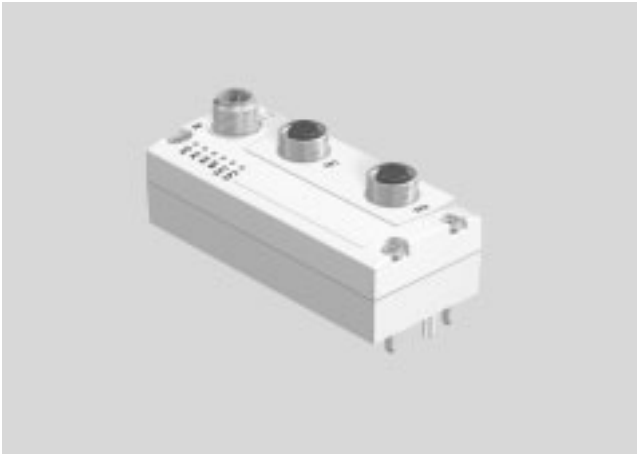
The bus node handles communication between the valve terminal and a higher-order PROFINET® master.

The module has basic diagnostic functions. It has 6 integrated LEDs for on-site display. A maximum of 64 byte inputs and 64 byte outputs are transmitted in the cyclic process image.



Application

Fieldbus interface

The bus connection is established via two M12 sockets, D-coded to IEC61076-2-101 with degree of protection IP65, IP67.

Both connections are equivalent 100BaseTX Ethernet ports (as per IEEE 802.3).

There is also an integrated switch function that enables free selection of the ports TP1/TP2 for PROFINET communication.

The voltage for the CTEU-PN bus node is supplied via an M12 plug, 5-pin, A-coded.

I-Port interface

The bus node supports two interfaces for connecting I-Port devices.

When mounting the bus node on a valve terminal (direct integration) only one interface is used.

When using the CTEU-PN bus node on the electrical sub-base CAPC (installation system CTEL),

both interfaces are available via the electrical sub-base.

General technical data		
Fieldbus interface		
Protocol		PROFINET RT
Function		Bus connection incoming/outgoing
Transmission rate	[Mbps]	100
Type		Ethernet
Connection type		2x socket
Connection technology		M12x1, D-coded to EN 61076-2-101
Number of pins/wires		4
Galvanic isolation		Yes
Internal cycle time		1 ms per 1 byte of user data
Inputs/outputs		
Max. address volume for inputs	[byte]	64
Max. address volume for outputs	[byte]	64

General data		
Device-specific diagnostics		System diagnostics
		Undervoltage
		Communication error
Additional functions		Conformance class C
		Fast start-up (FSU)
		LLDP
		MRP
		PROFINET IRT
		PROFIenergy
		SNMP
		Shared device
		Web servers
Configuration support		GSDML file
LED display	Product-specific	PS: Operating voltage for electronics and load supply
		X1: System status of module at I-Port 1
		X2: System status of module at I-Port 2
	Fieldbus-specific	NF: Network fault
		TP1: Network active port 1
		TP2: Network active port 2

Technical data – Electrical components		
Nominal operating voltage	[V DC]	24
Operating voltage range	[V DC]	18 ... 30
Intrinsic current consumption at nominal operating voltage	[mA]	Typically 80
Max. power supply	[A]	4
Power supply		
Function		Electronics and load
Connection type		Plug
Connection technology		M12x1, A-coded to EN 61076-2-101
Number of pins/wires		5

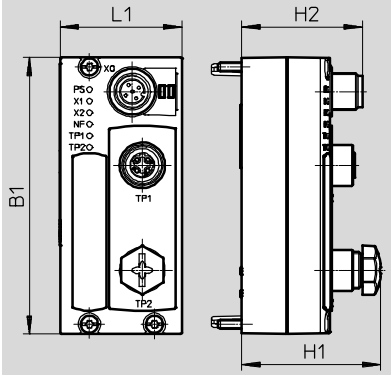
Technical data – Mechanical components		
Type of mounting		On electrical sub-base
		On electrical interface
Product weight	[g]	93
Grid dimension	[mm]	40
Dimensions W x L x H	[mm]	40 x 91 x 50

Materials	
Housing	PA
Note on materials	RoHS-compliant
	Contains paint-wetting impairment substances

Operating and environmental conditions		
Ambient temperature	[°C]	–5 … +50
Storage temperature	[°C]	–20 … +70
Corrosion resistance class CRC[1)]		2
CE mark (see declaration of conformity)[3)]		To EU EMC Directive[2)]
KC mark		KC EMC
Certification		c UL us - Listed (OL)
		RCM mark
Degree of protection		IP65/IP67
Note on degree of protection		In assembled state
		Unused connections sealed

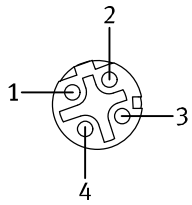
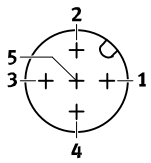
1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
2) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp ➔ Certificates.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.
3) Additional information www.festo.com/sp ➔ Certificates.

Dimensions Download CAD data ➔ **www.festo.com**

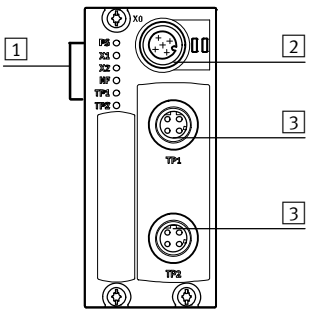


Type	B1	H1	H2	L1
CTEU-PN	91	45.7	39.7	40

Pin allocation

	Pin	Allocation	Description
PROFINET interface, M12 socket, 4-pin, D-coded			
	1	TX+	Differential transmitter cable, positive signal
	2	RX+	Differential receiver cable, positive signal
	3	TX-	Differential transmitter cable, negative signal
	4	RX-	Differential receiver cable, negative signal
	Housing		Functional earth
Power supply, M12 plug, 5-pin, A-coded			
	1	24 $V_{EL/SEN}$	Operating voltage supply (internal electronics, I-Port devices)
	2	24 $V_{VAL/OUT}$	Load voltage supply (I-Port devices)
	3	0 $V_{EL/SEN}$	Operating voltage supply (internal electronics, I-Port devices)
	4	0 $V_{VAL/OUT}$	Load voltage supply (I-Port devices)
	5	FE	Functional earth

Connection and display components



1 Status LED (operating status/diagnostics)
2 Power supply for bus node and connected devices (valve terminal)
3 Fieldbus interface