Product data sheet

Specifications



Safety dc discrete input module, Modicon TM5, digital 4I, 24V sink

TM5SDI4DFS

Main

Range of product	Modicon TM5
Product or component type	Safety dc discrete input module
Discrete input number	4
Discrete input voltage	24 V

Complementary

Range compatibility	PacDrive LMC motion controller
Product compatibility	PacDrive LMC Eco PacDrive LMC Pro PacDrive LMC Pro 2
Discrete input voltage type	DC
Input voltage limits	20.4...28.8 V
Discrete input logic	Sink
Discrete input current	3.45 mA
Input impedance	7 kOhm
Colour	Red
Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V
Input filtering	<= 500 ms configurable by software <= 150 ms hardware
Protection type	Short-circuit protection Overload protection
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Maximum voltage drop	<0.6 V at 100 mA
Maximum supply current for sensors	300 mA
Maximum power consumption in W	1.25 W for internal 0.32 W for bus
Local signalling	1 LED green for power supply 1 LED red for power supply 2 LEDs red for safety status 4 LEDs green/red for input status
Electrical connection	2 wires

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Marking	CE
Safety level	SIL 3 conforming to IEC 61508 SIL 3 conforming to IEC 62061 PL = e conforming to EN 13849-1
Safety reliability data	MTTFd > 100 years PFD < 1E-5 PFH < 1E-9
Net weight	0.025 kg

Environment

Standards	UL 508 IEC 62061 IEC 61508 EN 13849-1 IEC 61131-2 CSA C22.2 No 142
Product certifications	GOST-R cULus CSA
Ambient air temperature for operation	-10…50 °C (vertical installation) -10…55 °C (horizontal installation)
Ambient air temperature for storage	-40…70 °C
Relative humidity	5…95 % without condensation
IP degree of protection	IP20 conforming to EN 60529
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
Electromagnetic compatibility	Electrostatic discharge immunity test, 4 kV on contact conforming to EN/IEC 61000-4-2 Electrostatic discharge immunity test, 8 kV in air conforming to EN/IEC 61000-4-2 Susceptibility to electromagnetic fields, 10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3 Electrical fast transient/burst immunity test, 1 kV I/O conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test, 1 kV shielded cable conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test, 2 kV power lines conforming to EN/IEC 61000-4-4 1.2/50 µs shock waves immunity test, 0.5 kV differential mode conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test, 1 kV common mode conforming to EN/IEC 61000-4-5 Conducted RF disturbances conforming to EN/IEC 61000-4-6 Conducted and radiated emissions conforming to CISPR 11

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	51.0 g
Package 1 Height	3 cm
Package 1 width	6 cm
Package 1 Length	10.5 cm
Unit Type of Package 2	S02
Number of Units in Package 2	50
Package 2 Weight	2.75 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 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) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
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
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

Contractual warranty

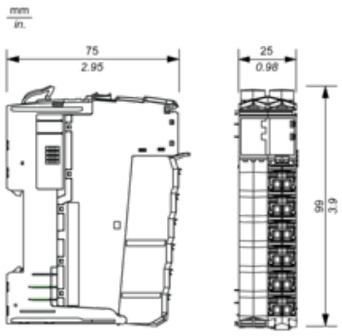
Warranty	18 months

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Dimensions Drawings

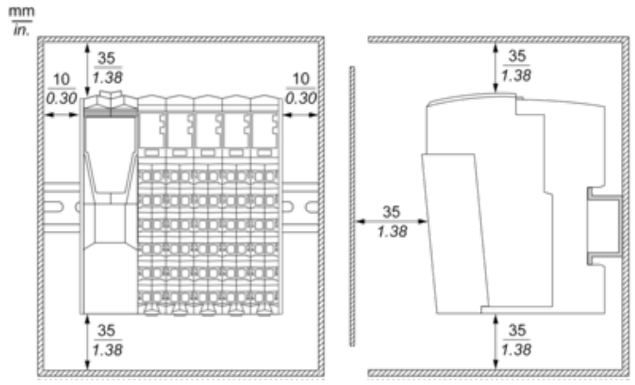
TM5 Slice

Dimensions

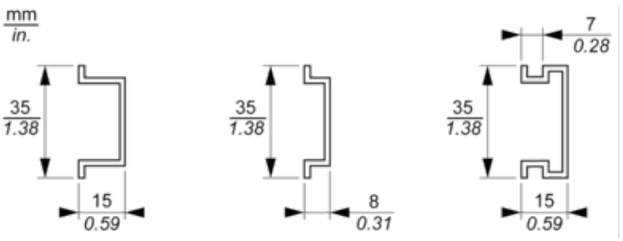


TM5 Safety System

Spacing Requirements



Mounting on a DIN Rail



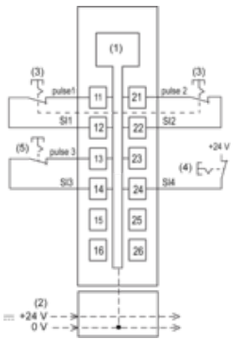
TM5 System Wiring Recommendations

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 4DI 24 Vdc Sink 2 Wires

Wiring Diagram



(1) Internal electronics

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

(3) 2-wire sensor

(4) single wire sensor, external power supply

(5) single wire sensor, internal power supply