

# Product data sheet

## Characteristics

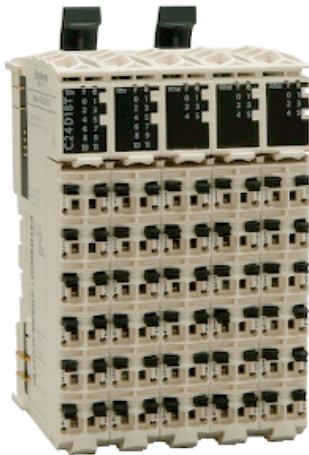
# TM5C12D8T

compact I/O expansion block TM5 - 20 I/O - 12 DI  
- 8 DO transistor

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



Price\* : 545.00 USD



### 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	3 modules with 4 digital input 2 modules with 4 digital output
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	<= 25 ms configurable by software <= 100 ms hardware
Response time	<= 300 µs from state 0 to state 1 output <= 300 µs from state 1 to state 0 output
Leakage current	5 µA when switched off output
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
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
Power dissipation in W	<= 2.36 W
Local signalling	5 LEDs green power supply 5 LEDs red power supply 12 LEDs green input status 8 LEDs yellow output status
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	CSA C22.2 No 142 IEC 61131-2 UL 508 CSA C22.2 No 213
Product certifications	CSA C-Tick cULus GOST-R
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...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	8 kV in air EN/IEC 61000-4-2 4 kV on contact EN/IEC 61000-4-2
Resistance to electromagnetic fields	0.91 V/yd (1 V/m) 2...2.7 GHz EN/IEC 61000-4-3 9.14 V/yd (10 V/m) 80...2000 MHz EN/IEC 61000-4-3
Resistance to fast transients	1 kV I/O EN/IEC 61000-4-4 1 kV shielded cable EN/IEC 61000-4-4 2 kV power lines EN/IEC 61000-4-4
Mounting support	DIN rail
Product weight	0.53 lb(US) (0.24 kg)

### Ordering and shipping details

Category	22532 - M258 PLC
Discount Schedule	PC12
GTIN	00785901940814
Nbr. of units in pkg.	1
Package weight(Lbs)	0.6099999999999999
Returnability	N
Country of origin	AT

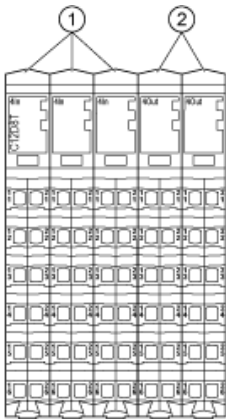
### Offer Sustainability

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 <a href="#">Reference not containing SVHC above the threshold</a>
Product environmental profile	Available
Product end of life instructions	Available
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
-----------------	-----------

TM5 Compact I/O Module



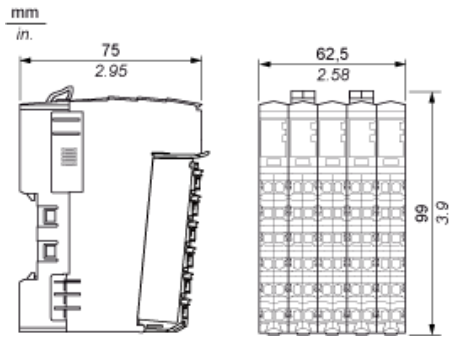
N°	Designation
1	Input electronic module / 4 digital inputs
2	Output electronic module / 4 digital outputs

---

Compact I/O Module

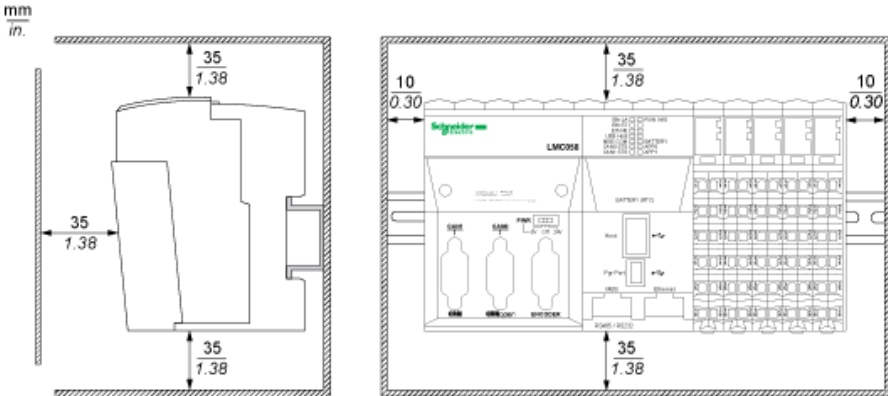
---

Dimensions

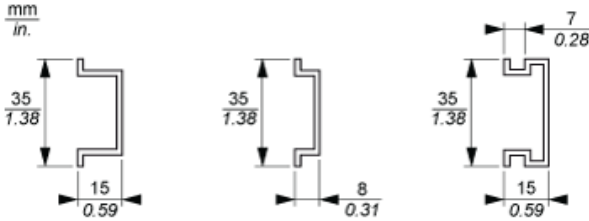


TM5 System

Spacing Requirements








Mounting on a DIN Rail



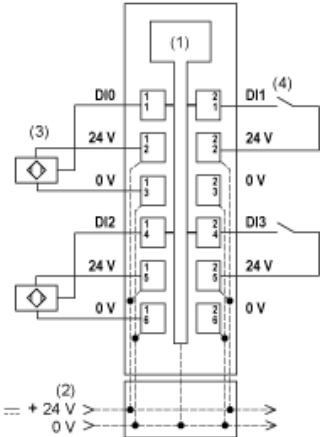
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.					
mm <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

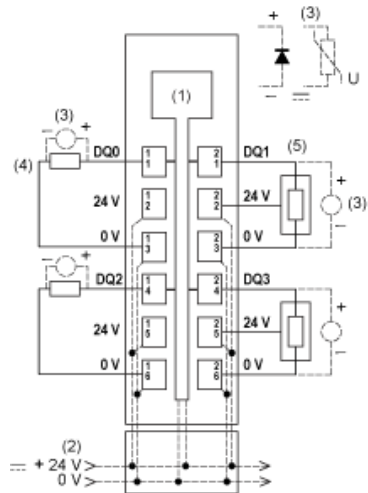


- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 3-wire sensor
- 4 2-wire sensor



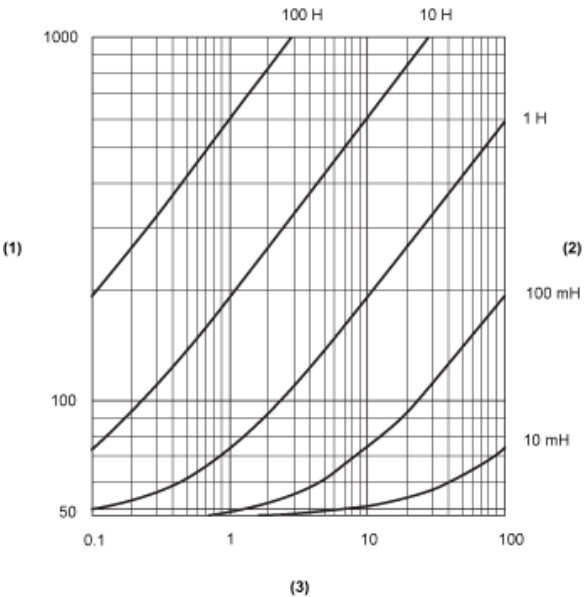
Digital Output 4Out

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