### Product data sheet Characteristics

## TM5SAO4L

analog output module - 40 - +/-10 V/0..20 mA - 12 bits





#### 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, 020 mA	

#### Complementary

Range compatibility	Modicon LMC058 Modicon M258		
Product compatibility	Logic controller Motion 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	200500 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 020 mA 020 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	500 Vrms AC insulation between channel and bus No insulation between channels		
Supply	Internal		
[Us] rated supply voltage	24 V DC -1520 %		
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	0.025 kg		

#### Environment

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Standards	IEC 61131-2 CSA C22.2 No 213 UL 508 CSA C22.2 No 142			
Product certifications	CULus GOST-R CSA 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 EN/IEC 61000-4-2 8 kV in air conforming to EN/IEC 61000-4-2			
Resistance to electromagnetic fields	1 V/M 22.7 GHz conforming to EN/IEC 61000-4-3 10 V/m 802000 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	43.0 g	
Package 1 Height	2.0 cm	
Package 1 width	6.0 cm	
Package 1 Length	11.0 cm	
Unit Type of Package 2	S02	
Number of Units in Package 2	97	
Package 2 Weight	4.471 kg	
Package 2 Height	15.0 cm	
Package 2 width	30.0 cm	
Package 2 Length	40.0 cm	

#### Offer Sustainability

Sustainable offer status	Green Premium product		
REACh Regulation	☑ REACh Declaration		
REACh free of SVHC	Yes		
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EV RoHS  Declaration		
Toxic heavy metal free	Yes		
Mercury free	Yes		
RoHS exemption information	₽		
China RoHS Regulation	☐ China RoHS Declaration		

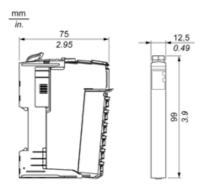
Environmental Disclosure	Product Environmental Profile  Find Of Life Information  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins		
Circularity Profile			
WEEE			
PVC free	Yes		
Contractual warranty			
Warranty	18 months		

# Product data sheet Dimensions Drawings

# TM5SAO4L

#### TM5 Slice

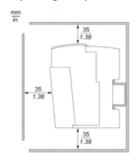
#### **Dimensions**

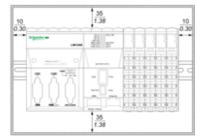


# TM5SAO4L

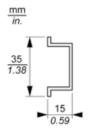
#### TM5 System

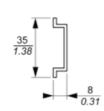
#### **Spacing Requirements**

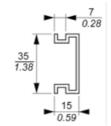




#### Mounting on a DIN Rail







## TM5SAO4L

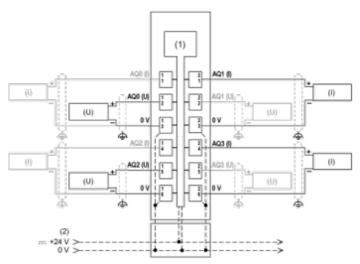
#### TM5 System Wiring Recommendations

#### Wire Sizes to Use with the Removable Spring Terminal Blocks

mm 0.35		$\approx$	~D=	
mm²	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 4AO ±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