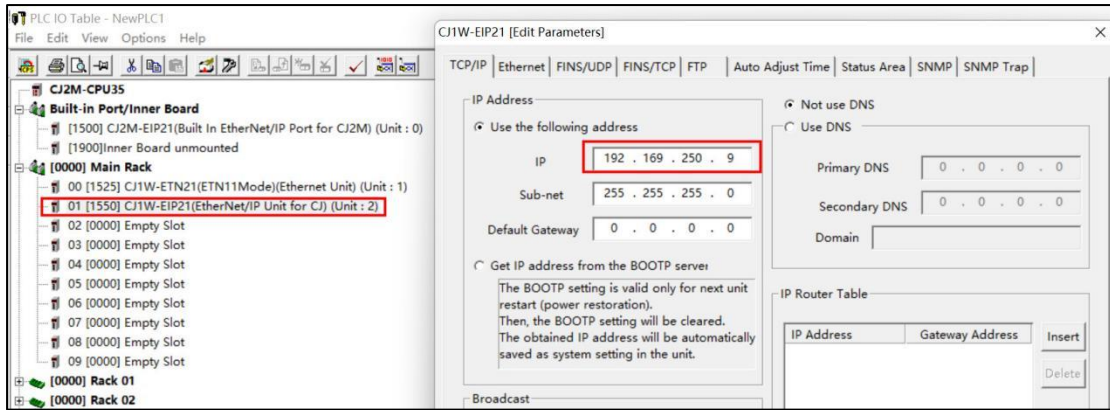


1. Communication with the built-in port is built-in and set as follows: Set IP address



2. Communication with rack equipment





PLC dialing code need to be UNIT No corresponds to the unit number 1, 2, Node No corresponds to the last bit of IP address 7, 9, and transmitted to the PLC



If the IP address is a two-digit number, such as 192.168.250.78, it corresponds to 4E in hexadecimal.



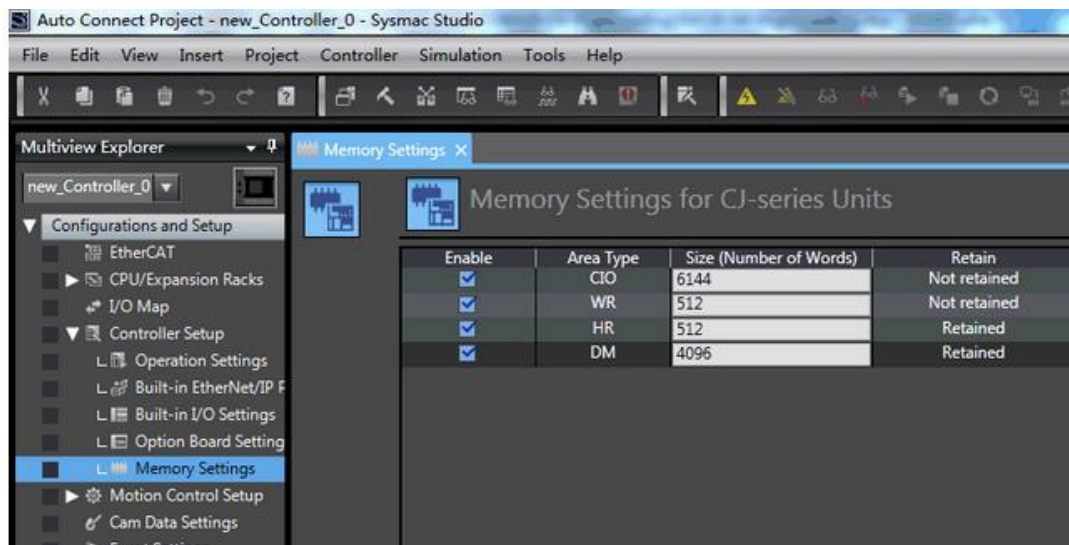
The dial settings are as follows: the dial on one side of "X16¹" is set to 4, and the dial on one side

of "X16⁰" is set to E, then $4 \times 16^1 + E \times 16^0 = 78$. Restart the PLC after setting



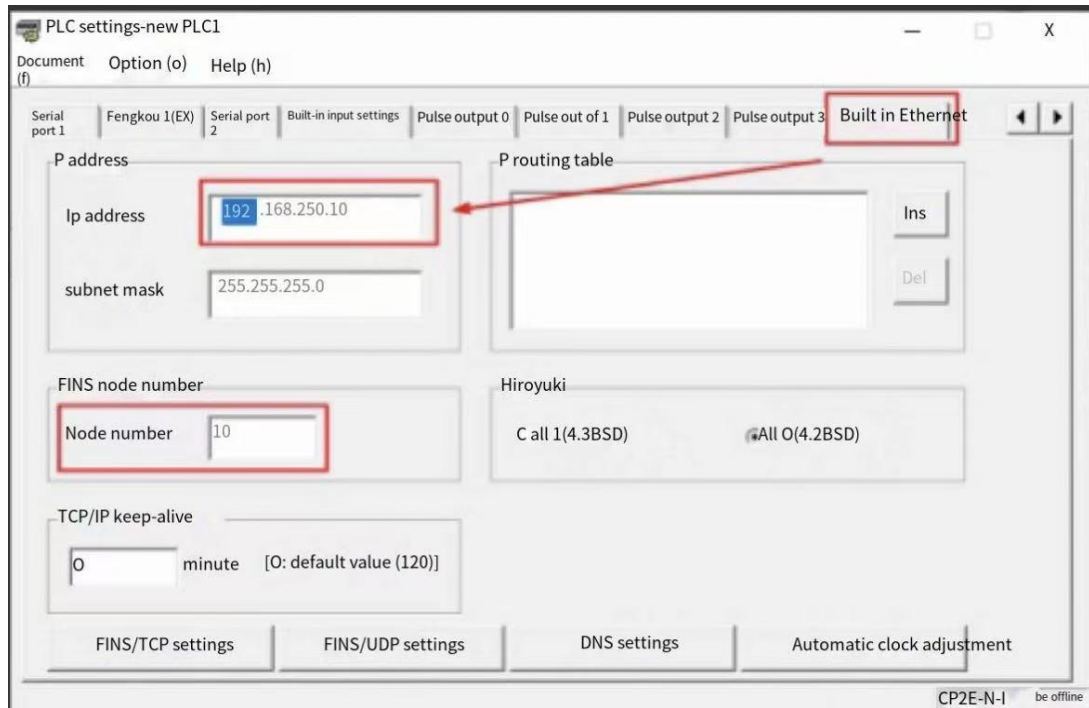
NX/NJ Series

Note: The NX1P2 model needs to be set up with sysmac studio first, tick the Enable box before the register area to be used, as shown below:



CP1\2 Series

Setting the node number of the PLC and download program, the PLC needs to be powered off and restarted to take effect



❖ 4 Supported Register Types

Device	Bit Address	Word Address	Format
D	D0.00-32767.15	D0-32767	DDDDD
W	W0.00-511.15	W0-511	DDD
A	A0.00-11535.15	A0-11535	DDDDD
H	H0.00-1535.15	H0-1535	DDDD
T	-----	T0-4095	DDDD
C	-----	C0-4095	DDDD
E0-E18	E0.00-32737.15	E0-32767	DDDDD
TK	-----	TK0-32767	DDDDD
IR	-----	IR0-15	DD
DR	-----	DR0-15	DD
CIO	CIO0.00-6143.15	CIO0-6143	DDDD
T_FLAG	T_FLAG0-4095	-----	DDDD
T_FORCED	T_FORCED0-4095	-----	DDDD
T_FORCED_RELEASE	T_FORCED_RELEASE0-4095	-----	DDDD
C_FLAG0	C_FLAG0-4095	-----	DDDD
C_FORCED	C_FORCED0-4095	-----	DDDD
C_FORCED_RELEASE	C_FORCED_RELEASE0-4095	-----	DDDD
T_RELEASE_STATUS	T_RELEASE_STATUS0-4095	-----	DDDD
C_RELEASE_STATUS	C_RELEASE_STATUS0-4095	-----	DDDD
TK_FLAG	TK_FLAG0-127	-----	DDD
CIO_FORCED	CIO_FORCED0.0-6143.15	-----	DDDD.DD
CIO_FORCED_RELEASE	CIO_FORCED_RELEASE0.0-6143.15	-----	DDDD.DD

CIO_RELEASE_STATUS	CIO_RELEASE_STATUS0.0-6143.15	-----	DDDD.DD
H_FORCED	H_FORCED0.0-1535.15	-----	DDDD.DD
H_FORCED_RELEASE	H_FORCED_RELEASE0.0-1535.15	-----	DDDD.DD
H_RELEASE_STATUS	H_RELEASE_STATUS0.0-1535.15	-----	DDDD.DD
W_FORCED	W_FORCED0.0-511.15	-----	DDDD.DD
W_FORCED_RELEASE	W_FORCED_RELEASE0.0-511.15	-----	DDDD.DD
W_RELEASE_STATUS	W_RELEASE_STATUS0.0-511.15	-----	DDDD.DD

❖ 5 Advanced parameters and error messages

Reference Manual - Communication "Advanced Parameters" and "Error Messages Table"