



## Main

Range of product	Modicon TM7
Product or component type	Analog I/O expansion block
Range compatibility	Modicon LMC058 Modicon M258
Enclosure material	Plastic
Bus type	TM7 bus
System Voltage	24 V DC
Input/output number	4
Input/output number of splitter box	2 I + 2 O

## Complementary

Analogue input number	2
Analogue input type	Voltage
Analogue input range	+/- 10 V
Analogue input resolution	11 bits + sign
Analogue output number	2
Analogue output type	Voltage
Analogue output range	+/- 10 V
Sensor power supply	24 V, 500 mA for all channels with overload, short-circuit and reverse polarity protection
Analogue output resolution	11 bits + sign
Electrical connection	1 male connector M8 - 4 ways power IN 1 female connector M8 - 4 ways power OUT 1 male connector M12 - B coding - 4 ways bus IN 1 female connector M12 - B coding - 4 ways bus OUT 4 female connectors M12 - A coding - 5 ways actuator
Local signalling	2 LEDs bus diagnostic 2 LEDs sensor/actuator power supply status
Operating position	Any position
Fixing mode	By 2 screws
Product weight	0.44 lb(US) (0.2 kg)

## Environment

standards	IEC 61131-2
product certifications	C-Tick CURus GOST-R ATEX II 3g EEx nA II T5
marking	CE
ambient air temperature for operation	14...140 °F (-10...60 °C)
ambient air temperature for storage	-13...185 °F (-25...85 °C)
relative humidity	5...95 % without condensation or dripping water
pollution degree	2 conforming to IEC 60664
IP degree of protection	IP67 conforming to IEC 61131-2
operating altitude	0...6561.68 ft (0...2000 m)
storage altitude	0...9842.52 ft (0...3000 m)
vibration resistance	7.5 mm constant amplitude (f = 2...8 Hz) conforming to IEC 60721-3-5 Class 5M3 2 gn constant acceleration (f = 8...200 Hz) conforming to IEC 60721-3-5 Class 5M3 4 gn constant acceleration (f = 200...500 Hz) conforming to IEC 60721-3-5 Class 5M3
shock resistance	30 gn 11 ms conforming to IEC 60721-3-5 Class 5M3
resistance to electrostatic discharge	8 kV in air conforming to EN/IEC 61000-4-2

	6 kV in contact conforming to EN/IEC 61000-4-2
resistance to electromagnetic fields	9.14 V/yd (10 V/m) (f = 0.08...2 Hz conforming to EN/IEC 61000-4-3 0.91 V/yd (1 V/m) (f = 2...2.7 Hz conforming to EN/IEC 61000-4-3)
resistance to fast transients	1 kV shielded cable conforming to EN/IEC 61000-4-4 2 kV power supply conforming to EN/IEC 61000-4-4 1 kV input/output conforming to EN/IEC 61000-4-4
surge withstand	1 kV power supply (common mode) conforming to EN/IEC 61000-4-5 0.5 kV power supply (differential mode) conforming to EN/IEC 61000-4-5 1 kV unshielded links (common mode) conforming to EN/IEC 61000-4-5 0.5 kV unshielded links (differential mode) conforming to EN/IEC 61000-4-5 1 kV shielded links (common mode) conforming to EN/IEC 61000-4-5 0.5 kV shielded links (differential mode) conforming to EN/IEC 61000-4-5
electromagnetic compatibility	EN/IEC 61000-4-6
disturbance radiated/conducted	CISPR 11

### Offer Sustainability

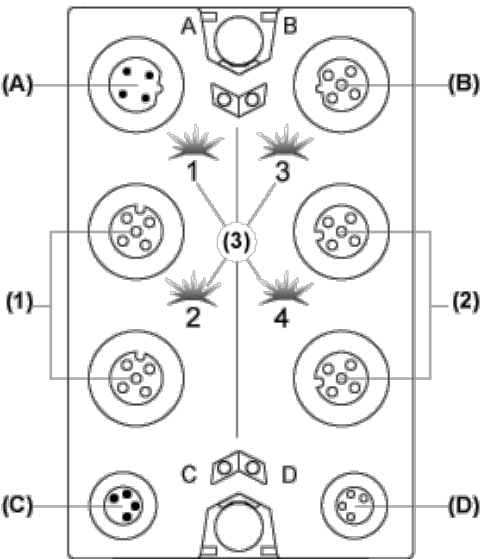
3595864093215	3595864093215
Compliant - since 1039 - Schneider Electric declaration of conformity	Compliant - since 1039 - Schneider Electric declaration of conformity

### Contractual warranty

Warranty period	18 months
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### Analog Mixed Block

#### Description



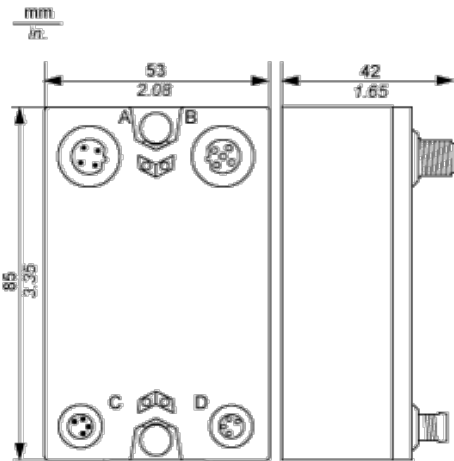
- (A) TM7 bus IN connector
- (B) TM7 bus OUT connector
- (C) 24 Vdc power IN connector
- (D) 24 Vdc power OUT connector
- (1) Input connectors
- (2) Output connectors
- (3) Status LEDs

#### Connector and Channel Assignments

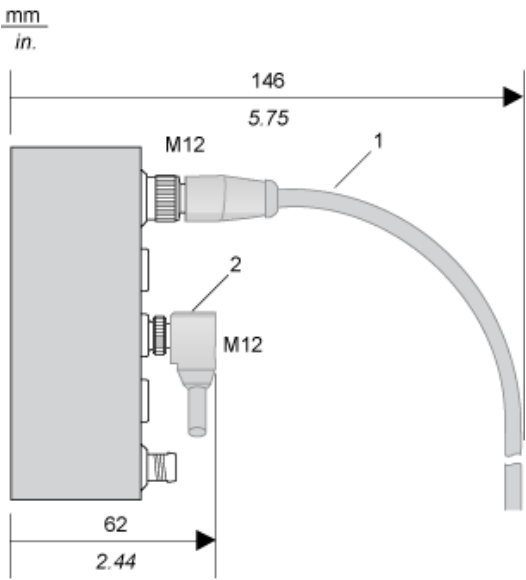
I/O connectors	Channel type	Channels
1	Input	I0
2	Input	I1
3	Output	Q0
4	Output	Q1

## TM7 Block, Size 1

### Dimensions



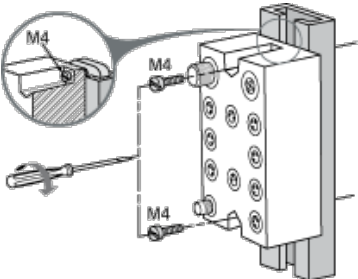
### Spacing Requirements



- 1 Straight cable
- 2 Elbowed cable

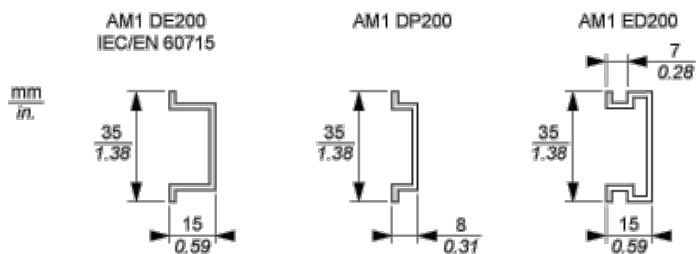
### Installation Guidelines

#### TM7 Block on an Aluminium Frame



NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

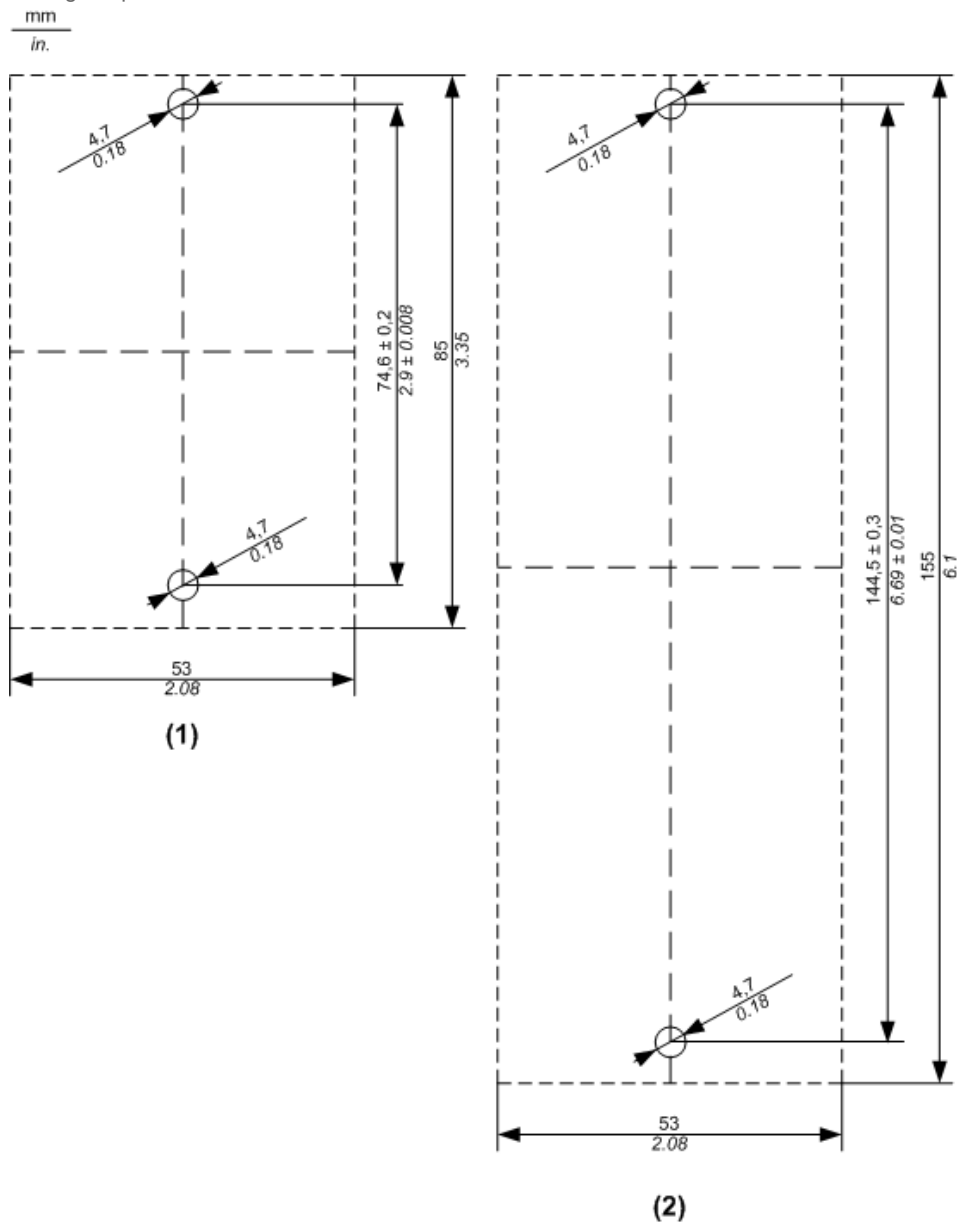
#### TM7 Block on a DIN Rail



NOTE: Only size 1 (smallest) blocks can be installed on DIN rail with the TM7ACMP mounting plate.

#### TM7 Block Directly on the Machine

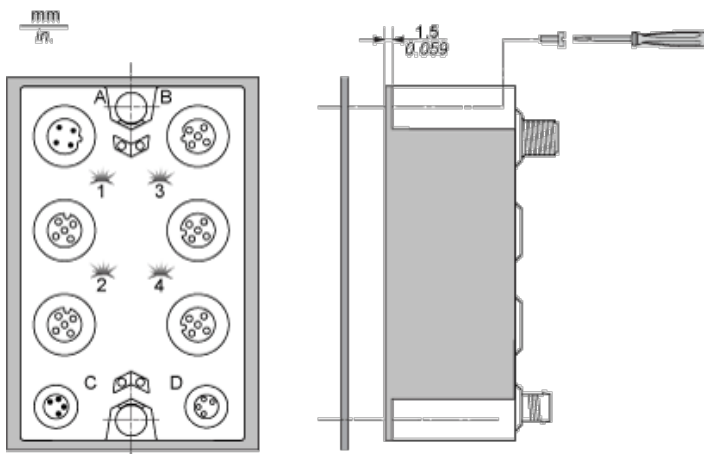
Drilling template of the block:



(1) Size 1

(2) Size 2

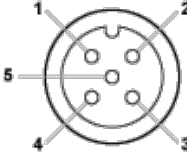
The thickness of the base plate should be taken into consideration when defining the screw length.



NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

### Wiring Diagram

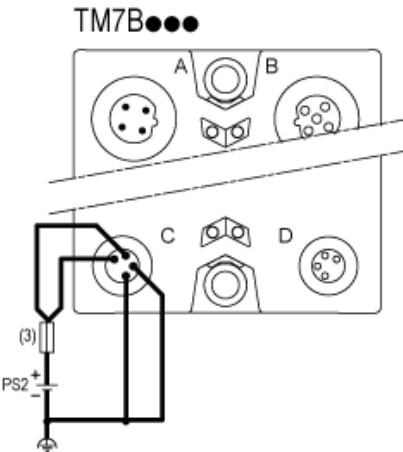
#### Pin Assignments for I/O Connectors

Connection	Pin	M12 Input	M12 Output
	1	24 Vdc sensor supply	Analog output +
	2	Analog input +	24 Vdc actuator supply
	3	0 Vdc	Analog output - (0 Vdc)
	4	Analog input -	0 Vdc
	5	Shield	Shield

### Wiring the Power Supply

When you provide power to a TM7 I/O block using the 24 VDC Power OUT connector of the preceding I/O block, both blocks occupy the same 24 Vdc I/O power segment. However, if you connect an external isolated power supply to the 24 Vdc Power IN connector of a TM7 I/O block, you establish a new 24 Vdc I/O power segment beginning with that I/O block.

I/O block wired with one external 24 Vdc power supply:



(3) External fuse, Type T slow-blow, 8 A max., 250 V

PS2 External isolated I/O power supply, 24 Vdc

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