

brings Ethernet and Fieldbus on the rails



- Industrial useful Ethernet Switch for top-hat rail
- Modular Ethernet switch extension
- Integrateable serial Interface
- Integrateable fieldbus Interface
- Small space requirement
- Easy installation and configuration
- Low cost



■ The Design

is based on the need for an easy installation technology for Ethernet applications on the field level. Connected with this was the aim of integrating the field bus protocol conversion into this installation technology in order to obtain a space-saving and economical solution. Thus, with netSWITCH a pure Ethernet installation can be achieved which can be extended if desired by means of fieldbus transfers or serial interfaces. This makes possible an optimum integration of field devices into Ethernet networks especially for vertical integration of automation solutions on a common management level.

■ The netSWITCH Series

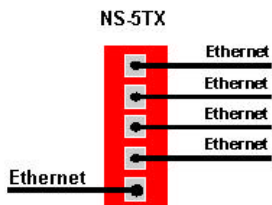
are based on a modularly structured Ethernet and fieldbus interface connection which can be assembled individually on a common top-hat rail.

This basis for this is a netSWITCH coupler which extends as a header station of the whole network to all downstream fieldbus modules. With the netSWITCH fieldbus modules, there are available, besides the standard field bus connections such as PROFIBUS, DeviceNet and CANopen, also serial interfaces such as RS-232 or RS-422/485. These netSWITCH fieldbus connections are based on the modules of the netTAP series.



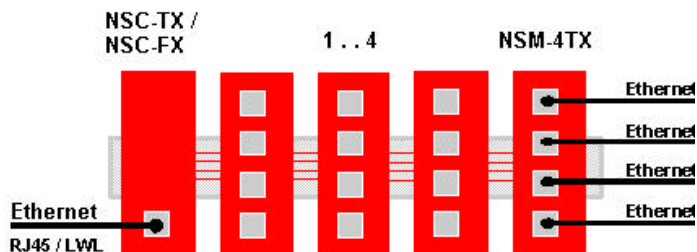
■ netSWITCH Ethernet Installations

are achieved without much effort with the top-hat rail modules NS-5TX. These modules are themselves a complete Ethernet switch with RJ45 connections and can be utilized as "stand Alone" solutions.



■ Expansion into modular Ethernet Switch

If it is desired to increase the number of Ethernet connections without using a lot of cabling, the modules NSC-TX and NSM-4TX are available as Ethernet couplers for twisted-pair or fiber optics. These can be extended with up to four Ethernet switch modules NSM-4TX to 17 Ethernet Ports. The modules are interconnected by means of a data bus.

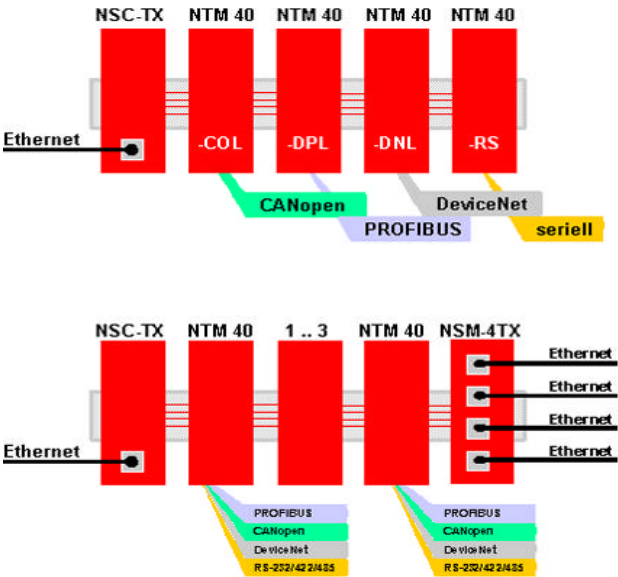


Areas of Application



■ The netTAP Fieldbus Modules

ensure the interface of the respective fieldbus protocols for the Ethernet.
Up to four netTAP fieldbus modules can be added to a netSWITCH coupler.
Each netTAP fieldbus possesses a fieldbus Master-Link connection on its front. The connection to the netSWITCH coupler is achieved via a common data bus.
The netTAP fieldbus modules can also be operated mixed with the NSM 4-TX Ethernet switch.



■ The Configuration of the netTAP Fieldbus Modules

is carried out using the SYCON.net configurator. This can be connected to the netTAP fieldbus modules over Ethernet, an independent serial diagnostic installation or via Bluetooth during operation and runs on Windows PCs.



Information

The NS-STX can also be operated without data bus as an individual device.

The NTM 40 fieldbus module and the NSM-4TX switch module can only be used together with a coupler and the corresponding data bus. On the data buses is shown how many netSWITCH modules can be operated at one netSWITCH coupler.

The PROFIBUS-DP, CANopen and DeviceNet field bus protocols are implemented as Master-Link, which means that exactly one field bus Slave device can be connected to a NTM 40.

The Modbus, 3964R and ASCII protocols are available with the NTM 40-RS.

Productoverview

Switch	Front connection	Data bus
NS-STX	5 x RJ45	no
Coupler	Front connection	Data bus
NSC-TX	1 x RJ45 (100BaseT)	yes
NSC-FX	1 x Fiber optics (100BaseF)	yes
Fieldbus Modul	Front connection	Data bus
NTM 40-DPL	PROFIBUS DP Master-Link	yes
NTM 40-COL	CANopen Master-Link	yes
NTM 40-DNL	DeviceNET Master-Link	yes
NTM 40-RS	Serial RS-232/422/485	yes
Switch Modul	Front connection	Data bus
NSM-4TX	4 x RJ45	yes
Data bus	Coupler	Switch Module
NSB-1M	1	1
NSB-2M	1	2
NSB-3M	1	3
NSB-4M	1	4
Accessories		
NT MEM	Memory expansion	
NT DIAG-BT	Diagnostic interface Bluetooth	
NT DIAG-RS	Diagnostic interface serial	

Technical Data

Ethernet	ANSI / IEEE 802.3 Konformität Transmission rate 10 / 100 Mbaud automatic detection Baudrate, Connection and Crossover 1024 MAC Adressen
Ethernet twisted pair	Interface 10 / 100 Base-T, potential free Plug connection RJ45 Plug
Ethernet Fiber Optics	Interface 10 / 100 Base-F potential free Duplex SC Plug connection
CANopen	Access to PDOs Data connection event-triggered remotely requested max. 1 Mbaud Transmission rate
DeviceNet	Implicit Messaging Data connection Polled I/O Change of state I/O Cyclic I/O 125 / 250 / 500KBaud Transmission rate
PROFIBUS-DP	Access to zykl. Process data Data connection Data_Exchange Transmission rate max. 12 Mbaud
Serial	Interface RS-232C, RS422, RS485 Potential separation Dependent on modul Bus termination can be switched on/off Transmission rate 50 bis 19,2 kbaud Connection Sub-D socket, 9pol. or free wire ends
Diagnostic connection	Wireless 2.4 GHz ISM band Serial RS232C non-isolated
LED displays	Device status, communication
Power supply	18 .. 30 VDC / 100 mA
Operating temperature	0 °C .. 50 °C
Dimensions	100 x 65 x 25 mm (H x T x B)
Protection type	IP 20
Installation	On top-hut rail DIN EN 60715
EMV	Noise immunity EN 61000-6-2 Radiated noise EN 55011 Kl. B

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