

Patch cable - NBC-R4ACR/2,0-93G/R4ACR - 1409007

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

EtherCAT® patch cable



Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356857345

Technical data

Ambient conditions

Degree of protection	IP20 (RJ45 connector)
Ambient temperature (operation)	-25 °C ... 80 °C (RJ45 connector)

General data

Rated current at 40°C	1 A
Rated voltage	48 V
Number of positions	4
Rated voltage (III/3)	72 V (DC)
Degree of protection	IP20
Number of slots	1
Transmission characteristics (category)	CAT5

Characteristics head 1

Color	black
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	PA (Housing)

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Technical data

Characteristics head 1

Insertion/withdrawal cycles	≥ 750
Ambient temperature (operation)	-25 °C ... 80 °C
Outer sheath, material	PVC
External sheath, color	green RAL 6018

Characteristics head 2

Color	black
Material (component)	CuSn (Contact)
	Ni/Au (Contact surface)
	PA (Contact carriers)
	PA (Housing)
Insertion/withdrawal cycles	≥ 750
Ambient temperature (operation)	-25 °C ... 80 °C

Cable

Cable type	EtherCAT®
Cable type (abbreviation)	93G
UL AWM style	21694
Signal type/category	EtherCAT® CAT5 (IEC 11801), 100 Mbps
Cable structure	1x4xAWG22/7; SF/TQ
Conductor cross section	4x 0.34 mm²
AWG signal line	22
Conductor structure signal line	7x 0.25 mm
Core diameter including insulation	1.55 mm
Wire colors	White, yellow, blue, orange
Overall twist	Star quad
Shielding	Aluminum-coated foil, tinned copper braided shield
Optical shield covering	85 %
External sheath, color	green RAL 6018
Outer sheath thickness	approx. 0.9 mm
External cable diameter D	6.5 mm ±0.2 mm
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Cable weight	67 kg/km
Outer sheath, material	PVC
Material, inner sheath	PVC
Material conductor insulation	PE
Conductor material	Tin-plated Cu litz wires
Insulation resistance	≥ 500 MΩ*km
Loop resistance	≤ (per km)
Wave impedance	100 Ω ±15 Ω (at 100 MHz)

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Technical data

Cable

Signal speed	0.66 c
Signal runtime	5.3 ns/m
Coupling resistance	$\leq 20.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000 V (50 Hz, 1 min.)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent
Other resistance	UV resistant According to UL 1581, Section 1200
Ambient temperature (operation)	-40 °C ... 70 °C (cable, fixed installation)
	-40 °C ... 70 °C (cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-50 °C ... 70 °C

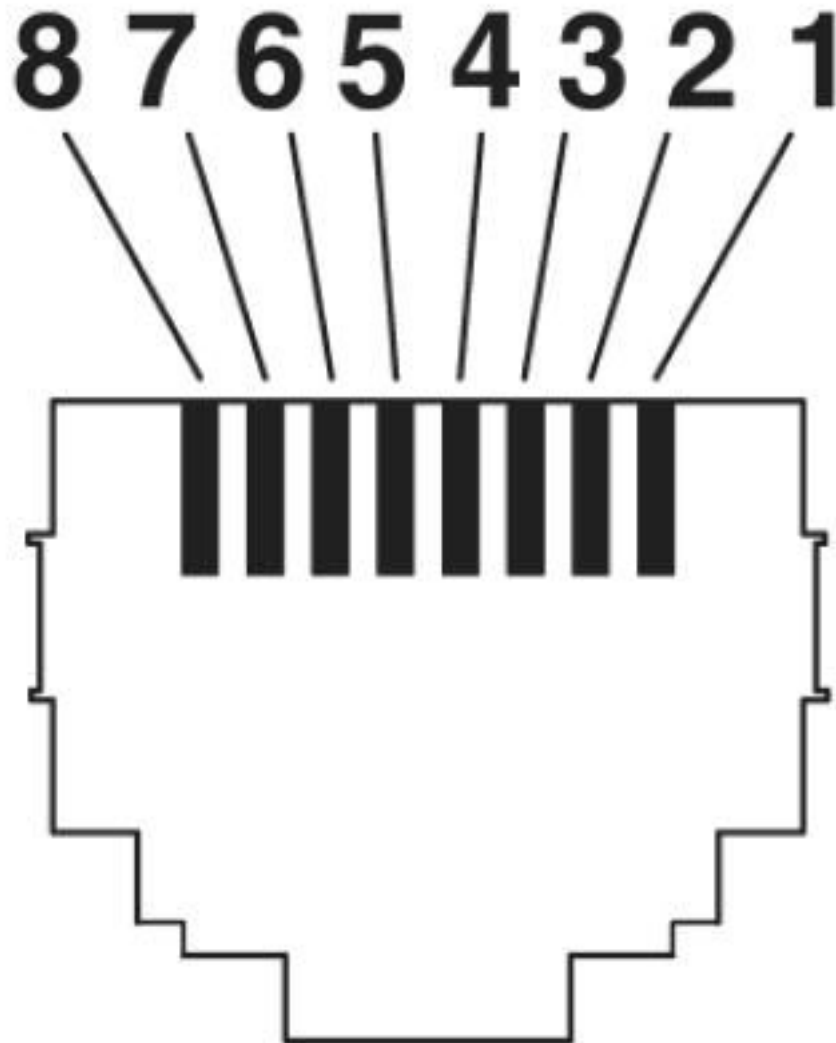
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Patch cable - NBC-R4ACR/2,0-93G/R4ACR - 1409007

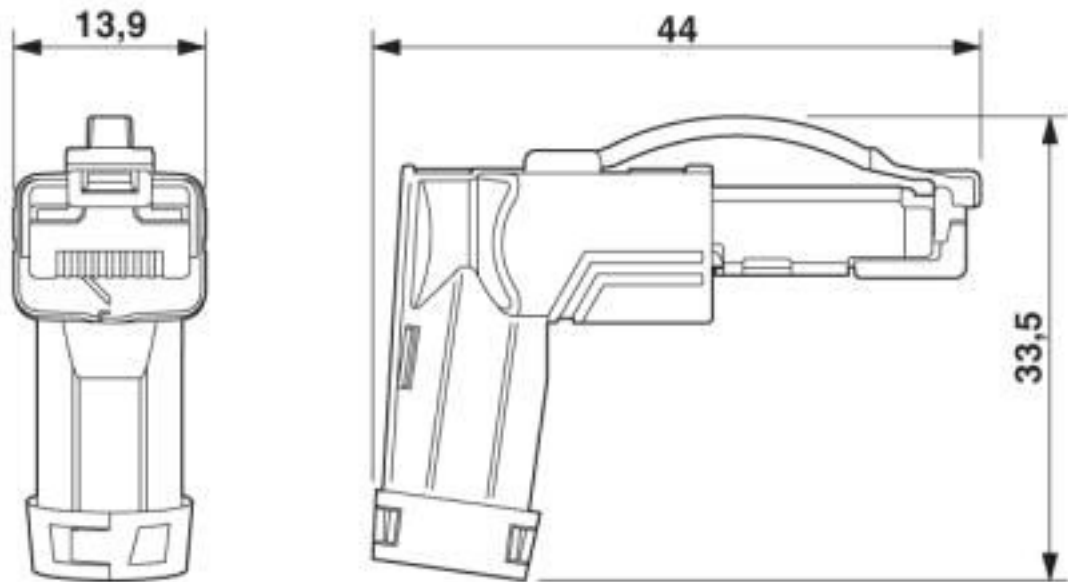
Schematic diagram



Connector pin assignment plug RJ45

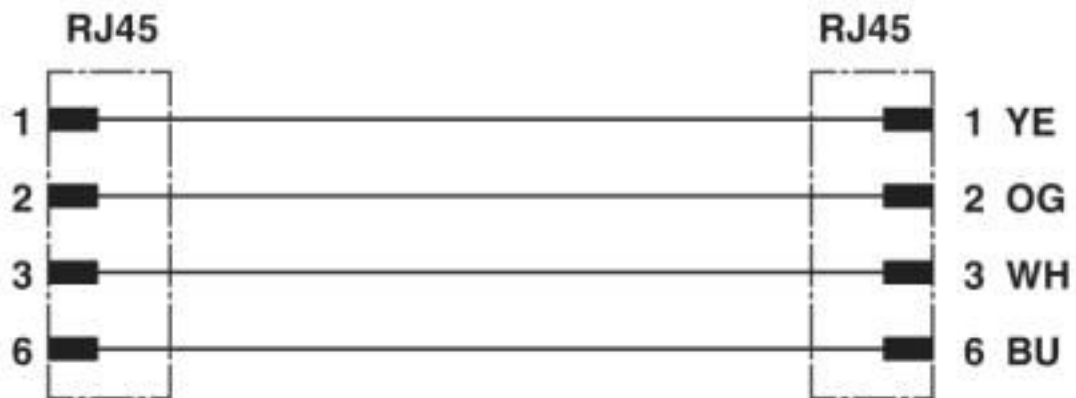
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Dimensional drawing



RJ45 connector, IP20, angled

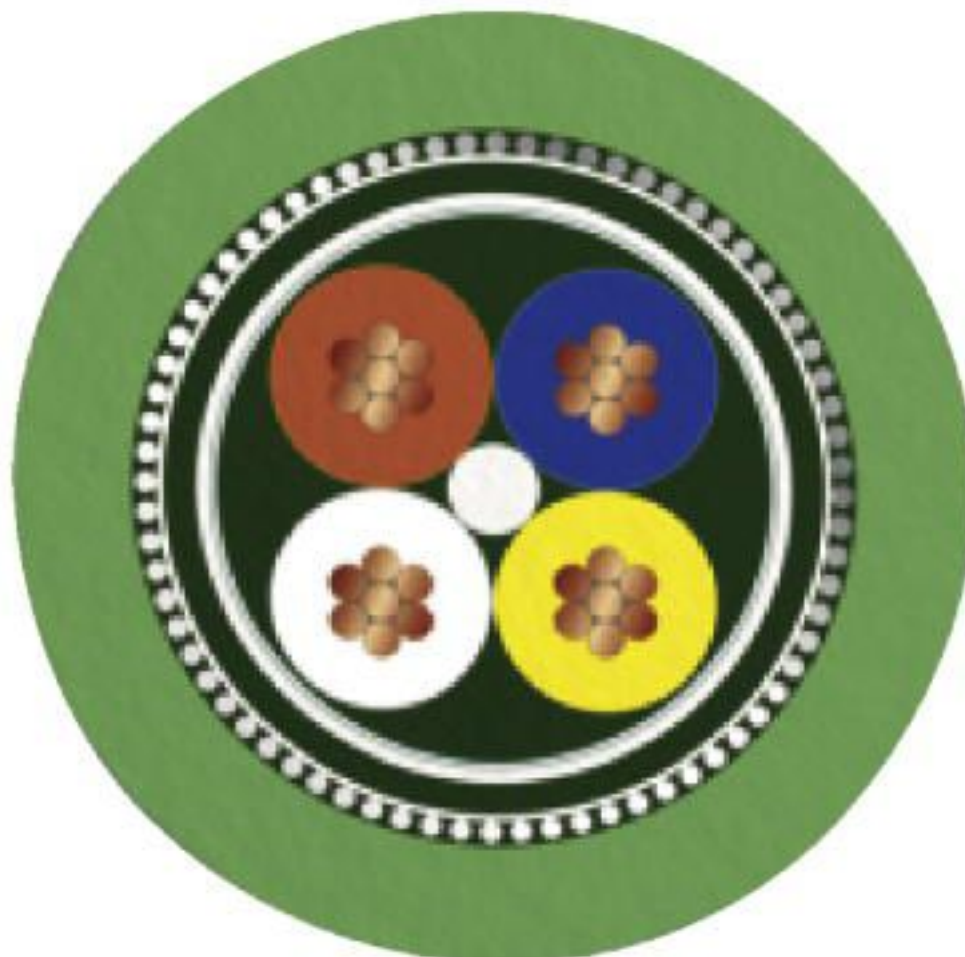
Circuit diagram



Contact assignment of RJ45 plugs

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Cable cross section



EtherCAT® [93G]

Classifications

eCl@ss

eCl@ss 4.0	24010400
eCl@ss 4.1	24010400
eCl@ss 5.0	19030300
eCl@ss 5.1	19030300
eCl@ss 6.0	27061800
eCl@ss 7.0	27060308
eCl@ss 8.0	27060308
eCl@ss 9.0	27060308

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Classifications

ETIM

ETIM 4.0	EC002599
ETIM 5.0	EC002599
ETIM 6.0	EC001262
ETIM 7.0	EC001262

UNSPSC

UNSPSC 6.01	26121616
UNSPSC 7.0901	26121616
UNSPSC 11	26121604
UNSPSC 12.01	31261501
UNSPSC 13.2	26121604
UNSPSC 19.0	26121604

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