Product data sheet
Characteristics

TM5SMM6D2L
Mixed I/O module, Modicon TM5, module

Main

Range of Product	Modicon TM5
Product or Component Type	Mixed I/O module
Range Compatibility	Modicon LMC058 Modicon M258
Product Compatibility	Motion controller Logic controller

Complementary

Discrete input number	4
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	3.3 mA
Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V
Input filtering	<= 2 µs hardware 1 ms by default <= 25 ms configurable by software
Analogue input number	1
Analogue input type	Voltage +/- 10 V Current 0...20 mA/4...20 mA
Analogue input resolution	12 bits + sign voltage 12 bits current
Common mode rejection	70 dB DC analog input 70 dB 50 Hz analog input
Discrete output number	2
Discrete output type	Transistor
Output voltage	24 V DC
Output voltage limits	20.4...28.8 V
Discrete output logic	Source
Discrete output current	<= 0.5 A per output <= 1 A
Peak output current	14 A
Maximum leakage current	5 µA when switched off) digital output
Switching frequency	100 Hz, resistive digital output
Analogue output number	1
Analogue output type	Voltage +/- 10 V Current 0...20 mA
Conversion time	300 µs analog output
Analogue output resolution	12 bits + sign, +/- 10 V 12 bits, 0...20 mA
Measurement resolution	2.441 mV, +/- 10 V, +/- 10 V 4.883 µA, 0...20 mA/4...20 mA, 0...20 mA
Color	White

Response time	<= 250 µs from state 0 to state 1 digital output <= 250 µs from state 1 to state 0 digital output 1 ms analog output
Input impedance	7.18 kOhm digital >= 1 MOhm analog, +/- 10 V
Minimum output impedance	1 KOhm +/- 10 V 32…131 °F (0…55 °C) 10 kOhm +/- 10 V 131…140 °F (55…60 °C)
Load impedance ohmic	<= 400 Ohm0...20 mA) 32…131 °F (0…55 °C) <= 300 Ohm0...20 mA) 131…140 °F (55…60 °C) <= 300 Ohm 0...20 mA/4...20 mA)
Sampling duration	300 µs analog input
Measurement error	< 0.08 % of full scale +/- 10 V) 25 °C < 0.08 % of full scale 0...20 mA/4...20 mA) 25 °C < 0.15 % of full scale+/- 10 V) 25 °C < 0.15 % of full scale0...20 mA) 25 °C
Temperature coefficient	+/- 0.009 %FS/°C 0...20 mA/4...20 mA) +/-0.006 %FS/°C +/- 10 V) +/- 0.02 %FS/°C0...20 mA) +/- 0.02 %FS/°C+/- 10 V)
Non-linearity	+/- 0.02 %FS 0...20 mA/4...20 mA) +/- 0.02 %FS +/- 10 V) +/- 0.1 %FS0...20 mA) +/- 0.1 %FS+/- 10 V)
Type of Cable	Shielded cable
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Supply	Internal
[Us] rated supply voltage	24 V DC -15...20 %
Local signalling	For power supply (ON) 1 LED (green) For power supply (OFF) 1 LED (red) For digital input status 4 LEDs (green) For digital output status 2 LEDs (orange) 1 LED (orange) 1 LED (green)
Wiring mode	1 wire digital input/output
Current consumption	2 mA 5 V DC bus 73 mA 24 V DC inputs/outputs
Maximum power dissipation in W	1.75 W
Protection type	Against reverse polarity digital output Against short-circuits digital output Thermal overload protection digital output Against short-circuits analog output
Marking	CE
Net Weight	0.06 lb(US) (0.025 kg)

Environment

Standards	IEC 61131-2 CSA C22.2 No 142 UL 508 CSA C22.2 No 213
Product Certifications	C-tick[RETURN]CSA[RETURN]cULus[RETURN]GOST-R
Ambient air temperature for operation	32…131 °F (0…55 °C) without derating horizontal installation) 131…140 °F (55…60 °C) with derating factor horizontal installation) 32…122 °F (0…50 °C) vertical installation)
Ambient Air Temperature for Storage	-13…158 °F (-25…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)
Surge withstand	0.5 KV differential mode IEC 61000-4-5 1 kV common mode IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR 11

Ordering and shipping details

Category	22532-M258 PLC
Discount Schedule	PC12
GTIN	3595864082073
Returnability	No
Country of origin	AT

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	0.79 in (2.000 cm)
Package 1 Width	2.36 in (6.000 cm)
Package 1 Length	4.13 in (10.500 cm)
Package 1 Weight	1.52 oz (43.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	97
Package 2 Height	5.91 in (15.000 cm)
Package 2 Width	11.81 in (30.000 cm)
Package 2 Length	15.75 in (40.000 cm)
Package 2 Weight	9.96 lb(US) (4.520 kg)

Offer Sustainability

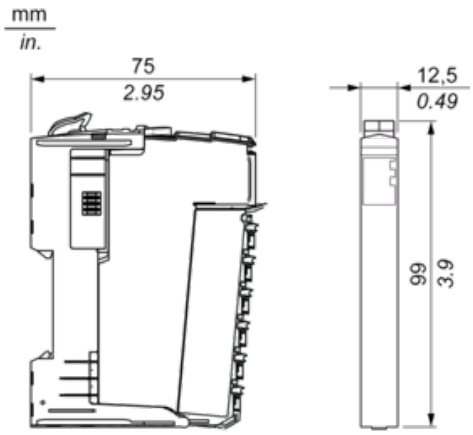
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
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

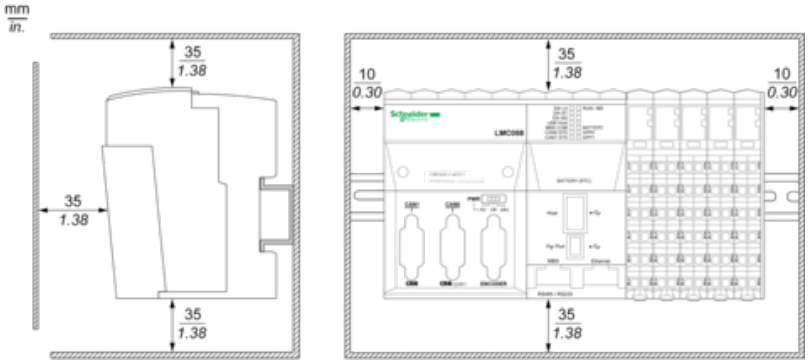
TM5 Slice

Dimensions

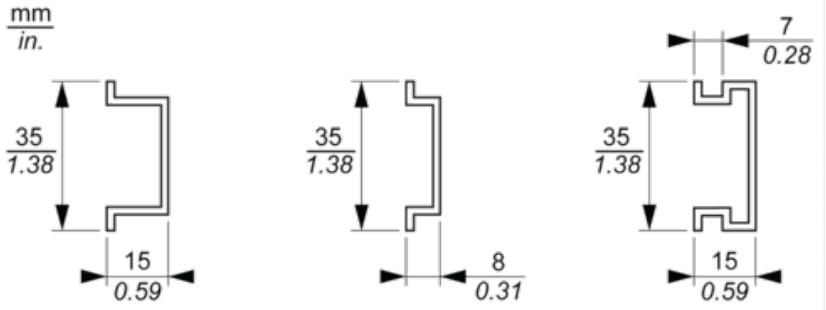


TM5 System

Spacing Requirements



Mounting on a DIN Rail

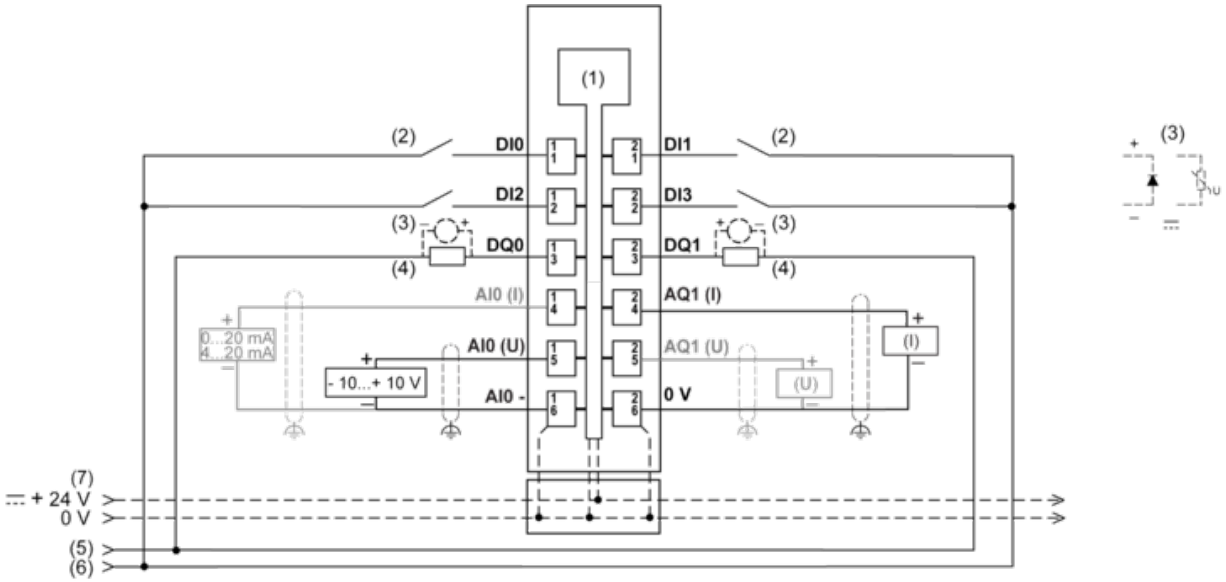


TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm / in. (9 / 0.35)				
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

Wiring Diagram



1 internal electronics
2 2-wire sensor
3 inductive load protection
4 2-wire load
5 0 Vdc I/O power segment by external connection
6 24 Vdc I/O power segment by external connection
7 24 Vdc I/O power segment integrated into the bus bases
I current
U voltage