

# Product data sheet

Specifications



## analog output module, Modicon TM5, 4O, +/-10V, 0 to 20mA, 16bits

TM5SAO4H

### Main

Range of product	Modicon TM5
Product or component type	Analog output module
Analogue output number	4
Analogue output resolution	15 bits + sign, +/- 10 V 15 bits, 0...20 mA

### Complementary

Range compatibility	Modicon M258 Modicon LMC058
Product compatibility	Logic controller Motion controller
Analogue output type	Current 0...20 mA Voltage +/- 10 V
Measurement resolution	305.176 $\mu$ V, +/- 10 V 610.352 nA, 0...20 mA
Colour	White
Response time	$\leq$ 1 ms
Minimum output impedance	1 Ohm
Sampling duration	50 $\mu$ s
Measurement error	$<$ 0.04 % of full scale +/- 10 V at 25 °C $<$ 0.04 % of full scale 0...20 mA at 25 °C
Temperature coefficient	0.01 %FS/°C, analogue output type: current 0.01 %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	0.025 kg
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## Environment

Standards	IEC 61131-2 CSA C22.2 No 213 UL 508 CSA C22.2 No 142
Product certifications	CSA C-Tick cULus GOST-R
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 IEC 61000-4-2 8 kV in air conforming to IEC 61000-4-2
Resistance to electromagnetic fields	1 V/m 2...2.7 GHz conforming to IEC 61000-4-3 10 V/m 80...2000 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	1.900 cm
Package 1 Width	5.900 cm
Package 1 Length	10.400 cm
Package 1 Weight	40.000 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	4.131 kg

# Contractual warranty

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Warranty

18 months



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

[Environmental Disclosure](#)

[Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard

No

Packaging without single use plastic

Yes

[EU RoHS Directive](#)

Pro-active compliance (Product out of EU RoHS legal scope)

REACH Regulation

[REACH Declaration](#)

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](http://www.P65Warnings.ca.gov)

PVC free

Yes

## Use Again

### Repack and remanufacture

End of life manual availability

[End of Life Information](#)

Take-back

No

WEEE Label

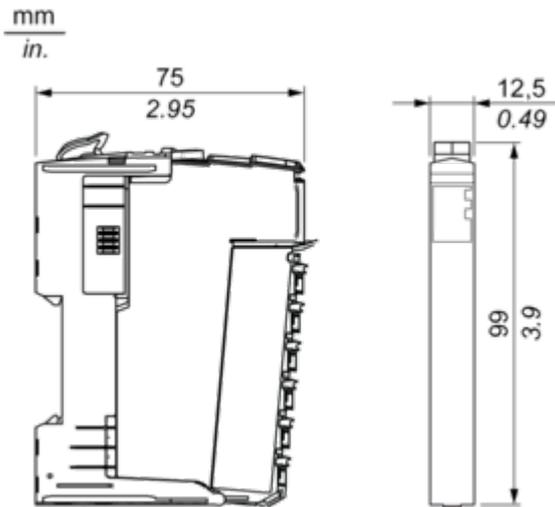
 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

TM5 Slice

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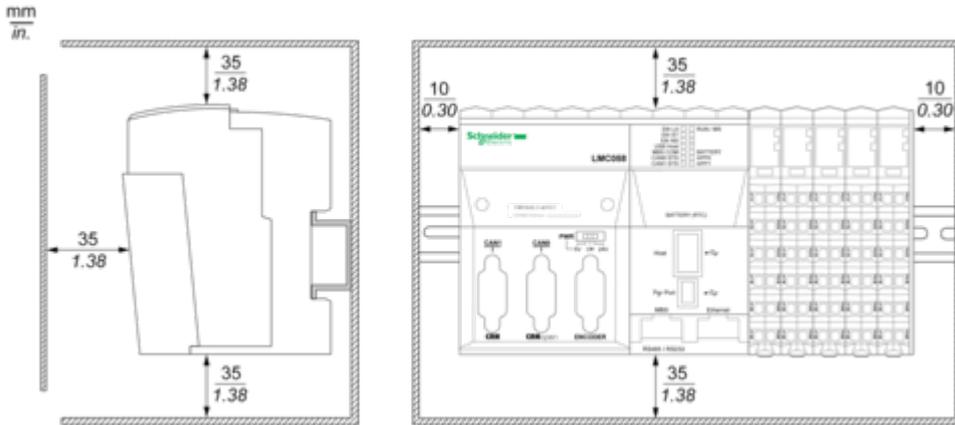
Dimensions



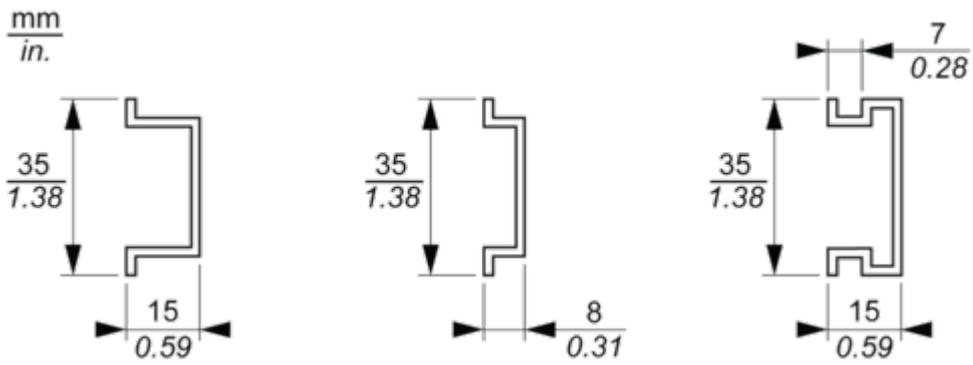
Mounting and Clearance

TM5 System

Spacing Requirements



Mounting on a DIN Rail



Connections and Schema

**TM5 System Wiring Recommendations**

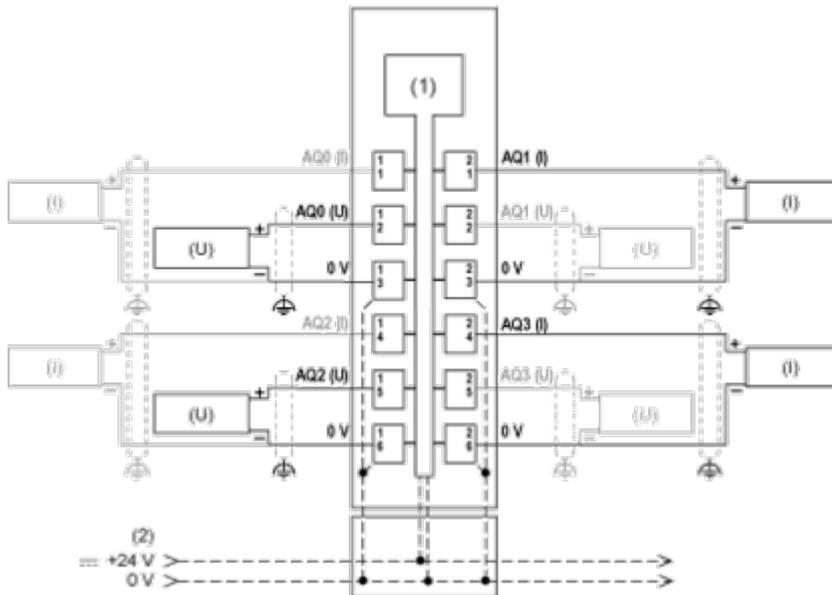
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**Wire Sizes to Use with the Removable Spring Terminal Blocks**

 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

Electronic Module 4AO  $\pm 10V/0-20mA$  16 Bits

Wiring Diagram



(1) Internal electronics

(2) 24 Vdc I/O power segment integrated into the bus bases

(I) Current

(U) Voltage