Industrial Ethernet Switch - FL NAT 2208 - 2702882

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Managed NAT Switch 2000, 8 RJ45 ports 10/100 Mbps, degree of protection: IP20, PROFINET Conformance-Class B, 1:1-NAT, Virtual NAT, IP-Masquerading

Your advantages

- Suitable for PROFINET and EtherNet/IP™ networks
- Easy and fast startup and commissioning with the FL NETWORK MANAGER software
- Configuration memory
- RSTP
- DHCP client, DHCP server (pool-based and port-based), DHCP option 82
- VLANs
- MRP (client and master)
- Web-based management, SNMP
- Slim design
- -40°C ... +70°C ambient temperature
- Flexible distribution into several LAN and WAN areas
- 1:1 NAT, virtual NAT, IP masquerading, port forwarding

Key Commercial Data

Packing unit	1 pc
GTIN	4 055626 384825
GTIN	4055626384825

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Dimensions

Width	45 mm
Height	130 mm

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Dimensions

Depth	115 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Air pressure (operation)	79 kPa ... 108 kPa up to 2000 m above mean sea level (Without derating)
Air pressure (storage/transport)	79 kPa ... 108 kPa up to 2000 m above mean sea level (Without derating)

Interfaces

Interface	Ethernet (RJ45)
No. of ports	8 (RJ45 ports)
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Copper
Transmission speed	10/100 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status

Function

Basic functions	Store-and-forward switch, complies with IEEE 802.3
Management	Web-based management (HTTP/HTTPS)
	SNMPv1/v2/v3
	Command-line interface (Telnet, SSH)
Diagnostic functions	RMON History
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps
	N:1-Portmirroring
	ACD (Address Conflict Detection)
	SysLog
	CRC-Surveillance
Filter functions	Quality of Service (8 priority classes)
	Port-Priorisierung
	VLAN (up to 32 VLANs)
	IGMP Snooping/Querier (v1/v2)
	Auto-Query-Port
	Extended Multicast Filtering
NAT functions	1:1-NAT
	Virtual-NAT
	IP-Masquerading

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Function

	Port forwarding
Redundancy	MRP (Media Redundancy Protocol)
	RSTP (Rapid Spanning Tree Protocol)
	FRD (Fast Ring Detection)
	Large Tree Support
	LACP (Link Aggregation Control Protocol)
MAC address table	8k
IP parameterization	DHCP-Client
	DHCP Option 82 (Relay Agent)
	DHCP server (pool-based, port-based)
	BootP
PROFINET device function	PROFINET device
PROFINET conformance class	Conformance-Class B
Time synchronization	SNTP (Simple Network Time Protocol)
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Ethernet port (Link/Activity and Speed)
Signal contact control voltage	typ. 24 V DC

Network expansion parameters

Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m

Supply voltage

Supply voltage	24 V DC (redundant)
Residual ripple	3.6 V_{PP} (within the permitted voltage range)
Supply voltage range	9 V DC ... 57 V DC
Typical current consumption	185 mA (at U_S = 24 V DC and 25 °C ambient temperature)
Max. current consumption	1.3 A ()
Current consumption	190 mA

General

Mounting type	DIN rail
Type AX	Book type
Net weight	260 g
Housing material	Polycarbonate fiber reinforced
Note	Support by phone or on-site (fee is charged)
Special properties	1:1-NAT, Virtual NAT, IP-Masquerading
MTTF	494.02 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	235.18 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	29.73 Years (SN 29500 standard, temperature 70 °C, operating cycle 100 % (7 days a week, 24 hours a day))

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Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.08 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section flexible min.	0.08 mm²
Conductor cross section flexible max.	1.5 mm²
Conductor cross section AWG min.	28
Conductor cross section AWG max.	16
Stripping length	7 mm

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Free fall in accordance with EN 61131-2
Test result	Carried out in packaging, 1 m height, 5 tests
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Vibration (storage/transport)	5g, 150 Hz, in acc. with IEC 60068-2-6
Free from substances that could impair the application of coating	Yes
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz
Shock (operation)	30g ()
ATEX	# II 3 G Ex ec IIC T4 Gc
IECEx	Ex ec IIC T4 Gc
UL, USA	UL 60079-0, Ed.6 / UL 60079-7, Ed.5
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4 Class I, Zone 2, IIC T4
UL, Canada	CSA C22.2 NO.60079-0, Ed.3 / CSA C22.2 NO.60079-7:16

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Approvals

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DNV GL / LR / ABS / BSH / RINA / UL Listed / cUL Listed / EAC / NK / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

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Approvals

Approval details

DNV GL	https://approvalfinder.dnvgl.com/	TAA00000YV
LR	http://www.lr.org/en	17/20056
ABS	http://www.eagle.org/eagleExternalPortalWEB/	17-HG1592765-1-PDA
BSH	http://www.bsh.de/de/index.jsp	Nr. 966
RINA	http://www.rina.org/en	ELE130419XG
UL Listed	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Listed	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
EAC		RU*-DE.*.B.00741/19
NK	http://www.classnk.or.jp/hp/en/	TA19464M
cULus Listed		

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