FNL – Fieldbus Network Link

Ethernet / PROFIBUS Gateway

- Description

FNL – for an optimum connection of fieldbuses and Ethernet networks up to 100 Mbit/s.

FNL – for communication transparency in automatic hierarchies, offering access to fieldbus devices from any arbitrary work station via Ethernet, Intranet or Internet.

FNL allows the connection to all PROFIBUS DP networks based on RS485 (up to 12 Mbit/s) and IEC-1158-2 for process automation (PA), and supports DP Master class 1 and class 2 on the basis of DP and DPV1 services.

On the fieldbus side, the following products are available:

- PROFIBUS DP/DPV1 Master class 1 and 2 up to 12 Mbit/s
- PROFIBUS PA Master on basis IEC 1158-2 (31.25 Kbit/s)

Various access options are offered on the network side:

OPC-Server
The OPC-Server allows direct connection of the FNL to all OPC-client-capable Windows applications. Today, OPC is supported by all common Scada, control, visualization, and process control systems. Some well-known examples are WIN CC, Siemens; FIX, Intellution; LabVIEW/BridgeVIEW from National Instruments or Intouch, Wonderware. Standard Windows applications like Visual Basic or Excel can easily be integrated via the "automation interface".

Programming Interface
For your own application developments, a programming interface is available under Windows NT/2000/XP. All PROFIBUS services DP/DPV1 Master class 1 and 2 are supported. Via the API-interface FNL can be accessed under all operating systems.

Compared to traditional solutions based on PC interfaces, FNL offers totally new aspects in the PC connection to fieldbuses:

- No more hardware/driver installation with its typical related problems.
- Access to the respective fieldbus from any arbitrary PC network.
- Trouble-free integration of lower automation levels into the control and design level.

FDT-1.2 Communication-DTM
The FDT technology is based on Microsoft's COM technology. FDT allows the standardized configuration of fieldbus devices via different bus systems like HART-Bus, Foundation fieldbus, PROFIBUS DP/PA or Ethernet.

By means of the communication DTM, DF PROFI or FNL – in combination with any FDT-1.2-capable container program – can be used for configuration of any PROFIBUS DP Slave.

Container programs are included in many process control systems. They are also available as stand-alone solutions, e.g. Pactware of the Pactware Association.

FNL – DP RS485

FNL – PA

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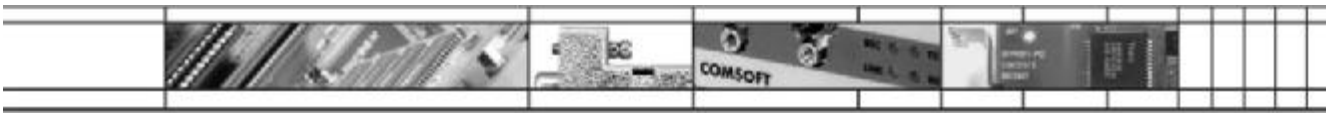

Technical Data

Interfaces	Ethernet	10/100BaseT
	PROFIBUS	RS485 (DB9) or IEC1158-2 (screw terminal)
	Serial	RS232 (screw terminal)
Baud Rates	Ethernet	max. 100 Mbit/s
	PROFIBUS RS485	max. 12 Mbit/s
	PROFIBUS IEC1158-2	31.25 Kbit/s
	RS232	19.2 Kbit/
Supported PROFIBUS Protocol Versions	DP/DPV1	Master class 1/2
	PA	Mono-Master

Order Numbers

Order No.	Item
4000-7-G 0 -3-*	FNL Hardware with Firmware
4	PROFIBUS DP/DPV1 Master, RS485, max. 12 Mbit/s
5	PROFIBUS PA Mono-Master, IEC1158-2, 31.25 Kbit/s
	PC-Software Interfaces for FNL
4000-7-3 M 4 -3-*	TMG i-tec DPE interface for Windows NT/2000/XP
4000-S-L M 6 -3-*	PROFIBUS DP/DPV1 OPC-Server for Windows NT/2000/XP
4000-S-L M 7 -3-*	FDT-1.2 Communication-DTM
4000-S-L T 8 -3-*	LabVIEW Driver
4000-S-L M 9 -3-*	DF PROFI compatible driver interface
	Additional Equipment
4000-7-0 0 1 -H	T-connector cable type A
4000-7-0 0 2 -H	Line termination type A
4000-7-0 0 3 -F	Plug-in power supply unit for FNL
4000-7-0 0 4 -F	Serial cable set for FNL
4000-7-0 0 5 -F	Ethernet cross-over cable
4000-7-0 0 S -H	Power supply 24V/0,65 A with power boost for up to 2 FNL
4000-7-0 1 S -H	Power supply 24V/2 A with power boost for up to 5 FNL

* Please complete the order number either with E for a documentation in English or D for a documentation in German.