



analog output module, Modicon TM5, 2O, +/-10V, 0 to 20mA, 12bits

TM5SAO2L

Main

Range of product	Modicon TM5
Product or component type	Analog output module
Analogue output number	2
Analogue output resolution	12 bits + sign, +/- 10 V 12 bits 0 - 20 mA

Complementary

Range compatibility	Modicon LMC058 Modicon M258			
Product compatibility	Motion controller Logic controller			
Analogue output type	Current 020 mA Voltage +/- 10 V			
Measurement resolution	4.882 mV, +/- 10 V 9.766 μA, 020 mA			
Colour	White			
Response time	<= 1 ms			
Minimum output impedance	1 Ohm			
Load impedance ohmic	<= 500 Ohm (current)			
Sampling duration	200 μs			
Measurement error	< 0.15 % of full scale +/- 10 V at 25 °C < 0.15 % of full scale 020 mA at 25 °C			
Temperature coefficient	0.02 %FS/°C, analogue output type: current 0.02 %FS/°C, analogue output type: voltage			
Non-linearity	< 0.007 %FS, analogue output type: current < 0.007 %FS, analogue output type: voltage			
Type of cable	Shielded cable			
Isolation	500 Vrms AC insulation between channel and bus No insulation between channels			
Supply	Internal			
[Us] rated supply voltage	24 V DC -1520 %			
Local signalling	LED green for power supply LED red for power supply LEDs yellow for output status			
Current consumption	2 mA at 5 V DC bus 46 mA at 24 V DC input/output			
Maximum power dissipation in W	1.11 W			

Marking	CE
Net weight	0.025 kg

Environment

Standards	CSA C22.2 No 142 IEC 61131-2 UL 508 CSA C22.2 No 213		
Product certifications	CSA GOST-R cULus C-Tick		
Ambient air temperature for operation	055 °C without derating (horizontal installation) 060 °C with derating factor (horizontal installation) 050 °C (vertical installation)		
Ambient air temperature for storage	-2570 °C		
Relative humidity	595 % without condensation		
IP degree of protection	IP20 conforming to IEC 61131-2		
Pollution degree	2 conforming to IEC 60664		
Operating altitude	02000 m		
Storage altitude	03000 m		
Vibration resistance	1 gn at 8.4150 Hz on DIN rail 3.5 mm at 58.4 Hz on DIN rail		
Shock resistance	15 gn for 11 ms		
Resistance to electrostatic discharge	4 kV on contact conforming to IEC 61000-4-2 8 kV in air conforming to IEC 61000-4-2		
Resistance to electromagnetic fields	1 V/m 22.7 GHz conforming to IEC 61000-4-3 10 V/m 802000 MHz conforming to IEC 61000-4-3		
Resistance to fast transients	1 kV (I/O) conforming to IEC 61000-4-4 1 kV (shielded cable) conforming to IEC 61000-4-4 2 kV (power lines) conforming to IEC 61000-4-4		
Surge withstand	0.5 kV differential mode conforming to IEC 61000-4-5 1 kV common mode conforming to 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 Height	2.000 cm
Package 1 Width	6.000 cm
Package 1 Length	10.500 cm
Package 1 Weight	39.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	97
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm

Package 2 Weight

3.996 kg

Contractual warranty

Warranty

18 months



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Transparency RoHS/REACh

Well-being performance

⊘	Toxic Heavy Metal Free	
⊘	Mercury Free	
⊘	Rohs Exemption Information	Yes

Certifications & Standards

Reach Regulation	REACh Declaration		
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)		
China Rohs Regulation	China RoHS declaration		
Environmental Disclosure	Product Environmental Profile		
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins		
Circularity Profile	End of Life Information		

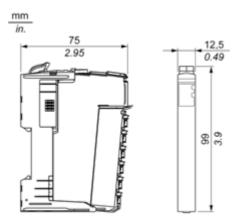
Product datasheet

TM5SAO2L

Dimensions Drawings

TM5 Slice

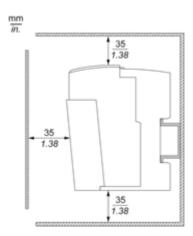
Dimensions

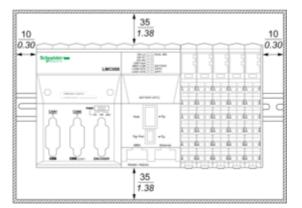


Mounting and Clearance

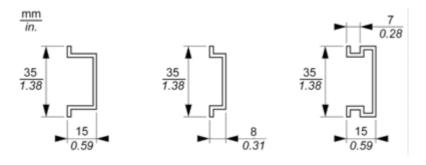
TM5 System

Spacing Requirements





Mounting on a DIN Rail



Product datasheet

TM5SAO2L

Connections and Schema

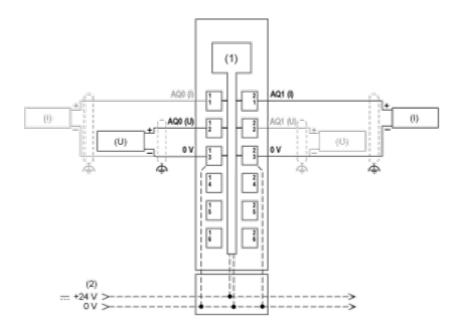
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.	0.35		==	~D=	æ>-
	mm ²	0,082,5	0,252,5	0,251,5	2 x 0,252 x 0,75
	AWG	2814	2414	2416	2 x 242 x 18

Electronic Module 2AO ±10V/0-20mA 12 Bits

Wiring Diagram



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