

Item no.: 387410

**45MR-6600-T - Module for the ioThinX 4500 Series, 6 RTDs, -40 to 75C operating temperature**

from **429,48 EUR**

Item no.: 387410  
shipping weight: 0.10 kg  
Manufacturer: MOXA



 [Product Description](#)

---

Introduction Moxa's ioThinX 4500 Series (45MR) Modules are available with DI/Os, AIs, relays, RTDs, and other I/O types, giving users a wide variety of options to choose from and allowing them to select the I/O combination that best fits their target application. With its unique mechanical design, hardware installation and removal can be done easily without tools, greatly reducing the amount of time required to set up and replace the modules. Easy Tool-Free Installation and Removal The ioThinX 4500 Series has a unique mechanical design that reduces the amount of time required for installation and removal. In fact, screwdrivers and other tools are not required for any part of the hardware installation, including mounting the device on a DIN-rail, as well as connecting the wiring for both communication and I/O signal acquisition. Furthermore, no tools are required to remove the ioThinX from a DIN-rail. Removing all of the modules from a DIN-rail is also easy using the latch and release tab. Input/Output Interface Digital Input Channels:- 45MR-1600: 16- 45MR-1601: 16- 45MR-2606: 8 Digital Output Channels:- 45MR-2600: 16- 45MR-2601: 16- 45MR-2606: 8 Analog Input Channels:- 45MR-3800: 8- 45MR-3810: 8- Relay Channels: 45MR-2404: 4- Analog Output Channels: 45MR-4420: 4- RTD Channels: 45MR-6600: 6- Thermocouple Channels: 45MR-6810: 8- System Power Input Channels: 45MR-7210: 1- Field Power Input Channels: 45MR-7210: 1- Field Potential Output Channels: 45MR-7820: 8- Isolation: 3k VDC or 2k Vrms Digital Inputs- Connector: Spring-type Euroblock terminal- Sensor Type: Dry contact, Wet contact (NPN or PNP)/I/O Mode:- 45MR-1600/1601: DI or event counter (only supports the first 4 channels)- 45MR-2606: DI or event counter (only supports the first 2 channels) Dry Contact:- On: short to FP+/FP- Off: open Wet Contact (DI to FP+):- On: 10 to 30 VDC- Off: 0 to 3 VDC Wet Contact (DI to FP+):- On: 10 to 30 VDC- Off: 0 to 3 VDC- Counter Frequency: 1 kHz- Digital Filtering Time Interval: Software configurable Digital Outputs- Connector: Spring-type Euroblock terminal/I/O Type:- 45MR-2600: Sink- 45MR-2601/2606: Source/O Mode:- 45MR-2600/2601: DO or pulse output (only supports the first 4 channels)- 45MR-2606: DO or pulse output (only supports the first 2 channels)- External Power: 12/24 VDC- Pulse Output Frequency: 1 kHz- Over-Voltage Protection: 45 VDC- Over-Temperature Shutdown: 175°C (typical), 150°C (min.)- Current Rating: 500 mA per channel Relays- Connector: Spring-type Euroblock terminal- Type: Form A (N.O.) power relay- I/O Mode: DO Contact Current Rating:- Resistive load: 2 A @ 30 VDC- Resistive load: 2 A @ 250 VAC- Relay On/Off Time: 10 ms (max.)- Initial Insulation Resistance: 1000 mega-ohms (min.) @ 500 VDC- Mechanical Endurance: 5,000,000 operations- Electrical Endurance: 45MR-2404 Models: 50,000 operations @ 2 A resistive load- Contact Resistance: 100 milli-ohms (max.) Analog Inputs- Connector: Spring-type Euroblock terminal- I/O Mode: Voltage/Current- I/O Type: Differential- Resolution: 16 bits Input Range:- 45MR-3800: 0 to 20 mA, 4 to 20 mA, 4 to 20 mA (burnout detection)- 45MR-3810: 0 to 10 VDC or -10 to 10 VDC Over-Voltage Protection:- -25 to +30 VDC (power on)- -35 to +35 VDC (power off) Accuracy:- ±0.1% FSR @ 25°C- ±0.3% FSR @ -40 and 75°C Sampling Rate:- All channels: 100 samples/sec- Per channel: 12.5 samples/sec- Single channel: 100 samples/sec Input Impedance:- 45MR-3800: 120 ohms- 45MR-3810: 10 mega-ohms (min.) Analog Outputs- Connector: Spring-type Euroblock terminal- I/O Mode: Voltage/Current- Output Range: 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA- Resolution: 12-bit- Accuracy: ±0.1% FSR @ 25°C, ±0.3% FSR @ -40 to 75°C- Load (Current Mode): Internal power: 500 ohms (max.)- Load (Voltage Mode): 1000 ohms (min.) RTDs- Connector: Spring-type Euroblock terminal Sensor Type:- PT50, PT100, PT200, PT500 (-200 to 850°C)- PT1000 (-200 to 350°C)- JPT100, JPT200, JPT500 (-200 to 640°C)- JPT1000 (-200 to 350°C)- NI100, NI200, NI500 (-60 to 250°C)- NI1000 (-60 to 150°C)- NI120 (-80 to 260°C)- Resistance Type: 310, 620, 1250, and 2200 ohms- Input Connection: 2- or 3-wire- Sampling Rate: All channels: 12 samples/sec, Per channel: 2 samples/sec- Resolution: 0.1°C or 0.1 ohms- Accuracy: ±0.1% FSR @ 25°C, ±0.3% FSR @ -40 and 75°C- Input Impedance: 625 kilo-ohms (min.) Thermocouples- Connector: Spring-type Euroblock terminal- Sensor Type: J, K, T, E, R, S, B, N- Millivolt Type: ±19.532 mV, ±39.062 mV, ±78.126 mV- Resolution: 16 bits- Millivolt Accuracy: ±0.1% FSR @ 25°C, ±0.3% FSR @ -40 and 75°C- Sampling Rate: All channels: 12 samples/sec, Per channel: 1.5 samples/sec- Input Impedance: 1 mega-ohms (min.) System Power Parameters- Power Connector: Spring-type Euroblock terminal- No. of Power Inputs: 1- Input Voltage: 12 to 48 VDC- Output Current: 1 A (max.)- Power Consumption: 800 mA @ 12 VDC- Over-Voltage Protection: 55 VDC- Over-Current Protection: 1 A @ 25°C Field Power Parameters- Power Connector: Spring-type Euroblock terminal- No. of Power Inputs: 1- Input Voltage: 12/24 VDC- Output Current: 2 A (max.)- Over-Current Protection: 2.5 A @ 25°C- Over-Voltage Protection: 33 VDC- Potential Output Mode: 45MR-7820: 0 VDC, 12/24 VDC Power Consumption System Power:- 45MR-1600: 59.4 mA @ 3.3 VDC- 45MR-1601: 59.4 mA @ 3.3 VDC- 45MR-2404: 44 mA @ 3.3 VDC- 45MR-2600: 57.2 mA @ 3.3 VDC- 45MR-2601: 63.8 mA @ 3.3 VDC- 45MR-2606: 62.7 mA @ 3.3 VDC- 45MR-3800: 197.3 mA @ 3.3 VDC- 45MR-3810: 187 mA @ 3.3 VDC- 45MR-4420: 44 mA @ 3.3 VDC- 45MR-6600: 131.7 mA @ 3.3 VDC- 45MR-6810: 148.1 mA @ 3.3 VDC- 45MR-7210: 45 mA @ 24 VDC Field Power:- 45MR-1600: 19.3 mA @ 12 VDC, 25.3 mA @ 24 VDC- 45MR-1601: 19.3 mA @ 12 VDC, 25.3 mA @ 24 VDC- 45MR-2404: 31.2 mA @ 12 VDC, 24.7 mA @ 24 VDC- 45MR-2606: 15.4 mA @ 12 VDC, 18.7 mA @ 24 VDC- 45MR-4420: 220.2 mA @ 12 VDC, 122.3 mA @ 24 VDC Physical Characteristics- Housing: Plastic- Dimensions: 19.5 x 99 x 60.5 mm (0.77 x 3.90 x 2.38 in) Weight:- 45MR-1600: 77 g (0.17 lb)- 45MR-1601: 77.6 g (0.171 lb)- 45MR-2404: 88.4 g (0.195 lb)- 45MR-2600: 77.4 g (0.171 lb)- 45MR-2601: 77 g (0.17 lb)- 45MR-2606: 77.4 g (0.171 lb)- 45MR-3800: 79.8 g (0.176 lb)- 45MR-3810: 79 g (0.175 lb)- 45MR-4420: 79 g (0.175 lb)- 45MR-6600: 78.7 g (0.174 lb)- 45MR-6810: 78.4 g (0.173 lb)- 45MR-7210: 77 g (0.17 lb)- 45MR-7820: 73.6 g (0.163 lb)- Installation: DIN-rail mounting- Strip Length: I/O cable, 9 to 10 mm Wiring:- 45MR-2404: 18 AWG- 45MR-7210: 12 to 18 AWG- 45MR-2600/45MR-2601/45MR-2606: 18 to 22 AWG- All Other 45MR Models: 18 to 24 AWG Environmental Limits- Operating Temperature: Standard Models: -20 to 60°C (-4 to 140°F), Wide Temp. Models: -40 to 75°C (-40 to 167°F)- Storage Temperature (package included): -40 to 85°C (-40 to 185°F)- Ambient Relative Humidity: 5 to 95% (non-condensing) - Altitude: Up to 4000 meters Standards and Certifications- EMC: EN 55032/35- EMI: CISPR 32, FCC Part 15B Class A EMS:- IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV- IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m- IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV- IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV- IEC 61000-4-6 CS: 3 V- IEC 61000-4-8 PFMF- Shock: IEC 60068-2-27- Vibration: IEC 60068-2-6- Safety: UL 61010-2-201- Hazardous Locations: ATEX, Class I Division 2 Declaration- Green Product: RoHS, CRoHS, WEEE MTBF Time:- 45MR-1600: 661,247 hrs- 45MR-1601: 661,247 hrs- 45MR-2404: 1,955,805 hrs- 45MR-2600: 647,334 hrs- 45MR-2601: 660,179 hrs- 45MR-2606: 638,652 hrs- 45MR-3800: 2,085,426 hrs- 45MR-3810: 2,478,459 hrs- 45MR-4420: 1,450,453 hrs- 45MR-6600: 2,291,755 hrs- 45MR-6810: 1,649,892 hrs- 45MR-7210: 2,550,077 hrs- 45MR-7820: 256,886,914 hrs- Standards: Telcordia SR332

## Specifications

Scan this QR code to view the product  
All details, up-to-date prices and availability

