

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



### Main

Range of product	Modicon TM7
Product or component type	CANopen interface I/O block
Range compatibility	Modicon M258 Modicon LMC058
Enclosure material	Plastic
Bus type	CANopen
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) configurable by software
Discrete output voltage	24 V
Discrete output voltage type	DC
Discrete output current	<= 0.5 A
Discrete output type	Transistor
Sensor power supply	24 V, 500 mA for all channels with overload, short-circuit and reverse polarity protection
Electrical connection	1 male connector M12 - A coding - 5 ways CANopen bus IN 1 female connector M12 - B coding - 4 ways TM7 bus OUT 1 male connector M8 - 4 ways power IN 1 female connector M8 - 4 ways power OUT 1 female connector M12 - A coding - 5 ways CANopen bus OUT 16 female connectors M8 - 3 ways sensor or actuator
Local signalling	2 LEDs bus diagnostic 1 LED actuator power supply diagnostics 1 LED 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	GOST-R CURus ATEX II 3g EEx nA II T5 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
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	00785901988687
Nbr. of units in pkg.	1
Package weight(Lbs)	0.88
Returnability	N
Country of origin	AT

### Offer Sustainability

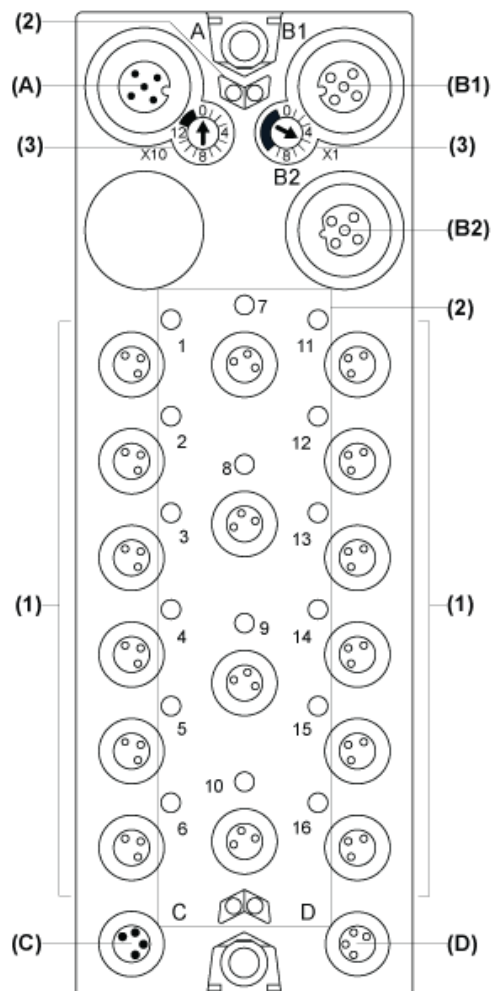
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1039 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available <a href="#">Product Environmental Profile</a>
Product end of life instructions	Available <a href="#">End Of Life Information</a>
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 <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>

### Contractual warranty

Warranty period	18 months
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## TM7 CANopen Interface I/O Block

### Description



- (A) CANopen bus IN connector
- (B1) CANopen bus OUT connector
- (B2) TM7 bus OUT connector
- (C) 24 Vdc power IN connector
- (D) 24 Vdc power OUT connector
- (1) Input / Output connectors
- (2) Status and channel LEDs
- (3) CANopen address settings rotary switches

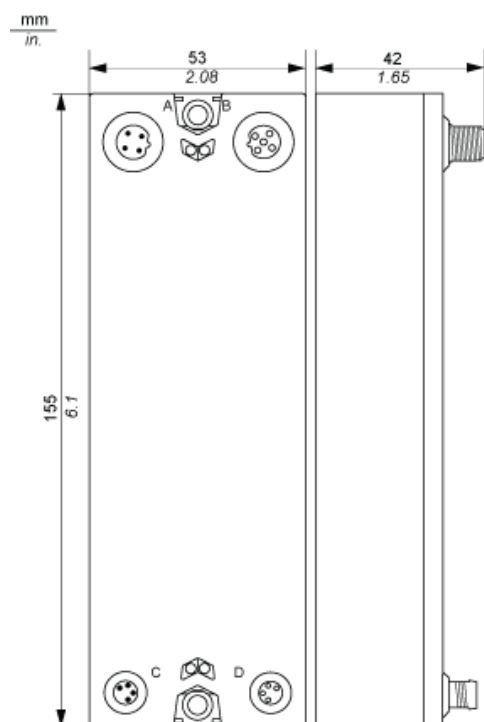
### Connector and Channel Assignments

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

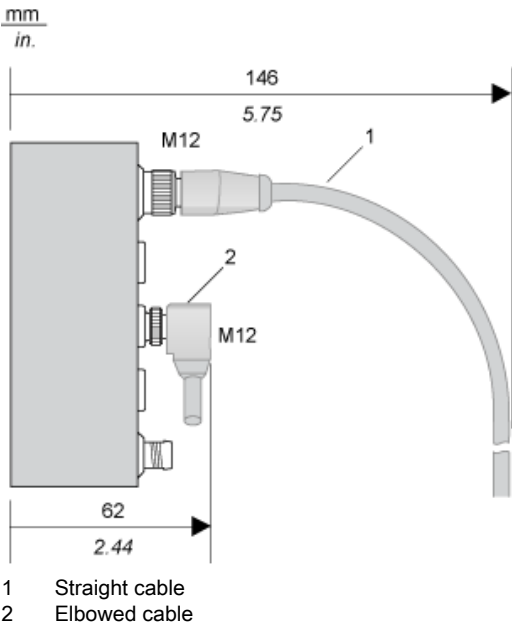
I/O connectors	Channel types	Channels
9	Input/Output	I8/Q8
10	Input/Output	I9/Q9
11	Input/Output	I10/Q10
12	Input/Output	I11/Q11
13	Input/Output	I12/Q12
14	Input/Output	I13/Q13
15	Input/Output	I14/Q14
16	Input/Output	I15/Q15

TM7 Block, Size 2

Dimensions

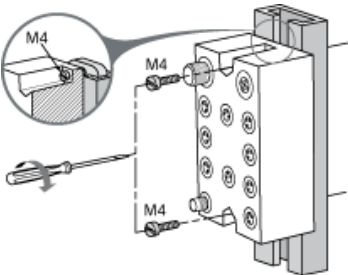


Spacing Requirements



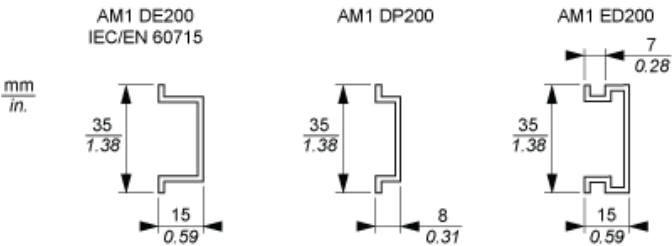
Installation Guidelines

TM7 Block on an Aluminium Frame



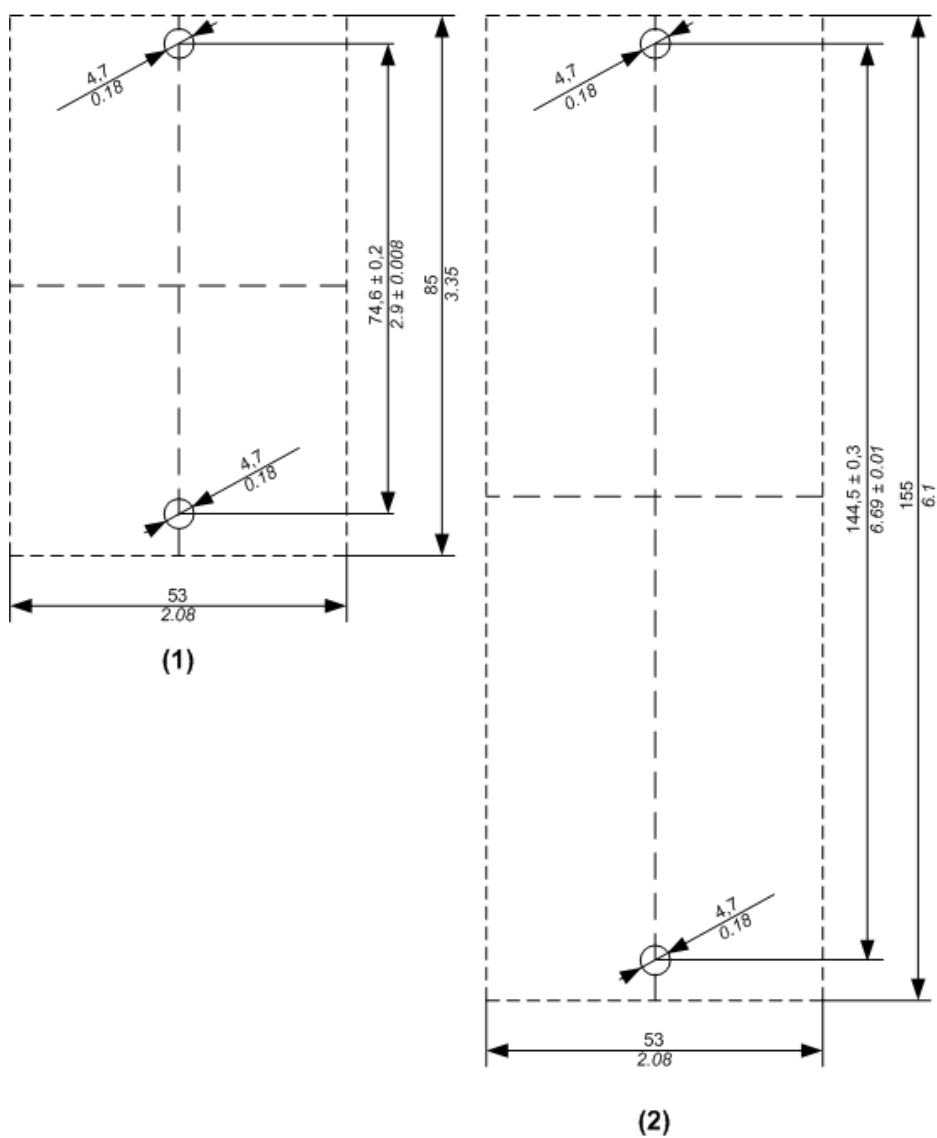
NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

TM7 Block on a DIN Rail



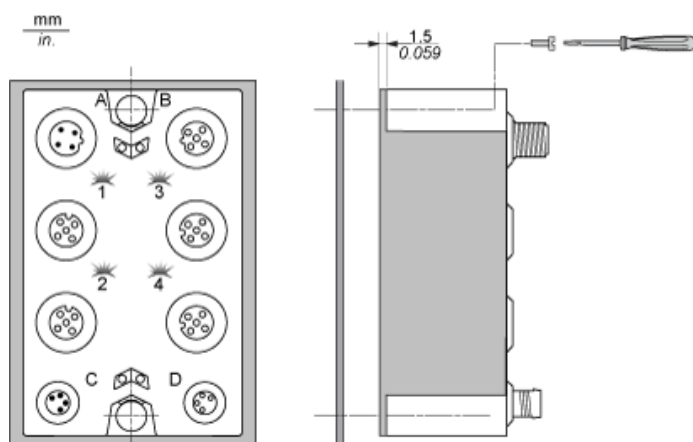
NOTE: Only size 1 (smallest) blocks can be installed on DIN rail with the TM7ACMP mounting plate.

Drilling template of the block:

$$\frac{\text{mm}}{\text{in.}}$$


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

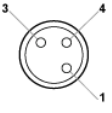
The thickness of the base plate should be taken into consideration when defining the screw length.



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

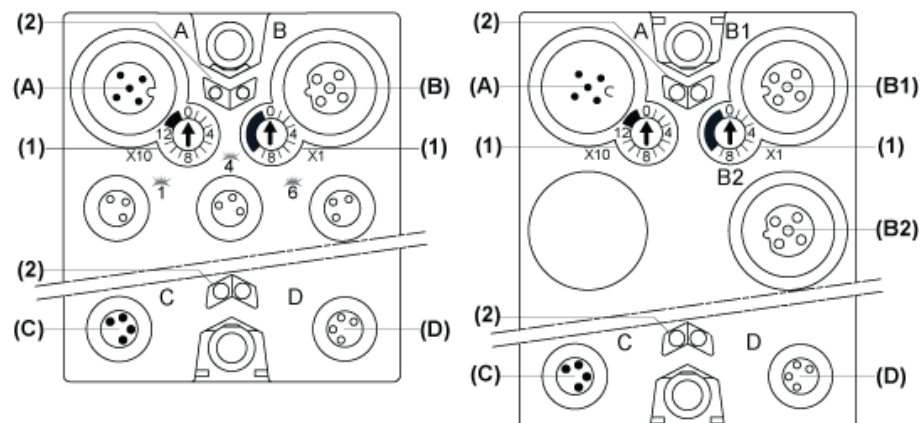
## Wiring Diagram

### Pin Assignments for I/O Connectors

Connection	Pin	Designation
	1	24 Vdc sensor / actuator supply
3	0 Vdc	
4	DI/DO: input/ output signal	

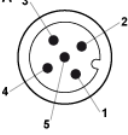
## CANopen Pins and Connectors

### Connector Assignments

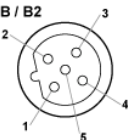
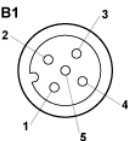
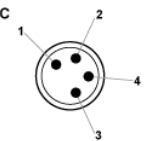
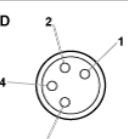


- (A) Field bus IN connector
- (B) TM7 bus OUT connector M12  
and  
(B2)
- (B1) CANopen bus OUT connector M12
- (C) 24 Vdc power IN connector
- (D) 24 Vdc power OUT connector
- (1) Address settings rotary switches
- (2) Status LEDs

### Pin Assignments

Connectors	Pin	Designation
	1	CAN_SHLD
2	(CAN_V+)	
3	CAN_GND	
4	CAN_H	
5	CAN_L	

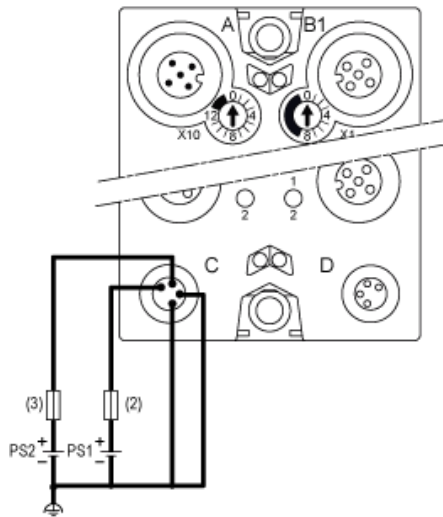


Connectors	Pin	Designation
	1	TM7 V+
	2	TM7 Bus Data
	3	TM7 0V
	4	TM7 Bus Data
	5	N.C.
	1	CAN_SHLD
	2	(CAN_V+)
	3	CAN_GND
	4	CAN_H
	5	CAN_L
Connectors	Pin	Designation
	1	24 Vdc main power
	2	24 Vdc I/O power segment
	3	0 Vdc
	4	0 Vdc
	1	24 Vdc I/O power segment
	2	24 Vdc I/O power segment
	3	0 Vdc
	4	0 Vdc

## Wiring the Power Supply

Connections	2 Power Supplies
24 Vdc main power that generates power for TM7 power bus	PS1
24 Vdc I/O power segment	PS2

TM7NCOM●●



(2) External fuse, Type T slow-blow, 1 A, 250 V <sup>1</sup>

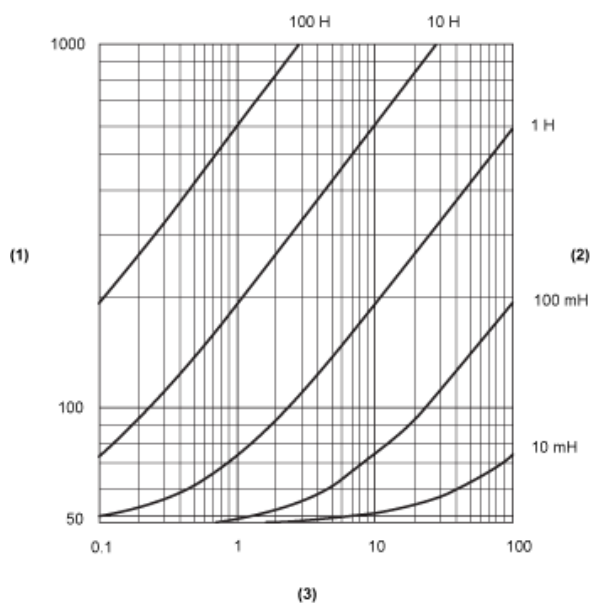
(3) External fuse, Type T slow-blow, 4 A max., 250 V

PS1 External isolated main power supply, 24 Vdc

PS2 External isolated I/O power supply, 24 Vdc

<sup>1</sup> Fuse limited to 1 A per PDB, maximum fuse limited to 5 A with maximum 4 PDB interconnected. If less than 4 PDBs size the fuse in accordance with the number of PDBs.

### Switching Inductive Load Characteristics



- (1) Load resistance in  $\Omega$
- (2) Load inductance in H
- (3) Max. operating cycles / second

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