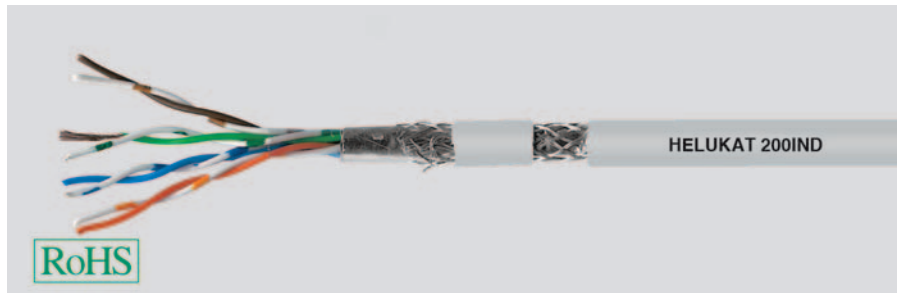
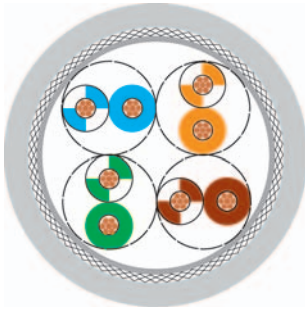


Industrial Ethernet

ROBUSTFLEX
HELUKAT® 200IND

SF/UTP, Category 5e



Type

Cable structure

Inner conductor diameter:
 Core insulation:
 Core colours:
 Stranding element:
 Shielding 1:
 Shielding 2:
 Screen 1 over stranding:
 Screen 2 over stranding:
 Outer sheath material:
 Cable external diameter:
 Outer sheath colour:

Industrial Patch Cables

SF/UTP 4x2xAWG 26/7 PUR

Copper, bare (AWG 26/7)
 PO
 whbu/bu, whog/og, whgn/gn, whbn/bn
 Double core
 Polyester foil over stranded bundle
 -
 Polyester foil, aluminium-lined
 Cu braid
 PUR
 app. 5,8 mm
 Grey similar to RAL 7035

Electrical data

Characteristic impedance:
 Loop resistance:
 Mutual capacitance:
 Relative propagation velocity:

100 Ohm ± 15 ohm at 1 to 100 MHz
 100 Ohm ± 20 Ohm at 101 to 200 MHz
 260 Ohm/km max.
 47 nF/km nom.
 74 %

Typical values

Frequency (MHz)	10	16	62,5	100	200
Attenuation (dB/10m)	0,8	1,1	2,4	2,9	4,3
Next (db)	58,0	56,0	45,0	43,0	37,0
ACR (db)	57,2	54,9	42,6	40,1	32,7

Technical data

Weight: app. 44 kg/km
 bending radius, repeated: 46 mm
 Operating temperature range min.: -40°C
 Operating temperature range max.: +80°C
 Caloric load, approx. value: 0,54 MJ/m
 Copper weight: 24,00 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Acc. to EIA/TIA 568-A, Category 5e, Flame-retardant acc. to IEC 60332-1, Smoke density acc. to IEC 61034, Halogen-free acc. to 60754-2, Oil-resistant

Application

HELUKAT® 200IND Cat 5e Robustflex is used in harsh industrial surroundings and characterized by high reserve capacity and outstanding performance. Mechanically, the halogen-free PU outer sheath makes it ideal for harsh industrial surroundings. This cable is configurable with common RJ45 plugs (industrial and office version), as well as with various Sub-D and M12 plugs.

Part no.

800068, SF/UTP 4x2xAWG 26/7 PUR (S-FTP)

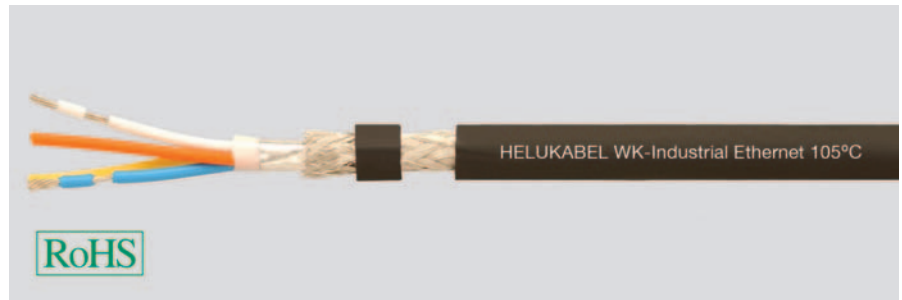
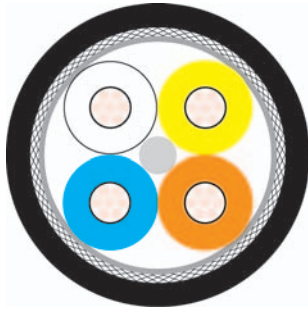
Dimensions and specifications may be changed without prior notice.

Industrial Ethernet

WK Industrial 105°C

HELUKAT® 100IND

SF/UTP, Category 5e



Type

Cable structure

Inner conductor diameter:
Core insulation:
Core colours:
Stranding element:
Shielding 1:
Shielding 2:
Total shielding:
Outer sheath material:
Cable external diameter:
Outer sheath colour:

Windenergy

SF/UTP 2x2x0,75 mm (stranded)

Copper, tinned (AWG 22/7)
XLPE ray cross-linking
wh, ye, bu, og
Star quad
Polyester foil over stranded bundle
Polyester foil, aluminium-lined
Cu braid, tinned
X-FRNC
app. 6,5 mm ± 0,2 mm
Black similar to RAL 9005

Electrical data

Characteristic impedance: 100 Ohm ± 15 ohm at 1 to 100 MHz
Conductor resistance, max.: 60 Ohm/km
Insulation resistance, min.: 0,5 GOhm x km
Loop resistance: 120 Ohm/km max.
Mutual capacitance: 52 nF/km nom.
Test voltage: 2 kV
Relative propagation velocity: 69 %

Typical values

Frequency (MHz)	10	16	62,5	100
Attenuation (dB/100m)	6,3	8,0	16,5	21,3
Next (db)	70,0	65,0	55,0	50,0
ACR (db)	63,7	57,0	38,5	28,7

Technical data

Weight: app. 64 kg/km
bending radius, repeated: 52 mm
Operating temperature range min.: -40°C
Operating temperature range max.: +105°C *
Caloric load, approx. value: 0,89 MJ/m
Copper weight: 34,00 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Category 5, Flame-retardant acc. to IEC 60332-3, Halogen-free acc. to 60754-2, Corrosiveness acc. to EN50267-2-3, UL-Style 21281 80°C/300V

Application

HELUKAT® 100IND Cat 5e WK Industrial 105°C is designed specially for demanding temperature requirements such as those encountered in wind turbines. Radiation cross-linking provides improved thermal stability as well good oil resistance.

Part no.

802293, INDUSTRIAL ETHERNET CAT.5

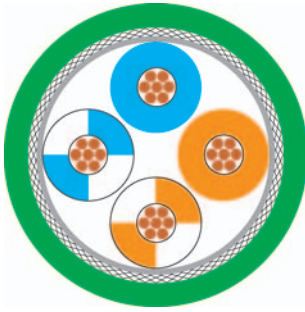
Dimensions and specifications may be changed without prior notice.

R

Industrial Ethernet

DRAG CHAIN ECO**HELUKAT® 100S**

SF/UTP 4 core, Category 5e

**Type****Cable structure**

Inner conductor diameter:
Core insulation:
Core colours:
Stranding element:
Shielding 1:
Shielding 2:
Total shielding:
Outer sheath material:
Cable external diameter:
Outer sheath colour:

Drag chain applications**SF/UTP 4x1x0.15 mm² (stranded)**

Copper, bare (AWG 26/19)
PO
whbl, bl, whor, or
Star quad
-
PETP fleece
Foil + braid
PUR
app. 4,8 mm ± 0,2 mm
Green

Electrical data

Characteristic impedance: 100 Ohm ± 15 ohm at 1 to 100 MHz
Insulation resistance, min.: 5 GOhm x km
Loop resistance: 250 Ohm/km max.
Mutual capacitance: 51 nF/km nom.
Test voltage: 0,5 kV
Relative propagation velocity: 67 %

Typical values

Frequency (MHz)	10	16	62,5	100	155
Attenuation (db/100m)	9,5	12,1	24,8	32,0	41,0
Next (db)	50,0	48,0	38,5	35,3	30,0

Technical data

Weight: app. 30 kg/km
bending radius, repeated: 70 mm
Operating temperature range min.: -40°C
Operating temperature range max.: +80°C
Caloric load, approx. value: 0,37 MJ/m
Copper weight: 17,00 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Acc. to EIA/TIA 568-A, Category 5e, Flame-retardant acc. to IEC 60332-1, Halogen-free acc. to 60754-2, Corrosiveness acc. to EN50267-2-3, AWM 20963 (80°C/30V)

Application

HELUKAT® 100S Cat 5e drag chain Eco is designed in use in cable carriers and the recurring loads cause by moving machine components. Thanks to the PU sheath, it also offers excellent resistance to common mineral oils, greases and cooling lubricants.

Part no.**82838**, INDUSTRIAL ETHERNET CAT.5e

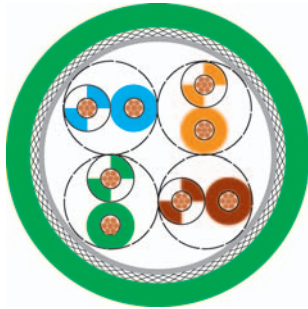
Dimensions and specifications may be changed without prior notice.

Industrial Ethernet

Drag chain ECO

HELUKAT® 100S

SF/UTP 4-pair, Category 5e



Type

Cable structure

Inner conductor diameter:
Core insulation:
Core colours:
Stranding element:
Shielding 1:
Shielding 2:
Total shielding:
Outer sheath material:
Cable external diameter:
Outer sheath colour:

Drag chain applications

SF/UTP 4x2x0.15 mm² (stranded)

Copper, bare (AWG 26/19)
PO
whbu/bu, whog/og, whgn/gn, whbn/bn
Double core
-
PETP fleece
Foil + braid
PUR
app. 6,6 mm ± 0,2 mm
Green

Electrical data

Characteristic impedance: 100 Ohm ± 15 ohm at 1 to 100 MHz
Insulation resistance, min.: 5 GOhm x km
Loop resistance: 250 Ohm/km max.
Mutual capacitance: 48 nF/km nom.
Test voltage: 0,5 kV
Relative propagation velocity: 67 %

Typical values

Frequency (MHz)	10	16	62,5	100	155
Attenuation (db/100m)	9,5	12,1	24,8	32,0	41,0
Next (db)	50,0	48,0	38,5	35,3	30,0

Technical data

Weight: app. 56 kg/km
bending radius, repeated: 102 mm
Operating temperature range min.: -40°C
Operating temperature range max.: +80°C
Caloric load, approx. value: 0,64 MJ/m
Copper weight: 31,00 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Acc. to EIA/TIA 568-A, Category 5e, Flame-retardant acc. to IEC 60332-1, Halogen-free acc. to 60754-2, Corrosiveness acc. to EN50267-2-3, AWM 20963 (80°C/30V)

Application

HELUKAT® 100S Cat 5e drag chain Eco is designed for use in cable carriers and the recurring loads caused by moving machine components. Thanks to the PU sheath, it also offers excellent resistance to common mineral oils, greases and cooling lubricants.

Part no.

82839, INDUSTRIAL ETHERNET CAT.5e

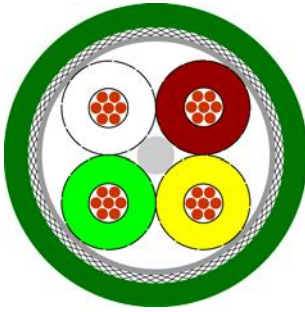
Dimensions and specifications may be changed without prior notice.

R

Industrial Ethernet

DRAG CHAIN
HELUKAT® 200S

SF/UTP 4 core, Category 5



Type

Cable structure

Inner conductor diameter:
 Core insulation:
 Core colours:
 Stranding element:
 Shielding 1:
 Shielding 2:
 Screen 1 over stranding:
 Screen 2 over stranding:
 Outer sheath material:
 Cable external diameter:
 Outer sheath colour:

Drag Chain Patch Cables

SF/UTP 4x1xAWG 24/ 19 (stranded) PUR

Copper, bare (AWG 24/19)
 PP
 wh/bn, gn/ye
 Quad
 Polyester foil over stranded bundle
 -
 Polyester foil, aluminium-lined
 Cu braid
 PUR
 app. 6,2 mm ± 0,2 mm
 Green similar to RAL 6026

Electrical data

Characteristic impedance: 100 Ohm ± 15 ohm at 1 to 100 MHz
 Loop resistance: 156 Ohm/km max.
 Mutual capacitance: 51 nF/km nom.
 Relative propagation velocity: 67 %

Typical values

Frequency (MHz)	10	16	62,5	100
Attenuation (dB/10m)	1,0	1,2	2,6	3,3
Next (db)	47,0	44,0	35,0	32,0
ACR (db)	46,0	42,8	32,4	28,7

Technical data

Weight: app. 54 kg/km
 bending radius, repeated: 75 mm
 Operating temperature range min.: -25°C
 Operating temperature range max.: +70°C
 Caloric load, approx. value: 0,944 MJ/m
 Copper weight: 30,00 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Acc. to EIA/TIA 568-A, Category 5, Flame-retardant acc. to IEC 60332-1, Halogen-free acc. to 60754-2, Oil-resistant

Application

HELUKAT® 200S Cat 5 drag chain is designed for use in cable carriers and the extreme loads caused by moving machine components and provides excellent transmission characteristics under the most difficult and extreme conditions. Thanks to the clever structure, it is also suitable mechanically for use even in cable carriers with a high packing density. This cable configurable with conventional Sub-D plugs, as well as with various RJ45 plugs.

Part no.

800088, SF/UTP 4x1xAWG 24/19 PUR (S-FTP)

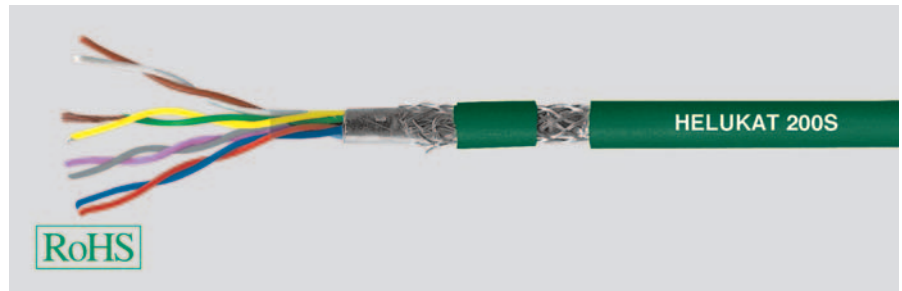
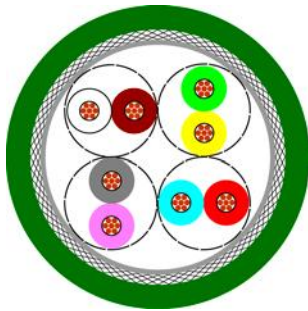
Dimensions and specifications may be changed without prior notice.

Industrial Ethernet

DRAG CHAIN

HELUKAT® 200S

SF/UTP 4 pair, Category 5



Type

Cable structure

Inner conductor diameter:
Core insulation:
Core colours:
Stranding element:
Shielding 1:
Shielding 2:
Screen 1 over stranding:
Screen 2 over stranding:
Outer sheath material:
Cable external diameter:
Outer sheath colour:

Drag Chain Patch Cables

SF/UTP 4x2xAWG 24/19 PUR (stranded)

Copper, bare (AWG 24/19)
PE
wh/bn, gn/ye, gy/pk, bu/rd
Double core
Polyester foil over stranded bundle
-
Polyester foil, aluminium-lined
Cu braid
PUR
app. 9,5 mm ± 0,2 mm
Green similar to RAL 6026

Electrical data

Characteristic impedance: 100 Ohm ± 15 ohm at 1 to 100 MHz
Loop resistance: 156 Ohm/km max.
Mutual capacitance: 51 nF/km nom.
Relative propagation velocity: 67 %

Typical values

Frequency (MHz)	10	16	62,5	100
Attenuation (dB/10m)	1,0	1,2	2,6	3,3
Next (db)	47,0	44,0	35,0	32,0
ACR (db)	46,0	42,8	32,4	28,7

Technical data

Weight: app. 110 kg/km
bending radius, repeated: 115 mm
Operating temperature range min.: -25°C
Operating temperature range max.: +70°C
Caloric load, approx. value: 2,08 MJ/m
Copper weight: 54,30 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Acc. to EIA/TIA 568-A, Category 5, Flame-retardant acc. to IEC 60332-1, Halogen-free acc. to 60754-2, Oil-resistant

Application

HELUKAT® 200S Cat 5 drag chain is designed for use in cable carriers and the extreme loads caused by moving machine components and provides excellent transmission characteristics under the most difficult and extreme conditions. Thanks to the clever structure, it is also suitable mechanically for use even in cable carriers with a high packing density. This cable is configurable with conventional Sub-D plugs, as well as with various RJ45 plugs.

Part no.

81155, SF/UTP 4x2xAWG 24/19 PUR (S-FTP)

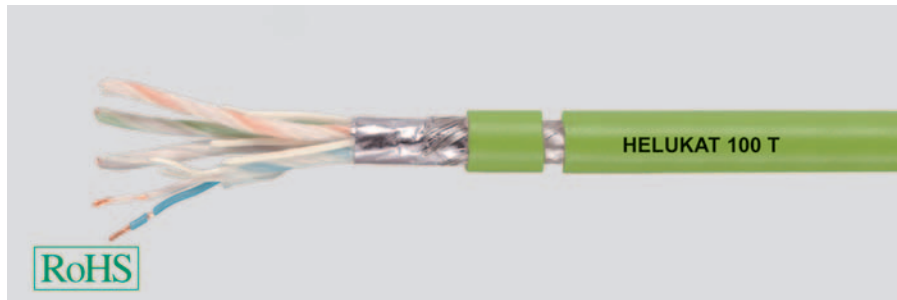
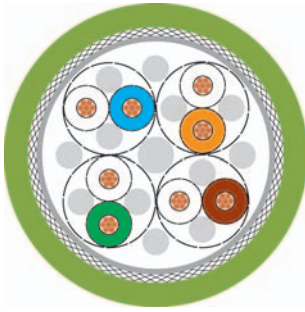
Dimensions and specifications may be changed without prior notice.

R

Industrial Ethernet

TORDIERFLEX
HELUKAT® 100T

SF/UTP, Category 5



Type

Cable structure

Inner conductor diameter:
 Core insulation:
 Core colours:
 Stranding element:
 Shielding 1:
 Shielding 2:
 Screen 1 over stranding:
 Screen 2 over stranding:
 Outer sheath material:
 Cable external diameter:
 Outer sheath colour:

Torsion Patch Cables

SF/UTP 4x2xAWG 26/19 PUR (stranded)

Copper, bare (AWG 26/19)
 PP
 wh/bu, wh/og, wh/gn, wh/bn
 Double core
 Polyester foil over stranded bundle
 -
 Polyester foil, aluminium-lined
 Cu braid
 PUR
 app. 7,5 mm
 Green similar to RAL 6018

Electrical data

Characteristic impedance: 100 Ohm ± 15 ohm at 1 to 100 MHz
 Loop resistance: 260 Ohm/km max.
 Mutual capacitance: 50 nF/km nom.
 Relative propagation velocity: 68 %

Typical values

Frequency (MHz)	10	16	62,5	100
Attenuation (dB/10m)	1,3	1,6	3,2	4,0
Next (db)	47,0	44,0	35,0	32,0
ACR (db)	45,7	42,4	31,8	28,0

Technical data

Weight: app. 63 kg/km
 bending radius, repeated: 56 mm
 Operating temperature range min.: -40°C
 Operating temperature range max.: +80°C
 Caloric load, approx. value: 1,234 MJ/m
 Copper weight: 29,50 kg/km

Norms

Acc. to ISO/IEC 11801, Acc. to EN 50173, Acc. to EIA/TIA 568-A, Category 5, Flame-retardant acc. to IEC 60332-1, Smoke density acc. to IEC 61034, Halogen-free acc. to 60754-2, Oil-resistant, AWM Style 20236 80°C/30V

Application

HELUKAT® 100T Cat 5 Torsionflex is designed for applications with torsion loads, e.g. in robots, and characterized by high reserve capacity and outstanding performance, even after exposure to extreme conditions. Thanks to the clever structure, it is also possible to achieve a long service life mechanically. These cables are configurable with conventional Sub-D plugs, as well as with various RJ45 plugs.

Part no.

800067, SF/UTP 4x2xAWG 26/19 PUR (S-FTP)

Dimensions and specifications may be changed without prior notice.