

TM5SAO4LK

Analog output module, Modicon TM5,
Composition kit of I/O(TM5SAO4L) + term.
block(TM5ACTB12) + bus base(TM5ACBM11)



Main

Range of product	Modicon TM5
Product or component type	Analog output module
Analogue output number	4
Analogue output resolution	12 bits + sign, +/- 10 V 12 bits, 0...20 mA

Complementary

Device composition	Bus sub-base TM5ACBM11 Terminal block TM5ACTB12 I/O module TM5SAO4L
Range compatibility	Modicon M258 Modicon LMC058
Product compatibility	Motion controller Logic controller
Analogue output type	Current 0...20 mA Voltage +/- 10 V
Measurement resolution	4.882 mV, +/- 10 V 9.766 µA, 0...20 mA
Colour	White
Response time	<= 1 ms
Minimum output impedance	1 Ohm
Load impedance ohmic	200...500 Ohm (current)
Sampling duration	300 µs
Measurement error	< 0.08 % of full scale +/- 10 V +/- 10 V at 25 °C < 0.08 % of full scale 0...20 mA 0...20 mA at 25 °C
Temperature coefficient	0.015 %FS/°C, analogue output type: current 0.015 %FS/°C, analogue output type: voltage
Non-linearity	< 0.005 %FS, analogue output type: current < 0.005 %FS, analogue output type: voltage
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	1 LED green for power supply 1 LED red for power supply 4 LEDs yellow for output status
Current consumption	2 mA at 5 V DC bus 63 mA at 24 V DC input/output
Maximum power dissipation in W	1.51 W
Marking	CE
Net weight	0.065 kg

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Environment

Standards	CSA C22.2 No 213 CSA C22.2 No 142 UL 508 IEC 61131-2
Product certifications	C-Tick CULus GOST-R CSA
Ambient air temperature for operation	0...55 °C without derating (horizontal installation) 0...60 °C with derating factor (horizontal installation) 0...50 °C (vertical installation)
Ambient air temperature for storage	-25...70 °C
Relative humidity	5...95 % without condensation
IP degree of protection	IP20 conforming to IEC 61131-2
Pollution degree	2 conforming to IEC 60664
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	1 gn at 8.4...150 Hz on DIN rail 3.5 mm at 5...8.4 Hz on DIN rail
Shock resistance	15 gn for 11 ms
Resistance to electrostatic discharge	4 kV on contact conforming to EN/IEC 61000-4-2 8 kV in air conforming to EN/IEC 61000-4-2
Resistance to electromagnetic fields	1 V/m 2...2.7 GHz conforming to EN/IEC 61000-4-3 10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3
Resistance to fast transients	1 kV (I/O) conforming to EN/IEC 61000-4-4 1 kV (shielded cable) conforming to EN/IEC 61000-4-4 2 kV (power lines) conforming to EN/IEC 61000-4-4
Surge withstand	0.5 kV differential mode conforming to EN/IEC 61000-4-5 1 kV common mode conforming to EN/IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR 11

Packing Units

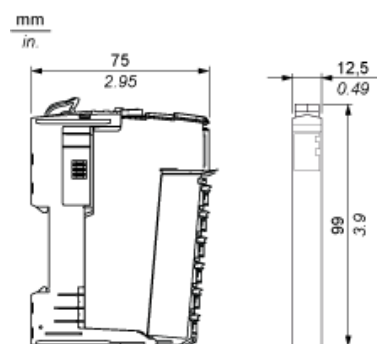
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	121 g
Package 1 Height	7 cm
Package 1 width	9 cm
Package 1 Length	11 cm

Contractual warranty

Warranty	18 months
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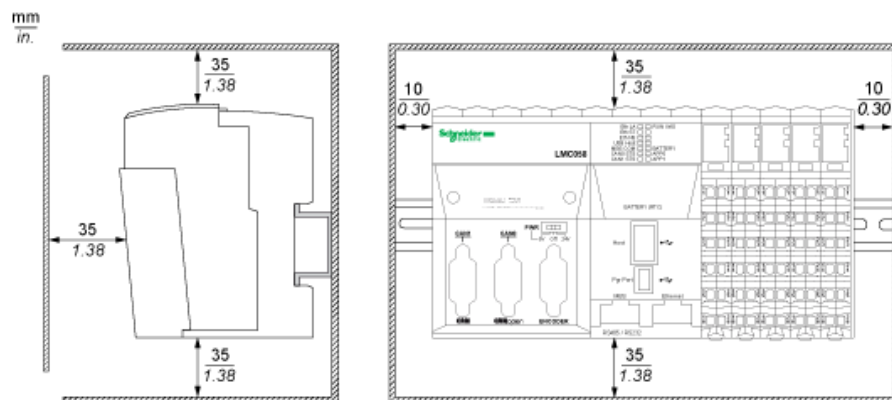
TM5 Slice

Dimensions

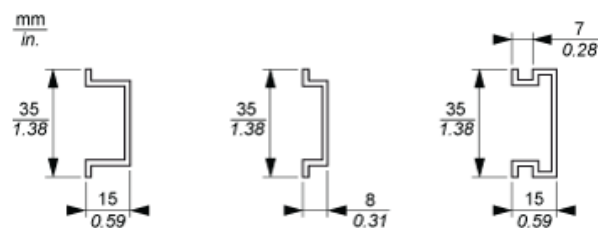


TM5 System

Spacing Requirements



Mounting on a DIN Rail



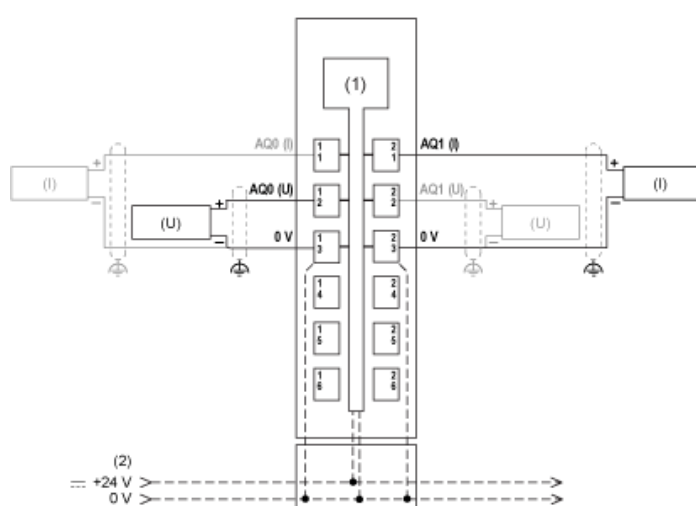
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.				
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

Electronic Module 2AO $\pm 10V/0-20mA$ 16 Bits

Wiring Diagram



- (1) Internal electronics
- (2) 24 Vdc I/O power segment integrated into the bus bases
- (I) Current
- (U) Voltage