

## 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

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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 IEC 61000-4-5 1 kV common mode 24 V DC 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[RETURN]GOST-R[RETURN]CSA[RETURN]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	IP20IEC 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 IEC 61000-4-2 8 kV in air IEC 61000-4-2
Resistance to electromagnetic fields	0.91 V/m (1 V/m) 2...2.7 GHz IEC 61000-4-3 9.14 V/m (10 V/m) 80...2000 MHz IEC 61000-4-3
Resistance to fast transients	1 KV IEC 61000-4-4 I/O) 1 KV IEC 61000-4-4 shielded cable) 2 kV 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
Returnability	No
Country of origin	AT

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.76 in (7.000 cm)
Package 1 Width	3.58 in (9.100 cm)
Package 1 Length	4.33 in (11.000 cm)
Package 1 Weight	9.63 oz (273.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	36

Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	22.42 lb(US) (10.171 kg)

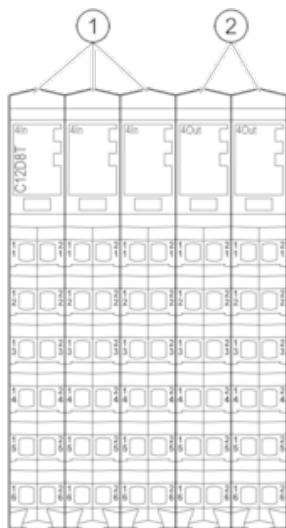
### Offer Sustainability

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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
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



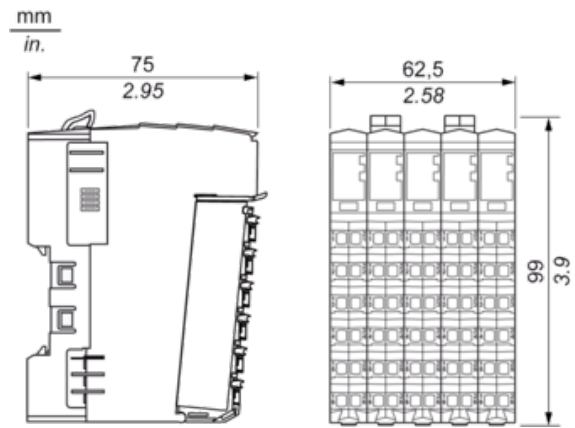
N°	Designation
1	Input electronic module / 4 digital inputs
2	Output electronic module / 4 digital outputs

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Compact I/O Module

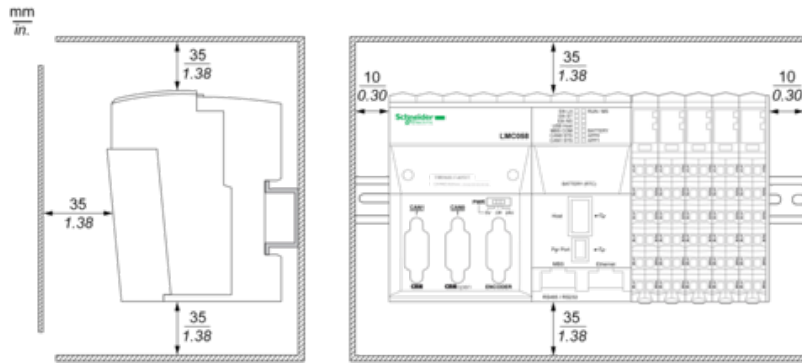
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Dimensions

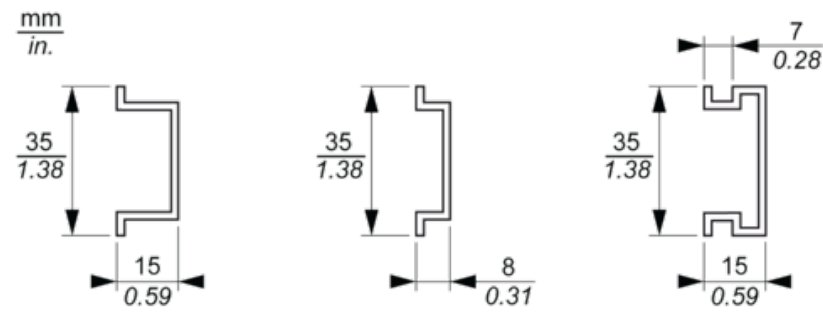


TM5 System

Spacing Requirements








Mounting on a DIN Rail



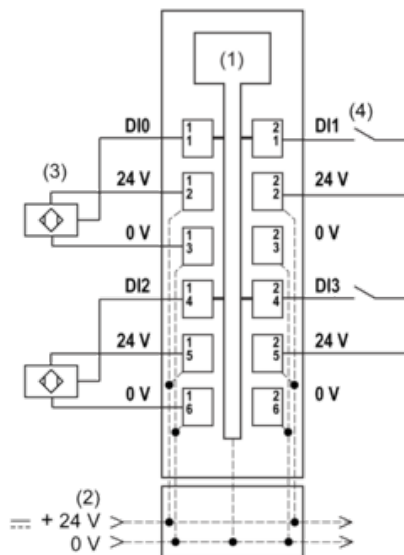
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

$\frac{\text{mm}}{\text{in.}}$ 				
mm <sup>2</sup>	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

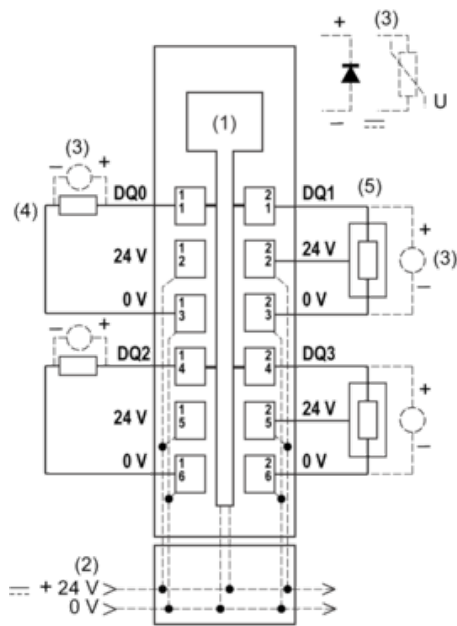
Wiring Diagram



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

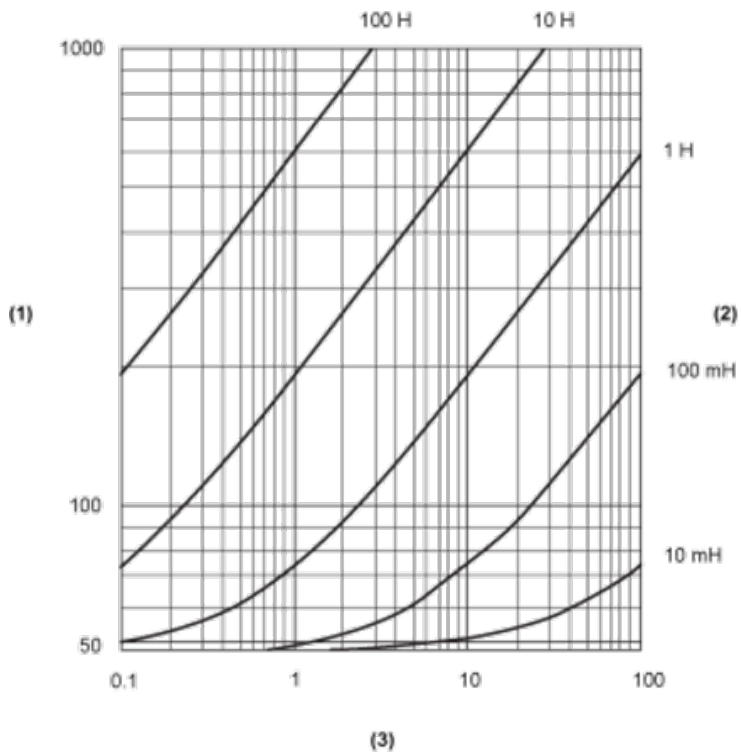
Digital Output 4Out

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