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The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes one RJ45 port and one D-SUB 9 port.



### **Key Commercial Data**

Packing unit	1 pc
GTIN	4 055626 989839
GTIN	4055626989839
Weight per Piece (excluding packing)	160.000 g
Custom tariff number	85176200
Country of origin	United States

#### Technical data

#### Note

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

#### **Dimensions**

Width	22.5 mm
Height	99 mm
Depth	115 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C 70 °C
Ambient temperature (storage/transport)	-40 °C 80 °C
Permissible humidity (operation)	10 % 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % 95 % (non-condensing)

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### Technical data

#### Ambient conditions

Altitude	< 2000 m
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

#### General

Electrical isolation	IEC UL 61010-1 (VCC // Ethernet)
Test voltage data interface/data interface	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub>
	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4
Net weight	110 g
Housing material	PA 6.6
Color	gray
MTBF	92.1 Years (Telcordia standard, 25°C temperature, 50% stress, Environmental Factor = 1.0)
	61.4 Years (Telcordia standard, 40°C temperature, 50% stress, Environmental Factor = 1.5)
Conformance	CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A

### Power supply

Supply voltage range	10.8 V DC 30 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	60 mA (24 V DC)
Typical current consumption	48 mA (24 V DC)
Conductor cross section flexible max.	2.50 mm <sup>2</sup>
Conductor cross section flexible min.	0.20 mm <sup>2</sup>
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24

#### Interfaces

Interface 1	PROFINET, MODBUS TCP
Interface	Ethernet
Connection method	RJ45 socket, shielded
Transmission length	≤ 100 m (shielded twisted pair)
Protocols supported	PROFINET, MODBUS ASCII/RTU/TCP
Auxiliary protocols	ARP, DHCP (Client), PING
Serial transmission speed	10/100 Mbps, auto negotiation



### Technical data

#### Interfaces

Interface	RS-232
Number of connections	1
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Transmission length	15 m
Data flow control/protocols	Software handshake, Xon/Xoff or hardware handshake RTS/CTS
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
Interface	RS-422
Number of connections	1
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Transmission length	≤ 1200 m
Termination resistor	120 Ω (configurable)
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
Interface	RS-485
Number of connections	1
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Termination resistor	120 Ω (configurable)
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps

#### Function

Management	Web-based management

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005
Standards/regulations	EN 55022, EN 55024
Conformance	CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A
ATEX	DEMKO 18ATEX 2026X: II 3 G Ex ec IIC T4 Gc
IECEx	IECEx UL 18.0023X



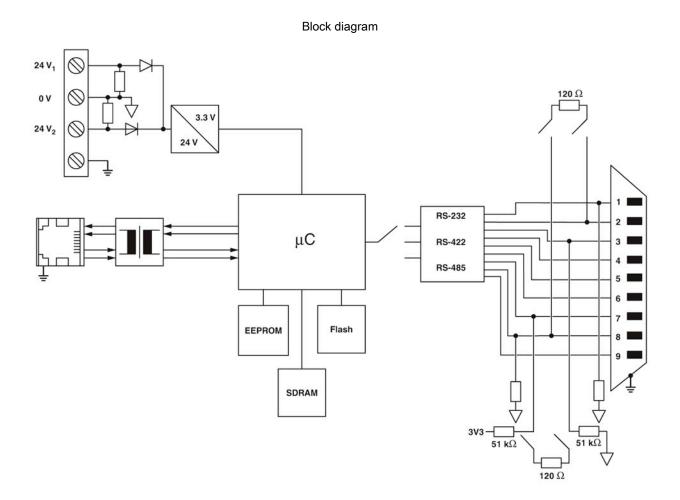
Technical data

Standards and Regulations

Ex ec IIC T4 Gc

Drawings







### Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 9.0	19179290

**ETIM** 

ETIM 5.0 EC000310

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

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

cULus Listed



Accessories

Accessories

Adapter



#### Accessories

Adapter - PSM-AD-D9-NULLMODEM - 2708753



V.24 (RS-232) zero modem connector

#### Adapter cable

Data cable - PSM-KA9SUB9/BB/2METER - 2799474



RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1

#### Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight

#### Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

#### Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m



#### Accessories

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m

#### Data plug

D-SUB bus connector - SUBCON 9/F-SH - 2761499



D-SUB plug, 9-pos. female connector, one cable entry < 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS-F/AX 9 - 2311797



D-SUB connector, 9-pos. female connector, axial version with two cable entries, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS 9/F - 2744241



D-SUB connector, 9-pos. female connector, two cable entries  $< 35^{\circ}$ , universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to one screw connection terminal block

D-SUB bus connector - SUBCON-PLUS F2 - 2799490



D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: CAN, SUCONET K1, K2 (MOELLER), S-BUS (Saia), J-BUS (Merlin Gerin), pin assignment: 2, 3, 4, 5, 7, 9 to two screw connection terminal blocks



#### Accessories

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042

RJ45 connector - VS-08-RJ45-10G/Q - 1419001



RJ45 connector, IP20, CAT6<sub>A</sub>, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435



RJ45 connector, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, cable outlet: straight, color: traffic grey A RAL 7042

#### Female insert

Contact insert - VS-09-BU-DSUB-EG - 1688803



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact socket, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Interface converter

Interface converter - PSM-ME-RS232/RS232-P - 2744461



Interface converter, for the isolation of RS-232 (V.24) interfaces, 4 channels, rail-mountable



#### Accessories

Repeater - PSM-ME-RS485/RS485-P - 2744429



Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable

#### Male insert

Contact insert - VS-09-ST-DSUB-EG - 1688793



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact pin, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 5,0 - 2832580



Patch cable, CAT5, assembled, 5 m

Sleeve housings



#### Accessories

D-SUB sleeve housings - CUC-DST-GZNI-S/DSSC9 - 1419722



D-SUB sleeve housings, degree of protection: IP20, material: Zinc die-cast, cable outlet: straight, size of housing: 1, color: Bare metallic

#### D-SUB sleeve housings - CUC-DST-GPME-S/DSSC9 - 1419705



D-SUB sleeve housings, degree of protection: IP20, material: ABS, metal-plated, cable outlet: straight, size of housing: 1, color: Bare metallic

#### Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007



Surge protection in accordance with Class  $E_A$  (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

#### Surge protection device - TTC-6P-3-HF-F-M-24DC-PT-I - 2906797



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.

#### Surge protection device - TTC-6P-3-HF-F-M-12DC-UT-I - 2906786



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.



### Accessories

Switch

Industrial Ethernet Switch - FL SWITCH SFN 5TX - 2891152



Ethernet switch, 5 TP RJ45 ports, automatic detection of data transmission speed of 10 or 100 Mbps (RJ45), autocrossing function

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The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes one RJ45 port and two D-SUB 9 ports.



### **Key Commercial Data**

Packing unit	1 pc
GTIN	4 055626 989846
GTIN	4055626989846
Weight per Piece (excluding packing)	160.000 g
Custom tariff number	85176200
Country of origin	United States

#### Technical data

#### Note

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

#### **Dimensions**

Width	22.5 mm
Height	99 mm
Depth	115 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C 70 °C
Ambient temperature (storage/transport)	-40 °C 80 °C
Permissible humidity (operation)	10 % 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % 95 % (non-condensing)

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### Technical data

#### Ambient conditions

Altitude	< 2000 m
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

#### General

Electrical isolation	IEC UL 61010-1 (VCC // Ethernet)
Test voltage data interface/data interface	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub>
	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4
Net weight	124 g
Housing material	PA 6.6
Color	gray
MTBF	69.4 Years (Telcordia standard, 25°C temperature, 50% stress, Environmental Factor = 1.0)
	46.3 Years (Telcordia standard, 40°C temperature, 50% stress, environmental factor = 1.0)
Conformance	CE-compliant CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A

### Power supply

Supply voltage range	10.8 V DC 30 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	85 mA (24 V DC)
Typical current consumption	76 mA (24 V DC)
Conductor cross section flexible max.	2.50 mm <sup>2</sup>
Conductor cross section flexible min.	0.20 mm <sup>2</sup>
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24

#### Interfaces

Interface 1	PROFINET, MODBUS TCP
Interface	Ethernet
No. of ports	1
Connection method	RJ45 socket, shielded
Transmission length	≤ 100 m (shielded twisted pair)
Protocols supported	PROFINET, MODBUS ASCII/RTU/TCP
Auxiliary protocols	ARP, DHCP (Client), PING



### Technical data

#### Interfaces

Serial transmission speed	10/100 Mbps, auto negotiation
Interface	RS-232
Number of connections	2
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Transmission length	15 m
Data flow control/protocols	Software handshake, Xon/Xoff or hardware handshake RTS/CTS
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
Interface	RS-422
Number of connections	2
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Transmission length	≤ 1200 m
Termination resistor	120 Ω (configurable)
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
Interface	RS-485
Number of connections	2
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Termination resistor	120 Ω (configurable)
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps

#### Function

Management	Web-based management
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### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005
Standards/regulations	EN 55022, EN 55024
Conformance	CE-compliant CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A
ATEX	DEMKO 18ATEX 2026X: II 3 G Ex ec IIC T4 Gc
IECEx	IECEx UL 18.0023X



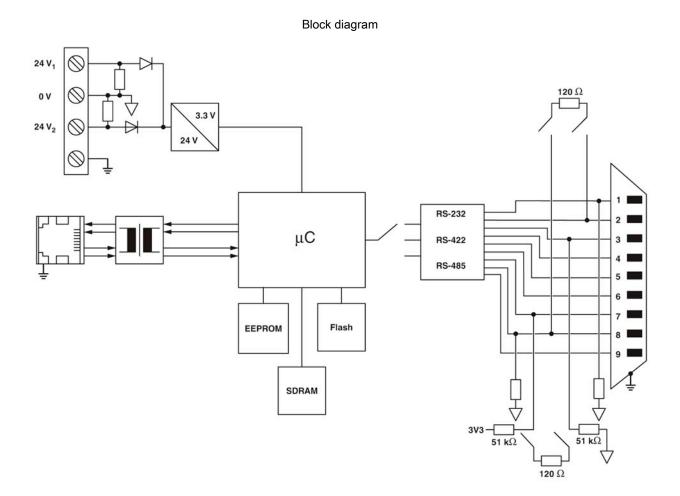
Technical data

Standards and Regulations

Ex ec IIC T4 Gc

Drawings







### Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 9.0	19179290

**ETIM** 

ETIM 5.0 EC000310

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

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

cULus Listed



Accessories

Accessories

Adapter



#### Accessories

Adapter - PSM-AD-D9-NULLMODEM - 2708753



V.24 (RS-232) zero modem connector

#### Adapter cable

Data cable - PSM-KA9SUB9/BB/2METER - 2799474



RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1

#### Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight

#### Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365



Patch cable,  $CAT6_A$ , 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

#### Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m



#### Accessories

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m

#### Data plug

D-SUB bus connector - SUBCON 9/F-SH - 2761499



D-SUB plug, 9-pos. female connector, one cable entry < 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS-F/AX 9 - 2311797



D-SUB connector, 9-pos. female connector, axial version with two cable entries, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS 9/F - 2744241



D-SUB connector, 9-pos. female connector, two cable entries  $< 35^{\circ}$ , universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to one screw connection terminal block

D-SUB bus connector - SUBCON-PLUS F2 - 2799490



D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: CAN, SUCONET K1, K2 (MOELLER), S-BUS (Saia), J-BUS (Merlin Gerin), pin assignment: 2, 3, 4, 5, 7, 9 to two screw connection terminal blocks



#### Accessories

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042

RJ45 connector - VS-08-RJ45-10G/Q - 1419001



RJ45 connector, IP20, CAT6<sub>A</sub>, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435



RJ45 connector, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, cable outlet: straight, color: traffic grey A RAL 7042

#### Female insert

Contact insert - VS-09-BU-DSUB-EG - 1688803



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact socket, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Interface converter

Interface converter - PSM-ME-RS232/RS232-P - 2744461



Interface converter, for the isolation of RS-232 (V.24) interfaces, 4 channels, rail-mountable



#### Accessories

Repeater - PSM-ME-RS485/RS485-P - 2744429



Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable

#### Male insert

Contact insert - VS-09-ST-DSUB-EG - 1688793



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact pin, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 5,0 - 2832580



Patch cable, CAT5, assembled, 5 m

Sleeve housings



#### Accessories

D-SUB sleeve housings - CUC-DST-GZNI-S/DSSC9 - 1419722



D-SUB sleeve housings, degree of protection: IP20, material: Zinc die-cast, cable outlet: straight, size of housing: 1, color: Bare metallic

#### D-SUB sleeve housings - CUC-DST-GPME-S/DSSC9 - 1419705



D-SUB sleeve housings, degree of protection: IP20, material: ABS, metal-plated, cable outlet: straight, size of housing: 1, color: Bare metallic

#### Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007



Surge protection in accordance with Class  $E_A$  (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

#### Surge protection device - TTC-6P-3-HF-F-M-24DC-PT-I - 2906797



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.

#### Surge protection device - TTC-6P-3-HF-F-M-12DC-UT-I - 2906786



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.



#### Accessories

Switch

Industrial Ethernet Switch - FL SWITCH SFN 5TX - 2891152



Ethernet switch, 5 TP RJ45 ports, automatic detection of data transmission speed of 10 or 100 Mbps (RJ45), autocrossing function

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### **Key Commercial Data**

Packing unit	1 pc
GTIN	4 055626 989372
GTIN	4055626989372
Weight per Piece (excluding packing)	220.000 g
Custom tariff number	85176200
Country of origin	United States

#### Technical data

#### Note

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

#### Dimensions

Width	45 mm
Height	99 mm
Depth	115 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C 70 °C
Ambient temperature (storage/transport)	-40 °C 80 °C
Permissible humidity (operation)	10 % 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % 95 % (non-condensing)

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### Technical data

#### Ambient conditions

Altitude	< 2000 m
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

#### General

Electrical isolation	IEC UL 61010-1 (VCC // Ethernet)
Test voltage data interface/data interface	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub>
	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4
Net weight	158 g
Housing material	PA 6.6
Color	gray
MTBF	68.1 Years (Telcordia standard, 25°C temperature, 50% stress, Environmental Factor = 1.0)
	45.4 Years (Telcordia standard, 40°C temperature, 50% stress, Environmental Factor = 1.5)
Conformance	CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A

### Power supply

Supply voltage range	10.8 V DC 30 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	100 mA (24 V DC)
Typical current consumption	88 mA (24 V DC)
Conductor cross section flexible max.	2.50 mm²
Conductor cross section flexible min.	0.20 mm²
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24

#### Interfaces

Interface 1	PROFINET, MODBUS TCP
Interface	Ethernet
Connection method	RJ45 socket, shielded
Transmission length	≤ 100 m (shielded twisted pair)
Protocols supported	PROFINET, MODBUS ASCII/RTU/TCP
Auxiliary protocols	ARP, DHCP (Client), PING
Serial transmission speed	10/100 Mbps, auto negotiation



### Technical data

#### Interfaces

RS-232
2
D-SUB 9 plug
5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
15 m
Software handshake, Xon/Xoff or hardware handshake RTS/CTS
0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
RS-422
2
D-SUB 9 plug
5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
≤ 1200 m
120 Ω (configurable)
0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
RS-485
2
D-SUB 9 plug
5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
120 Ω (configurable)
0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps

#### Function

Management	Web-based management

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005
Standards/regulations	EN 55022, EN 55024
Conformance	CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A
ATEX	DEMKO 18ATEX 2026X: II 3 G Ex ec IIC T4 Gc
IECEx	IECEx UL 18.0023X



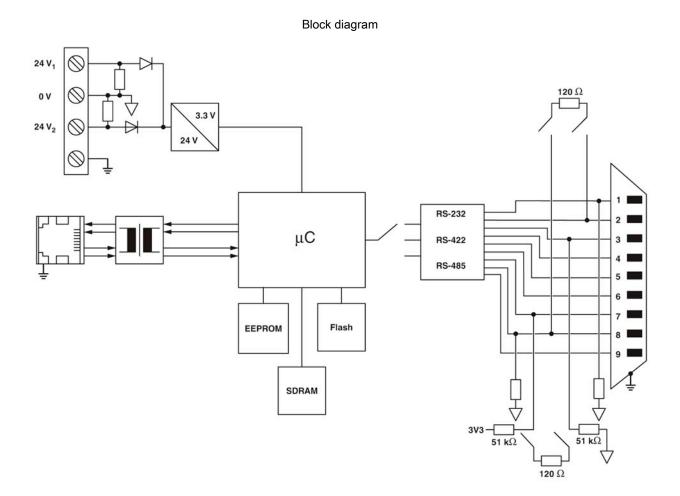
Technical data

Standards and Regulations

Ex ec IIC T4 Gc

Drawings







#### Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 9.0	19179290

**ETIM** 

ETIM 5.0 EC000310

Approvals

Approvals

Approvals

UL Listed / cUL Listed / KC / cULus Listed

Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

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

KC http://eng.kcc.go.kr/user/ehpMain.do R-R-PCK-2702761

cULus Listed cULus Listed

Accessories

Accessories

Adapter



#### Accessories

Adapter - PSM-AD-D9-NULLMODEM - 2708753



V.24 (RS-232) zero modem connector

#### Adapter cable

Data cable - PSM-KA9SUB9/BB/2METER - 2799474



RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1

#### Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight

#### Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

#### Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m



#### Accessories

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m

#### Data plug

D-SUB bus connector - SUBCON 9/F-SH - 2761499



D-SUB plug, 9-pos. female connector, one cable entry < 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS-F/AX 9 - 2311797



D-SUB connector, 9-pos. female connector, axial version with two cable entries, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS 9/F - 2744241



D-SUB connector, 9-pos. female connector, two cable entries < 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to one screw connection terminal block

D-SUB bus connector - SUBCON-PLUS F2 - 2799490



D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: CAN, SUCONET K1, K2 (MOELLER), S-BUS (Saia), J-BUS (Merlin Gerin), pin assignment: 2, 3, 4, 5, 7, 9 to two screw connection terminal blocks



#### Accessories

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042

RJ45 connector - VS-08-RJ45-10G/Q - 1419001



RJ45 connector, IP20, CAT6<sub>A</sub>, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435



RJ45 connector, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, cable outlet: straight, color: traffic grey A RAL 7042

#### Female insert

Contact insert - VS-09-BU-DSUB-EG - 1688803



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact socket, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Interface converter

Interface converter - PSM-ME-RS232/RS232-P - 2744461



Interface converter, for the isolation of RS-232 (V.24) interfaces, 4 channels, rail-mountable



### Accessories

Repeater - PSM-ME-RS485/RS485-P - 2744429



Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable

#### Male insert

Contact insert - VS-09-ST-DSUB-EG - 1688793



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact pin, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 5,0 - 2832580



Patch cable, CAT5, assembled, 5 m

Sleeve housings



#### Accessories

D-SUB sleeve housings - CUC-DST-GZNI-S/DSSC9 - 1419722



D-SUB sleeve housings, degree of protection: IP20, material: Zinc die-cast, cable outlet: straight, size of housing: 1, color: Bare metallic

#### D-SUB sleeve housings - CUC-DST-GPME-S/DSSC9 - 1419705



D-SUB sleeve housings, degree of protection: IP20, material: ABS, metal-plated, cable outlet: straight, size of housing: 1, color: Bare metallic

#### Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007



Surge protection in accordance with Class  $E_A$  (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

#### Surge protection device - TTC-6P-3-HF-F-M-24DC-PT-I - 2906797



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.

#### Surge protection device - TTC-6P-3-HF-F-M-12DC-UT-I - 2906786



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.



#### Accessories

Switch

Industrial Ethernet Switch - FL SWITCH SFN 5TX - 2891152



Ethernet switch, 5 TP RJ45 ports, automatic detection of data transmission speed of 10 or 100 Mbps (RJ45), autocrossing function

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The GW PN/MODBUS... enables two-way communication between PROFINET and Modbus protocols. Includes two RJ45 port and four D-SUB 9 ports.



## **Key Commercial Data**

Packing unit	1 pc
GTIN	4 055626 987354
GTIN	4055626987354
Weight per Piece (excluding packing)	260.000 g
Custom tariff number	85176200
Country of origin	United States

#### Technical data

#### Note

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

#### **Dimensions**

Width	45 mm
Height	99 mm
Depth	115 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C 70 °C
Ambient temperature (storage/transport)	-40 °C 80 °C
Permissible humidity (operation)	10 % 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % 95 % (non-condensing)

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## Technical data

#### Ambient conditions

Altitude	< 2000 m
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

#### General

Electrical isolation	IEC UL 61010-1 (VCC // Ethernet)
Test voltage data interface/data interface	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub>
	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4
Net weight	194 g
Housing material	PA 6.6
Color	gray
MTBF	63.5 Years (Telcordia standard, 25°C temperature, 50% stress, Environmental Factor = 1.0)
	42.3 Years (Telcordia standard, 40°C temperature, 50% stress, Environmental Factor = 1.5)
Conformance	CE-compliant CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A

### Power supply

Supply voltage range	10.8 V DC 30 V DC (via pluggable COMBICON screw terminal block)
Max. current consumption	120 mA (24 V DC)
Typical current consumption	110 mA (24 V DC)
Conductor cross section flexible max.	2.50 mm²
Conductor cross section flexible min.	0.20 mm²
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24

#### Interfaces

Interface 1	PROFINET, MODBUS TCP
Interface	Ethernet
No. of ports	2
Connection method	RJ45 socket, shielded
Transmission length	≤ 100 m (shielded twisted pair)
Protocols supported	PROFINET, MODBUS ASCII/RTU/TCP
Auxiliary protocols	ARP, DHCP (Client), PING



### Technical data

#### Interfaces

Serial transmission speed	10/100 Mbps, auto negotiation
Interface	RS-232
Number of connections	4
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Transmission length	15 m
Data flow control/protocols	Software handshake, Xon/Xoff or hardware handshake RTS/CTS
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
Interface	RS-422
Number of connections	4
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Transmission length	≤ 1200 m
Termination resistor	120 Ω (configurable)
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps
Interface	RS-485
Number of connections	4
Connection method	D-SUB 9 plug
File format/coding	5/6/7/8 Data bits, 1/2 Stop bits, None/Even/Odd/Mark/Space Parity
Termination resistor	120 Ω (configurable)
Serial transmission speed	0.3; 0.6; 1.2; 2.4; 4.8; 9.6; 19.2; 38.4; 57.6; 115.2; 230.4 Kbps

#### Function

Management	Web-based management
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### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005
Standards/regulations	EN 55022, EN 55024
Conformance	CE-compliant
UL, USA	UL 61010-1
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A
ATEX	DEMKO 18ATEX 2026X: II 3 G Ex ec IIC T4 Gc
IECEx	IECEx UL 18.0023X



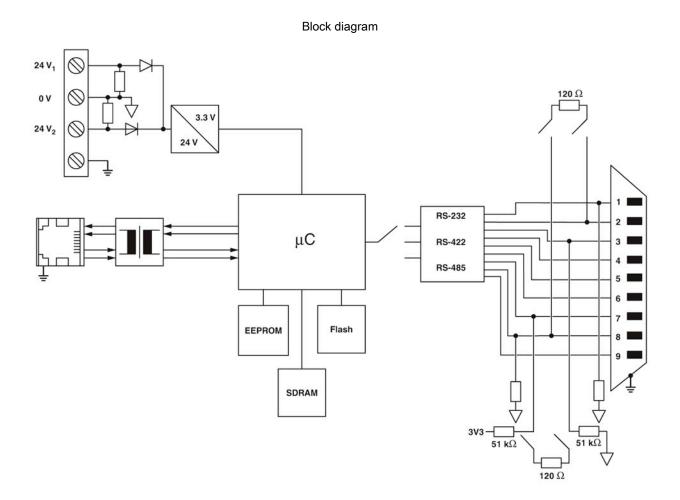
Technical data

Standards and Regulations

Ex ec IIC T4 Gc

Drawings







### Classifications

eCl@ss

eCl@ss 10.0.1	19179290
eCl@ss 9.0	19179290

**ETIM** 

ETIM 5.0 EC000310

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

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

cULus Listed



Accessories

Accessories

Adapter



#### Accessories

Adapter - PSM-AD-D9-NULLMODEM - 2708753



V.24 (RS-232) zero modem connector

#### Adapter cable

Data cable - PSM-KA9SUB9/BB/2METER - 2799474



RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1

#### Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight

#### Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365



Patch cable,  $CAT6_A$ , 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

#### Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m



#### Accessories

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m

#### Data plug

D-SUB bus connector - SUBCON 9/F-SH - 2761499



D-SUB plug, 9-pos. female connector, one cable entry < 35°, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS-F/AX 9 - 2311797



D-SUB connector, 9-pos. female connector, axial version with two cable entries, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to screw connection terminal block

D-SUB bus connector - SUBCON-PLUS 9/F - 2744241



D-SUB connector, 9-pos. female connector, two cable entries  $< 35^{\circ}$ , universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to one screw connection terminal block

D-SUB bus connector - SUBCON-PLUS F2 - 2799490



D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: CAN, SUCONET K1, K2 (MOELLER), S-BUS (Saia), J-BUS (Merlin Gerin), pin assignment: 2, 3, 4, 5, 7, 9 to two screw connection terminal blocks



#### Accessories

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042

RJ45 connector - VS-08-RJ45-10G/Q - 1419001



RJ45 connector, IP20, CAT6<sub>A</sub>, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435



RJ45 connector, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5 (IEC 11801:2002), material: PA, connection method: IDC fast connection, cable outlet: straight, color: traffic grey A RAL 7042

#### Female insert

Contact insert - VS-09-BU-DSUB-EG - 1688803



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact socket, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Interface converter

Interface converter - PSM-ME-RS232/RS232-P - 2744461



Interface converter, for the isolation of RS-232 (V.24) interfaces, 4 channels, rail-mountable



#### Accessories

Repeater - PSM-ME-RS485/RS485-P - 2744429



Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable

#### Male insert

Contact insert - VS-09-ST-DSUB-EG - 1688793



D-SUB contact insert, shell size 1, with nine signal contacts, type of contact pin, with solder cup, straight, fixing with a 3 mm hole, for panel mounting frame and sleeve housing VS-09-...

#### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 5,0 - 2832580



Patch cable, CAT5, assembled, 5 m

Sleeve housings



#### Accessories

D-SUB sleeve housings - CUC-DST-GZNI-S/DSSC9 - 1419722



D-SUB sleeve housings, degree of protection: IP20, material: Zinc die-cast, cable outlet: straight, size of housing: 1, color: Bare metallic

#### D-SUB sleeve housings - CUC-DST-GPME-S/DSSC9 - 1419705



D-SUB sleeve housings, degree of protection: IP20, material: ABS, metal-plated, cable outlet: straight, size of housing: 1, color: Bare metallic

#### Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007



Surge protection in accordance with Class  $E_A$  (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

#### Surge protection device - TTC-6P-3-HF-F-M-24DC-PT-I - 2906797



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.

#### Surge protection device - TTC-6P-3-HF-F-M-12DC-UT-I - 2906786



Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.



### Accessories

Switch

Industrial Ethernet Switch - FL SWITCH SFN 5TX - 2891152



Ethernet switch, 5 TP RJ45 ports, automatic detection of data transmission speed of 10 or 100 Mbps (RJ45), autocrossing function

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