

TN-5800A 系列

EN 50155 16/16+2G 連接埠 Layer3 Gigabit 網管型乙太網路交換器



特色與優點

- Layer 3 路由可與多個 LAN 通訊
- 4 個快速乙太網路連接埠和 2 個 Gigabit 連接埠，具備可選式繞道功能
- 隔離式電源，電源供應範圍為 24 至 110 VDC
- 符合所有 EN 50155 規範強制性測試項目¹
- -40°C 至 75°C 操作溫度範圍
- 支援 Turbo Ring 和 Turbo Chain (復原時間 <20 毫秒 @ 250 台交換器)，以及透過 STP/RSTP/MSTP 協議支援網路備援

認證



簡介

ToughNet TN-5800A 系列交換器是高效能 M12 Layer 3 乙太網路交換器，支援 Layer 3 路由，適用於跨網域佈署。TN-5800A 系列採用 M12 接頭和其他圓形連接器確保在環境干擾（例如：振動和衝擊）下，還是有緊密、穩固的連線能力及可靠性。TN-5800A 系列交換器提供隔離式電源，具有 24 到 110 VDC 電源輸入範圍，可讓您在全球各地可以使用相同型號。

此外，TN-5800A 系列交換器提供最多 16 個快速乙太網路 M12 連接埠，搭配 4 個繞道連接埠，以及 2 個具有繞道功能的 Gigabit 乙太網路連接埠。此外，操作溫度範圍為 -40 到 75°C，IP54 等級防水防塵機殼，適合應用在嚴苛環境中。TN-5800A 系列乙太網路交換器符合 EN 50155 規範中有關操作溫度、電源輸入電壓、突波、ESD 和振動的強制要求，並且採用敷形塗層和隔離式電源，讓這台交換器更適合用在各種工業應用。

附加特色與優點

- Layer3 交換功能可將大型網路分成階層式子網路，便於資料和資訊在網路間進行傳輸
- 領先業界的 EN 50155 L3 乙太網路交換器，適合軌道車輛應用
- DHCP Option 82 依據不同的政策配置 IP 位置
- Turbo Ring、Turbo Chain，以及透過 STP/RSTP/MSTP 協議支援網路備援
- IGMP 和 GMRP，用於篩選多播流量
- IEEE 802.1Q VLAN 以及 GVRP，用來簡化網路規劃
- 支援 EtherNet/IP 和 Modbus TCP 工業級乙太網路通訊協定
- QoS (IEEE 802.1p/1Q 和 ToS/DiffServ) 可將即時流量進行分類及排序
- IEEE 802.3ad、LACP 提供最佳化頻寬使用率
- 支援 TACACS+、SNMPv3、IEEE 802.1X、HTTPS 和 SSH，強化網路安全
- SNMPv1/v2c/v3，適用不同層級的網路管理
- RMON 提供主動且有效率的網路監控
- 頻寬管理可預防無法預測的網路狀態
- 鎖定連接埠，僅允許授權的 MAC 位址進行存取
- 可用連線埠鏡像進行線上除錯
- 發生狀況時，可自動透過 Email 和繼電器輸出告警
- 線路切換快速恢復
- LLDP 在網路管理軟體中可用來進行自動拓撲探索
- 可透過網頁瀏覽器、Telnet/序列主控台、及 Windows 程式進行設定
- 面板安裝或鋁軌安裝
- 迴圈保護，防止網路迴圈

規格

Input/Output Interface

Alarm Contact Channels

2 x relay output in one M12 A-coded 5-pin male connector with current carrying capacity of 1 A @ 30 VDC

1. 此產品適合用於符合 EN 50155 規範的軌道車輛應用。若需更詳細的說明，請參照：www.moxa.com/doc/specs/EN_50155_Compliance.pdf

Ethernet Interface

10/100/1000BaseT(X) Ports (M12 X-coded 8-pin female connector with bypass relay)	TN-5818A-2GTXPB Series: 2
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	12
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector with bypass relay)	4
Standards	IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1X for authentication IEEE 802.3 for 10BaseT TN-5818A-2GTXPB Series: IEEE 802.3ab for 1000BaseT(X) IEEE 802.3ad for Port Trunk with LACP IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control

Ethernet Software Features

Filter	802.1Q, GMRP, GVRP, IGMP v1/v2/v3, Port-based VLAN, QinQ VLAN, Static Multicast
Configuration Options	Command Line Interface (CLI), Command Line Interface (CLI) through Serial/Telnet/SSH, Web Console (HTTP/HTTPS), Windows Utility
Industrial Protocols	EtherNet/IP Adapter (Slave), Modbus TCP Server (Slave)
Management	Back Pressure Flow Control, DHCP Option 66/67/82, Flow control, HTTP, IPv4, LLDP, Port Mirror, QoS/CoS/ToS, RARP, RMON, SMTP, SNMP Inform, SNMPv1/v2c/v3, Syslog, Telnet
MIB	Bridge MIB, Ethernet-like MIB, MIB-II, P-BRIDGE MIB, Q-BRIDGE MIB, RMON MIB Groups 1, 2, 3, 9, RSTP MIB
Multicast Routing	DVMRP, PIM-DM
Redundancy Protocols	Link Aggregation, RSTP, STP, Turbo Chain, Turbo Ring v1/v2
Routing Redundancy	VRRP
Security	Broadcast storm protection, HTTPS/SSL, Port Lock, RADIUS, Rate Limit, SSH
Time Management	IEEE 1588 PTP v1/v2, NTP Server/Client, SNTP

Switch Properties

IGMP Groups	256
Max. No. of VLANs	64
Priority Queues	4
VLAN ID Range	VID 1 to 4094

LED Interface

LED Indicators	STATE, PWR1, PWR2, FAULT, 10/100/1000M
----------------	--

Serial Interface

Console Port	M12 A-coded male connector
--------------	----------------------------

Power Parameters

Input Current	TN-5816A Series: 1.1 A @ 24 VDC, 0.23 A @ 110 VDC TN-5818A Series: 1.24 A @ 24 VDC, 0.24 A @ 110 VDC
Input Voltage	24/36/48/72/96/110 VDC

No. of Power Inputs	2
Operating Voltage	16.8 to 137.5 VDC
Overload Current Protection	Supported
Power Connector	M23 connector
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP54
Dimensions	250 x 181.4 x 115 mm (9.84 x 7.14 x 4.53 in)
Weight	TN-5816A Series: 2,290 g (5.62 lb) TN-5818A Series: 3,160 g (6.97 lb)
Installation	DIN-rail mounting (optional), Wall mounting (standard)
Protection	PCB conformal coating

Environmental Limits

Operating Temperature	-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

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
Freefall	IEC 60068-2-31
Radio Frequency	FCC
Railway	EN 50121-4, EN 50155, IEC 60571
Railway Fire Protection	EN 45545-2
Safety	EN 60950-1, UL 508
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	TN-5816A Series: 577,026 hrs TN-5818A Series: 525,091 hrs
Standards	Telcordia SR332

Warranty

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

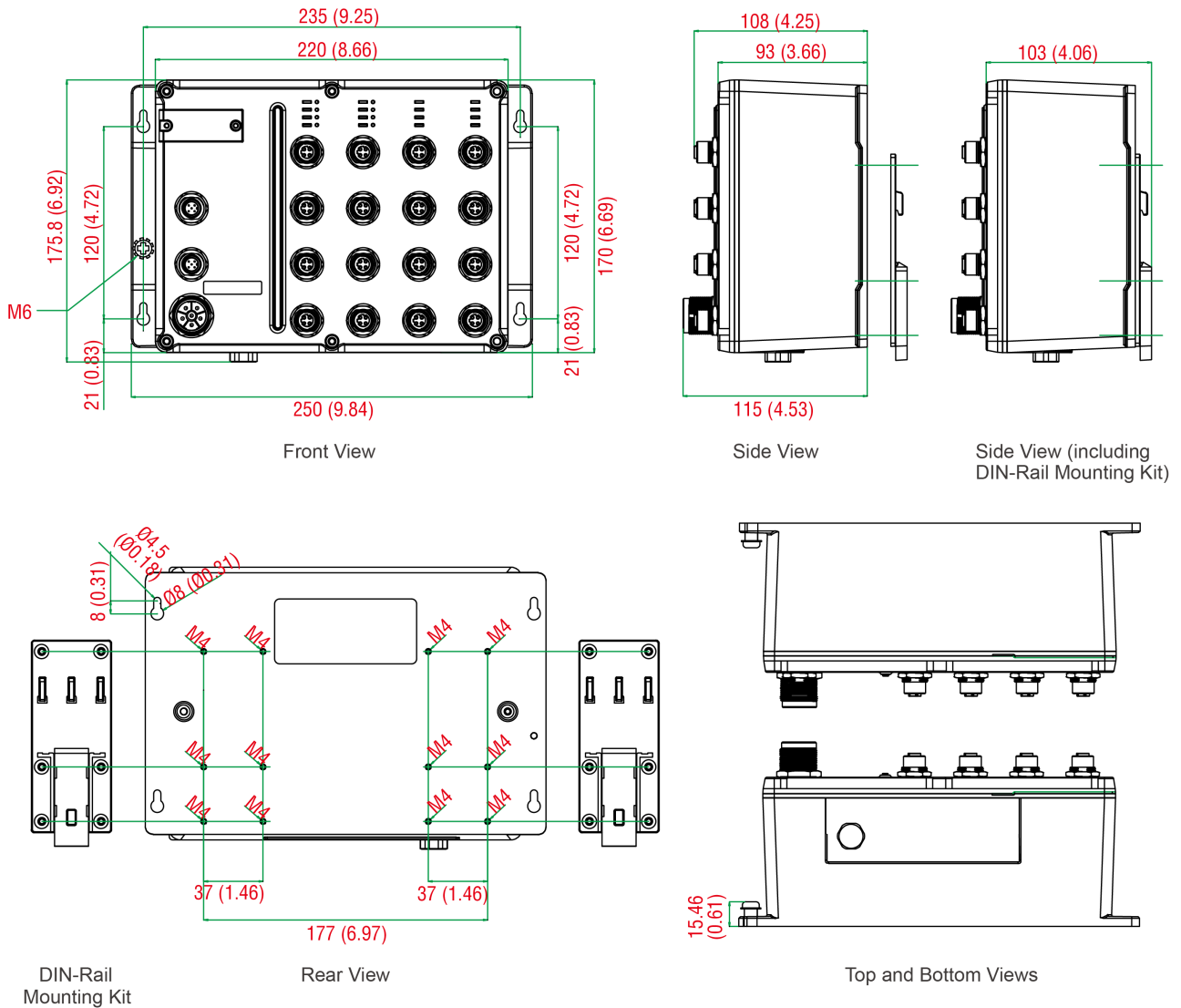
Package Contents

Device	1 x TN-5800A Series switch
Cable	1 x M12-to-DB9 console port
Installation Kit	2 x cap, female, plastic, for M12 port 1 x wall-mounting kit
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card

尺寸

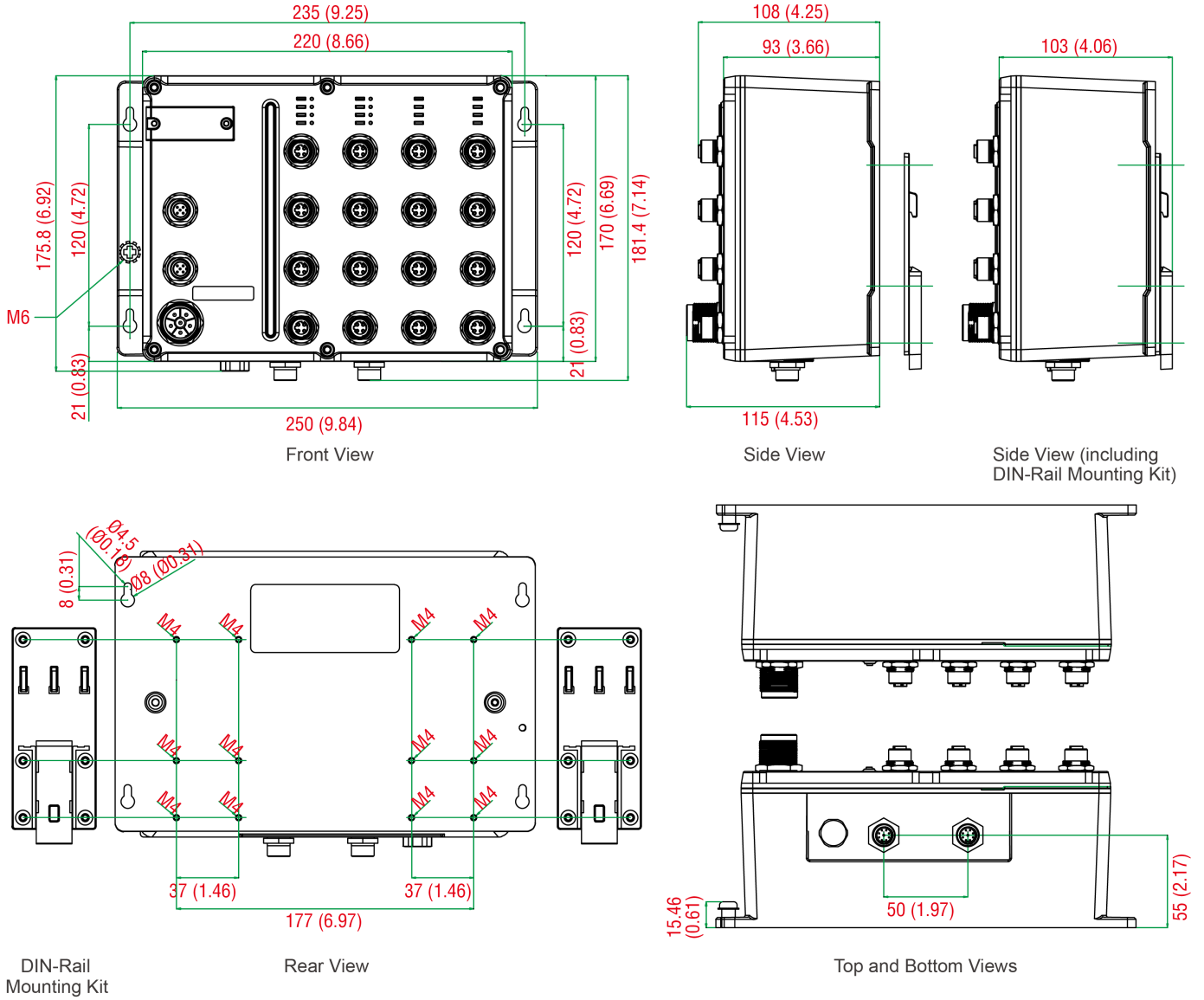
TN-5816A Series

單位：公釐 (英吋)



TN-5818A Series

單位：公釐（英吋）



訂購資訊

Model Name	10/100/1000BaseT(X) Ports, M12 X-coded 8-pin Female Connector with Bypass Relay	10/100BaseT(X) Ports, M12 D-Coded Female Connector with Bypass Relay	10/100BaseT(X) Ports, M12 D-Coded Female Connector	Power Input	Input Voltage	Conformal Coating
TN-5816ABP-WV-T	-	4	12	Redundant dual inputs	24/36/48/96/110 VDC	-
TN-5816ABP-WV-CT-T	-	4	12	Redundant dual inputs	24/36/48/96/110 VDC	P
TN-5818A-2GTXBP-WV-T	2	4	12	Redundant dual inputs	24/36/48/96/110 VDC	-
TN-5818A-2GTXBP-WV-CT-T	2	4	12	Redundant dual inputs	24/36/48/96/110 VDC	P

配件 (選購)

Storage Kits

ABC-01-M12	Configuration backup and restoration tool with M12 connector for managed Ethernet switches and wireless APs/Bridges/Clients, 0 to 60°C operating temperature
------------	--

Cables

CBL-M12D(MM4P)/RJ45-100 IP67	M12-to-RJ45 cable, IP67-rated, 1 m
CBL-M23(FF6P)/OPEN-BK-100 IP67	M23 to 6-pin power cable, IP67-rated female 6-pin M23 connector, IP67, 1 m
CBL-M12DMM4PM12DMM4P-BK-100-IP67	M12-to-M12 Cat-5E STP Ethernet cable, 4-pin D-coded M12 connector, IP67, 1 m
CBL-M12XMM8P-Y-100-IP67	M12-to-M12 Cat-5 UTP Ethernet cable, 8-pin male X-coded crimp type M12 connector, IP67, 1 m Applicable Models: TN-5818A-2GTXBP-WV-T TN-5818A-2GTXBP-WV-CT-T
CBL-M12XMM8P-Y-300-IP67	M12-to-M12 Cat-5 UTP Ethernet cable, 8-pin male X-coded crimp type M12 connector, IP67, 3 m Applicable Models: TN-5818A-2GTXBP-WV-T TN-5818A-2GTXBP-WV-CT-T
CBL-M12XMM8PRJ45-Y-200-IP67	M12-to-RJ45 Cat-5 UTP Ethernet cable, 8-pin male X-coded crimp type M12 connector, IP67, 2 m Applicable Models: TN-5818A-2GTXBP-WV-T TN-5818A-2GTXBP-WV-CT-T

Connectors

M12A-5P-IP68	A-coded screw-in sensor connector, female, IP68, 4.05 cm
M12D-4PMM-IP67	M12 D-coded connector, QUICKON type, 4-pin male, IP67
M12D-4P-IP68	M12 D-coded screw-in sensor connector, male, IP68
A-PLG-WPM23-01-IP67	M23 cable connector, female 6-pin, crimp type, IP67
M12X-8PMM-IP67-HTG	X-coded screw-in Gigabit Ethernet connector, 8-pin male M12 connector, IP67 Applicable Models: TN-5818A-2GTXBP-WV-T TN-5818A-2GTXBP-WV-CT-T

DIN-Rail Mounting Kits

DK-DC50131-01	DIN-rail mounting kit, 6 screws
---------------	---------------------------------

M12 Connector Caps

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

© Moxa Inc. 版權所有. 2018 年 11 月 12 日更新。

未經 Moxa Inc. 明確書面許可，不得以任何方式複製或使用本文件及其任何部分。產品規格如有變更，恕不另行通知。請至本公司官網了解最新的產品資訊。