Product data sheet
Characteristics

TM7BAI4TLA
expansion block - TM7 - IP67 - 4 RTD inputs - M12 connector

Product availability: Non-Stock - Not normally stocked in distribution facility

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 block	4 I

Complementary

Analogue input number	4
Analogue input type	Pt 100 temperature probe Pt 1000 temperature probe KTY 10 silicon temperature probe KTY 84 silicon temperature probe
Analogue input resolution	16 bits
Input impedance	0...3276 Ohm
Sensor power supply	24 V with overload, short-circuit and reverse polarity protection
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 sensor
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	6 kV in contact conforming to EN/IEC 61000-4-2 8 kV in air 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 for DC 24 V circuit	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

Ordering and shipping details

Category	22532 - M258 PLC
Discount Schedule	PC12
GTIN	00785901919124
Nbr. of units in pkg.	1
Package weight(Lbs)	0.51000000000000001
Returnability	N
Country of origin	AT

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1039 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available Product Environmental Profile
Product end of life instructions	Available End Of Life Information
California proposition 65	WARNING: This product can expose you to chemicals including:
- - - - - - - Substance 1	Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.
- - - - - - - More information	For more information go to www.p65warnings.ca.gov

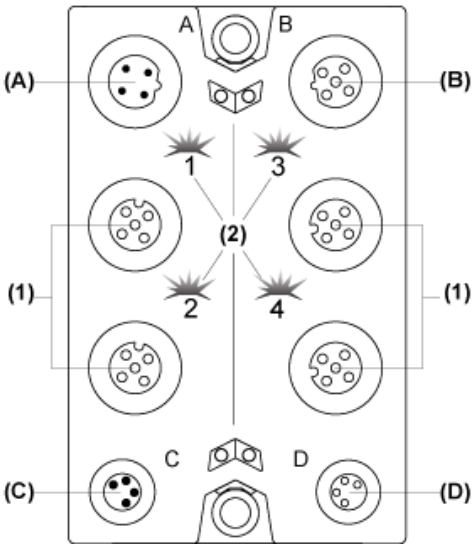
Contractual warranty

Warranty period	18 months

TM7BAI4TLA

Analog Temperature Input Block

Description



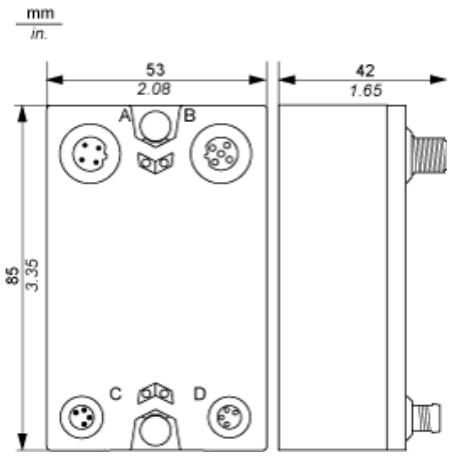
(A) TM7 bus IN connector
(B) TM7 bus OUT connector
(C) 24 Vdc power IN connector
(D) 24 Vdc power OUT connector
(1) Input connectors
(2) Status LEDs

Connector and Channel Assignments

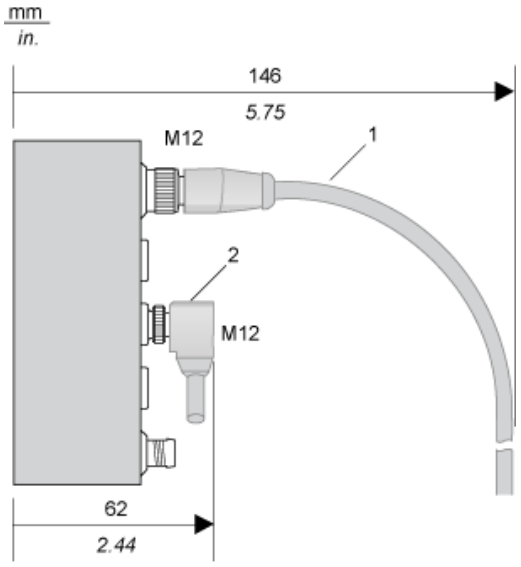
Input connectors	Channel type	Channels
1	Input	I0
2	Input	I1
3	Input	I2
4	Input	I3

TM7 Block, Size 1

Dimensions



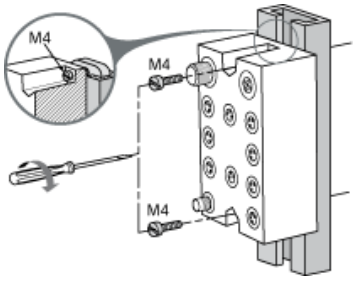
Spacing Requirements



1 Straight cable
2 Elbowed cable

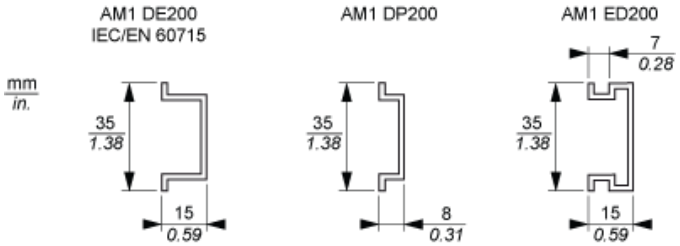
Installation Guidelines

TM7 Block on an Aluminium Frame



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

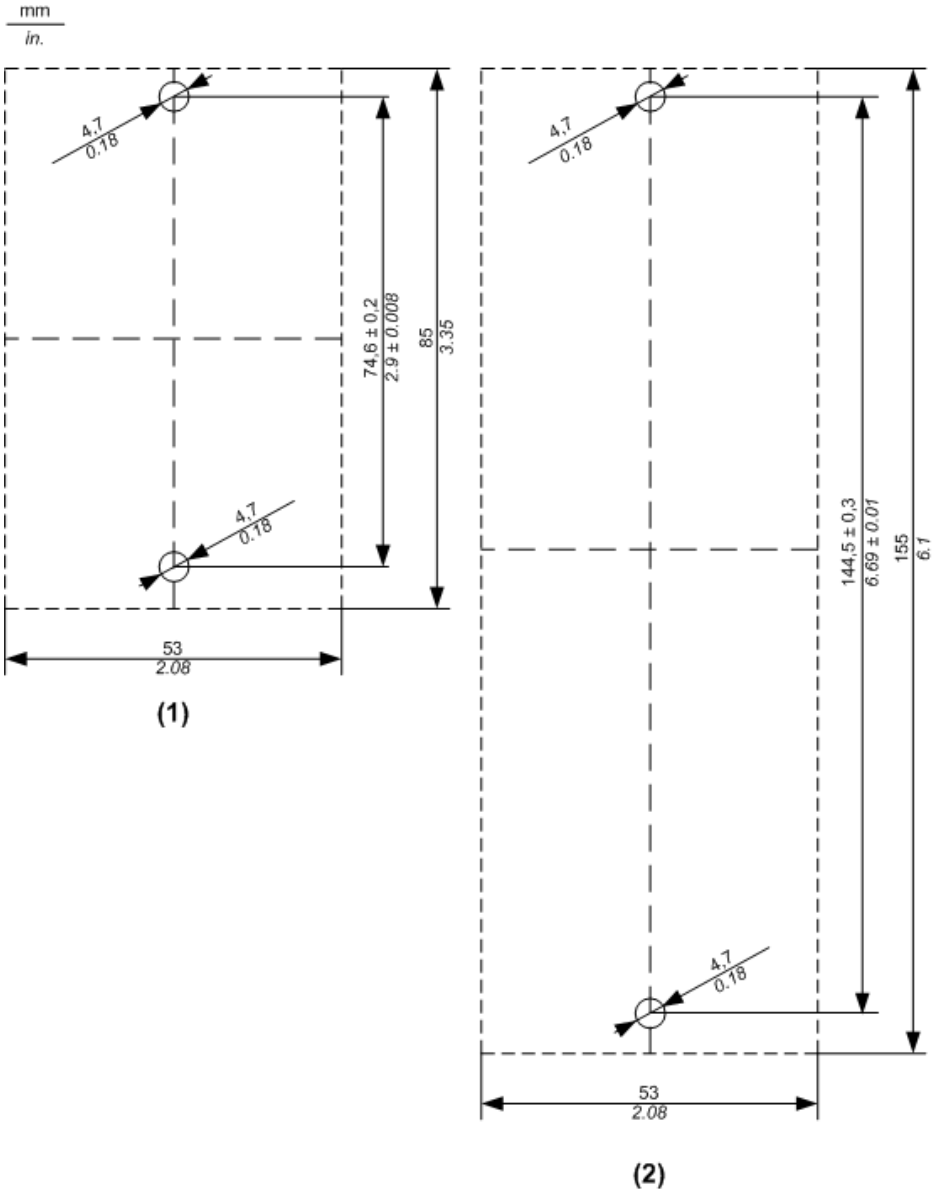
TM7 Block on a DIN Rail



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

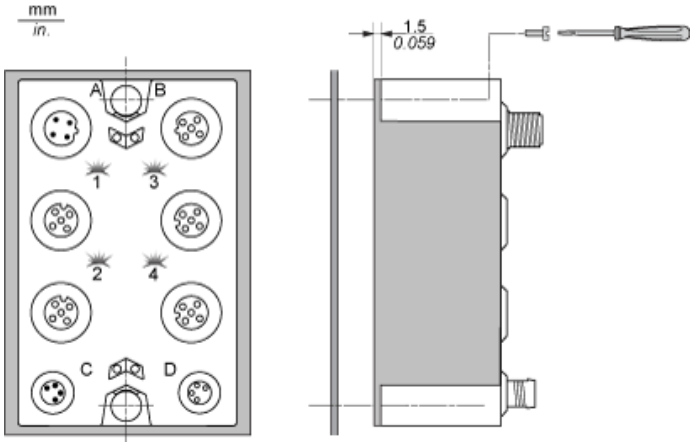
TM7 Block Directly on the Machine

Drilling template of the block:



(1) Size 1
(2) Size 2

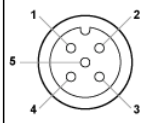
The thickness of the base plate should be taken into consideration when defining the screw length.



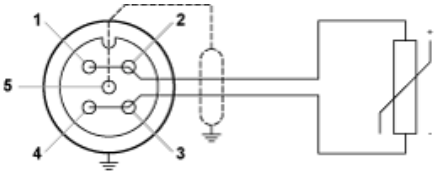
NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

Wiring Diagram

Pin Assignments for Input Connectors

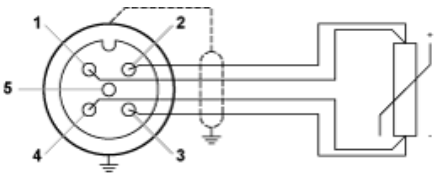
Connection	Pin	M12 input
	1	Sensor +
2	Sense +	
3	Sensor -	
4	Sense -	
5	Shield	

2 Wires Sensor Wiring



Pin	Description
1	Sensor + ([1])
2	Sense + ([1])
3	Sensor - ([2])
4	Sense - ([2])
5	Shield
The following M12 connector pins must be bridged together: • [1]: Pins 1 and 2 • [2]: Pins 3 and 4	

4 Wires Sensor Wiring

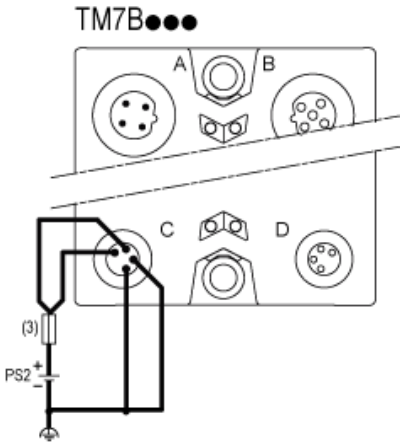


Pin	Description
1	Sensor +
2	Sense +
3	Sensor -
4	Sense -
5	Shield

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Schneider Electric:

TM7BAI4TLA