

XM-DI8-DO6T Digital Input and Output Expansion Module

Data sheet applicable for:

- XM-DI8-DO6T, 8 channel Digital Inputs and 6 channel Digital Outputs Expansion Module

Introduction

XM-DI8-DO6T is an Expansion Module that adds an extra of 8 digital inputs (DIs) and 6 digital outputs (DOs) to the XM14-DT, XM17-ADT, or XM14-DT-HIO Programmable Logic Controllers (PLCs).

Features of XM-DI8-DO6T

- Easy expansion by using a plug-in bus connection between the PLC and XM-DI8-DO6T module.
- Easy fitment next to the PLC on the 35 mm DIN rail.
- Bus connection routed through an Expansion Connector that also offers protection for cable.
- 8 optically isolated digital inputs that can accept sink or source logic and 6 optically solid-state transistor source outputs to drive external relays.
- Power supply connection on top as well as bottom for convenience of connection.
- Convenient stacking of multiple expansion modules with connectors available on both sides of the XM-DI8-DO6T unit.

Front view

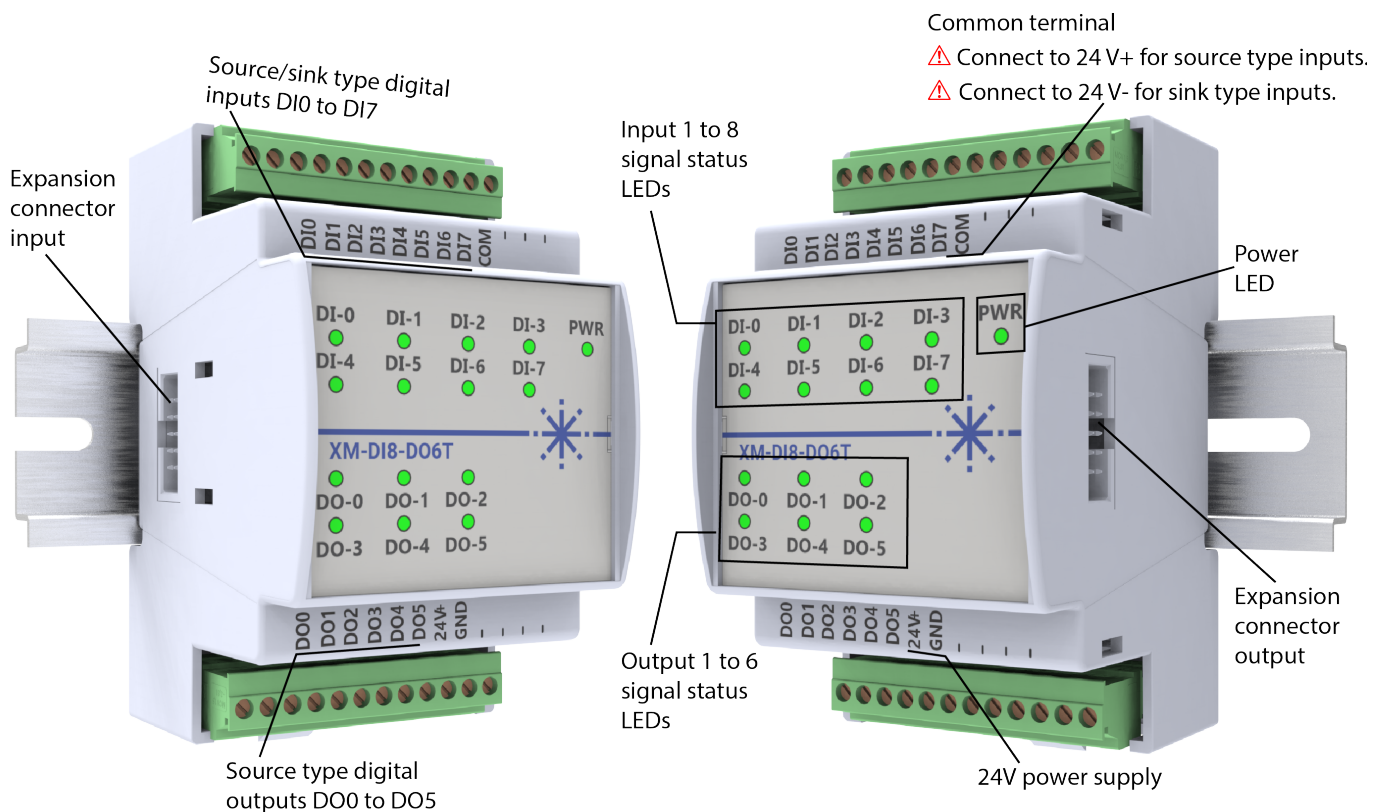


Figure 1. XM-DI8-DO6T Digital Input and Output Expansion Module

Local expansion of the PLC with expansion modules

The following figure shows two typical Expansion Modules (such as the XM-DI8-DO6T unit) attached to the XM14-DT PLC. Each Expansion Module connector contains a Flat Ribbon Cable (FRC) that connects the PLC with the expansion modules.

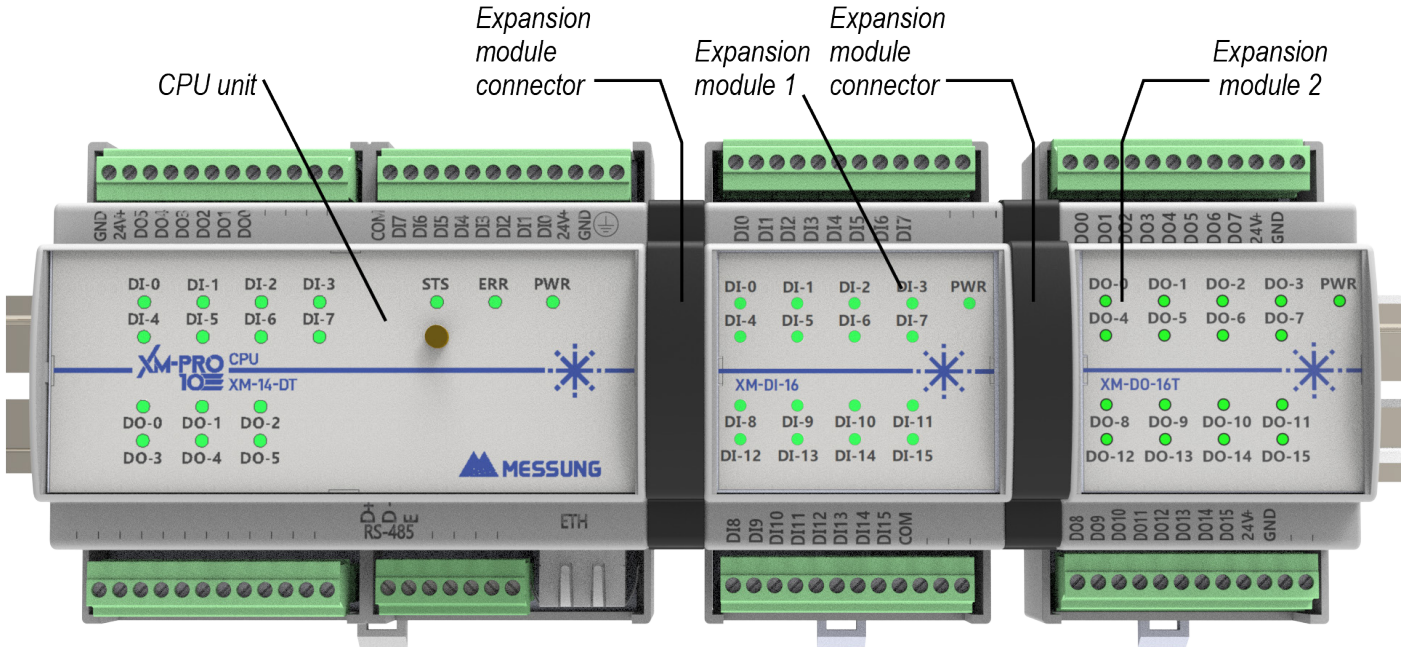


Figure 2. PLC CPU unit 2 typical expansion modules

Connecting the Expansion Module

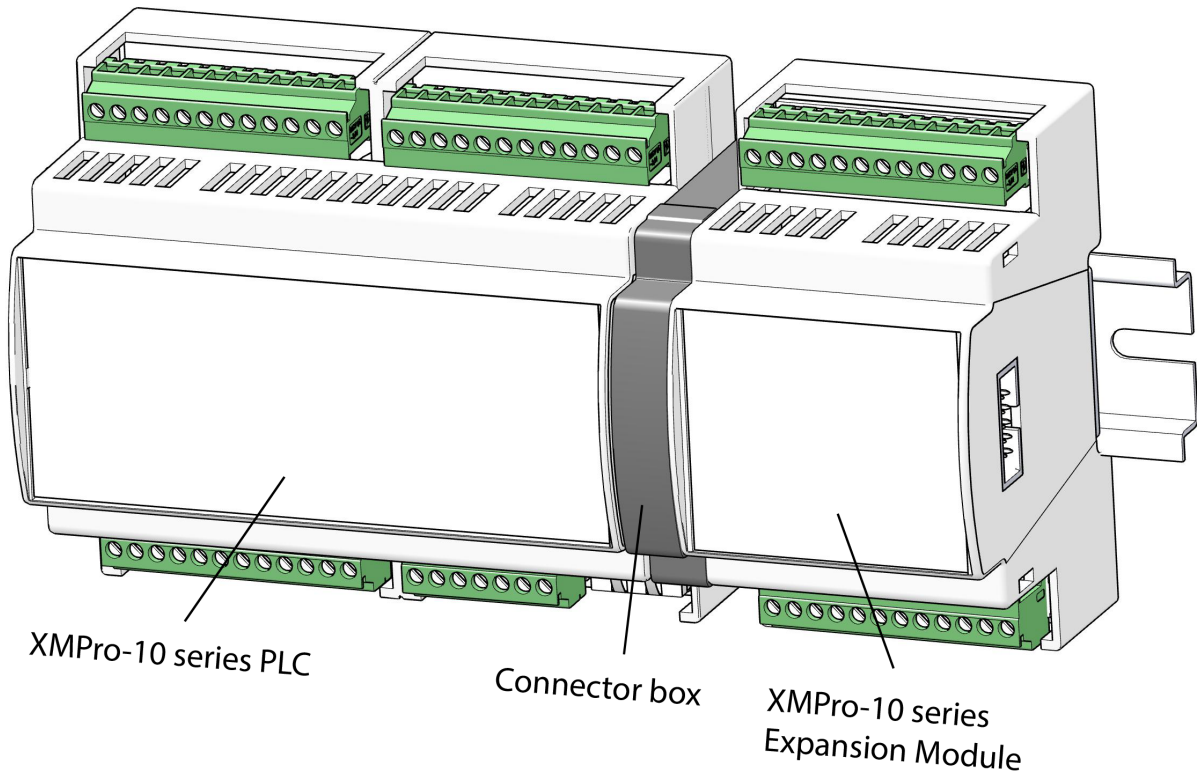


Figure 3. XMPro-10 series PLC and Expansion Module on a 35 mm DIN rail

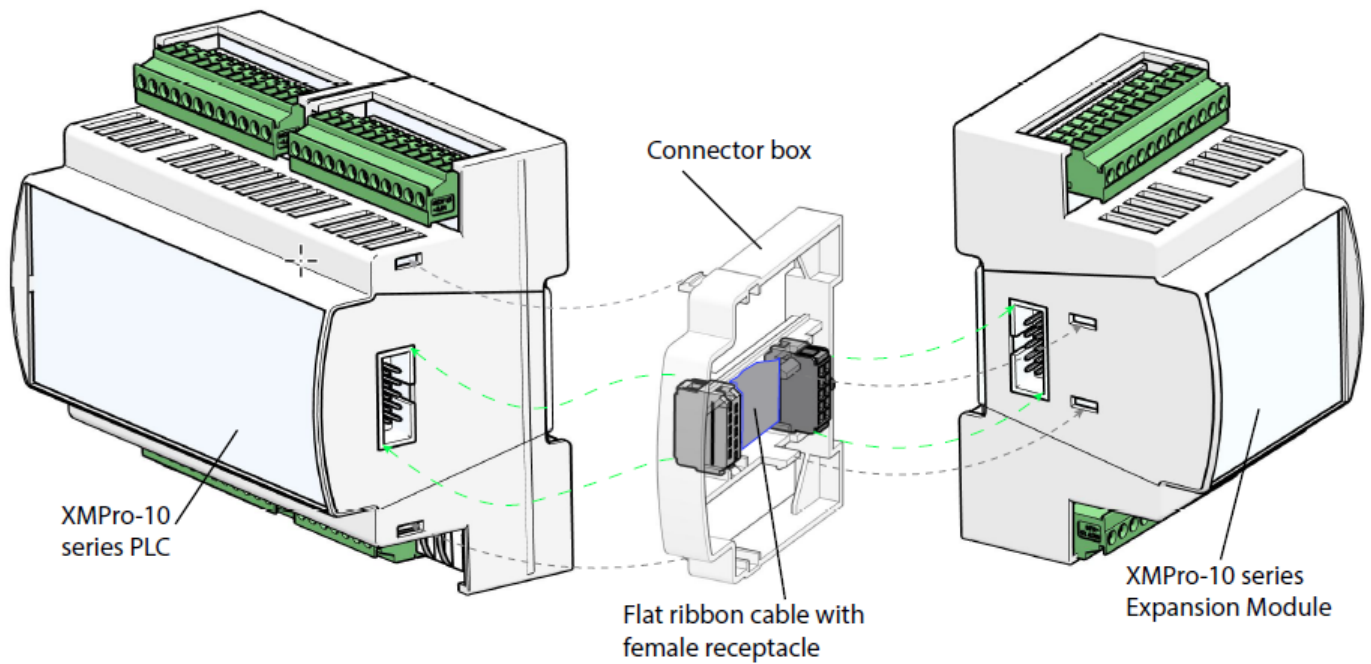


Figure 4. Connecting the XMPro-10 series PLC and Expansion Module

General specifications

Number of inputs	8
Number of outputs	6
Maximum input power	720 mW
Protection	Available, against voltage surges
IP level	IP20
Operating temperature	0°C to 55°C
Storage temperature	-5°C to +55°C
Operating and storage relative humidity	5 to 95% RH (no condensation)
Certifications	CE, RoHS
Dimensions	54 mm (width) x 91 mm (height) x 62mm (depth)
Weight	120 grams
Maximum wire size	0.5 mm ² with lugs
	1.5 mm ² without lugs

Digital inputs

Input type	Source or sink type
Number of inputs	8
Maximum input power	720 mW
Maximum input current	6mA at 24 VDC

Input voltage	Voltage (typical)	24 VDC
	Voltage range	18 to 30 VDC logic
	Connector type	Pluggable terminal connector
	0 Signal (low)	0 to 5 VDC
	1 Signal (high)	18 to 30 VDC
Response time	0.1 milliseconds	
Indication lamps	Input State LEDs (green)	

Digital outputs

Output type	Transistor Source Type
Number of outputs	6
External power supply	24 VDC
Isolation	Optical
Maximum input power	720 mW
Maximum output current	0.5A per channel
	2A per group
Switching frequency	250 Hz
Switching time	20 us, off-to-on transition @ 24 VDC
	500 us, on-to-off transition @ 24 VDC
Indication	Output state LEDs (green)

Wiring diagram

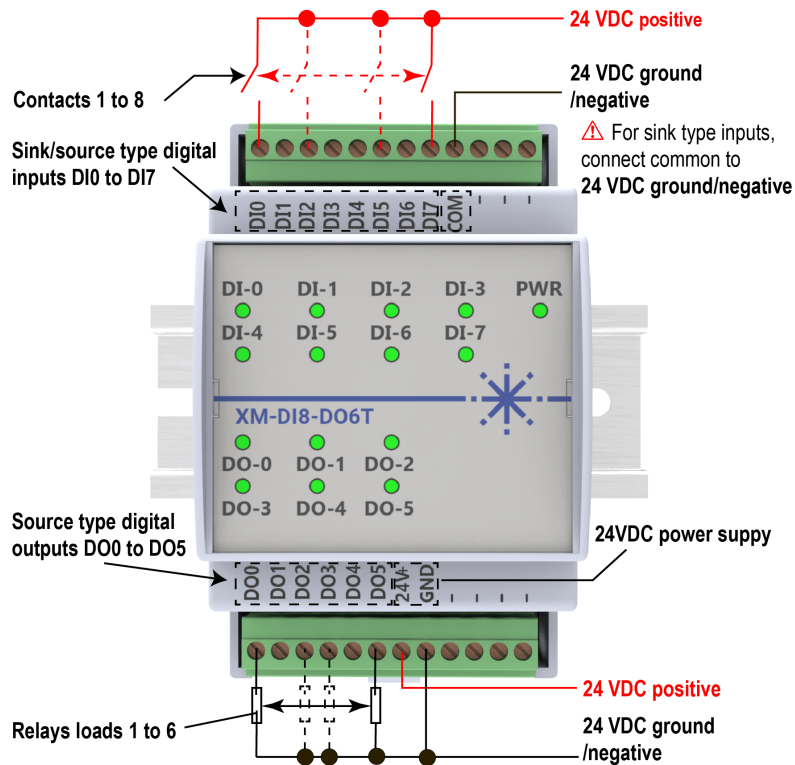


Figure 5. Typical wiring diagram of XM-DI8-DO6T Digital Expansion Module

Fitting and removal

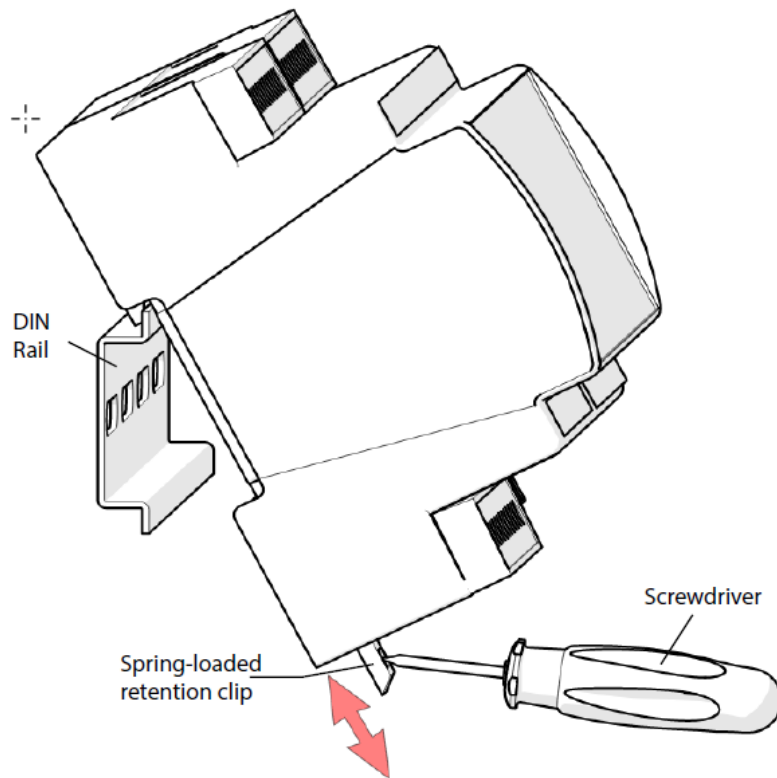


Figure 6. Engage the DIN rail and pull the retention clip

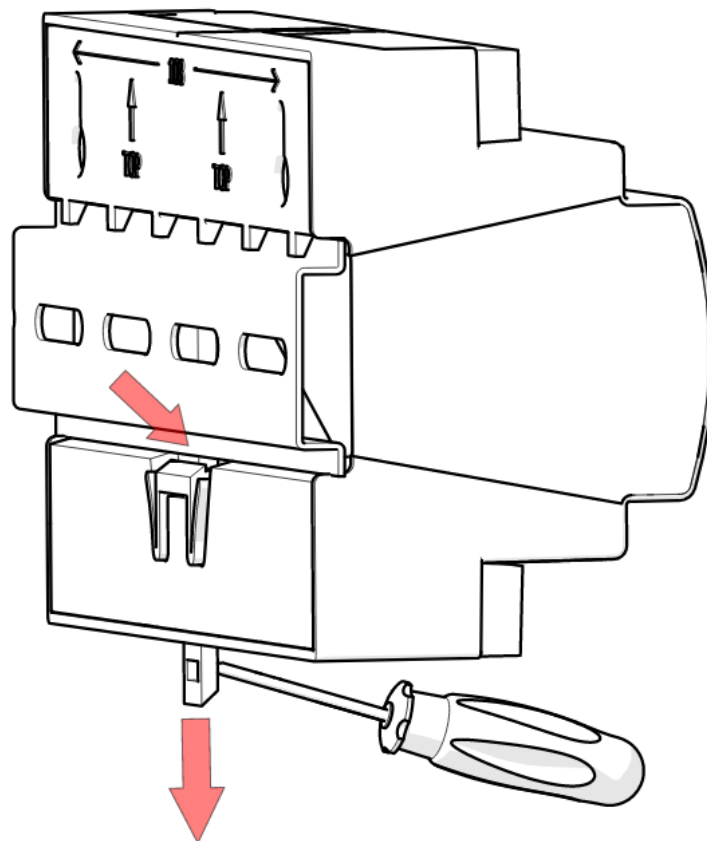


Figure 7. Pull down the spring-loaded retention clip using a flat-blade screwdriver

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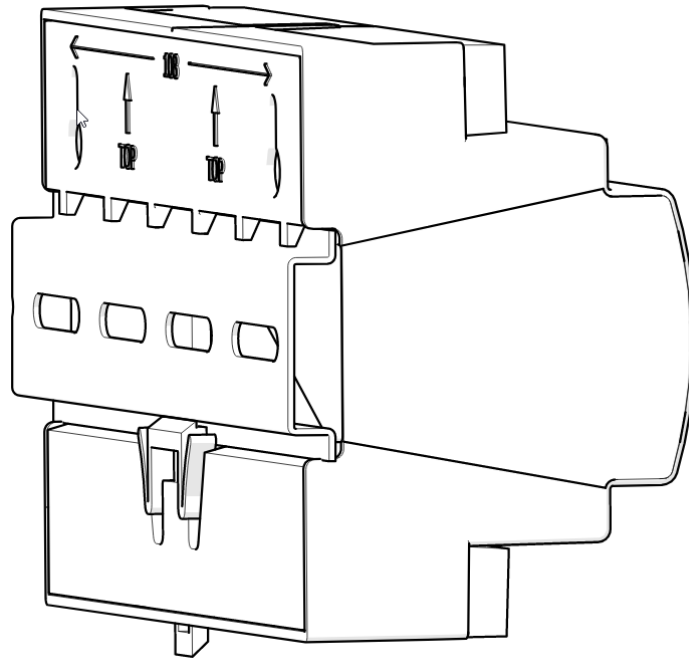


Figure 8. Lock the XM-DO-16T unit on the DIN rail

⚠ XM-DI8-DO6T unit series units fit on a 35 mm DIN rail channel.

1. Engage the slot at rear of unit to the upper edge of DIN rail. Refer Figure 6.
2. Pull down the spring-loaded retention clip using a flat-blade screwdriver.
3. Push the unit onto the DIN rail. Refer Figure 7.
4. Release the retention clip to lock the unit on the DIN rail. Refer Figure 8.
5. Reverse the procedure for removing the XM-DI8-DO6T unit from the DIN rail.

Safety instructions

- ⚠** Do install the unit only by qualified professionals, following all applicable laws and regulations.
- ⚠** Do not connect mains supply or any other external voltage to any terminal of the XmPro10 series unit.
- ⚠** Do ensure that the panel or box with the device is locked to prevent unauthorized access.
- ⚠** Do protect all electrical loads against overloads and short-circuits.
- ⚠** Do ensure adequate ventilation and protection from dripping water.