

1435412

https://www.phoenixcontact.com/us/products/1435412

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Valve connector B (10 mm), with 1 LED, Wiring: Z diode, cable length: 10 m

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- · Convenient: increased machine availability thanks to quick and easy diagnostics
- · Our standard: robust halogen-free PUR cable

Commercial data

Item number	1435412
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF07
Product key	AF1DCA
GTIN	4046356413718
Weight per piece (including packing)	328.5 g
Weight per piece (excluding packing)	306.1 g
Customs tariff number	85444290
Country of origin	PL



1435412

https://www.phoenixcontact.com/us/products/1435412

Technical data

Product properties

Product type	Sensor/actuator cable with valve connector
Application	Standard
Number of positions	3
No. of cable outlets	1
Shielded	no
Insulation characteristics	
Overvoltage category	III
Degree of pollution	3

Connection data

Conductor connection

Tightening torque	0.6 Nm (Valve connector)

Material specifications

Flammability rating according to UL 94	V0
Seal material	TPU
Material housing valve plug	TPU
Contact material	CuSn
Valve plug contact insert material	PA 6.6
Contact surface material	Sn

Electrical properties

Insulation resistance	≥ 100 MΩ
Nominal voltage U _N	24 V AC
	24 V DC
Nominal current I _N	4 A

Valve connector characteristics

Fixing screws	M3 x 29
Pulse power	40 W (at 100 μs square-wave pulse)
Terminal voltage	70 V (at 2 mA constant current)
Reverse voltage	50 V

Signaling

Status display	1 LED
Status display present	yes

Connector

Connection 1

_	
lype	free cable end
7 P	



1435412

https://www.phoenixcontact.com/us/products/1435412

Connection 2

Туре	Valve connector B (10 mm)
Number of positions	3
Material	CuSn (Contact)
	Sn (Contact surface)
	PA 6.6 (Contact carrier)
	TPU (Housing)
Protective circuit	Z diode

Cable/line

Cable length	10 m
--------------	------

PUR halogen-free black [PUR]

Dimensional drawing



Cable weight 30 kg/km UL AWM Style 20549 Number of positions 3 Shielded no Cable type PUR halogen-free black [PUR] Conductor structure signal line 28x 0.15 mm AWG signal line 20 Conductor cross section 3x 0.5 mm² Wire diameter incl. insulation 1.5 mm ±0.05 mm (Signal line) External cable diameter 4.50 mm ±0.2 mm Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, fixed installation 22.5 mm		
Number of positions 3 Shielded no Cable type PUR halogen-free black [PUR] Conductor structure signal line 28x 0.15 mm AWG signal line 20 Conductor cross section 3x 0.5 mm² Wire diameter incl. insulation 1.5 mm ±0.05 mm (Signal line) External cable diameter 4.50 mm ±0.2 mm Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Cable weight	30 kg/km
Shielded no Cable type PUR halogen-free black [PUR] Conductor structure signal line 28x 0.15 mm AWG signal line 20 Conductor cross section 3x 0.5 mm² Wire diameter incl. insulation 1.5 mm ±0.05 mm (Signal line) External cable diameter 4.50 mm ±0.2 mm Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	UL AWM Style	20549
Cable type PUR halogen-free black [PUR] Conductor structure signal line 28x 0.15 mm AWG signal line 20 Conductor cross section 3x 0.5 mm² Wire diameter incl. insulation 1.5 mm ±0.05 mm (Signal line) External cable diameter 4.50 mm ±0.2 mm Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Number of positions	3
Conductor structure signal line 28x 0.15 mm AWG signal line 20 Conductor cross section 3x 0.5 mm² Wire diameter incl. insulation 1.5 mm \pm 0.05 mm (Signal line) External cable diameter 4.50 mm \pm 0.2 mm Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω /km (at 20 °C) Insulation resistance min. 20 Ω Ω when Ω in Ω Ω Ω in Ω	Shielded	no
AWG signal line 20 Conductor cross section 3x 0.5 mm² Wire diameter incl. insulation 1.5 mm ±0.05 mm (Signal line) External cable diameter 4.50 mm ±0.2 mm Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Cable type	PUR halogen-free black [PUR]
Conductor cross section $3x 0.5 \text{ mm}^2$ Wire diameter incl. insulation $1.5 \text{ mm} \pm 0.05 \text{ mm}$ (Signal line) External cable diameter $4.50 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance $39 \Omega/\text{km}$ (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation $5 \times D$ Minimum bending radius, flexible installation $10 \times D$	Conductor structure signal line	28x 0.15 mm
Wire diameter incl. insulation $1.5 \text{ mm} \pm 0.05 \text{ mm}$ (Signal line)External cable diameter $4.50 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, materialPURExternal sheath, colorblack-gray RAL 7021Conductor materialBare Cu litz wiresMaterial wire insulationPPSingle wire, colorblack 1, black 2, green/yellowOverall twist3 wires, twistedMax. conductor resistance $39 \Omega/km$ (at $20 \degree C$)Insulation resistance $min. 20 M\Omega^*km$ Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage $\geq 1200 \text{ V}$ Minimum bending radius, fixed installation $5 \times D$ Minimum bending radius, flexible installation $10 \times D$	AWG signal line	20
External cable diameter $4.50 \text{ mm} \pm 0.2 \text{ mm}$ Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω /km (at 20 °C) Insulation resistance min. 20 Ω Ω *km Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage $\geq 1200 \text{ V}$ Minimum bending radius, fixed installation $5 \times D$ Minimum bending radius, flexible installation $10 \times D$	Conductor cross section	3x 0.5 mm²
Outer sheath, material PUR External sheath, color black-gray RAL 7021 Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Wire diameter incl. insulation	1.5 mm ±0.05 mm (Signal line)
External sheath, color Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω /km (at 20 °C) Insulation resistance min. 20 $M\Omega$ *km Nominal voltage, cable Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	External cable diameter	4.50 mm ±0.2 mm
Conductor material Bare Cu litz wires Material wire insulation PP Single wire, color black 1, black 2, green/yellow Overall twist 3 wires, twisted Max. conductor resistance 39 Ω/km (at 20 °C) Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Outer sheath, material	PUR
Material wire insulationPPSingle wire, colorblack 1, black 2, green/yellowOverall twist3 wires, twistedMax. conductor resistance $39 \Omega/\text{km}$ (at 20 °C)Insulation resistancemin. 20 MΩ*kmNominal voltage, cable≤ 300 VTest voltage≥ 1200 VMinimum bending radius, fixed installation $5 \times D$ Minimum bending radius, flexible installation $10 \times D$	External sheath, color	black-gray RAL 7021
Single wire, color Overall twist 3 wires, twisted Max. conductor resistance 39 Ω /km (at 20 °C) Insulation resistance min. 20 $M\Omega$ *km Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage $\geq 1200 \text{ V}$ Minimum bending radius, fixed installation $5 \times D$ Minimum bending radius, flexible installation $10 \times D$	Conductor material	Bare Cu litz wires
Overall twist 3 wires, twisted Max. conductor resistance 39 Ω /km (at 20 °C) Insulation resistance min. 20 Ω *km Nominal voltage, cable $\leq 300 \text{ V}$ Test voltage $\geq 1200 \text{ V}$ Minimum bending radius, fixed installation $\leq x D$ Minimum bending radius, flexible installation $\leq x D$	Material wire insulation	PP
Max. conductor resistance $39 \Omega/km$ (at 20 °C) Insulation resistance min. $20 M\Omega*km$ Nominal voltage, cable ≤ $300 V$ Test voltage ≥ $1200 V$ Minimum bending radius, fixed installation $5 \times D$ Minimum bending radius, flexible installation $10 \times D$	Single wire, color	black 1, black 2, green/yellow
Insulation resistance min. 20 MΩ*km Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Overall twist	3 wires, twisted
Nominal voltage, cable ≤ 300 V Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Max. conductor resistance	39 Ω/km (at 20 °C)
Test voltage ≥ 1200 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Insulation resistance	min. 20 MΩ*km
Minimum bending radius, fixed installation 5 x D Minimum bending radius, flexible installation 10 x D	Nominal voltage, cable	≤ 300 V
Minimum bending radius, flexible installation 10 x D	Test voltage	≥ 1200 V
	Minimum bending radius, fixed installation	5 x D
Smallest bending radius, fixed installation 22.5 mm	Minimum bending radius, flexible installation	10 x D
	Smallest bending radius, fixed installation	22.5 mm



1435412

https://www.phoenixcontact.com/us/products/1435412

Smallest bending radius, movable installation	45 mm
Dynamic load capacity (bending)	Max. bending cycles: 15000000, Bending radius: 50 mm, Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s²
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	according to DIN VDE 0482
	According to DIN EN 50265-2-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	largely oil-resistant
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-20 °C 80 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation) (Valve connector)	-20 °C 85 °C (Valve connector)

Standards and regulations

Valve connector

Standard designation	Valve connector
Standards/specifications	EN 175301-803

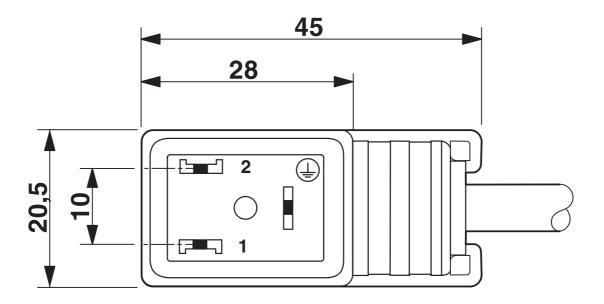


1435412

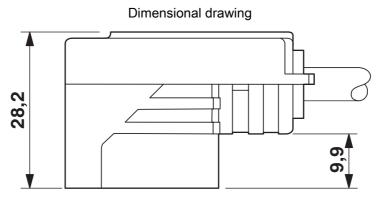
https://www.phoenixcontact.com/us/products/1435412

Drawings

Dimensional drawing



Valve connector, type B



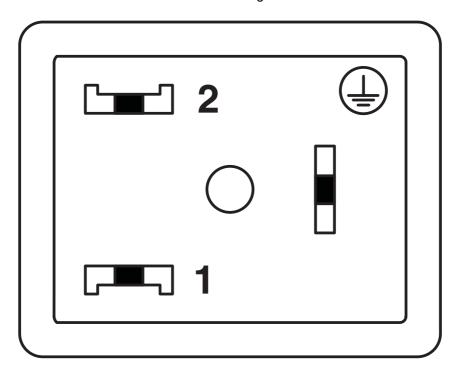
Valve connector, type B, side view



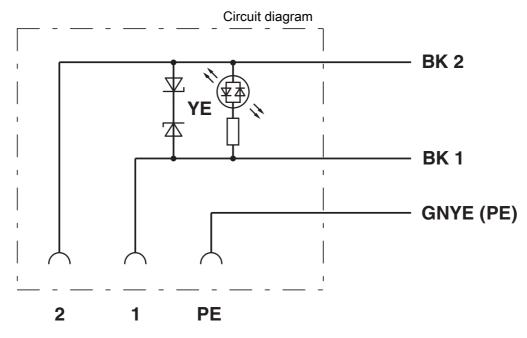
1435412

https://www.phoenixcontact.com/us/products/1435412

Schematic diagram



Valve connector pin assignment, type B



Contact assignment of the valve plug



1435412

https://www.phoenixcontact.com/us/products/1435412

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1435412



CSAus Approval ID: 13631	CSAus Approval ID: 13631			
	Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
keine				
	24 V	6 A	-	-



1435412

https://www.phoenixcontact.com/us/products/1435412

Classifications

ECLASS

	ECLASS-13.0	27060312		
	ECLASS-15.0	27060312		
ETIM				
	ETIM 9.0	EC001855		
UNSPSC				

UNSPSC 21.0 31251500



1435412

https://www.phoenixcontact.com/us/products/1435412

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-l
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Diboron trioxide(CAS: 1303-86-2)
	Lead monoxide (lead oxide)(CAS: 1317-36-8)
SCIP	2ffc65aa-8776-4c48-a87e-81ad4aa21400
EF3.0 Climate Change	
CO2e kg	2.818 kg CO2e

Phoenix Contact 2025 @ - all rights reserved https://www.phoenixcontact.com

Phoenix Contact USA 586 Fulling Mill Road Middletown, PA 17057, United States (+717) 944-1300 info@phoenixcon.com