Product data sheet
Characteristics

TM7BDM16A
expansion block - TM7 - IP67 - 16 DI/DO - 24V DC - 0.5 A - M12 connector

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

Main

Range of product	Modicon TM7
Product or component type	Discrete 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	16
Input/output number of block	16 I/O

Complementary

Discrete input number	0...16 input(s) configurable by software
Discrete input voltage	24 V
Discrete input voltage type	DC
Discrete input current	4.4 mA
Discrete input logic	Positive
Discrete output number	0...16 output(s) at <= 0.5 A, configurable by software with transistor protection
Discrete output voltage	24 V
Discrete output voltage type	DC
Sensor power supply	24 V, 500 mA for all channels 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 8 female connectors M12 - 5 ways sensor or actuator
Local signalling	2 LEDs bus diagnostic 2 LEDs sensor power supply diagnostics
Operating position	Any position
Fixing mode	By 2 screws
Product weight	0.71 lb(US) (0.32 kg)

Environment

Standards	IEC 61131-2
Product certifications	ATEX II 3g EEx nA II T5 GOST-R 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 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
Electromagnetic compatibility	Conducted and radiated emissions conforming to CISPR 11 Conducted RF disturbances conforming to EN/IEC 61000-4-6 Electrostatic discharge immunity test (level: 4 kV - on contact) conforming to EN/IEC 61000-4-2 Electrostatic discharge immunity test (level: 8 kV - in air) conforming to EN/IEC 61000-4-2 Susceptibility to electromagnetic fields (level: 1 V/m - 2...2.7 GHz) conforming to EN/IEC 61000-4-3 Susceptibility to electromagnetic fields (level: 10 V/m - 80...2000 MHz) conforming to EN/IEC 61000-4-3 Electrical fast transient/burst immunity test (level: 2 kV - power supply) conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test (level: 1 kV - input/output) conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test (level: 1 kV - shielded cable) conforming to EN/IEC 61000-4-4 1.2/50 µs shock waves immunity test (level: 0.5 kV - power supply (common mode)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (level: 1 kV - power supply (differential mode)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (level: 0.5 kV - unshielded links (common mode)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (level: 1 kV - unshielded links (differential mode)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (level: 0.5 kV - shielded links (common mode)) conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test (level: 1 kV - shielded links (differential mode)) conforming to EN/IEC 61000-4-5

Ordering and shipping details

Category	22532 - M258 PLC
Discount Schedule	PC12
GTIN	00785901988540
Nbr. of units in pkg.	1
Package weight(Lbs)	0.81000000000000005
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

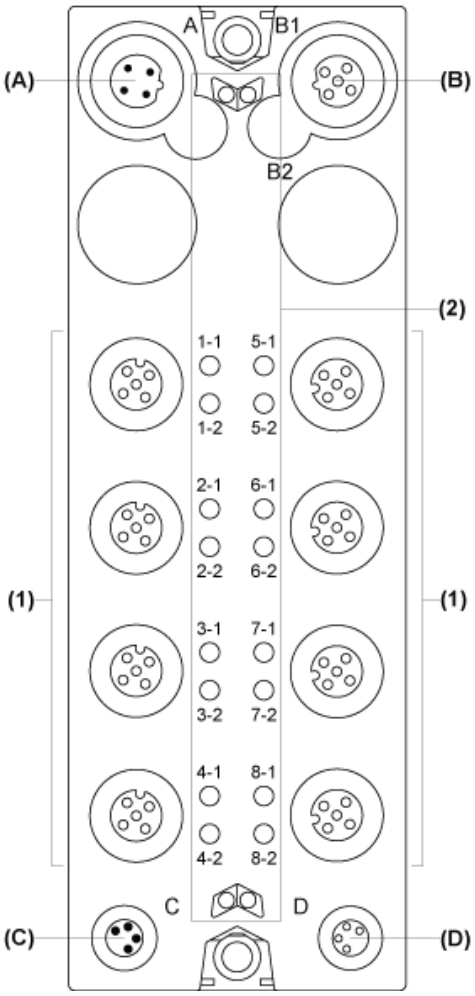
Contractual warranty

Warranty period	18 months

TM7BDM16A

Digital 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 / Output connectors
(2) Status LEDs

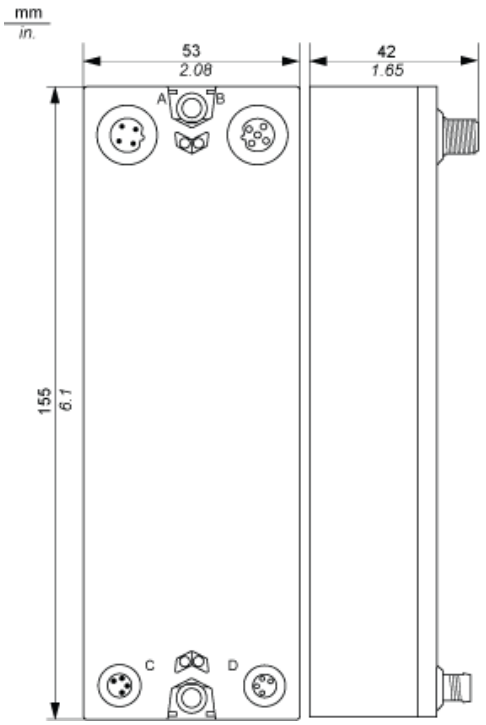
Connector and Channel Assignments

I/O connectors	Channel types	Channels
1	Input/Output	I0/Q0
Input/Output	I1/Q1	
2	Input/Output	I2/Q2
Input/Output	I3/Q3	
3	Input/Output	I4/Q4
Input/Output	I5/Q5	
4	Input/Output	I6/Q6
Input/Output	I7/Q7	
5	Input/Output	I8/Q8

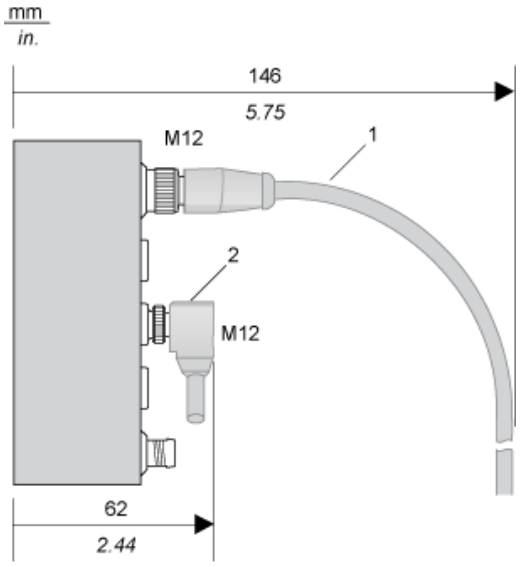
I/O connectors	Channel types	Channels
Input/Output	I9/Q9	
6	Input/Output	I10/Q10
Input/Output	I11/Q11	
7	Input/Output	I12/Q12
Input/Output	I13/Q13	
8	Input/Output	I14/Q14
Input/Output	I15/Q15	

TM7 Block, Size 2

Dimensions



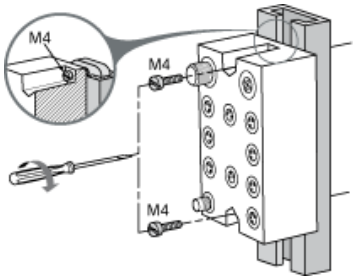
Spacing Requirements



1 Straight cable
2 Elbowed cable

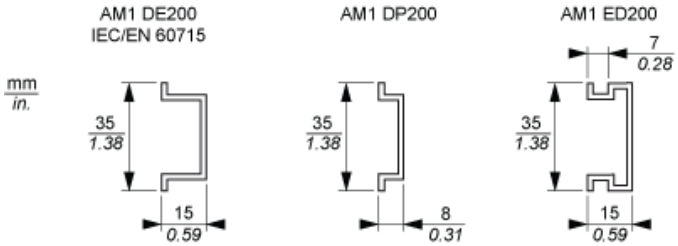
Installation Guidelines

TM7 Block on an Aluminium Frame



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

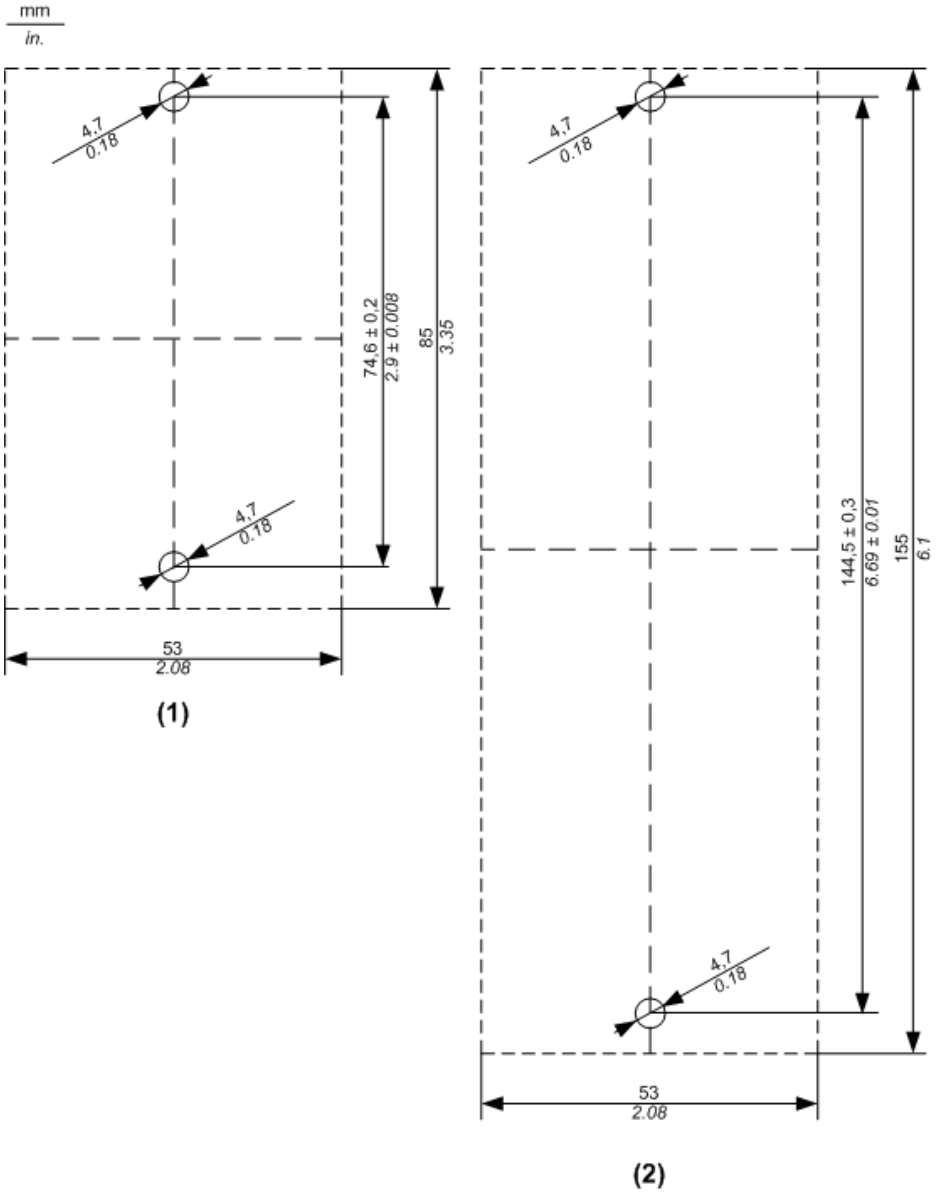
TM7 Block on a DIN Rail



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

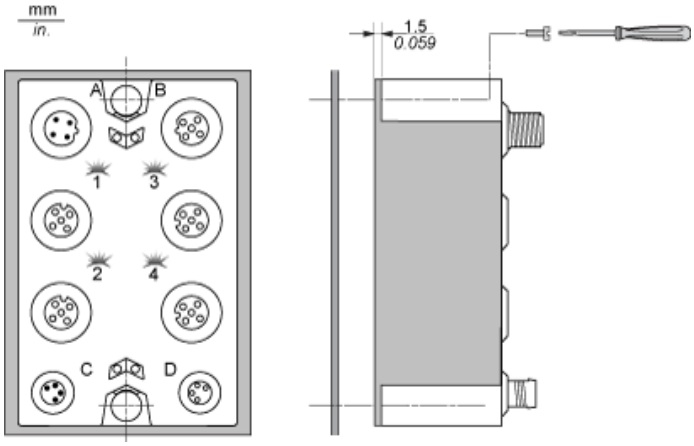
TM7 Block Directly on the Machine

Drilling template of the block:



(1) Size 1
(2) Size 2

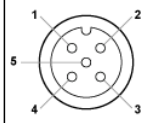
The thickness of the base plate should be taken into consideration when defining the screw length.



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

Wiring Diagram

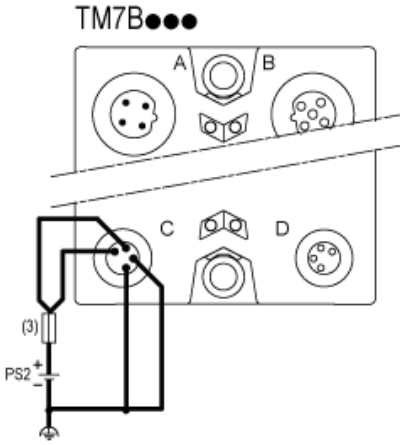
Pin Assignments for I/O Connectors

Connection	Pin	M12 input / output
	1	24 Vdc sensor / actuator supply
2	DI/DO: input/ output signal channel 1	
3	0 Vdc	
4	DI/DO: input/ output signal channel 2	
5	N.C.	

Wiring the Power Supply

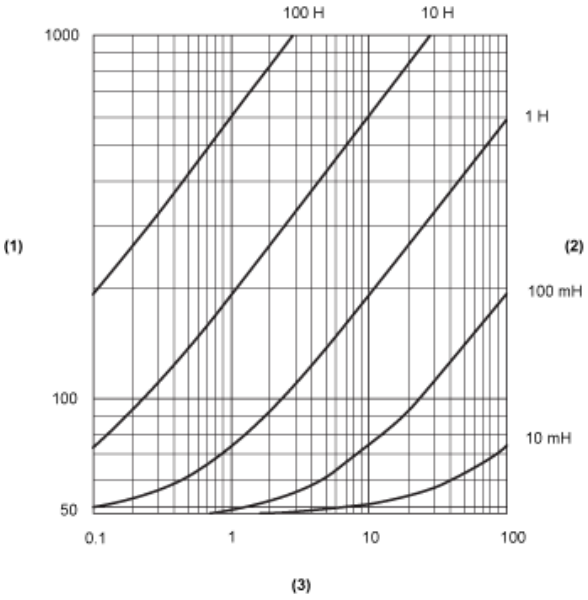
When you provide power to a TM7 I/O block using the 24 VDC Power OUT connector of the preceding I/O block, both blocks occupy the same 24 Vdc I/O power segment. However, if you connect an external isolated power supply to the 24 Vdc Power IN connector of a TM7 I/O block, you establish a new 24 Vdc I/O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

Switching Inductive Load Characteristics



(1) Load resistance in Ω
(2) Load inductance in H
(3) Max. operating cycles / second

Mouser Electronics

Authorized Distributor

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

Schneider Electric:

TM7BDM16A