

Product data sheet

Specifications



Analog I/O expansion block, Modicon TM7, IP67, 4 AO, +/-10 V, M12 connector

TM7BAO4VLA

Product availability : Stock - Normally stocked in distribution facility

Main

Range of Product	Modicon TM7
Product or Component Type	Analog I/O expansion block
Range Compatibility	Modicon M258 Modicon LMC058
Enclosure Material	Plastic
Bus type	TM7 bus
[Ue] rated operational voltage	24 V DC
Input/Output number	4
Input/Output number of block	4 O

Complementary

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

Environment

Standards	IEC 61131-2
Product Certifications	GOST-R ATEX II 3g EEx nA II T5 cURus C-tick

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 IEC 60664
IP degree of protection	IP67 conforming to IEC 61131-2
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0.00...9842.52 ft (0...3000 m)
Vibration resistance	7.5 mm constant amplitude 2...8 Hz)IEC 60721-3-5 Class 5M3 2 gn constant acceleration 8...200 Hz)IEC 60721-3-5 Class 5M3 4 gn constant acceleration 200...500 Hz)IEC 60721-3-5 Class 5M3
Shock resistance	30 gn 11 ms IEC 60721-3-5 Class 5M3
Resistance to electrostatic discharge	6 kV in contact EN/IEC 61000-4-2 8 kV in air EN/IEC 61000-4-2
Resistance to electromagnetic fields	9.14 V/m (10 V/m) 0.08...2 Hz EN/IEC 61000-4-3 0.91 V/m (1 V/m) 2...2.7 Hz EN/IEC 61000-4-3
Resistance to fast transients	2 kV EN/IEC 61000-4-4 power supply) 1 kV EN/IEC 61000-4-4 input/output) 1 kV EN/IEC 61000-4-4 shielded cable)
Surge withstand for DC 24 V circuit	1 kV power supply (common mode) EN/IEC 61000-4-5 0.5 kV power supply (differential mode) EN/IEC 61000-4-5 1 kV unshielded links (common mode) EN/IEC 61000-4-5 0.5 kV unshielded links (differential mode) EN/IEC 61000-4-5 1 kV shielded links (common mode) EN/IEC 61000-4-5 0.5 kV shielded links (differential mode) 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	3595864092997
Returnability	No
Country of origin	AT

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.97 in (5 cm)
Package 1 Width	2.36 in (6 cm)
Package 1 Length	4.13 in (10.5 cm)
Package 1 Weight	8.22 oz (233 g)
Unit Type of Package 2	S02
Number of Units in Package 2	24
Package 2 Height	5.91 in (15 cm)
Package 2 Width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)

Package 2 Weight	13.10 lb(US) (5.942 kg)
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Offer Sustainability

Sustainable offer status	Green Premium product
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California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
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REACH Regulation	REACH Declaration
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EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
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Toxic heavy metal free	Yes
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Mercury free	Yes
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China RoHS Regulation	China RoHS declaration
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RoHS exemption information	Yes
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Environmental Disclosure	Product Environmental Profile
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Circularity Profile	End of Life Information
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WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
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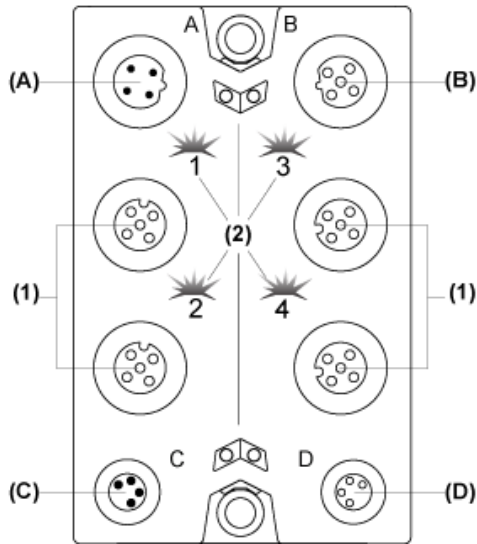
PVC free	Yes
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Contractual warranty

Warranty	18 months
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Analog Output Block

Description



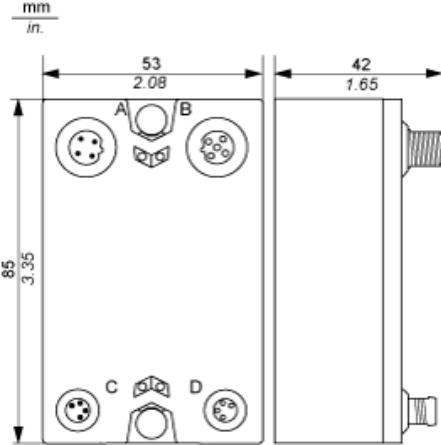
- (A) TM7 bus IN connector
- (B) TM7 bus OUT connector
- (C) 24 Vdc power IN connector
- (D) 24 Vdc power OUT connector
- (1) Output connectors
- (2) Status LEDs

Connector and Channel Assignments

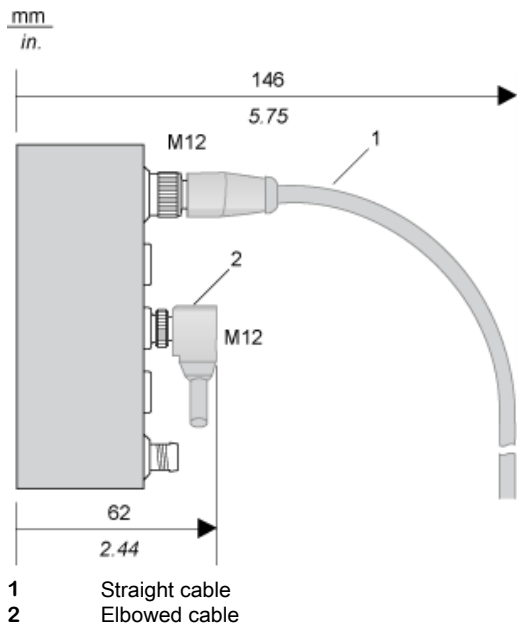
Output connectors	Channel type	Channels
1	Output	Q0
2	Output	Q1
3	Output	Q2
4	Output	Q3

TM7 Block, Size 1

Dimensions

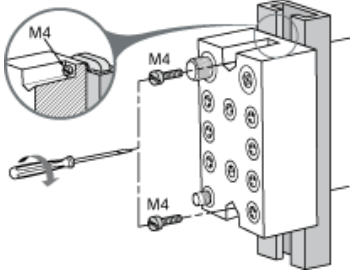


Spacing Requirements



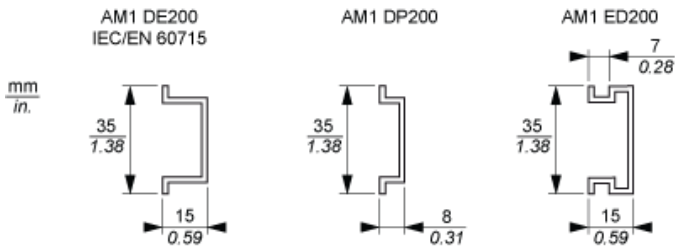
Installation Guidelines

TM7 Block on an Aluminium Frame



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

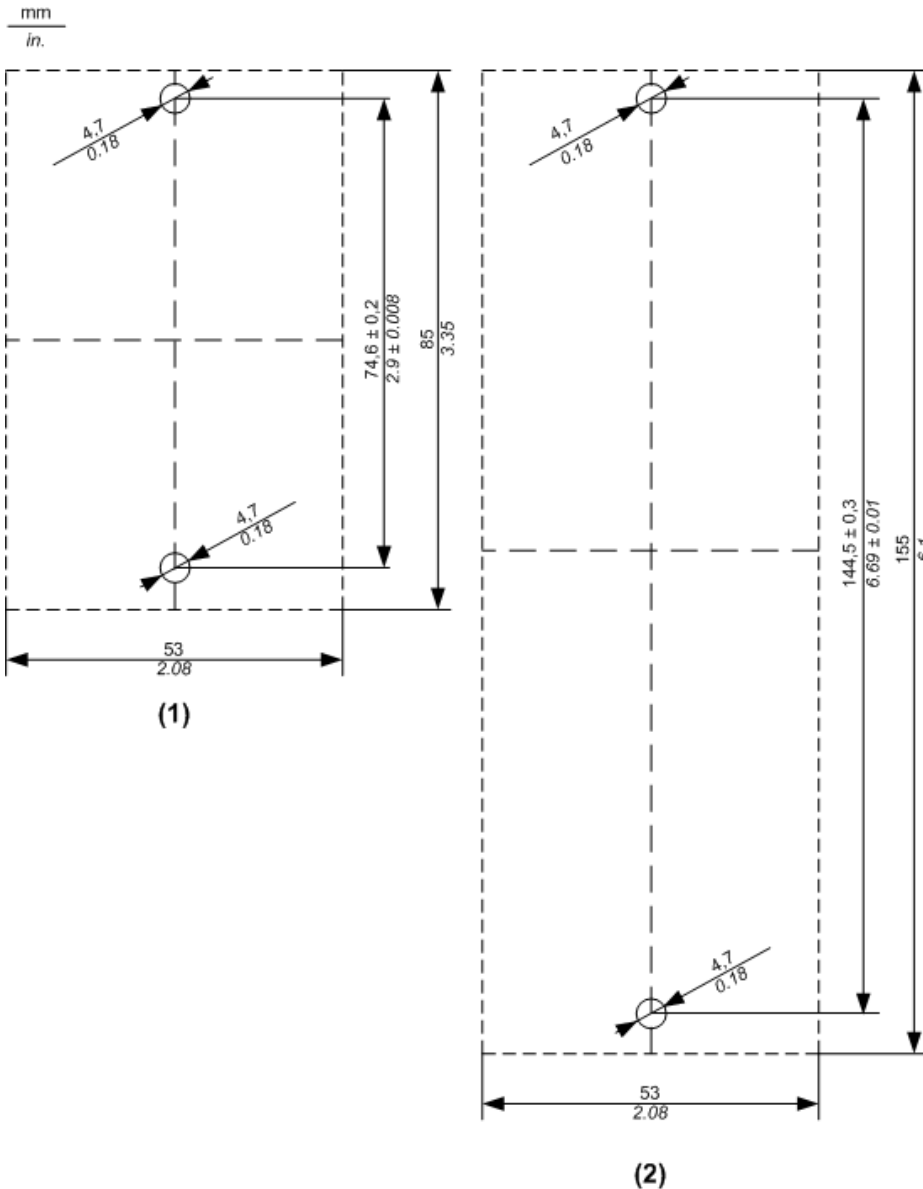
TM7 Block on a DIN Rail



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

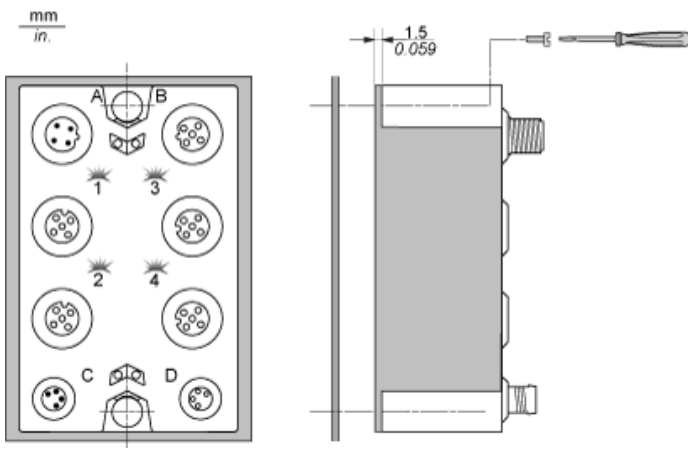
TM7 Block Directly on the Machine

Drilling template of the block:



- (1) Size 1
- (2) Size 2

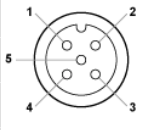
The thickness of the base plate should be taken into consideration when defining the screw length.



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

Wiring Diagram

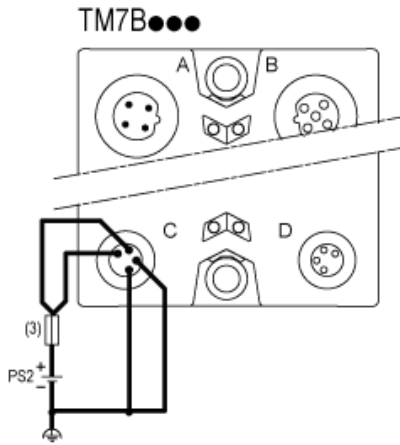
Pin Assignments for Output Connectors

Connection	Pin	M12 Output
	1	Analog output +
	2	24 Vdc actuator supply
	3	Analog output - (0 Vdc)
	4	0 Vdc
	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

Recommended replacement(s)