

# NBC-M12FR/2,0-971/R4AQ VR - Network cable



1425619

<https://www.phoenixcontact.com/us/products/1425619>

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Assembled VARAN cable, shielded, stranded, black, angled M12 socket, SPEEDCON, 6-pos. to RJ45 plug/IP20, QUICKON, length: 2 m

## Commercial data

Item number	1425619
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Product key	ABNMAY
GTIN	4055626409023
Weight per piece (including packing)	182.7 g
Weight per piece (excluding packing)	182.7 g
Country of origin	PL

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## Technical data

### Product properties

Product type	Patch cable
Sensor type	VARAN
Number of positions	6
No. of cable outlets	1
Coding	A

### Insulation characteristics

Overvoltage category	I
Degree of pollution	1

### Electrical properties

Rated voltage (III/3)	72 V (DC)
Nominal voltage $U_N$	30 V
Nominal current $I_N$	2 A

### Material specifications

Color	black
Material	PC PA
Flammability rating according to UL 94	V0
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated
Outer sheath, material	SANTOPRENE halogen-free

### Connector

#### Connection 1

Type	Socket angled M12
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#### Connection 2

Type	Plug straight RJ45
Degree of protection	IP20

### Cable/line


VARAN PVC [971]

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Dimensional drawing	
Shielded	yes
UL AWM Style	2461 (80°C/300 V)
Cable type	VARAN PVC
Cable type (abbreviation)	971
Signal type/category	VARAN CAT5 (IEC 11801), 100 Mbps
Cable structure	1x2x24/32+2x2x24/19, SF/UTP
External cable diameter	7.00 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	black
Thickness, outer sheath	0.90 mm
Conductor material	Bare Cu litz wires
Conductor structure signal line	19x 0.13 mm
AWG signal line	24
Conductor structure, voltage supply	32x 0.10 mm
Conductor cross-section	2x 2x 0.25 mm <sup>2</sup> (Signal line)
AWG power supply	24
Material wire insulation	PE
Wire diameter incl. insulation	1.25 mm (Signal line) 1.4 mm (Power supply)
Single wire, color	blue-yellow, green-orange, red-blue
Twisted pairs	2 cores to the pair
Overall twist	3 pairs with filler elements to the core
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
Nominal voltage, cable	≤ 80 V
Test voltage Core/Core	1000 V
Test voltage Core/Shield	1000.00 V
Cable resistance	78 Ω/km (at 20 °C)
Cable insulation resistance	≥ 500 MΩ*km (at 20 °C)
Working capacitance	approx. 57 nF (at 1 kHz)
Signal runtime	5.3 ns/m
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Number of bending cycles	200000
Minimum bending radius, drag chain applications	5 x D
Resistance to oil	According to DIN EN 60811-2-1, 168 h at 100°C

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Flame resistance	according to IEC 60332-1-2
Ambient temperature (operation)	-40 °C ... 80 °C

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	≥ 100
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## Environmental and real-life conditions

### Ambient conditions

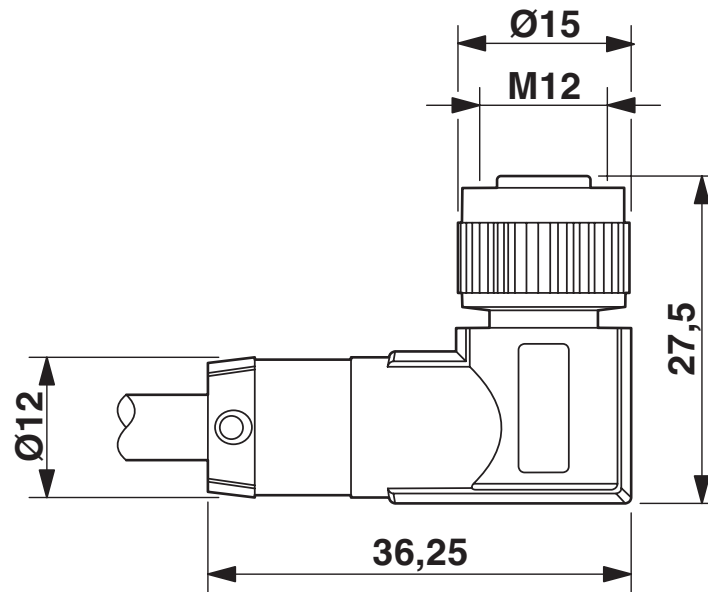
Degree of protection	IP20
	IP20
Ambient temperature (operation) (Cable, fixed installation)	0 °C ... 50 °C (for installation)
	-20 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)

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## Drawings

Dimensional drawing



M12 x 1 socket, angled, shielded

Schematic diagram



Pin assignment M12 socket, 8-pos., A-coded, view female side

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Schematic diagram



Circuit diagram



Contact assignment of the M12 socket

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## Classifications

### UNSPSC

UNSPSC 21.0	39121413
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

### 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.)	No substance above 0.1 wt%
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