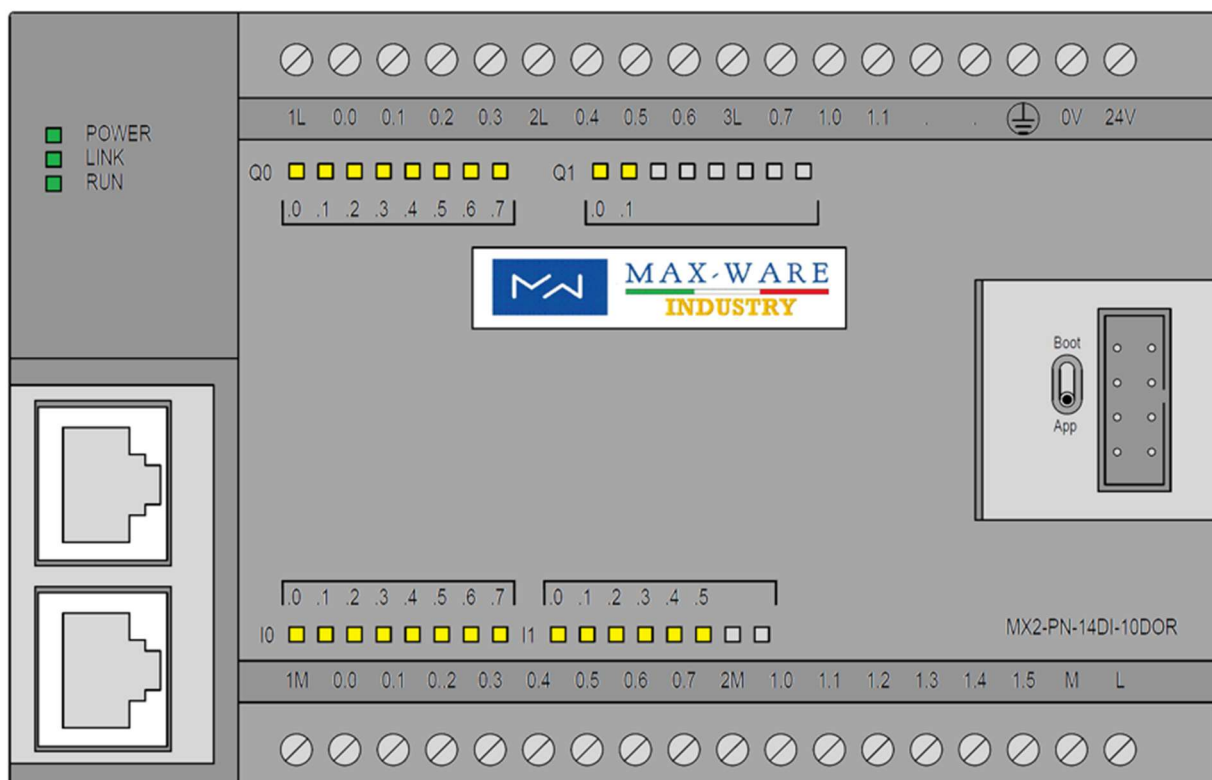




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MX2-PN-14DI-10DOR

PROFINET DATA ACQUISITION MODULE





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TABLE OF CONTENT

Sommario

1 PRODUCT OVERVIEW	3
2 PRODUCT SPECIFICATION	4
3 WIRING	5
4 COMMUNICATION FUNCTION	7
5 RESTORE TO FACTORY DEFAULT	7
6 PROFINET GSDML FILE	8
7 CONFIGURATION.....	9



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1 PRODUCT OVERVIEW

Module is an extended remote distributed IO module that supports PROFINET Protocol connection to PLC.

- 14-way photoelectric isolation digital input, 10-way relay digital output (corresponding to the number of status indicator)
- 2 way RJ45 port, 10/100 Mbps Ethernet communication
- Support standard Profinet protocol



2 PRODUCT SPECIFICATION

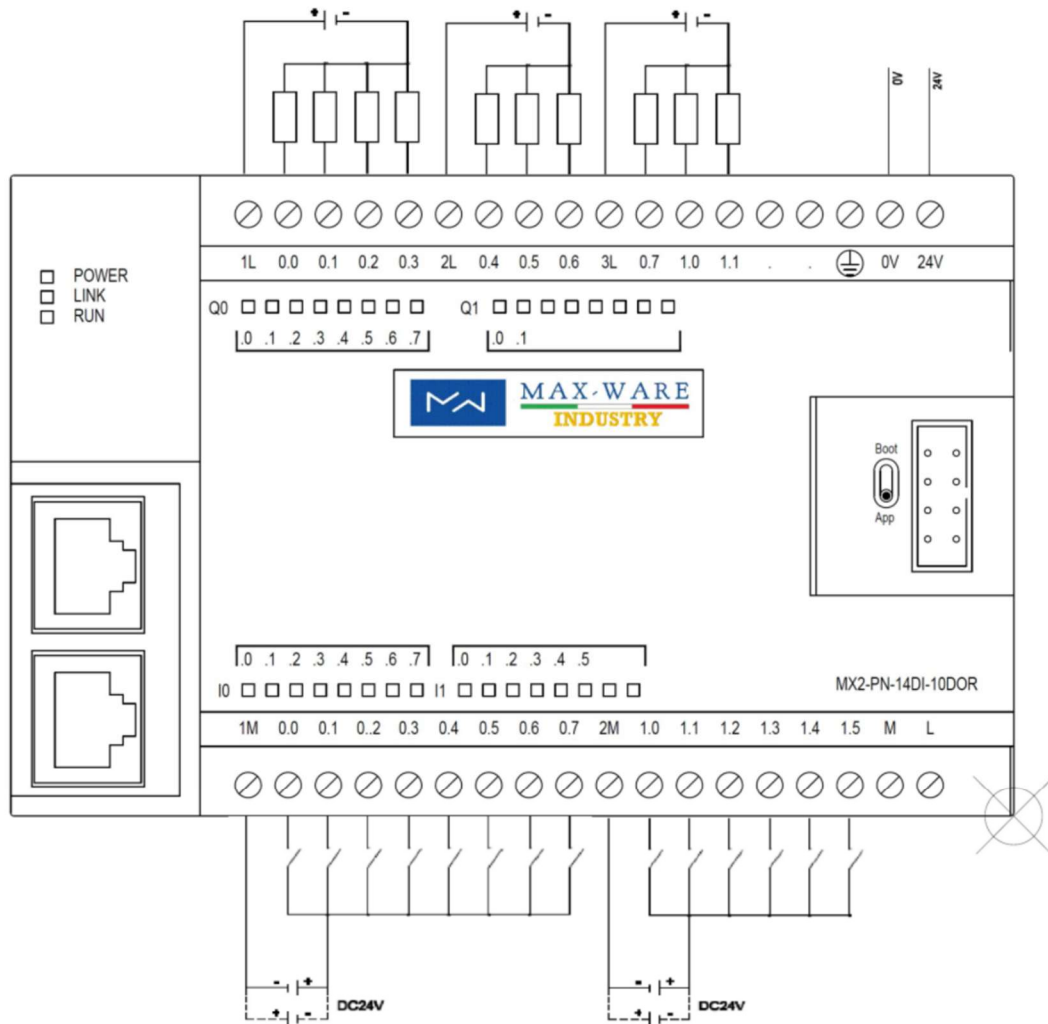
DIGITAL INPUT	14 DIGITAL INPUT Switch contact signal or level signal (PNP or NPN) Effective range: dc 20-28 vdc Optocoupler isolation
DIGITAL OUTPUT	10 DIGITAL OUTPUT Relay output normally open contacts (PNP or NPN) Contact capacity: 30vdc/5A 250vac/5A Mechanical isolation
ANALOGIC INPUT	NO
ANALOGIC OUTPUT	NO
COM PORT 1	NO
COM PORT 2	NO
ETHERNET PORT	Type: RJ45 Local area network 10/100mbps, full duplex, adaptive Communication protocol: PROFINET Default ip address: NO
POWER	Operating voltage: DC 24V; with anti-reverse protection Power consupcion: 2–4 W
TEMPERATURE	-20°C +70°C
DIMENSIONS	120MM (length) * 80MM (width) * 60MM (height)
INSTALLATION MODE	Guide rail DIN



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3 WIRING





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DIGITAL INPUT		DIGITAL OUTPUT		POWER	
1M	Com input 1-8	1L	Com output 1-4	24V	24VDC
0.0	Ch1 digital input	0.0	Ch1 digital output	0V	0 VDC
0.1	Ch2 digital input	0.1	Ch2 digital output		
0.2	Ch3 digital input	0.2	Ch3 digital output	M	Not used
0.3	Ch4 digital input	0.3	Ch4 digital output	L	Not used
0.4	Ch5 digital input	2L	Com output 5-7		
0.5	Ch6 digital input	0.4	Ch5 digital output		
0.6	Ch7 digital input	0.5	Ch6 digital output		
0.7	Ch8 digital input	0.6	Ch7 digital output		
2M	Com input 9-14	3L	Com output 8-10		
1.0	Ch9 digital input	0.7	Ch8 digital output		
1.1	Ch10 digital input	1.0	Ch9 digital output		
1.2	Ch11 digital input	2.1	Ch10 digital output		
1.3	Ch12 digital input				
1.4	Ch13 digital input				
1.5	Ch14 digital input				



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4 COMMUNICATION FUNCTION

STANDARD OPEN PROFINET PROTOCOL

5 RESTORE TO FACTORY DEFAULT

When the module is powered on and the RUN light is flashing, press and hold the reset button (about 5S) until the RUN light becomes normal and then release the button, the RUN light will be on for 5S and then resume flashing, then power off the module for at least 3S and power on, the module will restore the factory parameters, as shown in the table below.



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6 PROFINET GSDML FILE

Download link:

<https://www.max-ware.it/DOWNLOAD/GSDML-V2.3-MAX-WARE-MX2-PN-14DI-10DOR-20240125.zip>

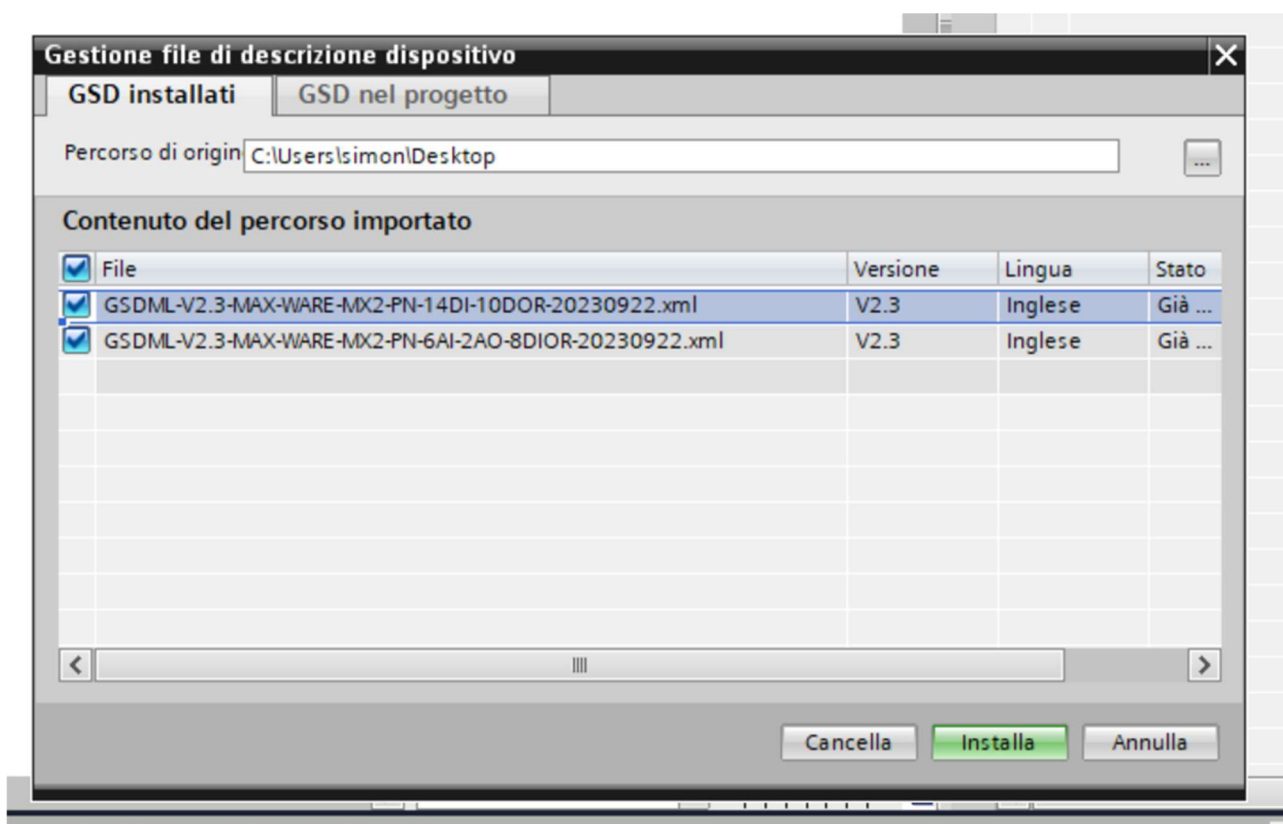
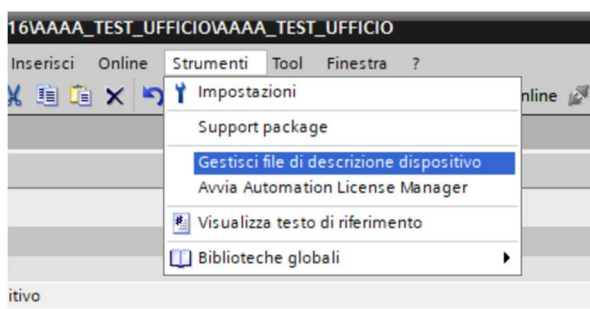


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7 CONFIGURATION

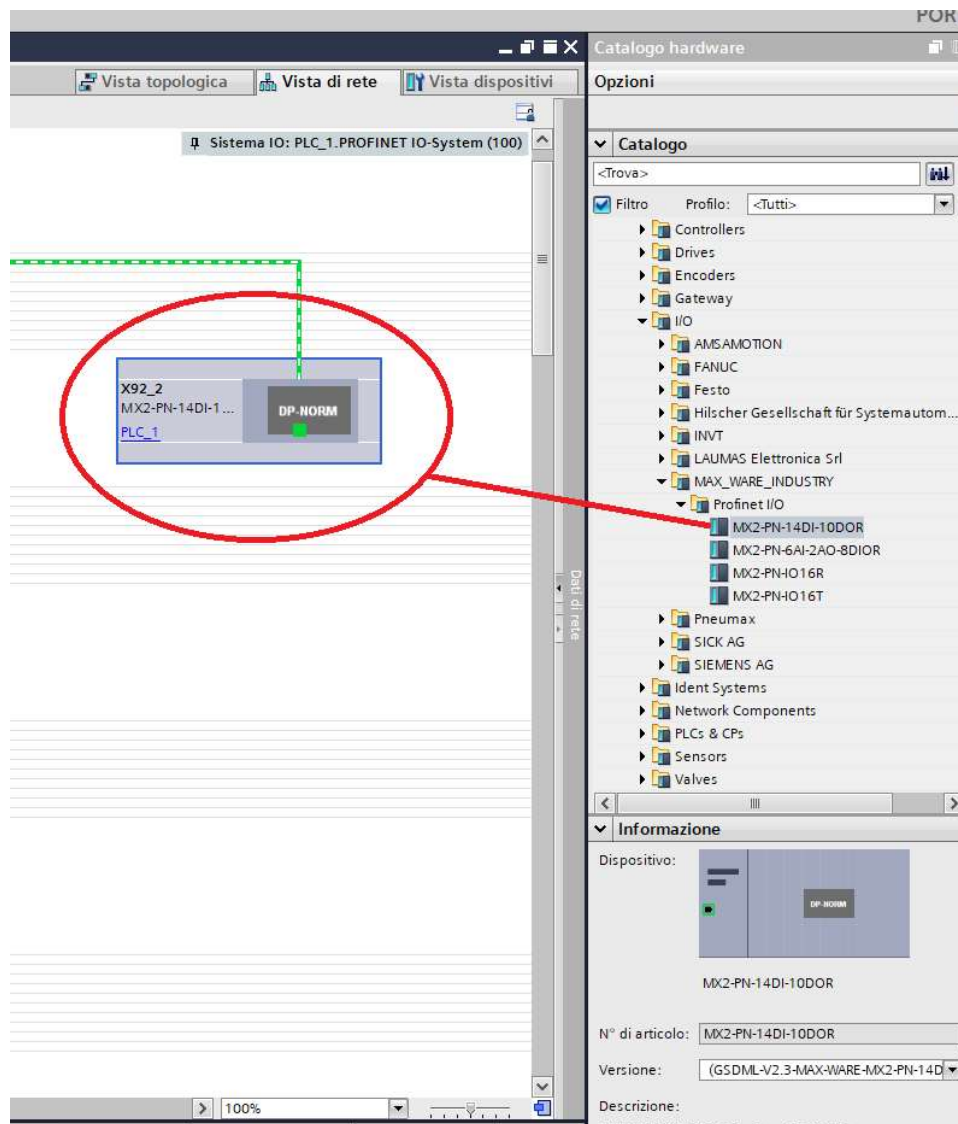
Tia portal V16 configuration example:

1. Install gsdml file GSDML-V2.3-MAX-WARE-MX2-PN-14DI-10DOR-20240125





2. Find in the hardware catalog the component like the image below, insert in the hardware and connect to the cpu.





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3. Insert module EX001H and double click on the component and define the input output range number.

The screenshot displays the MAX-WARE software interface. The main window shows a project titled 'CPC_O+R' with a device 'X34 SWITCH R SUD [MX2-PN-14DI-10DOR]'. The 'Vista generale dispositivi' (General Device View) is active, showing a table of modules:

Modulo	Telaio...	Posto ...	Indirizzo I	Indirizzo...	Tipo
X34 SWITCH R SUD	0	0			MX2-PN-14...
PROFINET	0	0 X1			mx2-pn-14...
EX001H_1	0	1	840...841	840...841	EX001H

The right-hand pane shows the 'Catalogo hardware' (Hardware Catalog) with a search filter set to '<Tutti>'. The 'Modulo' (Module) list is expanded, showing 'EX001H' selected. Below the catalog, the 'Informazione' (Information) section displays details for the selected module:

- Dispositivo: DP-NORM
- EX001H
- N° di articolo: -
- Versione: (G5DML-V2.3-MAX-WARE-MX2-PN)
- Descrizione: Local IO DI14 DO10 PNP



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4. Select the profinet name and ip address you want

The screenshot displays the MAX-WARE software interface for configuring a device. The top window shows a project tree with the selected device 'mx2-pn-6ai-2ao-8dior [MX2-PN-6AI-2AO-8DIOR]'. The 'Vista generale dispositivi' (General device view) table lists the device's modules and their addresses:

Modulo	Telaio...	Posto ...	Indirizzo I	Indirizz...	Tipo
mx2-pn-6ai-2ao-8dior	0	0			MX2-PN-6AI-2AO-8...
X1	0	0 X1			mx2-pn-6ai-2ao-8...
IOBRA_1	0	1			IOBRA
DI8	0	1 1	100		DI8
DO8	0	1 2		100	DO8
AI6	0	1 3	300...311		AI6
AO2	0	1 4		300...303	AO2

The bottom window shows the 'Proprietà' (Properties) tab for the selected device. The 'Indirizzi Ethernet' (Ethernet addresses) section is active, showing the 'Interfaccia collegata a' (Interface connected to) as 'PNIE_1'. The 'Protocollo IP' (IP protocol) section is configured with the following values:

- ☒ Imposta indirizzo IP nel progetto (Set IP address in project)
- Indirizzo IP: 192 . 168 . 50 . 1
- Maschera di sottorete: 255 . 255 . 255 . 0
- ☒ Sincronizza le impostazioni di router con IO Controller
- ☐ Utilizza router
- Indirizzo del router: 0 . 0 . 0 . 0
- ☐ Consenti la modifica dell'indirizzo IP direttamente nel dispositivo

The 'PROFINET' section shows the 'Nome del dispositivo PROFINET' (PROFINET device name) as 'mx2-pn-6ai-2ao-8dior'.



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5. Give profinet cycle time to manual and 16ms

x61 [MX2-PN-6AI-2AO-8DIOR]

Generale Variabile IO Costanti di sistema Testi

Consenti la modifica dell'indirizzo IP direttamente nel dispositivo

PROFINET

☒ Genera nome del dispositivo PROFINET automaticamente

Nome del dispositivo PROFINET: x61

Nome convertito: x61

Numero dispositivo: 61

Opzioni avanzate

> Opzioni dell'interfaccia

☐ Avvio prioritario

☐ Utilizza modalità LLDP IEC V2.2

> Impostazioni Realtime

> > Ciclo IO

Tempo di aggiornamento

☐ Calcola automaticamente il tempo di aggiornamento

☒ Imposta manualmente il tempo di aggiornamento

Tempo di aggiornamento: 16.000

☐ Adegua il tempo di aggiornamento se viene modificato l'intervallo di trasmissione

Tempo di controllo risposta

Cicli di aggiornamento accettati senza dati IO: 3

Tempo di controllo risposta: 48.000

> X1 P1 [X1 P1]

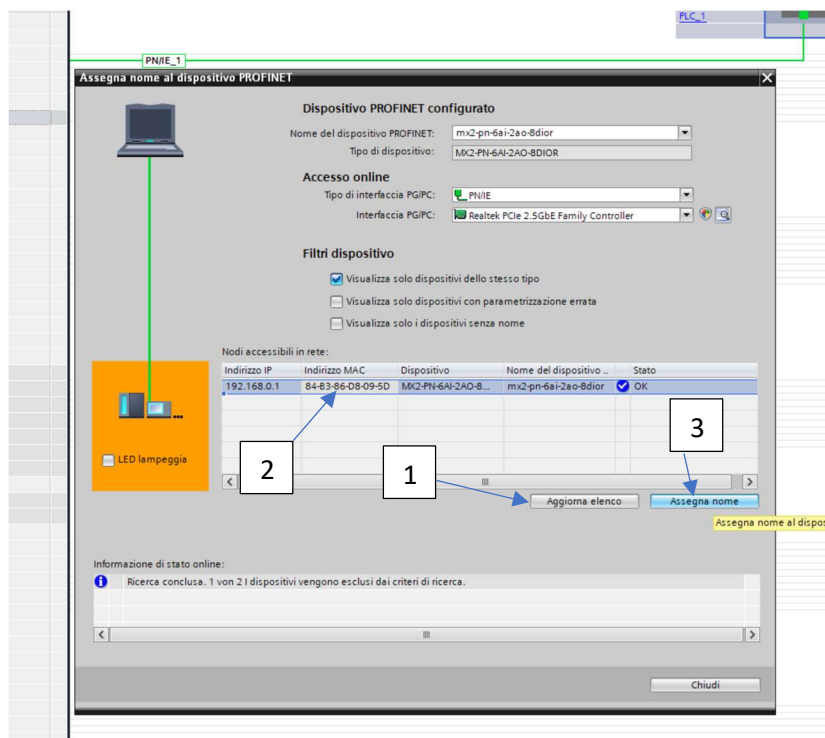
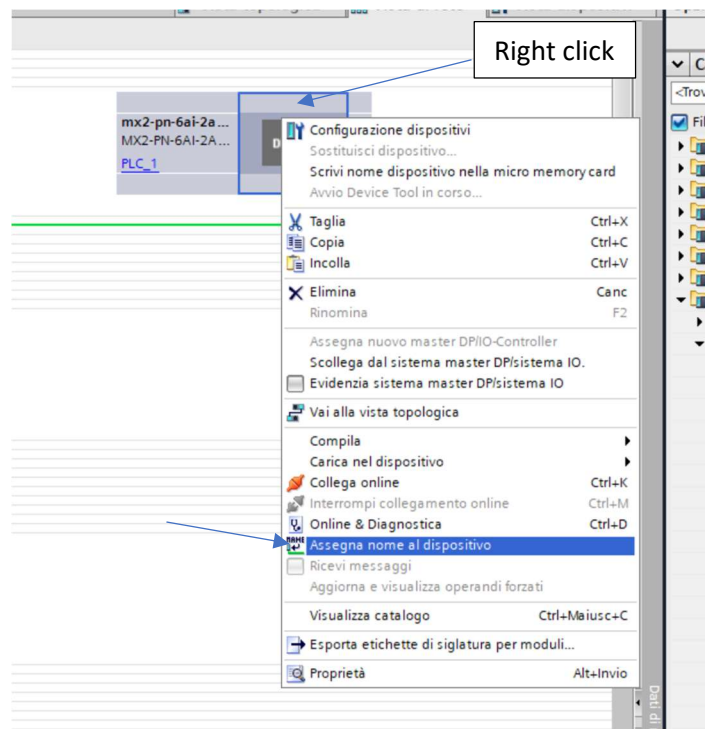
> > Generale



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6. Give profinet name to the component





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The configuration is finish.