

Main

Range of Product	Modicon TM5
Product or Component Type	Compact I/O expansion block

Complementary

Enclosure Material	Plastic
Color	White
Input/output number	20
For enclosure nominal dimensions	12 I + 8 O
Number of modules	Digital input 3 x 4 Digital output 2 x 4
Discrete input number	12
Discrete input voltage	24 V
Discrete input voltage type	DC
Input voltage limits	20.4...28.8 V
Discrete input logic	Sink
Discrete input current	3.75 mA
Input impedance	6.4 kOhm
Analogue input number	0
Discrete output number	8
Discrete output type	Transistor
Wiring mode	3-wire discrete input 3-wire discrete output
Output voltage	24 V DC
Output voltage limits	20.4...28.8 V DC
Discrete output logic	Source
Discrete output current	0.5 A per output
Peak output current	4 A
Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V
Input filtering	<= 100 ms hardware <= 25 ms configurable by software
Response time	<= 300 µs from state 0 to state 1 output <= 300 µs from state 1 to state 0 output
Maximum leakage current	5 µA when switched off) output
Isolation	500 Vrms AC insulation between channel and bus No insulation between channels
Maximum voltage drop	<0.3 V at 500 mA output
Current consumption	68 mA 5 V DC bus 80 mA 24 V DC input/output

Max current	1000 mA sensor supply 1500 mA actuator supply 4000 mA loads on I/O power segment
Maximum power dissipation in W	2.36 W
Local signalling	For power supply 5 LEDs (green) For power supply 5 LEDs (red) For input status 12 LEDs (green) For output status 8 LEDs (yellow)
Sensor power supply	24 V, 500 mA for all channels overload, short-circuit and reverse polarity protection
Electrical Connection	Removable spring terminal block
Marking	CE
Surge withstand	0.5 kV differential mode 24 V DC EN/IEC 61000-4-5 1 kV common mode 24 V DC EN/IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR 11

Environment

Standards	IEC 61131-2 UL 508 CSA C22.2 No 213 CSA C22.2 No 142
Product Certifications	C-tick GOST-R CSA cULus
Ambient air temperature for operation	14...122 °F (-10...50 °C) vertical installation) 14...140 °F (-10...60 °C) horizontal installation)
Ambient Air Temperature for Storage	-40...158 °F (-40...70 °C)
Relative Humidity	5...95 % without condensation
IP degree of protection	IP20/IEC 61131-2
Pollution degree	2 IEC 60664
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0.00...9842.52 ft (0...3000 m)
Vibration resistance	1 gn 8.4...150 Hz DIN rail 3.5 mm 5...8.4 Hz DIN rail
Shock resistance	15 gn 11 ms
Resistance to electrostatic discharge	4 kV on contact EN/IEC 61000-4-2 8 kV in air EN/IEC 61000-4-2
Resistance to electromagnetic fields	0.91 V/m (1 V/m) 2...2.7 GHz EN/IEC 61000-4-3 9.14 V/m (10 V/m) 80...2000 MHz EN/IEC 61000-4-3
Resistance to fast transients	1 kV EN/IEC 61000-4-4 I/O) 1 kV EN/IEC 61000-4-4 shielded cable) 2 kV EN/IEC 61000-4-4 power lines)
Mounting Support	DIN rail
Net Weight	0.53 lb(US) (0.24 kg)

Ordering and shipping details

Category	22532 - M258 PLC
Discount Schedule	PC12
GTIN	3595864074368
Nbr. of units in pkg.	1
Package weight(Lbs)	9.63 oz (273 g)
Returnability	No
Country of origin	AT

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	2.76 in (7 cm)
Package 1 width	3.58 in (9.1 cm)
Package 1 Length	4.33 in (11 cm)
Unit Type of Package 2	S03
Number of Units in Package 2	36
Package 2 Weight	22.49 lb(US) (10.2 kg)
Package 2 Height	11.81 in (30 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)

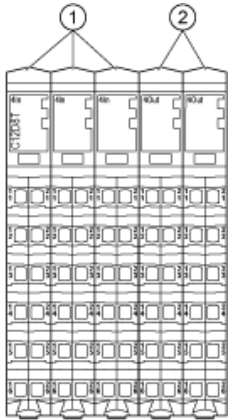
Offer Sustainability

Sustainable offer status	Green Premium product
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
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
PVC free	Yes

Contractual warranty

Warranty	18 months
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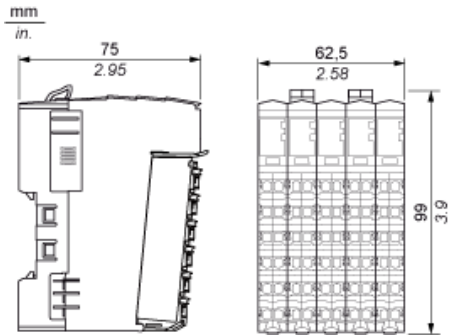
TM5 Compact I/O Module



N°	Designation
1	Input electronic module / 4 digital inputs
2	Output electronic module / 4 digital outputs

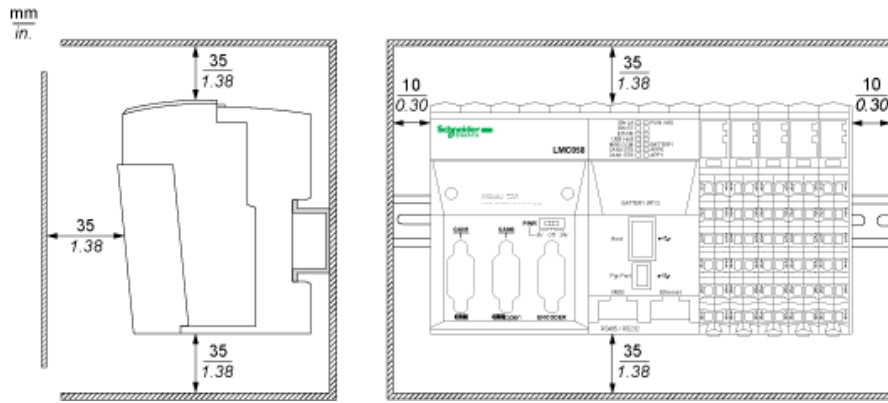
Compact I/O Module

Dimensions

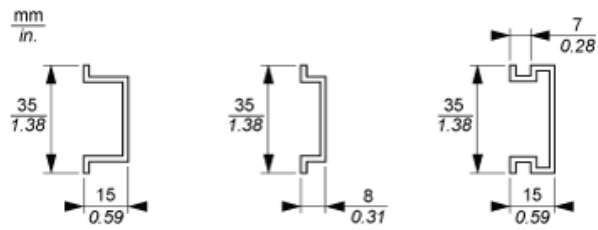


TM5 System

Spacing Requirements







Mounting on a DIN Rail



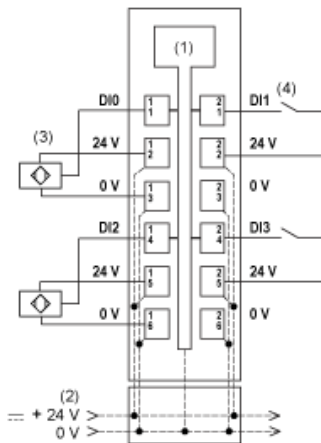
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.				
mm ²	0,08...2,5	0,25...2,5	0,25...1,5	2 x 0,25...2 x 0,75
AWG	28...14	24...14	24...16	2 x 24...2 x 18

Digital Input 4In

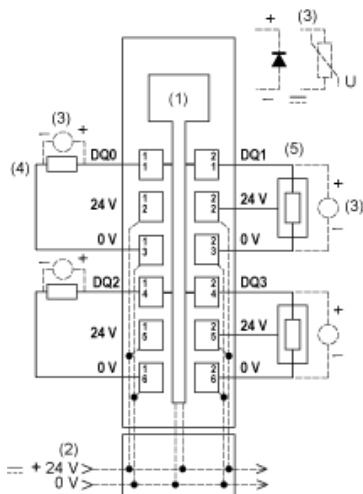
Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 3-wire sensor
- 4 2-wire sensor

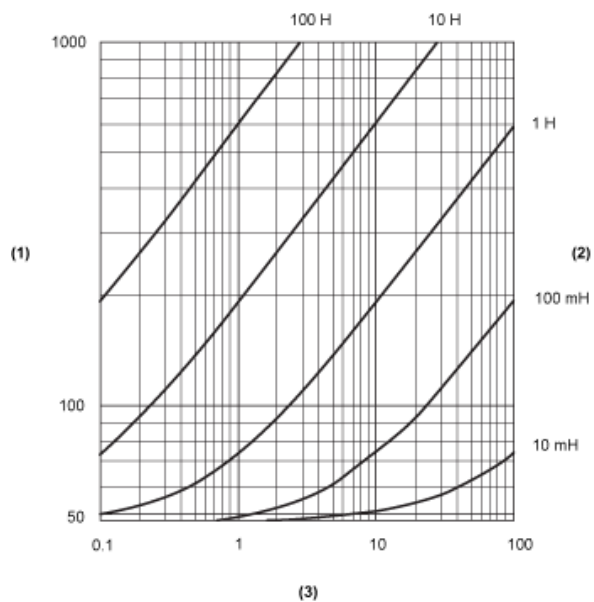
Digital Output 4Out

Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 Inductive load protection
- 4 2-wire load
- 5 3-wire load

Switching Inductive Load Characteristics



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