



## Main

Range of product	Modicon TM5
Product or component type	Compact I/O expansion block

## Complementary

Enclosure material	Plastic
Colour	White
Input/Output number	36
For enclosure nominal dimensions	24 I + 12 O
Number of modules	2 modules with 6 relay output 2 modules with 12 digital input
Discrete input number	24
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	12
Discrete output type	Relay
Wiring mode	1 wire discrete input
Output voltage	240 V AC 30 V DC
Output voltage limits	184...276 V AC 24...36 V DC
Discrete output function	1 NO
Discrete output logic	Source or sink
Discrete output current	2 A per output
Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V
Input filtering	0...25 ms configurable by software <= 100 µs hardware
Response time	<= 10 ms from state 1 to state 0 output <= 12 ms from state 0 to state 1 output
Minimum switching current	10 mA 5 V DC
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Mechanical durability	20000000 cycles
Current consumption	165 mA 24 V DC input/output 68 mA 5 V DC bus
Power dissipation in W	<= 4.3 W

Local signalling	12 LEDs yellow output status 4 LEDs red power supply 4 LEDs green power supply 24 LEDs green input status
Electrical connection	Removable spring terminal block
Marking	CE
Surge withstand	2 kV common mode 230 V AC EN/IEC 61000-4-5 1 kV differential mode 230 V AC EN/IEC 61000-4-5 1 kV common mode 24 V DC EN/IEC 61000-4-5 0.5 kV differential mode 24 V DC EN/IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR11

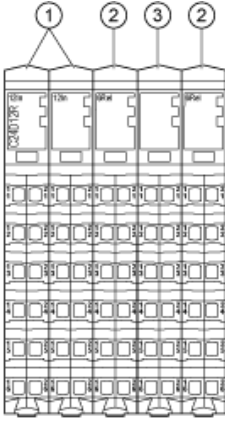
## Environment

Standards	CSA 22-2 No 142 IEC 61131-2 UL 508 CSA 22-2 No 213
Product certifications	CSA C-Tick CULus GOST-R
Ambient air temperature for operation	-10...60 °C horizontal installation -10...50 °C vertical installation
Ambient air temperature for storage	-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...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm 5...8.4 Hz DIN rail 1 gn 8.4...150 Hz DIN rail
Shock resistance	15 gn 11 ms
Resistance to electrostatic discharge	8 kV in air EN/IEC 61000-4-2 4 kV on contact EN/IEC 61000-4-2
Resistance to electromagnetic fields	10 V/m 80...2000 MHz EN/IEC 61000-4-3 1 V/m 2...2.7 GHz EN/IEC 61000-4-3
Resistance to fast transients	2 kV power lines EN/IEC 61000-4-4 1 kV shielded cable EN/IEC 61000-4-4 1 kV I/O EN/IEC 61000-4-4
Mounting support	DIN rail
Product weight	0.26 kg

## Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS	Compliant - since 1039 - Schneider Electric declaration of conformity <a href="#">download declaration of conformity</a>

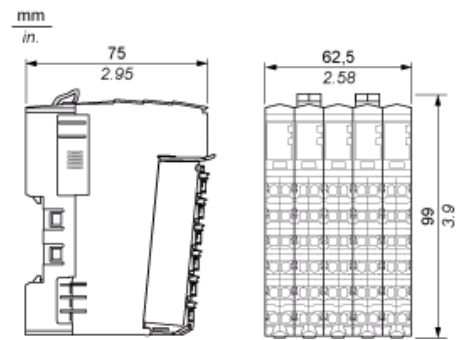
TM5 Compact I/O Module



N°	Designation
1	Input electronic module / 12 digital inputs
2	Relay output electronic module / 6 relay outputs
3	Dummy module

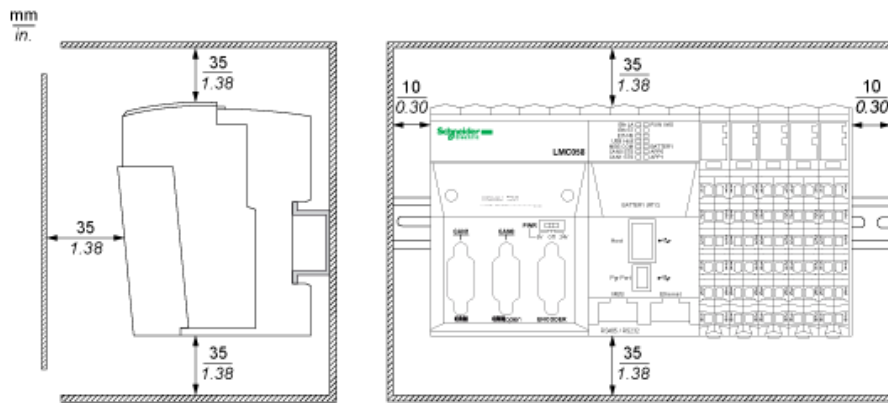
Compact I/O Module

Dimensions

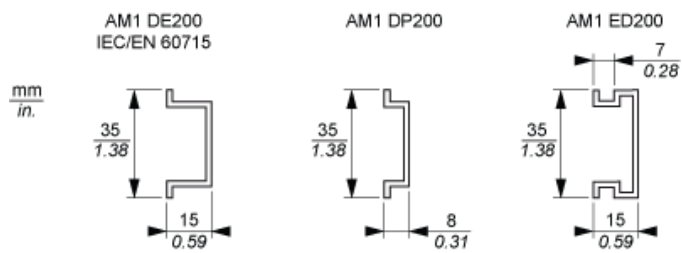


TM5 System

Spacing Requirements







Mounting on a DIN Rail



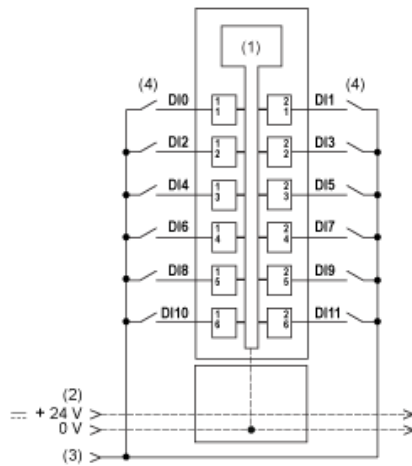
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.				
mm <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 12In

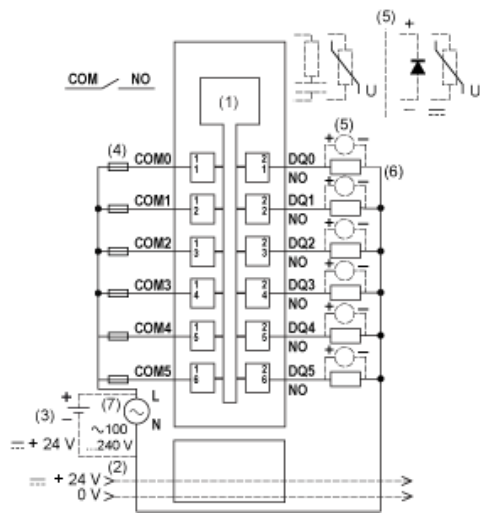
Wiring Diagram



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

Digital Output Relay 6Rel

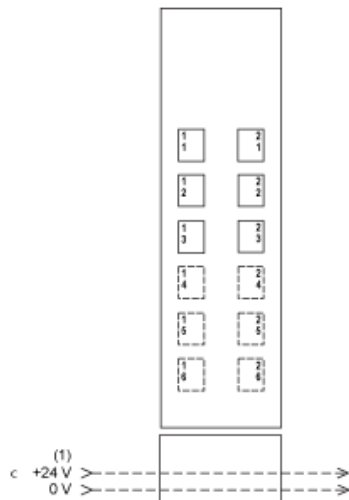
## Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 External isolated power supply 24 Vdc
- 4 External fuse type T slow-blow 2 A 250 V
- 5 Inductive load protection
- 6 2-wire load
- 7 External power supply 100...240 Vac

## Dummy Module

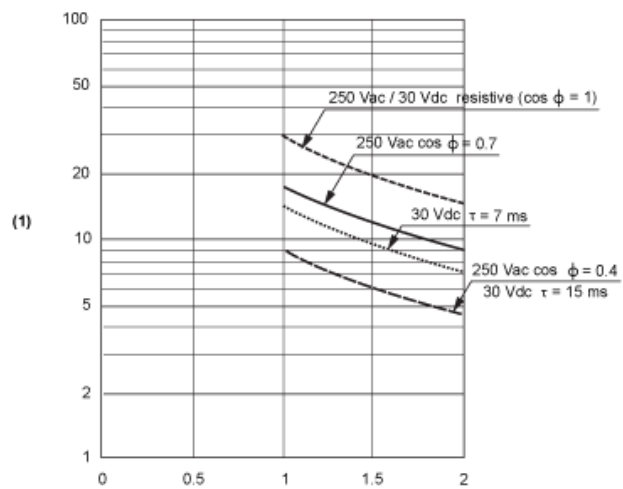
### Wiring Diagram



- 1 24 Vdc I/O power segment integrated into the bus bases

Digital Output Relay Electronic Module

Electric Durability



- 1 Switching procedures ( $\times 10^4$ )  
2 Switching current in A