Product data sheet

Specifications



CANopen interface I/O block, Modicon TM7, IP67, 8 M8

TM7NCOM08B

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 LMC058 Modicon M258
Enclosure Material	Plastic
Bus type	CANopen

Complementary

Input/output number	8
Input voltage limits	24 V DC
Electrical connection	1 male connector M12 - A coding - 5 ways CANopen bus IN 1 female connector M12 - B coding - 4 ways TM7 bus OUT 8 female connectors M8 - 3 ways sensor or actuator 1 male connector M8 - 4 ways power IN 1 female connector M8 - 4 ways power OUT
Operating position	Any position
Fixing Mode	By 2 screws
Local signalling	2 LEDs bus diagnostic 1 LED actuator power supply diagnostics 1 LED sensor power supply diagnostics
Height	6.1 in (155 mm)
Width	2.09 in (53 mm)
Depth	1.7 in (42 mm)
Product Weight	0.430 lb(US) (0.195 kg)

Environment

IP Degree of Protection	IP67
Marking	CE
Product certifications	CURus ATEX II 3g EEx nA II T5 GOST-R C-tick
Standards	IEC 61131-2
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

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Operating altitude	0...6561.68 ft (0...2000 m)
Pollution degree	2
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 msIEC 60721-3-5 Class 5M3
Electromagnetic compatibility	EN/IEC 61000-4-6

Ordering and shipping details

Category	US1PC1222532
Discount Schedule	PC12
GTIN	3595864092782
Returnability	No
Country of origin	AT

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	1.969 in (5.000 cm)
Package 1 Width	2.323 in (5.900 cm)
Package 1 Length	4.173 in (10.600 cm)
Package weight(Lbs)	7.654 oz (217.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	24
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	12.527 lb(US) (5.682 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**240 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**12 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**228 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.3 kg CO2 eq.**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**No**
Packaging without single use plastic	**Yes**
EU RoHS Directive	**Compliant**
REACh Regulation	**Free of Substances of Very High Concern above the threshold**
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**
PVC free	**Yes**

Use Longer

Lifetime extension

Repair	**No**

Use Again

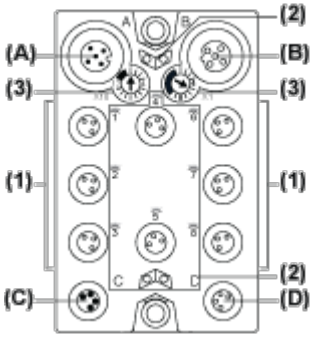
Repack and remanufacture

Recyclability potential, in %	**10**
Circularity Profile	**End of Life Information**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.**

Presentation

TM7 CANopen Interface I/O Block

Description



(A) CANopen 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 and channel LEDs

(3) CANopen address settings rotary switches

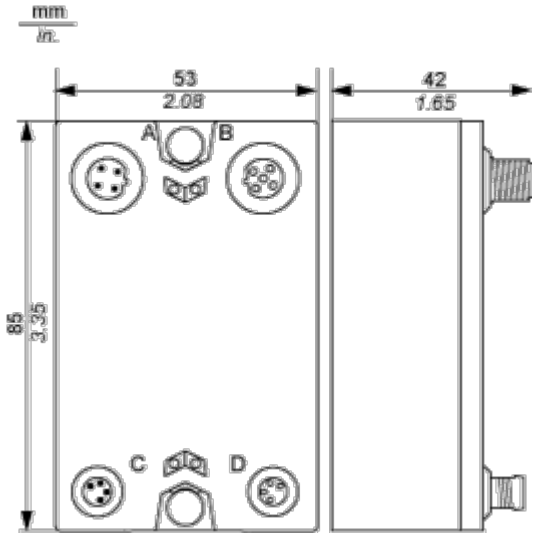
Connector and Channel Assignments

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

Dimensions Drawings

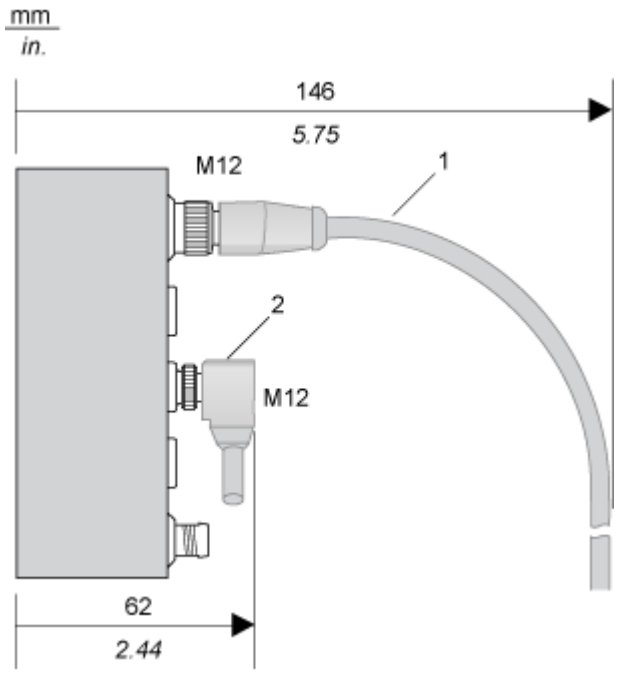
TM7 Block, Size 1

Dimensions



Mounting and Clearance

Spacing Requirements

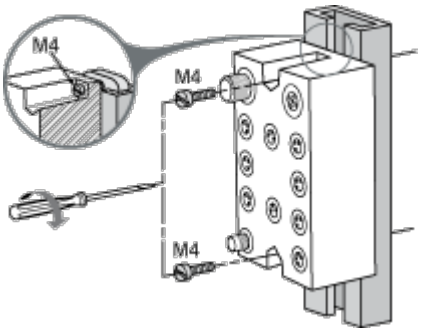


1 Straight cable

2 Elbowed cable

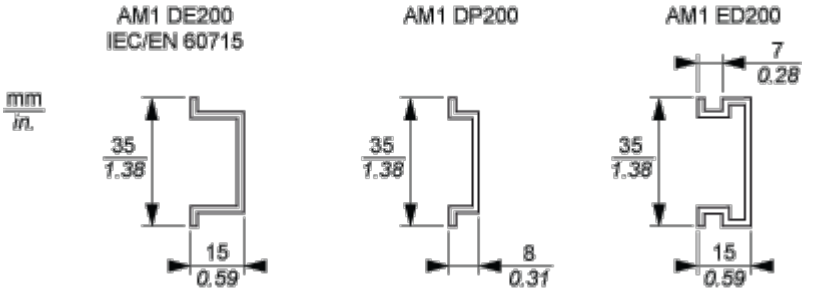
Installation Guidelines

TM7 Block on an Aluminium Frame



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

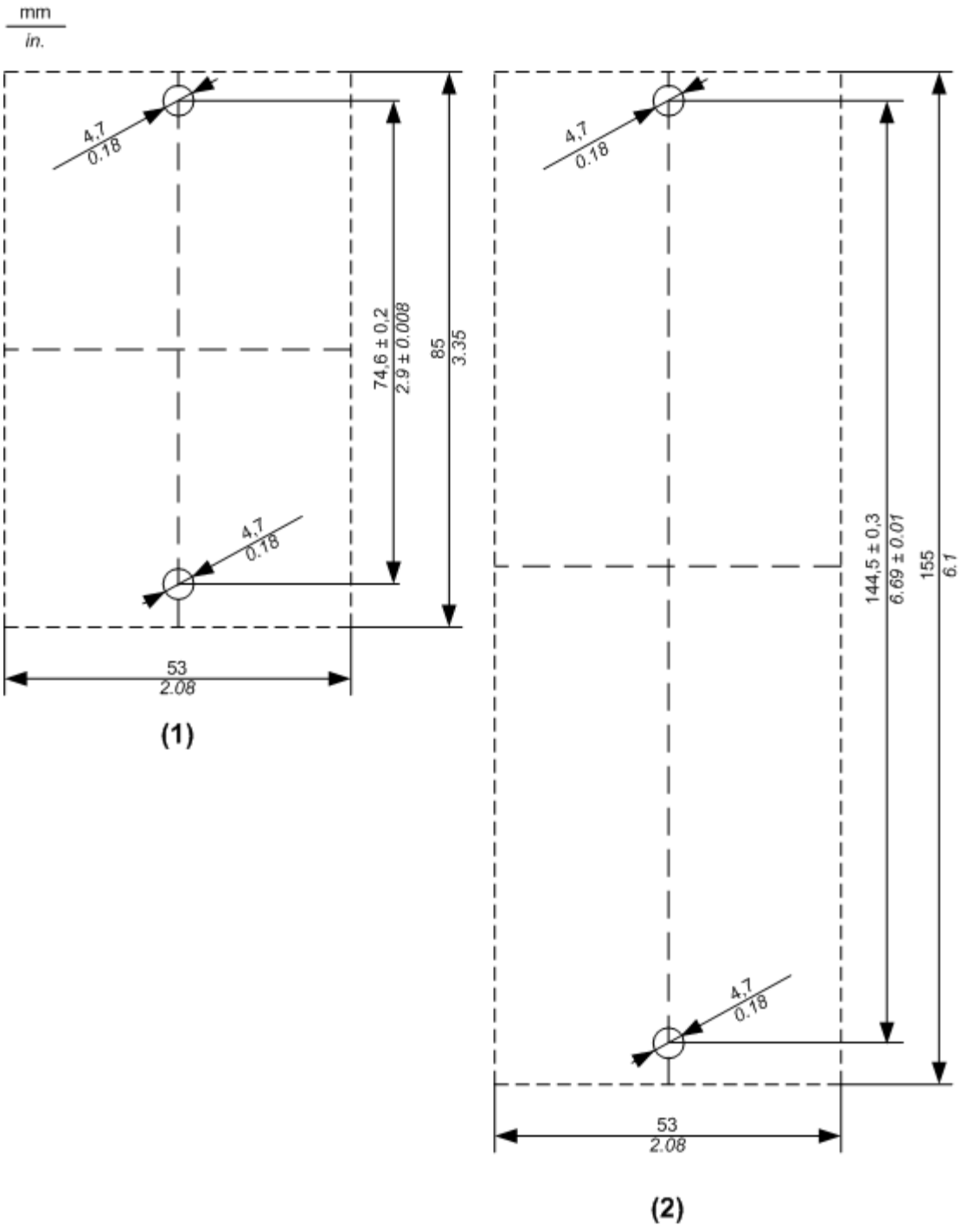
TM7 Block on a DIN Rail



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

TM7 Block Directly on the Machine

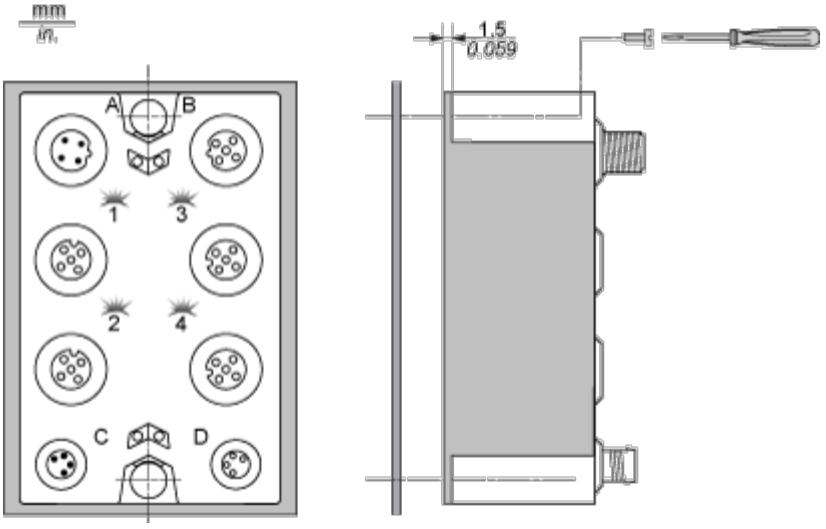
Drilling template of the block:



(1) Size 1

(2) Size 2

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

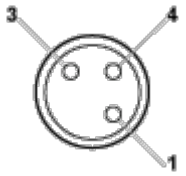


NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

Connections and Schema

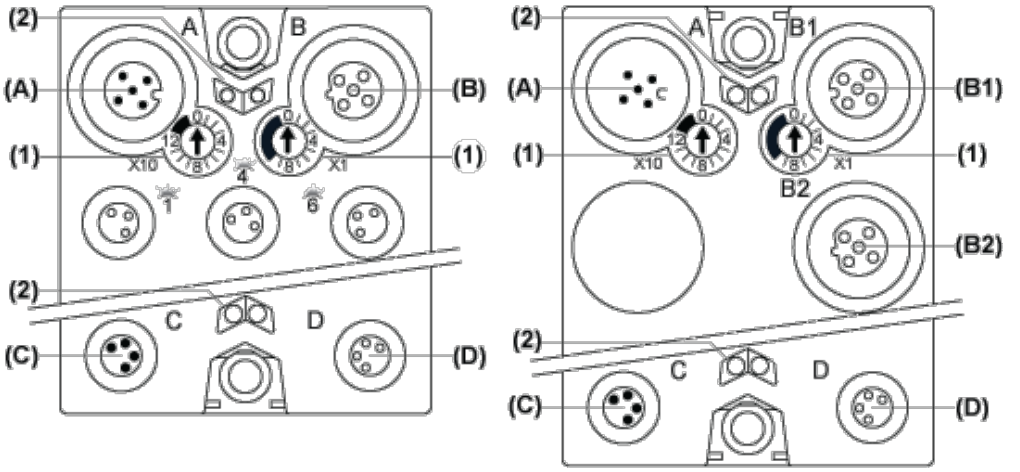
Wiring Diagram

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) and (B2) TM7 bus OUT connector M12

(B1) CANopen bus OUT connector M12

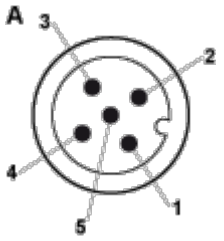
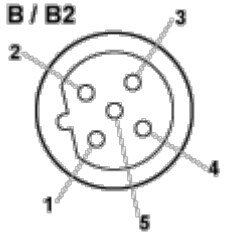
(C) 24 Vdc power IN connector

(D) 24 Vdc power OUT connector

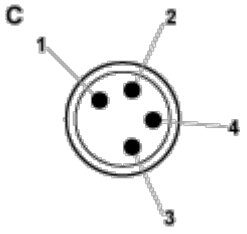
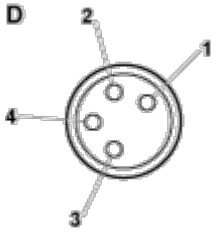
(1) Address settings rotary switches

(2) Status LEDs

Pin Assignments

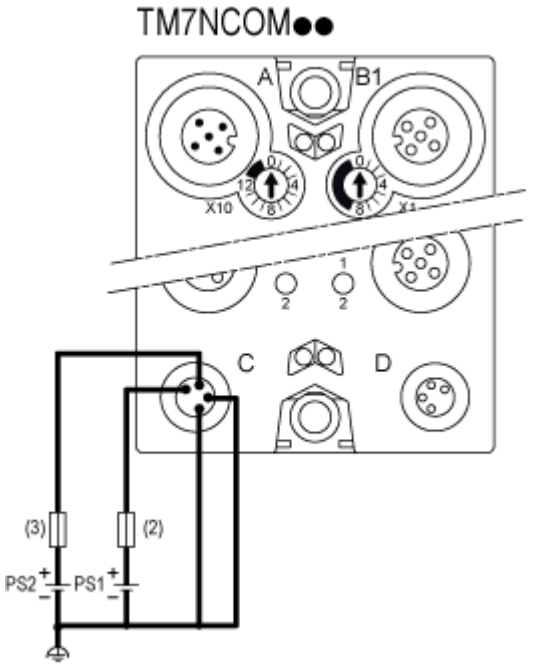
Connectors	Pin	Designation
	1	CAN_SHLD
	2	(CAN_V+)
	3	CAN_GND
	4	CAN_H
	5	CAN_L
	1	TM7 V+
	2	TM7 Bus Data
	3	TM7 0V
	4	TM7 Bus Data
	5	N.C.
	1	CAN_SHLD

Connectors	Pin	Designation
	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



(2) External fuse, Type T slow-blow, 1 A, 250 V [1]

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

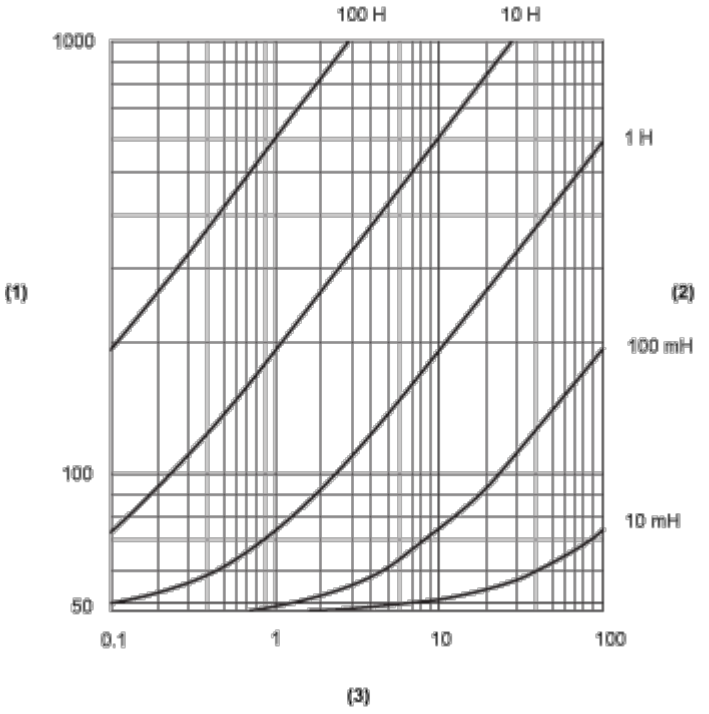
PS1 External isolated main power supply, 24 Vdc

PS2 External isolated I/O power supply, 24 Vdc

[1] Fuse limited to 1 A per PDB, maximum fuse limited to 5 A with maximum 4 PDB interconnected. If less then 4 PDBs size the fuse in accordance with the number of PDBs.

Performance Curves

Switching Inductive Load Characteristics



(1) Load resistance in Ω

(2) Load inductance in H

(3) Max. operating cycles / second