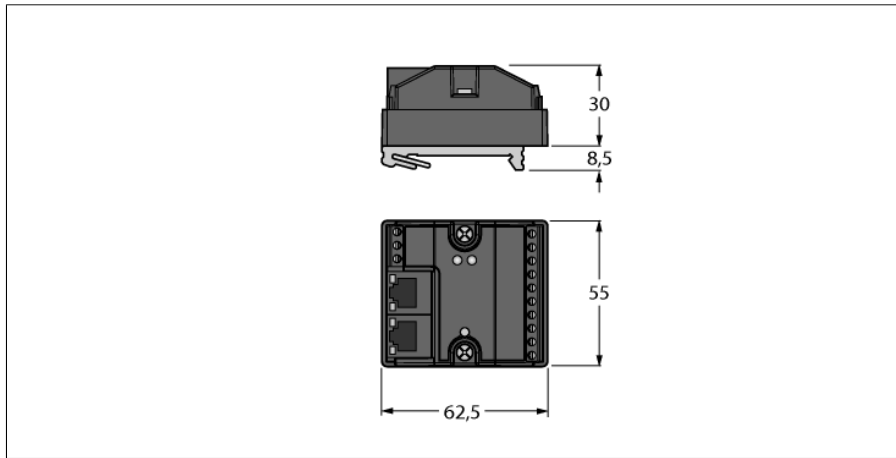


**Compact IP20 Multiprotocol Ethernet I/O Station**  
**4 Digital PNP Inputs and 4 Configurable Digital PNP Channels**  
**FEN20-4DIP-4DXP-DIN**



- EtherNet/IP™ Slave
- Modbus TCP Slave
- PROFINET Slave
- Integrated Ethernet Switch
- 10 Mbps / 100 Mbps supported
- 2 x RJ45 Sockets for Fieldbus Connection
- can be mounted on DIN rail
- 4 digital PNP inputs
- 4 configurable PNP channels, DI or DO
- 24 VDC
- 1 A outputs
- Degree of protection IP20

<b>Type code</b>	FEN20-4DIP-4DXP-DIN
Ident-No.	6931092
Ident-No (TUSA)	F6931092

<b>Number of channels</b>	8
Operating / load voltage	12...30 VDC
Operating current	100 mA
Electrical isolation	500V Galvanic Zone-Zone and Zone-Ethernet
Supply voltage	24 VDC
Power loss, typical	≤ 2.4 W
Voltage supply connection	screw terminals

<b>Inputs</b>	
Number of channels	8
Input voltage	24 VDC
Supply current	700 mA
Switching threshold	7V / 1.65mA
Low level signal voltage	< 7 VDC
High level signal voltage	7...30 VDC
Low level signal current	< 1.5 mA
High level signal current	> 2 mA
Input delay	2.5 ms
Max. input current	6 mA

<b>Outputs</b>	
Number of channels	4
Output voltage	12...30 VDC, short-circuit proof
Output current per channel	1 A
Output total current	4 A
Load type	Resistive, Inductive, Lamp Load
Short-circuit protection	yes

<b>System data</b>	
Transmission rate	10/100 Mbps; Full/Half Duplex; Auto Negotiation; Auto Crossing
Addressing modes Ethernet:	via Software
Connection technology Ethernet	2 x RJ45 Sockets
Protocol detection	automatic
Web server	192.168.1.254 (Default)
Service interface	Ethernet
Device Reset	via Push-button

<b>Modbus TCP</b>	
Addressing	Static IP, BOOTP, DHCP
Supported function codes	FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23
Simultaneous CIP connections	6
Input Data Size	max. 1 register
Input register start address	0
Output Data Size	max. 1 register
Output register start address	2048 (0x0800 hex)

**Compact IP20 Multiprotocol Ethernet I/O Station**  
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**EtherNet/IP™**

Addressing	acc. to EtherNet/IP™ specification
Quick Connect (QC)	< 150 ms
Device Level Ring (DLR)	supported
Simultaneous CIP connections	6

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**PROFINET**

Addressing	DCP
Conformance Class	B (RT)
MinCycleTime	1 ms
Fast Start-Up (FSU)	< 150 ms
Diagnostics	acc. to PROFINET alarm handling
Topology detection	supported
Automatic addressing	supported

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**LEDs Err**

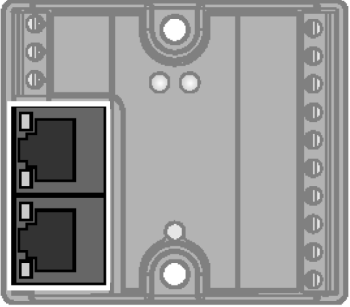

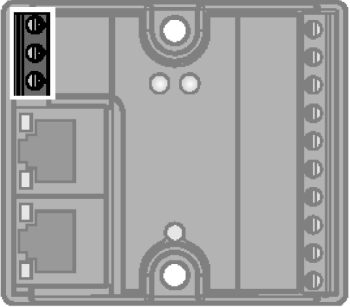

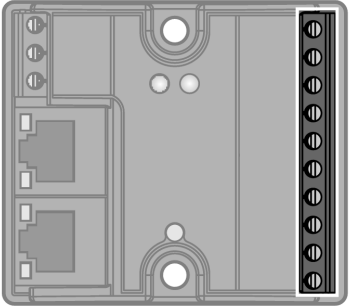
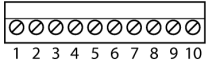
green: no error  
red: module error

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**Dimensions (W x L x H)**

Housing material	55x62.5x30mm
Operating temperature	Fiber-glass reinforced Polyamide (PA6-GF30)
Storage temperature	-40...70 °C
Protection class	-40...85 °C
Approvals	IP20
	CE, cULus

**Compact IP20 Multiprotocol Ethernet I/O Station**  
**4 Digital PNP Inputs and 4 Configurable Digital PNP Channels**  
**FEN20-4DIP-4DXP-DIN**

	<p><b>Ethernet</b>                  Fieldbus cable (example): RJ45S RJ45S 441-2M (Ident no. U-06842)</p>	 <p>12345678</p> <ul style="list-style-type: none"> <li>1 = TX +</li> <li>2 = TX -</li> <li>3 = RX +</li> <li>4 = n.c.</li> <li>5 = n.c.</li> <li>6 = RX -</li> <li>7 = n.c.</li> <li>8 = n.c.</li> </ul>
	<p><b>Power supply</b></p>	 <ul style="list-style-type: none"> <li>1 = ⊖</li> <li>2 = V1 -</li> <li>3 = V1 +</li> </ul>
	<p><b>I/O channels</b></p>	 <ul style="list-style-type: none"> <li>1 = V1 -</li> <li>2 = I/O 1</li> <li>3 = I/O 2</li> <li>4 = I/O 3</li> <li>5 = I/O 4</li> <li>6 = I5</li> <li>7 = I6</li> <li>8 = I7</li> <li>9 = I8</li> <li>10 = V<sub>OUT</sub>1 +</li> </ul>

**Compact IP20 Multiprotocol Ethernet I/O Station**  
**4 Digital PNP Inputs and 4 Configurable Digital PNP Channels**  
**FEN20-4DIP-4DXP-DIN**

**Process Data Mapping**

**Modbus TCP Register Mapping**

	Reg	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Inputs (RO)	0x0000	-	-	-	-	-	-	-	-	DI8	DI7	DI6	DI5	DI4	DI3	DI2	DI1
Status (RO)	0x0001	-	FCE	-	-	CFG	COM	V1 low	-	-	-	-	-	-	-	-	Diag Warn
Diag (RO)	0x0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I/O Diag
Outputs (RW)	0x0800	-	-	-	-	-	-	-	-	-	-	-	-	DO4	DO3	DO2	DO1
I/O Diag (RO)	0xA000	-	-	-	-	SCO4	SCO3	SCO2	SCO1	-	-	-	-	-	-	-	IGS

**EtherNet/IP™ Data Mapping**

INPUT	Word	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
	0	-	FCE	-	-	CFG	COM	V1 low	-	-	-	-	-	-	-	-	Diag Warn
	1	-	-	-	-	-	-	-	-	DI8	DI7	DI6	DI5	DI4	DI3	DI2	DI1
	2	-	-	Sched Diag	-	-	-	-	-	-	-	-	-	-	-	-	I/O Diag
	3	-	-	-	-	SCO4	SCO3	SCO2	SCO1	-	-	-	-	-	-	-	IGS
OUTPUT	Word	Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-	-	-	-	DO4	DO3	DO2	DO1

**PROFINET Process Data**

	Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Inputs	0	DI8	DI7	DI6	DI5	DI4	DI3	DI2	DI1
	1	-	-	-	-	-	-	-	-
Outputs	0	-	-	-	-	DO4	DO3	DO2	DO1
	1	-	-	-	-	-	-	-	-

**Key:**

DIx	Digital input x	COM	Communication error on internal module bus
DOx	Digital output x	CFG	I/O configuration error
IGS	Input group short-circuit	FCE	I/O-ASSISTANT Force Mode active
SCOx	Short-circuit output x	I/O Diag	I/O diagnostic detected
Diag Warn	Diagnostic at least on 1 channel	Sched Diag	Manufacturer-specific diagnostics configured and active
V1 low	Undervoltage V1	-	-