TN-5305 Series

EN 50155 5-port IP67 unmanaged Ethernet switches

Features and Benefits

- 10/100BaseT(X), 4-pin M12 (D-coded), F/H duplex mode, and auto MDI/MDI-X connection

- IP67-rated housing protection

- Power input: 12 to 45 VDC, 18 to 30 VAC

- Complies with all EN 50155 mandatory test items[1]

- -40 to 75°C operating temperature range (-T models)

Certifications

EN 50155   EN 50121-4   C E   FC

Introduction

The TN-5305 Series Ethernet switches are IP67-rated for tough industrial applications. By using M12 connectors, you can rest assured that Ethernet cables will connect tightly to the switch, and will be robust enough to protect your applications from external disturbances, such as the vibration and shock encountered in the transportation industry.

The space-saving TN-5305 switches can be mounted virtually anywhere, and wide operating temperature (-40 to 75°C) models are also available for use in the most extreme weather conditions. TN-5305 Series Ethernet switches comply with a portion of EN 50155 specifications, covering operating temperature, power input voltage, surge, ESD, and vibration, making the switches suitable for a variety of industrial applications.

Specifications

Ethernet Interface

10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	5
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control

Power Parameters

Input Current	0.1 A @ 24 VDC, 0.08 A @ 36 VDC
Input Voltage	18 to 30 VAC (47 to 63 Hz) 24 to 36 VDC
No. of Power Inputs	1
Operating Voltage	18 to 30 VAC 12 to 45 VDC
Power Connector	M12 A-coded male connector

Physical Characteristics

Housing	Plastic top cover, metal bottom plate
IP Rating	IP67

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1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, click here: www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Dimensions	60 x 125 x 29.6 mm (2.36 x 4.92 x 1.09 in)
Weight	Packaged: 270 g (0.56 lb)
Installation	DIN-rail mounting (with optional kit) Wall mounting

Environmental Limits

Operating Temperature	TN-5305: -25 to 60°C (-13 to 140°F) TN-5305-T: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Altitude	2000 m

Standards and Certifications

Freefall	IEC 60068-2-32
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1, EN 50155 IEC 60068-2-14, EN 50155 IEC 60068-2-2, EN 50155 IEC 60068-2-30, EN 50155
International Approval	RCM
Railway	EN 50121-4 EN 50155
Railway Fire Protection	EN 45545-2
Safety	EN 60950-1 UL 508
Salt Spray Test	IEC 60068-2-11, EN 50155
Shock	IEC 60068-2-27, IEC 61373, EN 50155
Vibration	IEC 60068-2-64, IEC 61373, EN 50155

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	3,451,678 hrs
Standards	Telcordia SR332

Warranty

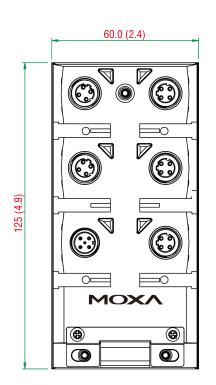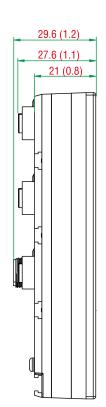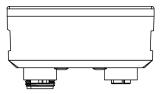|	
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x TN-5305 Series switch
Installation Kit	1 x panel-mounting kit
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)

Top View

Front View

Side View

Ordering Information

Model Name	PoE, 10/100BaseT(X) Ports, M12 D-Coded Female Connector	10/100BaseT(X) Ports, M12 D-Coded Female Connector	Power Input	Input Voltage	Operating Temp.
TN-5305	–	5	Single input	24/36 VDC, 18 to 30 VAC	-25 to 60°C
TN-5305-T	–	5	Single input	24/36 VDC, 18 to 30 VAC	-40 to 75°C

Accessories (sold separately)

Cables

CBL-M12(FF5P)/OPEN-100 IP67	A-coded M12-to-5-pin power cable, IP67-rated 5-pin female M12 connector, 1 m
CBL-M12D(MM4P)/RJ45-100 IP67	M12-to-RJ45 cable, IP67-rated, 1 m
CBL-M12DMM4PM12DMM4P-BK-100-IP67	M12-to-M12 Cat-5E STP Ethernet cable, 4-pin D-coded M12 connector, IP67, 1 m

Connectors

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M12D-4PMM-IP67	M12 D-coded connector, QUICKON type, 4-pin male, IP67
M12D-4P-IP68	D-coded screw-in sensor connector, male, IP68
M12A-5P-IP68	A-coded screw-in sensor connector, female, IP68, 4.05 cm

M12 Connector Caps

A-CAP-M12F-M	Metal cap for M12 female connector
A-CAP-M12M-M	Metal cap for M12 male connector

DIN-Rail Mounting Kits

DK-M12-305	DIN-rail mounting kit for EDS-305-M12