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ACCESSORIES

APPENDIX

HITRONIC® POF SIMPLEX BUFFERED FIBRE

Info

- J-V2Y 1P 980 / 1000
- Simplex polymer fibre-optic cable for direct connector assembly

Benefits

- Transmission lengths up to 70 m
- Suitable for direct connector assembly
- Easy to handle
- No crosstalk
- EMC protection

Application range

- For optical signal transmission in industrial applications
- Very suitable for fixed installation in control cabinets, cable ducts, or pipes with low mechanical stress

Product features

- Lightweight
- High flexibility
- Halogen-free buffer tube

Product Make-up

- Polymer Optical Fibre (POF)
- PE buffer tube
- Without outer sheath
- Colour: black

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: PMMA
Cladding material: fluoropolymers

Permissible bending radius
≥ 10 x outer diameter

Permissible tensile force
Fixed installation: 5 N
Short-term: 15 N

Temperature range
Operation: -55°C to +85°C
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® POF SIMPLEX PE					
28000001	HITRONIC® POF SIMPLEX PE	980 / 1000 POF	1	2.2	3.8

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- HITRONIC® POF SIMPLEX CABLE refer to page 489

Accessories

- POF Connector and Adapter HFBR refer to page 493
- POF Cutting Tools refer to page 496
- POF Connector F05 Simplex refer to page 494
- UNIVERSAL STRIP stripping tool refer to page 1006

HITRONIC® POF SIMPLEX CABLE

Info

- J-V2Y(ZN)11Y 1P 980/1000
- Simplex POF cable with strain relief and PUR outer sheath
- FD - Highly flexible (power chains)

Benefits

- Optical data transmisson up to 70m
- Easy to handle
- No intereference by external fields
- No grounding problems
- Suitable for direct connector assembly

Application range

- For optical signal transmission in industrial applications
- As a link between moving parts
- FD cable version:
  for flexible applications (power chains)

Product features

- Resistant to abrasion, oil, microbes and hydrolysis
- Adhesion-free
- Outer sheath flame-retardant and halogen-free
- FD cable version:
  5.000.000 bending cycles

Product Make-up

- Polymer Optical Fibre (POF)
- PE buffer tube
- Aramid yarns as strain relief
- PUR outer sheath
- Colour: orange (RAL 2003)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: PMMA
Cladding material: fluoropolymers

Permissible bending radius
≥ 10 x outer diameter

Permissible tensile force
Fixed installation: 100 N
Short-term: 600 N

Temperature range
Operation: –20 °C to +70 °C
Installation: –10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® POF SIMPLEX PE-PUR					
28020001	HITRONIC® POF SIMPLEX PE-PUR	980/1000 POF	1	5.5	25
HITRONIC® POF SIMPLEX FD PE-PUR for draig chain application					
28320001	HITRONIC® POF SIMPLEX FD PE-PUR	980/1000 POF	1	6	30

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- POF Assembly Sets refer to page 496
- POF Cutting Tools refer to page 496
- POF Connector F-SMA and ST(BFOC) refer to page 494
- STAR STRIP stripping tool refer to page 1000
- SMART STRIP stripping tool

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HITRONIC® POF DUPLEX BUFFERED FIBRES

Info

- J-V2Y 2x1P 980/1000
- Duplex polymer fibre-optic cable for direct connector assembly

Benefits

- Transmission lengths up to 70 m
- Suitable for direct connector assembly
- Easy to handle
- No crosstalk
- EMC protection

Application range

- For optical signal transmission in industrial applications
- Very suitable for fixed installation in control cabinets, cable ducts, or pipes with low mechanical stress
- Light mechanical stress
- Identification by white dots

Product features

- Halogen-free
- Lightweight
- High flexibility

Product Make-up

- Polymer Optical Fibre (POF)
- Twin cable
- PE buffer tube
- Without outer sheath
- Colour: black

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Dimensions
Twin cable
2x2.2mm

Optical fibre type
Core material: PMMA
Cladding material: fluoropolymers

Permissible bending radius
≥ 10 x outer diameter

Permissible tensile force
Fixed installation: 10 N
Short-term: 30 N

Temperature range
Operation: -55°C to +85°C
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® POF DUPLEX BUFFERED FIBRES					
28000002	HITRONIC® POF DUPLEX PE	980/1000 POF	2	2.2	7.6

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Similar products

- HITRONIC® POF SIMPLEX BUFFERED FIBRE refer to page 488

Accessories

- POF Connector and Adapter HFBR refer to page 493
- POF Cutting Tools refer to page 496
- UNIVERSAL STRIP stripping tool refer to page 1006

HITRONIC® POF DUPLEX CABLE

Info

- J-V2Y(ZN)11Y 2P 980/1000
- Duplex plastic fibre optic cable with strain relief and PUR outer sheath
- FD - Highly flexible (power chains)

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX PE-PUR

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX HEAVY PE-PUR

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX FD PE-PUR

Benefits

- Optical data transmisson up to 70m
- Easy to handle
- No intereference by external fields
- No grounding problems
- Suitable for direct connector assembly

Application range

- For optical signal transmission in industrial applications
- FD cable version:
  for flexible applications (power chains)

Product features

- Outer sheath flame-retardant and halogen-free
- Resistant to abrasion, oil, microbes and hydrolysis
- Adhesion-free
- FD cable version:
  5.000.000 bending cycles

Product Make-up

- Polymer Optical Fibre (POF)
- PE buffer tube
- Fibre colour coding: black, orange
- Aramid yarns as strain relief
- PUR outer sheath, orange (RAL 2003)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: PMMA
Cladding material: fluoropolymers

Permissible bending radius
≥ 10 x outer diameter

Permissible tensile force
Fixed installation: 100 N (PE-PUR),
                    130 N (Heavy PE-PUR)
Short-term: 400 N

Temperature range
Operation: -40°C to +7 °C
           (FD: -20°C to +70°C)
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® POF DUPLEX PE-PUR					
28020002	HITRONIC® POF DUPLEX PE-PUR	980/1000 POF	2	5.5	27
HITRONIC® POF DUPLEX HEAVY PE-PUR					
28030002	HITRONIC® POF DUPLEX HEAVY PE-PUR	980/1000 POF	2	8	57
HITRONIC® POF DUPLEX FD PE-PUR for draig chain application					
28320002	HITRONIC® POF DUPLEX FD PE-PUR	980/1000 POF	2	6	30

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Accessories

- POF Assembly Sets refer to page 496
- POF Cutting Tools refer to page 496
- POF Connector F-SMA and ST(BFOC) refer to page 494
- POF Connector SC-RJ refer to page 495
- STAR STRIP stripping tool refer to page 1000

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NEW

HITRONIC® POF cables for PROFINET Applications

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX PNB PA-PUR

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX PNB PA-PVC

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX FD PNC PA-PUR

Info

- PROFINET compliant
  - Type B or Type C
- J-V4Y(ZN)11Y 2P980/1000
  J-V4Y(ZN)Y 2P980/1000
  J-V4Y(ZN)11Y 2P980/1000 flex

Benefits

- Optical data transmisson up to 70m
- Easy to handle
- No intereference by external fields
- No grounding problems
- Suitable for direct connector assembly

Application range

- For optical signal transmission in industrial applications
- PROFINET / Industrial Ethernet
- At 100 Mbit/s: max 50 m cable length
- PROFINET type B:
  for fixed laying
- PROFINET type C:
  for flexible applications (power chains)

Product features

- Cable version with PVC outer sheath: for standard applications in industrial environments
- Cable version with PUR outer sheath: for high mechanical or chemical stress in industrial environments
- PNB - PROFINET-Type B
- PNC - PROFINET-Type C
- FD - Highly flexible (power chains)

Product Make-up

- Polymer Optical Fibre (POF)
- PA buffer tube
- Fibre colour coding: black, orange (with arrow printing)
- Aramid yarns as strain relief
- Outer sheath material PUR or PVC (see article description)
- Outer sheath colour: green (RAL 6018)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Dimensions
Buffered fibre: 2.2mm
Cable: see table

Core identification code
Black, orange (with arrow printing)

Optical fibre type
Core material: PMMA
Cladding material: fluoropolymers

Permissible bending radius
≥ 10 x outer diameter

Permissible tensile force
see data sheet

Temperature range
Operation: -20 °C to +70 °C
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
POF DUPLEX - PROFINET TYPE B					
28051002	HITRONIC® POF DUPLEX PNB PA-PUR	980/1000 POF	2	8	56
28052002	HITRONIC® POF DUPLEX PNB PA-PVC	980/1000 POF	2	7.8	59
POF DUPLEX - PROFINET TYPE C					
28351002	HITRONIC® POF DUPLEX FD PNC PA-PUR	980/1000 POF	2	8	55

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Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
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Accessories

- POF Assembly Sets refer to page 496
- POF Cutting Tools refer to page 496
- POF Connector F-SMA and ST(BFOC) refer to page 494
- POF Connector SC-RJ refer to page 495
- EPIC® DATA PB Sub-D FO refer to page 351
- STAR STRIP stripping tool refer to page 1000

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POF Connector and Adapter HFBR

Benefits
- Compatible with HP Versatile Link Connectors and Components series
- Different colours for channel coding

Application range
- Factory automation
- Medical equipment
- Telecommunications Switching Systems
- Automotive Networks
- Printed Circuit Board

Product features
- HFBR connector series for 2.2 mm POF
- For crimping or clamping
- Simplex or Duplex variations

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Article number	Article designation	PU
Connector HFBR-4501, Simplex, with Crimp Sleve		
29140099	POF Connector HFBR4501 GY Simplex /4PC	4 piece
29140098	POF Connector HFBR4501 GY Simplex /50PC	50 piece
Latching Connector HFBR-4503, Simplex, with Crimp Sleve		
29141099	POF Connector HFBR4503 GY Simplex /4PC	4 piece
29141098	POF Connector HFBR4503 GY Simplex /50PC	50 piece
Connector HFBR-4506, Duplex, with Crimp Sleve		
29142099	POF Connector HFBR4506 WH Duplex /4PC	4 piece
29142098	POF Connector HFBR4506 WH Duplex /50PC	50 piece
Connector HFBR-4511, Simplex, with Crimp Sleve		
29143099	POF Connector HFBR4511 BL Simplex /4PC	4 piece
29143098	POF Connector HFBR4511 BL Simplex /50PC	50 piece
Latching Connector HFBR-4513, Simplex, with Crimp Sleve		
29144099	POF Connector HFBR4513 BL Simplex /4PC	4 piece
29144098	POF Connector HFBR4513 BL Simplex /50PC	50 piece
Latching Connector HFBR-4516, Duplex, with Crimp Sleve		
29145099	POF Connector HFBR4516 GY Duplex /4PC	4 piece
29145098	POF Connector HFBR4516 GY Duplex /50PC	50 piece
Clamp Connector HFBR-4531, Simplex		
29146099	POF Connector HFBR4531 BK Simplex /4PC	4 piece
29146098	POF Connector HFBR4531 BK Simplex /50PC	50 piece
Clamp and Latching Connector HFBR-4532, Simplex		
29147099	POF Connector HFBR4532 BK Simplex /4PC	4 piece
29147098	POF Connector HFBR4532 BK Simplex /50PC	50 piece
Clamp Connector HFBR-4533, Simplex		
29148099	POF Connector HFBR4533 BL Simplex /4PC	4 piece
29148098	POF Connector HFBR4533 BL Simplex /50PC	50 piece
HFBR4505 Adapters		
29440099	POF Adapter HFBR4505 GY Simplex /4PC	4 piece
HFBR4515 Adapters		
29441099	POF Adapter HFBR4515 BL Simplex /4PC	4 piece

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories
- POF Cutting Tools refer to page 496
- POF Polishing tools and accessories refer to page 497

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POF Connector F05 Simplex

Benefits
• Easy to assemble

Application range
• Digital audio
• Factory automation
• Office Automation (Smart House)

Product features
• F-05 (TOCP) SIMPLEX clamp connector for connecting to polymer optical fibre without crimping or gluing
• Snap-In Connector
• Suitable for 2.2 mm POF

Info
• Compatible with TOCP155K

Technical data
ETIM 5.0 Class-ID: EC001122
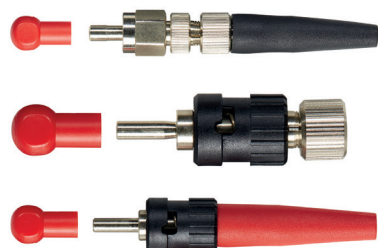ETIM 5.0 Class-Description: Fibre optic connector

Article number	Article designation	PU
Connector F05 Simplex		
29150099	POF Connector F05 Simplex /4PC	4 piece
29150098	POF Connector F05 Simplex /50PC	50 piece
Adapter for Connector F05 Simplex		
29450099	POF Adapter F05 Simplex /4PC	4 piece

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories
• POF Cutting Tools refer to page 496
• POF Polishing tools and accessories refer to page 497

POF Connector F-SMA and ST(BFOC)

Benefits
• As crimp or clamp version for easy assembling

Product features
• FSMA and ST(BFOC) connector with knurled nut or hexagonal nut for crimping, gluing or easy clamping
• Suitable for 2.2 mm POF
• Available for different cable diameters (2.2 mm and 6.0 mm)
• Connector including bend protection boot and dust cap
• Bend protection boot colour: black and red

Info
• FSMA and ST(BFOC) connectors for POF cable assembly

Technical data
ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description: Fibre optic connector

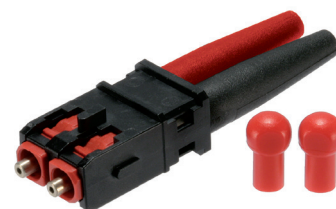| Article number	Article designation	PU
FSMA Connectors with knurled nut for crimping		
29135099	POF Connector FSMA Crimp 2.2 /4PC	4 piece
29135098	POF Connector FSMA Crimp 2.2 /50PC	50 piece
29137099	POF Connector FSMA Crimp 6.0 /4PC	4 piece
29137098	POF Connector FSMA Crimp 6.0 /50PC	50 piece
FSMA Connectors with hexagonal nut for crimping		
29135089	POF Connector FSMA Hex Crimp 2.2 /4PC	4 piece
29135088	POF Connector FSMA Hex Crimp 2.2 /50PC	50 piece
29132089	POF Connector FSMA Hex Crimp 6.0 /4PC	4 piece
29132088	POF Connector FSMA Hex Crimp 6.0 /50PC	50 piece
FSMA Connectors with knurled nut for clamping		
29130099	POF Connector FSMA Clamp 2.2 /4PC	4 piece
29130098	POF Connector FSMA Clamp 2.2 /50PC	50 piece
FSMA Connectors with hexagonal nut for clamping		
29130089	POF Connector FSMA Hex Clamp 2.2 /4PC	4 piece
29130088	POF Connector FSMA Hex Clamp 2.2 /50PC	50 piece
ST(BFOC) Connectors for crimping		
29125099	POF Connector ST(BFOC) Crimp 2.2 /4PC	4 piece
29125098	POF Connector ST(BFOC) Crimp 2.2 /50PC	50 piece
ST(BFOC) Connectors for clamping		
29120099	POF Connector ST(BFOC) Clamp 2.2 /4PC	4 piece
29120098	POF Connector ST(BFOC) Clamp 2.2 /50PC	50 piece

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Accessories
• POF Assembly Sets refer to page 496
• POF Cutting Tools refer to page 496
• POF Polishing tools and accessories refer to page 497
• POF Measurement Equipment refer to page 498

NEW

POF Connector SC-RJ

Benefits
- As crimp version for easy assembling

Product features
- Connector set included two SC connectors,
  SC-RJ housing, two bending protection boots, dust caps
- Suitable for 2.2 mm POF
- Bend protection boot colour:
  black and red

ⓘ Info
- SC-RJ connectors for POF cable assembly
- Connectors for PROFINET Data Cabling

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Article number	Article designation	PU
POF Connector SC-RJ		
29161097	POF Connector SC-RJ Crimp 2.2	1 piece

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Accessories
- POF Assembly Sets refer to page 496
- POF Cutting Tools refer to page 496
- POF Polishing tools and accessories refer to page 497
- POF Measurement Equipment refer to page 498

POF Adapter F-SMA

Product features
- POF Adapter FSMA:
  version with two fixing nuts and lock wahser
- POF Adapter FSMA hexa:
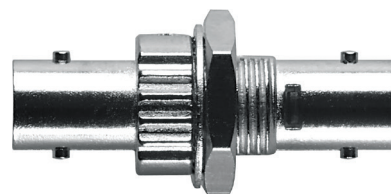 version with hexagonal flange, fixing nuts and lock wahser

ⓘ Info
- Can be used for POF and PCF connector types

Technical data

ETIM 5.0 Class-ID: EC000752
ETIM 5.0 Class-Description:
Fibre optic coupler

Article number	Article designation	PU
FSMA Adapters		
29430099	POF Adapter FSMA /4PC	4 piece
29430089	POF Adapter FSMA Hex /4PC	4 piece

Photographs are not to scale and do not represent detailed images of the respective products.

POF Adapter ST (BFOC)

Product features
- ST(BFOC) adapter with flange, fixing nuts and lock washer

ⓘ Info
- Can be used for POF and PCF connector types

Technical data

ETIM 5.0 Class-ID: EC000752
ETIM 5.0 Class-Description:
Fibre optic coupler

Article number	Article designation	PU
ST(BFOC) Adaptera		
29420099	POF Adapter ST (BFOC) /4PC	4 piece

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POF Assembly Sets

Benefits
- Easy to handle
- Set includes all the necessary tools for connector assembly
- Suitable for on-site assembly

Product features
- Sets available for POF connector types FSMA and ST (BFOC) and SC / SC-RJ
- Contents: crimp tool, buffered fibre stripper, polishing disc FSMA, polishing film, cutter

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description: Fibre optic connector

Article number	Article designation	PU
Assembly Set for POF FSMA Connector		
29500001	Assembly Set POF Connector FSMA	1 piece
Assembly Set for POF ST(BFOC) Connector		
29500002	Assembly Set POF Connector ST(BFOC)	1 piece
Assembly Set for POF SC/SC-RJ Connector		
29500004	Assembly Set for POF Connector SC	1 piece

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Optical transmission systems

LAPP GROUP

POF – Polymer optical fibre accessories • Tools and Accessories

POF Cutting Tools

Technical data

ETIM 5.0 Class-ID: EC001126
ETIM 5.0 Class-Description: Fibre optic cleaver

Benefits
- Cutting tools for the POF cable and connector product range

Application range
- Cable stripper for different jacket materials and cable diameter

Product features
- Various tools for cutting buffered fibres (2.2mm) from very simple to version with automatic blade advance
- Crimping tool suitable for the POF(PCF) connector program

Article number	Article designation	PU
POF Bare Fibre Cutter		
29500014	POF Cutter 2.2/1.0mm Guillotine	5 pieces
29500015	POF BufferedFibreCutter 2.2mm manuel	1 piece
29500016	POF BufferedFibreCutter 2.2mm automatic	1 piece
POF Cable Stripper		
29500011	POF Buffered Fibre Stripper 2.2 mm (P980/1000)	1 piece
29500013	POF Cable Stripper PA 2.2mm	1 piece
29500012	POF Cable Stripper 3.6/6.0mm	1 piece
Strain relief element scissors		
29500017	Strain relief element scissors	1 piece
POF Crimping Tool		
29500010	POF Crimp Tool 2.5/3.0/4.5/4.95mm	1 piece

Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

LAPP GROUP

POF Polishing tools and accessories

Benefits
- Easy to handle
- Suitable to POF Connector Assembly Sets

Product features
- Accessories for POF Assembly
- Polishing disc for various POF connector types
- Other versions are available upon request
- Polishing film with different graining size types for fibre end face treatment
- Polishing process:
  POF - Polishing Film 1000 (BU)
        Polishing Film 5µm (BN)
        Polishing Film 1µm (GN)
  PCF - Polishing Film 5 µm (BN)
        Polishing Film 1 µm (GN)
        Polishing Film 0.3 µm (WH)

Technical data

ETIM 5.0 Class-ID: EC001126
ETIM 5.0 Class-Description: Fibre optic cleaver

Article number	Article designation	PU
Polishing Disc for POF connector assembly		
29500031	Polishing Disc POF FSMA Connector	1 piece
29500032	Polishing Disc POF ST(BFOC) Connector	1 piece
29500033	Polishing Disc POF HFBR4501/4511 SIMPLEX	1 piece
29500034	Polishing Disc POF HFBR4516 DUPLEX	1 piece
29500035	Polishing Disc POF F05 Connector	1 piece
29500036	Polishing Disc POF Simplex 2.2mm	1 piece
29500733	Polishing Disc PCF HFBR4521 Connector	1 piece
29500037	Polishing Disc POF SC Connector	1 piece
Polishing film		
29500021	Polishing film graining size 1000 (BL)	10 pieces
29500024	Polishing film graining size 5 µm (BR)	10 pieces
29500023	Polishing film graining size 1 µm (GN)	10 pieces
29500022	Polishing film graining size 0.3 µm (WH)	10 pieces
Polishing accessories		
29500020	Polishing glass plate 150x230mm	1 piece

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Similar products

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POF Measurement Equipment

Benefits

- Measuring Equiment Set for wavelenghts 660/850nm
- Suitable for the measurement of assemblied POF and PCF systems
- Measuring Equiment Set for different wave lengths and connector types. Connector type and wavelength is defined by interchangeable adapter system

Product features

- The mesasurement device is supplied without adaters. Please order separately
- Optical Transmitter (TMR): wavelength dependent on interchangeable adapter
  - 650nm
  - 660nm
  - 850nm (on request)
- Optical Power Meter: for attenuation measurement of an assembled POF (PCF) systems adapted to Optical Transmitter (TMR)

Product Make-up

- Optical Transmitter with digital display, wavelength dependent on adapter, active interchangeable adapters are not included, please order separately
- Optical Power Meter with digital display, wavelength meter 660/850 nm, interchangeable adapters (receiver side) are not included, please order separately
- Measuring Set (29500089): Optical Transmitter and Power Meter as set in a black suitcase, interchangeable adapters are not included

Article number	Article designation	PU
POF Measurement Equipment		
29500070	POF Optical Transmitter (TMR)	1 piece
POF TMR Adapter, wavelength 650nm		
29500071	POF Optical TMR Adapter HFBR, 650nm	1 piece
29500072	POF Optical TMR Adapter FSMA, 650nm	1 piece
29500073	POF Optical TMR Adapter ST(BFOC), 650nm	1 piece
POF TMR Adapter, wavelength 660nm		
29500074	POF Optical TMR Adapter F05, 660nm	1 piece
29500075	POF Optical TMR Adapter HFBR, 660nm	1 piece
29500076	POF Optical TMR Adapter FSMA, 660nm	1 piece
29500077	POF Optical TMR Adapter ST(BFOC), 660nm	1 piece
POF Optical Power Meter 660/850 nm		
29500080	POF Optical Power Meter 660/850 nm	1 piece
POF Power Meter Adapters		
29500081	POF Power Meter Adapter HFBR4501/4521	1 piece
29500082	POF Power Meter Adapter FSMA	1 piece
29500083	POF Power Meter Adapter ST(BFOC)	1 piece
29500084	POF Power Meter Adapter F05	1 piece
POF Measuring Equiment Set without adapters		
29500089	POF Measuring Equiment Set 660/850nm	1 piece

Photographs are not to scale and do not represent detailed images of the respective products.

HITRONIC® PCF SIMPLEX Cable

LAPP KABEL STUTTGART HITRONIC® PCF SIMPLEX PUR OUTDOOR 1K 200/230

Info

- A-V(ZN)11Y
- Simplex plastic cladded fibre (PCF) cable for direct connector assembly

Benefits

- Transmission lengths up to 500 m
- Suitable for direct connector assembly
- High mechanical strength
- UV-resistant
- EMC protection

Application range

- For data transmission in field bus systems, such as PROFIBUS, INTERBUS etc.
- Industrial environments

Product features

- Possible transmission wavelengths: 650 nm and 850 nm
- Outer sheath flame-retardant and halogen-free

Product Make-up

- Tight-buffered fibres
- Aramid yarns as strain relief
- PUR outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Minimum bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Optical fibre type
Core material: glass
Cladding material: fluoropolymers

Permissible tensile force
Fixed installation: 200 N

Temperature range
Operation: -10°C to +60°C
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® PCF SIMPLEX Cable					
28600701	HITRONIC® PCF SIMPLEX PUR Outdoor	200/230 PCF	1	2.9	7.5

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- PCF Assembly Sets refer to page 504
- PCF Connector HFBR refer to page 503
- PCF Connector F-SMA and ST(BFOC) refer to page 503
- PCF Cutting Tools refer to page 505

HITRONIC® PCF DUPLEX Cable

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX FRNC-PUR indoor

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX FRNC-PE outdoor

Info
- PCF DUPLEX Indoor: J-V(ZN)H11Y 2K200/230
- PCF DUPLEX Outdoor: A-VQ(ZN)HB2Y 2K200/230
- Plastic-cladded fibre (PCF) cable compatible with all BUS systems

Benefits
- Transmission lengths up to 500 m
- Suitable for direct connector assembly
- Good resistance to oil, petrol, acids and alkalis
- High mechanical strength
- EMC protection

Application range
- For data transmission in field bus systems, such as PROFIBUS, INTERBUS etc.
- Industrial environments

Product features
- Possible transmission wavelengths: 650 nm and 850 nm
- Complies with requirements for all BUS systems
- Halogen-free outer sheath

Product Make-up
- Colour-coded, tight-buffered PCF sub-cable with FRNC sheath (2.9mm)
- Aramid yarns as strain relief
- PUR outer sheath (indoor); PE outer sheath (outdoor)
- Colour: orange (indoor); black (outdoor)

Technical data
ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Minimum bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Optical fibre type
Core material: glass
Cladding material: fluoropolymers

Permissible tensile force
Fixed installation: 400 N (indoor); 500 N (outdoor)
Short-term: 1200 N (indoor); 1500 N (outdoor)

Temperature range
Operation: -20 °C to +70 °C
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Indoor					
28020702	HITRONIC® PCF DUPLEX FRNC-PUR Indoor	200/230 PCF	2	8	53
Outdoor					
28620702	HITRONIC® PCF DUPLEX FRNC-PE Outdoor	200/230 PCF	2	10.5	89

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Similar products
- HITRONIC® PCF DUPLEX FD cables refer to page 501
- HITRONIC® PCF cables for PROFINET Applications refer to page 502

Accessories
- PCF Assembly Sets refer to page 504
- PCF Connector HFBR refer to page 503
- PCF Connector F-SMA and ST(BFOC) refer to page 503
- PCF Connector SC-RJ refer to page 504
- STAR STRIP stripping tool refer to page 1000
- SMART STRIP stripping tool

HITRONIC® PCF DUPLEX FD cables

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX FD FRNC-PUR

Info

- A/J-V(ZN)H11Y
- Flexible PCF cable compatible with all BUS systems

Benefits

- Designed for use in power chains
- Transmission lengths up to 500 m
- Suitable for direct connector assembly
- Good resistance to oil, petrol, acids and alkalis
- EMC protection

Application range

- For highly flexible applications
- For data transmission in field bus systems, such as PROFIBUS, INTERBUS etc.
- As a link between moving parts
- Industrial environments

Product features

- Possible transmission wavelengths: 650 nm and 850 nm
- Complies with requirements for all BUS systems
- Outer sheath flame-retardant and halogen-free

Product Make-up

- Colour-coded, tight-buffered PCF sub-cable with FRNC sheath
- Sub cable outer diameter: 2.2mm
- Aramid yarns as strain relief
- PUR outer sheath
- Colour: orange (RAL 2003)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Minimum bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Optical fibre type
Core material: glass
Cladding material: fluoropolymers

Permissible tensile force
Fixed installation: 800 N
Short-term: 2000 N

Temperature range
Operation: -20 °C to +70 °C
Installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® PCF DUPLEX FD cables					
28320702	HITRONIC® PCF DUPLEX FD FRNC-PUR	200/230 PCF	2	8.8	63

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
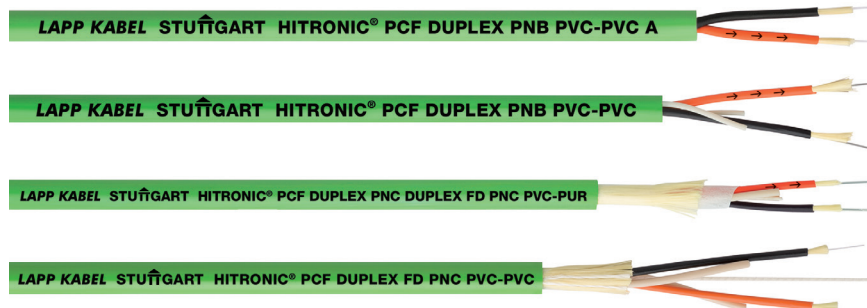The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- PCF Assembly Sets refer to page 504
- PCF Connector HFBR refer to page 503
- PCF Connector F-SMA and ST(BFOC) refer to page 503
- PCF Cutting Tools refer to page 505
- PCF Connector SC-RJ refer to page 504
- STAR STRIP stripping tool refer to page 1000

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NEW

HITRONIC® PCF cables for PROFINET Applications

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX PNB PVC-PVC A

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX PNB PVC-PVC

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX PNC DUPLEX FD PNC PVC-PUR

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX FD PNC PVC-PVC

Info
- PROFINET compliant
  - Type B or Type C
- J-V(ZN)YY 2K200/230
  J-V(ZN)Y(ZN)11Y 2K200/230 flex
  J-V(ZN)Y(ZN)Y 2K200/230 flex

Benefits
- Optical data transmisson up to 500m
- Easy to handle
- No intereference by external fields
- No grounding problems
- Suitable for direct connector assembly

Application range
- PCF DUPLEX cabels for optical signal transmission in industrial applications
- PROFINET / Industrial Ethernet
- At 100 Mbit/s: max 100 m cable length
- PROFINET type B:
  for fixed laying
- PROFINET type C:
  for flexible applications (power chains)

Product features
- Cable version with PVC outer sheath:
  for standard applications in industrial environments
- Cable version with PUR outer sheath:
  for high mechanical or chemical stress in industrial environments
- PNB – PROFINET–Type B
- PNC – PROFINET–Type C
- FD – Highly flexible (power chains)

Norm references / Approvals
- 28055702: with c(UL)us certification (OFNG 75°C)

Product Make-up
- Colour-coded, tight-buffered PCF sub-cable with PVC sheath
- Sub cable outer diameter: 2.2mm
- Aramid yarns as strain relief
- Outer sheath material PUR or PVC (see article description)
- Outer sheath colour: green (RAL 6018)

Technical data

ETIM	ETIM 5.0 Class-ID: EC000034 ETIM 5.0 Class-Description: Fibre optic cable
⊘	**Dimensions** Sub cable outer diameter: 2.2mm Cable: see table
	Core identification code Black, orange (with arrow printing)
	Minimum bending radius see data sheet
▷	**Optical fibre type** Core material: glass Cladding material: fluoropolymers
kg	**Permissible tensile force** see data sheet
	Temperature range See data sheet

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
PCF DUPLEX - PROFINET TYPE B					
28055702	HITRONIC® PCF DUPLEX PNB PVC-PVC A	200/230 PCF	2	7.5	59
28052702	HITRONIC® PCF DUPLEX PNB PVC-PVC	200/230 PCF	2	7.2	55
PCF DUPLEX - PROFINET TYPE C					
28351702	HITRONIC® PCF DUPLEX FD PNC PVC-PUR	200/230 PCF	2	8.8	71
28352702	HITRONIC® PCF DUPLEX FD PNC PVC-PVC	200/230 PCF	2	8.8	76

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Lapp Kabel is a member of the PROFIBUS user organisation (PNO)
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories
- PCF Assembly Sets refer to page 504
- PCF Connector F-SMA and ST(BFOC) refer to page 503
- PCF Cutting Tools refer to page 505
- PCF Connector SC-RJ refer to page 504
- EPIC® DATA PB Sub-D FO refer to page 351
- STAR STRIP stripping tool refer to page 1000

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PCF Connector HFBR

Benefits
• Compatible with HP Versatile Link
  Connectors and Components series

Application range
• Factory automation
• Medical equipment
• Telecommunications Switching Systems

Product features
• HFBR4521 connector for 2.2 mm
  PCF cable diameter as crimp version
• HFBR4521 connector for 3.0 mm
  PCF cable diameter as clamp version
• HFBR4521 clamp connector compatible
  with Assemby Set PCF Connector
  HFBR4521

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Article number	Article designation	PU
Connector HFBR4521 for 2.2 mm cables - crimp version		
29140799	PCF Connector HFBR4521 BK Simplex 2.2 /4PC	4 piece
29140798	PCF Connector HFBR4521 BK Simplex 2.2 /50PC	50 piece
Connector HFBR4521 for 3.0 mm cables - clamp version		
29141799	PCF Connector HFBR4521 Clamp 3.0 /4PC	4 piece
29141798	PCF Connector HFBR4521 Clamp 3.0 /50PC	50 piece

Photographs are not to scale and do not represent detailed images of the respective products.

PCF Connector F-SMA and ST(BFOC)

Benefits
• Easy to assemble
• Designed for field assembly
• Reusable as it can be removed

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Product features
• Connectors for clamp and cleave assembly
• Available for different cable
  diameters (2.2mm and 3.0mm)
• Adapters available on request
• Bend protection boot colour:
  black and red

Article number	Article designation	PU
Connector FSMA Clamp for 3.0 mm cables		
29136799	PCF Connector FSMA Clamp 3.0 /4PC	4 piece
29136798	PCF Connector FSMA Clamp 3.0 /50PC	50 piece
Connector FSMA Clamp for 2.2 mm cables		
29135799	PCF Connector SC-RJ Clamp 2.2	4 piece
29135798	PCF Connector FSMA Clamp 2.2 /50PC	50 piece
Connector ST(BFOC) Clamp for 3.0 mm cables		
29126799	PCF Connector ST (BFOC) Clamp 3.0 /4PC	4 piece
29126798	PCF Connector ST (BFOC) Clamp 3.0 /50PC	50 piece
Connector ST(BFOC) Clamp for 2.2 mm cables		
29125799	PCF Connector ST (BFOC) Clamp 2.2 /4PC	4 piece
29125798	PCF Connector ST (BFOC) Clamp 2.2 /50PC	50 piece

Photographs are not to scale and do not represent detailed images of the respective products.
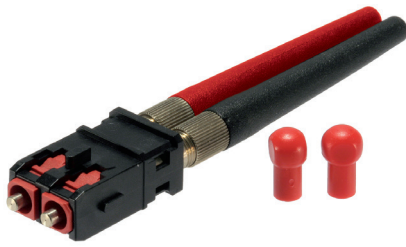
Similar products
• POF Adapter F-SMA refer to page 495
• POF Adapter ST (BFOC) refer to page 495

Accessories
• PCF Assembly kit
• PCF Cutting Tools refer to page 505

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PCF Connector SC-RJ

Benefits
- Easy to assemble
- Designed for field assembly
- Reusable as it can be removed

Product features
- Connector set included two SC connectors,
  SC-RJ housing, two bending protection boots, dust caps
- Connectors for clamp and cleave assembly
- Available for different cable diameters (2.2mm and 3.0mm)
- Bend protection boot colour: black and red

Info
- Connectors for PROFINET Data Cabling

Technical data
ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Article number	Article designation	PU
PCF Connector SC-RJ		
29166797	PCF Connector SC-RJ Clamp 3.0	1 piece
29165797	PCF Connector SC-RJ Clamp 2.2	1 piece

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Accessories
- PCF Assembly kit
- PCF Cutting Tools refer to page 505

PCF Assembly Sets

Benefits
- Easy to handle
- Set includes all the necessary tools for connector assembly from clamp connector versions
- Suitable for on-site assembly

Product features
- Sets available for PCF clamp connector types
  FSMA, ST (BFOC), SC and HFBR4521
- Contents: stripper, cleave tool, kevlar scissor, cutter, microscope

Technical data
ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Article number	Article designation	PU
Assembly Set For PCF FSMA Connectors		
29500701	Assemby Set PCF Connector FSMA	1 piece
Assembly Set For PCF ST(BFOC) Connectors		
29500702	Assemby Set PCF Connector ST(BFOC)	1 piece
Assembly Set For PCF HFBR4521 Connectors		
29500703	Assembly Set PCF Connector HFBR4521	1 piece
Assembly Set For PCF SC/SC-RJ Connectors		
29500704	Assemby Set PCF Connector SC	1 piece

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories
- PCF Connector F-SMA and ST(BFOC) refer to page 503
- PCF Cutting Tools refer to page 505
- PCF Connector SC-RJ refer to page 504

PCF Cutting Tools

Benefits

- Optimally coordinated tools for the PCF cable and connector product range
- For the processing of PCF fibres

Product features

- PCF cleaving tool for connector types:
  - FSMA
  - ST(BFOC)
  - HFBR4521
  - SC

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description:
Fibre optic connector

Article number	Article designation	PU
PCF Buffered Fibre Stripper		
29500711	PCF Buffered Fibre Stripper 0.5mm (K200/230)	1 piece
PCF Fibre Cleaving Tool		
29500712	PCF Cleaving Tool FSMA Connector	1 piece
29500713	PCF Cleaving Tool ST(BFOC) Connector	1 piece
29500714	PCF Cleaving Tool HFBR4521 Connector	1 piece
29500715	PCF Cleaving Tool SC Connector	1 piece

Photographs are not to scale and do not represent detailed images of the respective products.

Similar products

- PCF Assembly Sets refer to page 504

PCF Measurement Equipment

Benefits

- Inspection Microscope with 100x magnification for connector inspection
- Easy to handle

Product features

- Interchangeable adapter for PCF connector types FSMA, ST(BFOC), HFBR
- Interchangeable adapters are not included in microscope, please order separately
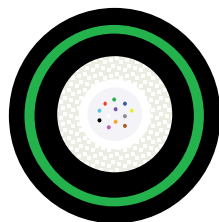- Other adapters available on request

Article number	Article designation	PU
PCF Inspection Microscope (100x) without adapter		
29500770	PCF Inspection Microscope (100x)	1 piece
PCF Microscope Adapter For Connector Types		
29500771	PCF Microscope Adapter FSMA Simplex	1 piece
29500772	PCF Microscope Adapter ST(BFOC) Simplex	1 piece
29500773	PCF Microscope Adapter HFBR Simplex	1 piece

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HITRONIC® FIRE

Info

- A/J-DQ(ZN)BH(SR)H or
  U-DQ(ZN)BH(SR)H
- Fire-resistant for at least
  180 minutes in the event of fire

Benefits

- Ensures that the fibres can still transmit data during and after a fire (according to IEC 60331-25)
- Suitable for installation in underground tunnels where fire safety is critical
- Additional sheath protects the fibres for use in harsh environments
- Armouring provides excellent protection against high mechanical stress and rodents
- UV-resistant longitudinally and laterally watertight

Application range

- In industrial areas that use fire as a tool
- Highly combustible or fire-prone areas
- For indoor and outdoor use
- Methods of Deployment: empty plastic pipes, ducts and trays

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - Flame-retardant (IEC 60332-3)
  - Low smoke density (IEC 61034-1/2)
  - Circuit integrity (IEC 60331-25); Optical fibre cables
- Central loose tube with up to 24 fibres
- Colour-coded fibres
- Longitudinal watertight
- Outer sheath flame-retardant and halogen-free

Product Make-up

- Gel-filled loose tube
- Water-blocking reinforced glass yarn strain relief
- Corrugated steel tape armour
- LSZH inner and outer sheaths
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 1500 N
Short-term: 2200 N

Temperature range
Fixed installation: -30°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
27560304	HITRONIC® FIRE 4G 50/125 OM3	50/125 OM3	4	9.6	123
27560308	HITRONIC® FIRE 8G 50/125 OM3	50/125 OM3	8	9.6	123
27560312	HITRONIC® FIRE 12G 50/125 OM3	50/125 OM3	12	9.6	123
27560324	HITRONIC® FIRE 24G 50/125 OM3	50/125 OM3	24	12.6	188
Multimode G 50 OM2					
27560204	HITRONIC® FIRE 4G 50/125 OM2	50/125 OM2	4	9.6	123
27560208	HITRONIC® FIRE 8G 50/125 OM2	50/125 OM2	8	9.6	123
27560212	HITRONIC® FIRE 12G 50/125 OM2	50/125 OM2	12	9.6	123
27560224	HITRONIC® FIRE 24G 50/125 OM2	50/125 OM2	24	12.6	188
Multimode G 62.5 OM1					
27560104	HITRONIC® FIRE 4G 62.5/125 OM1	62.5/125 OM1	4	9.6	123
27560108	HITRONIC® FIRE 8G 62.5/125 OM1	62.5/125 OM1	8	9.6	123
27560112	HITRONIC® FIRE 12G 62.5/125 OM1	62.5/125 OM1	12	9.6	123
27560124	HITRONIC® FIRE 24G 62.5/125 OM1	62.5/125 OM1	24	12.6	188
Single-mode E 9 OS2					
27560904	HITRONIC® FIRE 4E 9/125 OS2	9/125 OS2	4	9.6	123
27560908	HITRONIC® FIRE 8E 9/125 OS2	9/125 OS2	8	9.6	123
27560912	HITRONIC® FIRE 12E 9/125 OS2	9/125 OS2	12	9.6	123
27560924	HITRONIC® FIRE 24E 9/125 OS2	9/125 OS2	24	12.6	188

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
Available on request with Multimode OM4 fibres.

Accessories

- STAR STRIP stripping tool refer to page 1000
- SMART STRIP stripping tool

HITRONIC® TORSION

Info

- A/J-V(ZN)H11Y
- Breakout cable designed to withstand high torsional stresses
- Torsion-resistant and very flexible

Benefits

- Designed to withstand high torsion in the windmill drip loop
- Suitable for field assembly
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For fixed and flexible installations, as well as for applications with torsional movements (e.g. machinery, wind turbines)
- Industrial environments
- In vertical installations
- As a link between moving parts
- For indoor and outdoor use

Product features

- Based on military norm MIL-C-85045
- Torsion-resistant and very flexible
- Outer sheath flame-retardant and halogen-free
- Mechanically robust

Product Make-up

- 2.5 mm tight-buffered sub-cable with LSZH sheath
- Aramid yarns as strain relief
- Central element
- PUR outer sheath
- Colour: black (RAL 9005)

Technical data

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: –40°C to +70°C
Occasional flexing: –30°C to +70°C

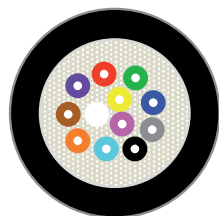| Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
26310302	HITRONIC® TORSION 2G 50/125 OM3	50/125 OM3	2	8.4	54
26310304	HITRONIC® TORSION 4G 50/125 OM3	50/125 OM3	4	8.4	54
26310308	HITRONIC® TORSION 8G 50/125 OM3	50/125 OM3	8	11.6	95
26310312	HITRONIC® TORSION 12G 50/125 OM3	50/125 OM3	12	14.7	122
Multimode G 50 OM2					
26310202	HITRONIC® TORSION 2G 50/125 OM2	50/125 OM2	2	8.4	54
26310204	HITRONIC® TORSION 4G 50/125 OM2	50/125 OM2	4	8.4	54
26310208	HITRONIC® TORSION 8G 50/125 OM2	50/125 OM2	8	11.6	95
26310212	HITRONIC® TORSION 12G 50/125 OM2	50/125 OM2	12	14.7	122
Multimode G 62.5 OM1					
26310102	HITRONIC® TORSION 2G 62.5/125 OM1	62.5/125 OM1	2	8.4	54
26310104	HITRONIC® TORSION 4G 62.5/125 OM1	62.5/125 OM1	4	8.4	54
26310108	HITRONIC® TORSION 8G 62.5/125 OM1	62.5/125 OM1	8	11.6	95
26310112	HITRONIC® TORSION 12G 62.5/125 OM1	62.5/125 OM1	12	14.7	122
Single-mode E 9 OS2					
26310902	HITRONIC® TORSION 2E 9/125 OS2	9/125 OS2	2	8.4	54
26310904	HITRONIC® TORSION 4E 9/125 OS2	9/125 OS2	4	8.4	54
26310908	HITRONIC® TORSION 8E 9/125 OS2	9/125 OS2	8	11.6	95
26310912	HITRONIC® TORSION 12E 9/125 OS2	9/125 OS2	12	14.7	122

Photographs are not to scale and do not represent detailed images of the respective products.
Available on request with Multimode OM4 fibres.

Accessories

- STAR STRIP stripping tool refer to page 1000

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ACCESSORIES
APPENDIX

HITRONIC® HDM Cable

Info

- A/J-V(ZN)11Y
- Mini breakout/distribution cable designed for frequent reeling and unreeling use
- Mobile field cables

Benefits
- Suitable for field application
- Reelable for mobile use
- Very easy to install due to small dimensions, high flexibility, and small bending radius
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range
- Light & sound technology
- For indoor and outdoor use
- Industrial environments
- TV broadcasts
  Camera technology
  Building monitoring
- Field application

Product features
- Based on military norm MIL-C-85045
- Highly flexible, reelable and tensile strength
- Colour-coded tight buffered fibres for easy channel identification
- Outer sheath flame-retardant and halogen-free
- Mechanically robust

Product Make-up
- Up to 12 tight-buffered fibres (900µm)
- Colour-coded
- Aramid yarns as strain relief
- PUR outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: -40°C to +70°C
Flexible use: -20°C to +60°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM4					
26610404	HITRONIC® HDM600 4G 50/125 OM4	50/125 OM4	4	5.5	24
26610406	HITRONIC® HDM600 6G 50/125 OM4	50/125 OM4	6	5.6	29
26610408	HITRONIC® HDM700 8G 50/125 OM4	50/125 OM4	8	6.2	36
Multimode G 50 OM3					
26610304	HITRONIC® HDM600 4G 50/125 OM3	50/125 OM3	4	5.5	24
26610306	HITRONIC® HDM600 6G 50/125 OM3	50/125 OM3	6	5.6	29
26610308	HITRONIC® HDM700 8G 50/125 OM3	50/125 OM3	8	6.2	36
Multimode G 50 OM2					
26610204	HITRONIC® HDM600 4G 50/125 OM2	50/125 OM2	4	5.5	24
26610206	HITRONIC® HDM600 6G 50/125 OM2	50/125 OM2	6	5.6	29
26610208	HITRONIC® HDM700 8G 50/125 OM2	50/125 OM2	8	6.2	36
Multimode G 62.5 OM1					
26610104	HITRONIC® HDM600 4G 62.5/125 OM1	62.5/125 OM1	4	5.5	24
26610106	HITRONIC® HDM600 6G 62.5/125 OM1	62.5/125 OM1	6	5.6	29
26610108	HITRONIC® HDM700 8G 62.5/125 OM1	62.5/125 OM1	8	6.2	36
Single-mode E 9 OS2					
26610904	HITRONIC® HDM600 4E9/125 OS2	9/125 OS2	4	5.5	24
26610906	HITRONIC® HDM600 6E9/125 OS2	9/125 OS2	6	5.6	29
26610908	HITRONIC® HDM700 8E9/125 OS2	9/125 OS2	8	6.2	36
26610912	HITRONIC® HDM700 12E9/125 OS2	9/125 OS2	12	6.7	49

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
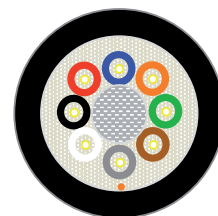
HITRONIC® HRM-FD Cable

Info

- A / J-V(ZN)H(ZN) 11Y
- Flexible breakout cable designed for use in power chain applications

Benefits

- Designed for use in power chains
- Suitable for field assembly
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For highly flexible industrial applications
- As a link between moving parts
- In vertical installations
- Industrial environments
- For indoor and outdoor use

Product features

- Based on military norm MIL-C-85045
- For use in power chains and moving machinery parts in dry or damp rooms
- Outer sheath flame-retardant and halogen-free
- Mechanically robust

Product Make-up

- 2.0 mm tight-buffered sub-cable with LSZH sheath
- Aramid yarns as strain relief
- Central element
- PUR outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: –40°C to +70°C
Flexible use: –20°C to +60°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM4					
26300402	HITRONIC® HRM-FD800 2G 50/125 OM4	50/125 OM4	2	7.8	50
26300404	HITRONIC® HRM-FD1000 4G 50/125 OM4	50/125 OM4	4	7.8	50
26300408	HITRONIC® HRM-FD1400 8G 50/125 OM4	50/125 OM4	8	10.4	93
26300412	HITRONIC® HRM-FD1800 12G 50/125 OM4	50/125 OM4	12	13	98
Multimode G 50 OM3					
26300302	HITRONIC® HRM-FD800 2G 50/125 OM3	50/125 OM3	2	7.8	50
26300304	HITRONIC® HRM-FD1000 4G 50/125 OM3	50/125 OM3	4	7.8	50
26300308	HITRONIC® HRM-FD1400 8G 50/125 OM3	50/125 OM3	8	10.4	93
26300312	HITRONIC® HRM-FD1800 12G 50/125 OM3	50/125 OM3	12	13	98
Multimode G 50 OM2					
26300202	HITRONIC® HRM-FD800 2G 50/125 OM2	50/125 OM2	2	7.8	50
26300204	HITRONIC® HRM-FD1000 4G 50/125 OM2	50/125 OM2	4	7.8	50
26300208	HITRONIC® HRM-FD1400 8G 50/125 OM2	50/125 OM2	8	10.4	93
26300212	HITRONIC® HRM-FD1800 12G 50/125 OM2	50/125 OM2	12	13	98
Multimode G 62.5 OM1					
26300102	HITRONIC® HRM-FD800 2G 62.5/125 OM1	62.5/125 OM1	2	7.8	50
26300104	HITRONIC® HRM-FD1000 4G 62.5/125 OM1	62.5/125 OM1	4	7.8	50
26300108	HITRONIC® HRM-FD1400 8G 62.5/125 OM1	62.5/125 OM1	8	10.4	93
26300112	HITRONIC® HRM-FD1800 12G 62.5/125 OM1	62.5/125 OM1	12	13	98
Single-mode E 9 OS2					
26300902	HITRONIC® HRM-FD800 2E 9/125 OS2	9/125 OS2	2	7.8	50
26300904	HITRONIC® HRM-FD1000 4E 9/125 OS2	9/125 OS2	4	7.8	50
26300908	HITRONIC® HRM-FD1400 8E 9/125 OS2	9/125 OS2	8	10.4	93
26300912	HITRONIC® HRM-FD1800 12E 9/125 OS2	9/125 OS2	12	13	98

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The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Optical transmission systems

GOF – Glass Optical Fibre • FTTx applications

LAPP GROUP

HITRONIC® HMDC Micro Cable

Info

- A-D(ZN)2Y
- Micro special cable designed for installation by air-blowing systems (Micro Ducts)

Benefits

- Suitable for blowing into micro-ducts
- Very compact dimensions (between 2mm to 2.5mm diameter)
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- FTTH applications
- House connection
- Telecommunications network
- For installations by blowing
- Methods of deployment: for blowing or pulling into micro ducts

Product features

- Colour-coded fibres
- High reduced dimensions (cable diameter ≤ 2.5mm)
- Halogen-free, low-friction outer sheath
- UV-resistant

Product Make-up

- Central mini subunit with up to 12 fibres
- Standard with single-mode fibre type G.657.A1 (low macrobending sensitive fibre)
- Aramid yarns as strain relief
- PE outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Fibre type
Single-mode
ITU-T G657.A1

Standard designation
A-D(ZN)2Y

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
≥ 25 x outer diameter

Permissible tensile force
Installation: 200N

Temperature range
Fixed installation: -40°C to +80°C
During installation: -10°C to +50°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
HITRONIC® HMDC Micro Cable					
27009802	HITRONIC® HMDC 2E9/125 G.657.A1	9/125 G.657.A1	2	2	5
27009804	HITRONIC® HMDC 4E9/125 G.657.A1	9/125 G.657.A1	4	2	5
27009806	HITRONIC® HMDC 6E9/125 G.657.A1	9/125 G.657.A1	6	2.2	5
27009808	HITRONIC® HMDC 8E9/125 G.657.A1	9/125 G.657.A1	8	2.3	5
27009812	HITRONIC® HMDC 12E9/125 G.657.A1	9/125 G.657.A1	12	2.5	5

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
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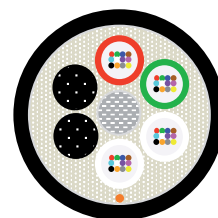
Similar products

LAPP GROUP

HITRONIC® HVN-Mini Cable

Info
- A-DQ(ZN)2Y
- Mini outdoor cable designed for installation by air-blowing systems (Ducts)

Benefits
- Suitable for blowing into ducts
- Compact dimensions
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range
- Backbone-Area, FTTH applications
- Telecommunications network
- WAN applications
- For installations by blowing
- Methods of deployment: for blowing or pulling into ducts

Product features
- Stranded loose tubes with up to 144 fibres (12 loose tubes with each 12 fibres)
- Colour-coded fibres and loose tubes
- Reduced dimensions
- Halogen-free, low-friction outer sheath
- UV-resistant

Product Make-up
- Up to 12 stranded gel-filled loose tubes
- Central GRP strength element
- Reinforced glass yarn strain relief
- PE outer sheath
- Colour: black (RAL 9005)

Technical data
ETIM ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Standard designation
A-DQ(ZN)2Y

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
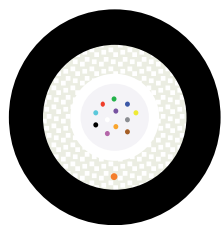Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: -40°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Single-mode E 9 OS2					
26609912	HITRONIC® HVN-Mini500 1x12E 9/125 OS2	9/125 OS2	12	5.8	30
26609924	HITRONIC® HVN-Mini500 2x12E 9/125 OS2	9/125 OS2	24	5.8	30
26609948	HITRONIC® HVN-Mini500 4x12E 9/125 OS2	9/125 OS2	48	5.8	33
26609972	HITRONIC® HVN-Mini500 6x12E 9/125 OS2	9/125 OS2	72	5.8	33
26609996	HITRONIC® HVN-Mini1200 8x12E 9/125 OS2	9/125 OS2	96	7.2	52
26609944	HITRONIC® HVN-Mini1000 12x12E 9/125	9/125 OS2	144	8	80

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HITRONIC® HQN Outdoor Cable

Benefits

- Suitable for direct burial
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- UV-resistant longitudinally and laterally watertight
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For outdoor use
- Campus backbone
- WAN applications
- Industrial environments
- Methods of Deployment: empty plastic pipes, ducts and trays

Product features

- Central loose tube with up to 24 fibres
- Colour-coded fibres
- Longitudinal watertight
- Rodent-protection
- Robust, halogen-free outer sheath

Product Make-up

- Glass fibres with primary coating
- Gel-filled loose tube
- Water-blocking reinforced glass yarn strain relief
- PE outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 1500 N
Short-term: 3000 N

Temperature range
Fixed installation: –40°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
27600304	HITRONIC® HQN1500 4G 50/125 OM3	50/125 OM3	4	7.3	40
27600308	HITRONIC® HQN1500 8G 50/125 OM3	50/125 OM3	8	7.3	40
27600312	HITRONIC® HQN1500 12G 50/125 OM3	50/125 OM3	12	7.3	40
27600324	HITRONIC® HQN1500 24G 50/125 OM3	50/125 OM3	24	8.3	65
Multimode G 50 OM2					
27600204	HITRONIC® HQN1500 4G 50/125 OM2	50/125 OM2	4	7.3	40
27600208	HITRONIC® HQN1500 8G 50/125 OM2	50/125 OM2	8	7.3	40
27600212	HITRONIC® HQN1500 12G 50/125 OM2	50/125 OM2	12	7.3	40
27600224	HITRONIC® HQN1500 24G 50/125 OM2	50/125 OM2	24	8.3	65
Multimode G 62.5 OM1					
27600104	HITRONIC® HQN1500 4G 62.5/125 OM1	62.5/125 OM1	4	7.3	40
27600108	HITRONIC® HQN1500 8G 62.5/125 OM1	62.5/125 OM1	8	7.3	40
27600112	HITRONIC® HQN1500 12G 62.5/125 OM1	62.5/125 OM1	12	7.3	40
27600124	HITRONIC® HQN1500 24G 62.5/125 OM1	62.5/125 OM1	24	8.3	65
Single-mode E 9 OS2					
27600904	HITRONIC® HQN1500 4E 9/125 OS2	9/125 OS2	4	7.3	40
27600908	HITRONIC® HQN1500 8E 9/125 OS2	9/125 OS2	8	7.3	40
27600912	HITRONIC® HQN1500 12E 9/125 OS2	9/125 OS2	12	7.3	40
27600924	HITRONIC® HQN1500 24E 9/125 OS2	9/125 OS2	24	8.3	65

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
Available on request with Multimode OM4 fibres.

Similar products

Accessories

Optical transmission systems
GOF – Glass Optical Fibre • Outdoor area

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ACCESSORIES
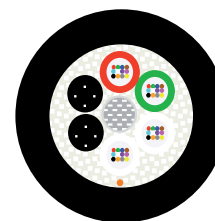
APPENDIX

LAPP GROUP

HITRONIC® HVN Outdoor Cable

Info

• A-DQ(ZN)B2Y
• Outdoor cable with stranded loose tubes and non-metallic strain relief

Benefits

• Suitable for direct burial
• Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
• UV-resistant longitudinally and laterally watertight
• Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

• For outdoor use
• Campus backbone
• WAN applications
• Industrial environments
• Methods of Deployment: empty plastic pipes, ducts and trays

Product features

• Stranded loose tubes with up to 144 fibres (12 loose tubes with each 12 fibres)
• Colour-coded fibres and loose tubes
• Longitudinal watertight
• Rodent-protection
• Robust, halogen-free outer sheath

Product Make-up

• Up to 12 stranded gel-filled loose tubes
• Central GRP strength element
• Water-blocking reinforced glass yarn strain relief
• PE outer sheath
• Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: -40°C to +70°C

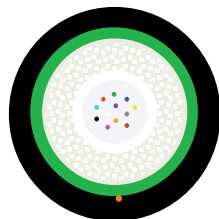| Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
26600324	HITRONIC® HVN5000 2x12G 50/125 OM3	50/125 OM3	24	11	64
26600348	HITRONIC® HVN5000 4x12G 50/125 OM3	50/125 OM3	48	11	84
Multimode G 50 OM2					
26600224	HITRONIC® HVN5000 2x12G 50/125 OM2	50/125 OM2	24	11	64
26600248	HITRONIC® HVN5000 4x12G 50/125 OM2	50/125 OM2	48	11	84
Single-mode E 9 OS2					
26600924	HITRONIC® HVN5000 2x12E 9/125 OS2	9/125 OS2	24	11	64
26600948	HITRONIC® HVN5000 4x12E 9/125 OS2	9/125 OS2	48	11	84
HVN Telecom Single-mode E 9 OS2					
26601924	HITRONIC® HVN1500 2x12E 9/125 OS2	9/125 OS2	24	10.5	89
26601948	HITRONIC® HVN1500 4x12E 9/125 OS2	9/125 OS2	48	10.5	91
26601972	HITRONIC® HVN2000 6x12E 9/125 OS2	9/125 OS2	72	10.8	97
26601996	HITRONIC® HVN2000 8x12E 9/125 OS2	9/125 OS2	96	11.9	121
26601944	HITRONIC® HVN2000 12x12E 9/125 OS2	9/125 OS2	144	14.3	183

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
Other models are available upon request.

Similar products

HITRONIC® HQW Armoured Outdoor Cable

Info

- A-DQ(ZN)(SR)2Y
- Double-sheathed outdoor cable with corrugated steel tape armour, and non-metallic strength elements

Benefits

- Armouring provides excellent protection against high mechanical stress and rodents
- Suitable for direct burial
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- UV-resistant longitudinally and laterally watertight

Application range

- For outdoor use
- Campus backbone
- WAN applications
- Industrial environments
- Methods of Deployment: empty plastic pipes, ducts and trays

Product features

- Central loose tube with up to 24 fibres
- Colour-coded fibres
- Longitudinal watertight
- Excellent rodent protection
- Robust, halogen-free outer sheath

Product Make-up

- Gel-filled loose tube
- Water-blocking reinforced glass yarn strain relief
- Corrugated steel tape armour
- PE outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 3000 N
Short-term: 5000 N

Temperature range
Fixed installation: -40°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
27900304	HITRONIC® HQW3000 4G 50/125 OM3	50/125 OM3	4	9.6	88
27900308	HITRONIC® HQW3000 8G 50/125 OM3	50/125 OM3	8	9.6	88
27900312	HITRONIC® HQW3000 12G 50/125 OM3	50/125 OM3	12	9.6	88
27900324	HITRONIC® HQW3000 24G 50/125 OM3	50/125 OM3	24	9.6	88
Multimode G 50 OM2					
27900204	HITRONIC® HQW3000 4G 50/125 OM2	50/125 OM2	4	9.6	88
27900208	HITRONIC® HQW3000 8G 50/125 OM2	50/125 OM2	8	9.6	88
27900212	HITRONIC® HQW3000 12G 50/125 OM2	50/125 OM2	12	9.6	88
27900224	HITRONIC® HQW3000 24G 50/125 OM2	50/125 OM2	24	9.6	88
Multimode G 62.5 OM1					
27900104	HITRONIC® HQW3000 4G 62.5/125 OM1	62.5/125 OM1	4	9.6	88
27900108	HITRONIC® HQW3000 8G 62.5/125 OM1	62.5/125 OM1	8	9.6	88
27900112	HITRONIC® HQW3000 12G 62.5/125 OM1	62.5/125 OM1	12	9.6	88
27900124	HITRONIC® HQW3000 24G 62.5/125 OM1	62.5/125 OM1	24	9.6	88
Single-mode E 9 OS2					
27900904	HITRONIC® HQW3000 4E 9/125 OS2	9/125 OS2	4	9.6	88
27900908	HITRONIC® HQW3000 8E 9/125 OS2	9/125 OS2	8	9.6	88
27900912	HITRONIC® HQW3000 12E 9/125 OS2	9/125 OS2	12	9.6	88
27900924	HITRONIC® HQW3000 24E 9/125 OS2	9/125 OS2	24	9.6	88

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The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 1000
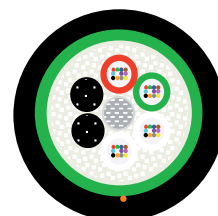- SMART STRIP stripping tool

HITRONIC® HVW Armoured Outdoor Cable

Info

- A-DQ(ZN)(SR)2Y
- Outdoor cable with corrugated steel tape armour, stranded loose tubes and non-metallic strain relief

Benefits

- Armouring provides excellent protection against high mechanical stress and rodents
- Suitable for direct burial
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- UV-resistant longitudinally and laterally watertight

Application range

- Methods of Deployment: empty plastic pipes, ducts and trays
- For outdoor use
- Campus backbone
- WAN applications
- Industrial environments

Product features

- Stranded loose tubes with up to 144 fibres (12 loose tubes with each 12 fibres)
- Colour-coded fibres and loose tubes
- Longitudinal watertight
- Excellent rodent protection
- Robust, halogen-free outer sheath

Product Make-up

- Up to 12 stranded gel-filled loose tubes
- Water-blocking reinforced glass yarn strain relief
- Corrugated steel tape armour
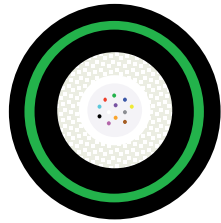- PE outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 3000 N
Short-term: 5000 N

Temperature range
Fixed installation: -40°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Single-mode E 9 OS2					
26900924	HITRONIC® HVW3000 2x12E 9/125 OS2	9/125 OS2	24	10	98
26900948	HITRONIC® HVW3000 4x12E 9/125 OS2	9/125 OS2	48	12.5	148
26900972	HITRONIC® HVW3000 6x12E 9/125 OS2	9/125 OS2	72	16	215
26900996	HITRONIC® HVW3000 8x12E 9/125 OS2	9/125 OS2	96	16	222
26900944	HITRONIC® HVW3000 12x12E 9/125 OS2	9/125 OS2	144	18.5	261

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
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HITRONIC® HQW-Plus Armoured Outdoor Cable

Info

- A-DQ(ZN)B2Y(SR)2Y
- Double-sheathed outdoor cable with corrugated steel tape armour, and non-metallic strength elements

Benefits

- Additional sheath protects the fibres for use in harsh environments
- Armouring provides excellent protection against high mechanical stress and rodents
- Suitable for direct burial
- UV-resistant longitudinally and laterally watertight

Application range

- For outdoor use
- Harsh industrial environment
- Campus backbone
- WAN applications
- Methods of Deployment: empty plastic pipes, ducts and trays

Product features

- Central loose tube with up to 24 fibres
- Colour-coded fibres
- Longitudinal watertight
- Excellent rodent protection
- Robust, halogen-free outer sheath

Product Make-up

- Gel-filled loose tube
- Water-blocking reinforced glass yarn strain relief
- Corrugated steel tape armour
- PE inner and outer sheaths
- Colour: black (RAL 9005)

Technical data

ETIM ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 3000 N
Short-term: 5000 N

Temperature range
Fixed installation: –40°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
27920304	HITRONIC® HQW-Plus3000 4G 50/125 OM3	50/125 OM3	4	9.6	95
27920308	HITRONIC® HQW-Plus3000 8G 50/125 OM3	50/125 OM3	8	9.6	95
27920312	HITRONIC® HQW-Plus3000 12G 50/125 OM3	50/125 OM3	12	9.6	95
27920324	HITRONIC® HQW-Plus3000 24G 50/125 OM3	50/125 OM3	24	12.6	135
Multimode G 50 OM2					
27920204	HITRONIC® HQW-Plus3000 4G 50/125 OM2	50/125 OM2	4	9.6	95
27920208	HITRONIC® HQW-Plus3000 8G 50/125 OM2	50/125 OM2	8	9.6	95
27920212	HITRONIC® HQW-Plus3000 12G 50/125 OM2	50/125 OM2	12	9.6	95
27920224	HITRONIC® HQW-Plus3000 24G 50/125 OM2	50/125 OM2	24	12.6	135
Multimode G 62.5 OM1					
27920104	HITRONIC® HQW-Plus3000 4G 62.5/125 OM1	62.5/125 OM1	4	9.6	95
27920108	HITRONIC® HQW-Plus3000 8G 62.5/125 OM1	62.5/125 OM1	8	9.6	95
27920112	HITRONIC® HQW-Plus3000 12G 62.5/125 OM1	62.5/125 OM1	12	9.6	95
27920124	HITRONIC® HQW-Plus3000 24G 62.5/125 OM1	62.5/125 OM1	24	12.6	135
Single-mode E 9 OS2					
27920904	HITRONIC® HQW-Plus3000 4E 9/125 OS2	9/125 OS2	4	9.6	95
27920908	HITRONIC® HQW-Plus3000 8E 9/125 OS2	9/125 OS2	8	9.6	95
27920912	HITRONIC® HQW-Plus3000 12E 9/125 OS2	9/125 OS2	12	9.6	95
27920924	HITRONIC® HQW-Plus3000 24E 9/125 OS2	9/125 OS2	24	12.6	135

Photographs are not to scale and do not represent detailed images of the respective products.
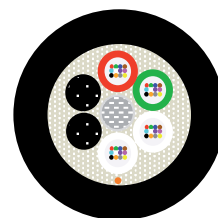
HITRONIC® HQA Aerial Cable

Info

- A-DQ(ZN)2Y - ADSS
- Outdoor self-supporting aerial cable with stranded loose tubes and non-metallic strain relief

Benefits

- Suitable for mild weather conditions
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- UV-resistant longitudinally and laterally watertight
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For outdoor use
- Hanging on poles
- Laying on poles

Product features

- Stranded loose tubes with up to 96 fibres
- Colour-coded fibres and loose tubes
- Longitudinal watertight
- Robust, halogen-free outer sheath
- Span width up to 90m

Product Make-up

- Up to 8 stranded gel-filled loose tubes
- Central GRP strength element
- Aramid yarns as strain relief
- PE outer sheath
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description:
Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
MAT: 2000 N
EDS: 800 N

Temperature range
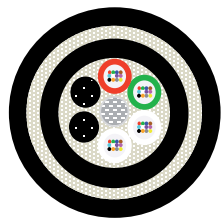Fixed installation: -40°C to +70°C
Occasional flexing: -30°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Single-mode E 9 OS2					
26640912	HITRONIC® HQA800 6x2E 9/125 OS2	9/125 OS2	12	9.7	73
26640924	HITRONIC® HQA800 6x4E 9/125 OS2	9/125 OS2	24	9.7	73
26640948	HITRONIC® HQA800 6x8E 9/125 OS2	9/125 OS2	48	10.9	92
26640972	HITRONIC® HQA800 6x12E 9/125 OS2	9/125 OS2	72	10.9	94
26640996	HITRONIC® HQA800 8x12E 9/125 OS2	9/125 OS2	96	12.4	121

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.

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HITRONIC® HQA-Plus Aerial Cable

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Info

- A-DQ2Y(ZN)2Y ADSS
- Double-sheathed, self-supporting aerial cable with stranded loose tubes and non-metallic strain relief

Benefits

- Designed to withstand harsh weather conditions
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- UV-resistant longitudinally and laterally watertight
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For long span widths
- Hanging on poles
- For outdoor use
- Laying on poles

Product features

- Stranded loose tubes with up to 96 fibres
- Colour-coded fibres and loose tubes
- Longitudinal watertight
- Robust, halogen-free outer sheath
- Span width up to 250m

Product Make-up

- Up to 8 stranded gel-filled loose tubes
- Central GRP strength element
- Aramid yarns as strain relief
- PE inner and outer sheaths
- Colour: black (RAL 9005)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
MAT: 8000 N
EDS: 3200 N

Temperature range
Fixed installation: -40°C to +70°C
Occasional flexing: -30°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Single-mode E 9 OS2					
26644912	HITRONIC® HQA-Plus3200 6x2E 9/125 OS2	9/125 OS2	12	12.8	132
26644924	HITRONIC® HQA-Plus3200 6x4E 9/125 OS2	9/125 OS2	24	12.8	132
26644948	HITRONIC® HQA-Plus3200 6x8E 9/125 OS2	9/125 OS2	48	13.7	151
26644972	HITRONIC® HQA-Plus3200 6x12E 9/125 OS2	9/125 OS2	72	13.7	153
26644996	HITRONIC® HQA-Plus3200 8x12E 9/125 OS2	9/125 OS2	96	15.3	188

Photographs are not to scale and do not represent detailed images of the respective products.

HITRONIC® HUN Universal Cable

Info

- A/J-DQ(ZN)BH or U-DQ(ZN)BH
- Universal cable with central or stranded loose tube and non-metallic strain relief

Benefits

- Flame retardance makes it suitable for indoor and outdoor installations
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- UV-resistant longitudinally and laterally watertight
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For indoor and outdoor use
- Campus backbone
- Industrial environments
- Methods of Deployment: empty plastic pipes, ducts and trays

Product features

- Central loose tube with up to 24 fibres
- Colour-coded fibres
- Longitudinal watertight
- Outer sheath flame-retardant and halogen-free
- Rodent-protection

Product Make-up

- Glass fibres with primary coating
- Gel-filled loose tube
- Water-blocking reinforced glass yarn strain relief
- LSZH outer sheath
- Colour: dark grey

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 1500 N
Short-term: 2000 N

Temperature range
Fixed installation: -30°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
27400304	HITRONIC® HUN 1500 4G 50/125 OM3	50/125 OM3	4	7.3	53
27400308	HITRONIC® HUN 1500 8G 50/125 OM3	50/125 OM3	8	7.3	53
27400312	HITRONIC® HUN 1500 12G 50/125 OM3	50/125 OM3	12	7.3	53
27400324	HITRONIC® HUN 1500 24G 50/125 OM3	50/125 OM3	24	8.3	60
26400324	HITRONIC® HUN 1500 2x12G 50/125 OM3	50/125 OM3	24	10.1	84
26400348	HITRONIC® HUN 1500 4x12G 50/125 OM3	50/125 OM3	48	11	109
Multimode G 50 OM2					
27400204	HITRONIC® HUN 1500 4G 50/125 OM2	50/125 OM2	4	7.3	53
27400208	HITRONIC® HUN 1500 8G 50/125 OM2	50/125 OM2	8	7.3	53
27400212	HITRONIC® HUN 1500 12G 50/125 OM2	50/125 OM2	12	7.3	53
27400224	HITRONIC® HUN 1500 24G 50/125 OM2	50/125 OM2	24	8.3	60
Multimode G 62.5 OM1					
27400104	HITRONIC® HUN 1500 4G 62.5/125 OM1	62.5/125 OM1	4	7.3	53
27400108	HITRONIC® HUN 1500 8G 62.5/125 OM1	62.5/125 OM1	8	7.3	53
27400112	HITRONIC® HUN 1500 12G 62.5/125 OM1	62.5/125 OM1	12	7.3	53
27400124	HITRONIC® HUN 1500 24G 62.5/125 OM1	62.5/125 OM1	24	8.3	60
Single-mode E 9 OS2					
27400904	HITRONIC® HUN 1500 4E 9/125 OS2	9/125 OS2	4	7.3	53
27400908	HITRONIC® HUN 1500 8E 9/125 OS2	9/125 OS2	8	7.3	53
27400912	HITRONIC® HUN 1500 12E 9/125 OS2	9/125 OS2	12	7.3	53
27400924	HITRONIC® HUN 1500 24E 9/125 OS2	9/125 OS2	24	8.3	60
26400924	HITRONIC® HUN 1500 2x12E 9/125 OS2	9/125 OS2	24	10.1	84
26400948	HITRONIC® HUN 1500 4x12E 9/125 OS2	9/125 OS2	48	11	109
26400972	HITRONIC® HUN 2000 6x12E 9/125 OS2	9/125 OS2	72	12.6	148
26400996	HITRONIC® HUN 2000 8x12E 9/125 OS2	9/125 OS2	96	14.3	190
26400944	HITRONIC® HUN 2000 12x12E 9/125 OS2	9/125 OS2	144	17	221

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
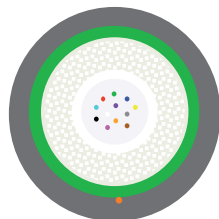Available on request with Multimode OM4 fibres.

Accessories

- GOF SIMPLEX Pigtail refer to page 524
- DATA STRIP stripping tool refer to page 1001

GOF – Glass Optical Fibre • Outdoor and indoor area

HITRONIC® HUW Armoured Universal Cable

Info

- A/J-DQ(ZN)(SR)H or U-DQ(ZN)(SR)H
- Universal cable with corrugated steel tape armour, central loose tube and non-metallic strain relief

Benefits

- Armouring provides excellent protection against high mechanical stress and rodents
- Flame retardance makes it suitable for indoor and outdoor installations
- Easy to install due to the compact design, high flexibility, robust sheath and small bending radii
- Water-resistant

Application range

- For indoor and outdoor use
- Campus backbone
- Industrial environments
- Methods of Deployment: empty plastic pipes, ducts and trays

Product features

- Outer sheath flame-retardant and halogen-free
- Central loose tube with up to 24 fibres
- Colour-coded fibres
- Longitudinal watertight
- Excellent rodent protection

Product Make-up

- Gel-filled loose tube
- Water-blocking reinforced glass yarn strain relief
- Corrugated steel tape armour
- LSZH outer sheath
- Colour: green (based on RAL 6018)

Technical data

ETIM ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Permissible tensile force
Fixed installation: 1500 N
Short-term: 2000 N

Temperature range
Fixed installation: -30°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM4					
27500404	HITRONIC® HUW1500 4G 50/125 OM4	50/125 OM4	4	9.6	88
27500408	HITRONIC® HUW1500 8G 50/125 OM4	50/125 OM4	8	9.6	88
27500412	HITRONIC® HUW1500 12G 50/125 OM4	50/125 OM4	12	9.6	88
27500424	HITRONIC® HUW1500 24G 50/125 OM4	50/125 OM4	24	9.6	88
Multimode G 50 OM3					
27500304	HITRONIC® HUW1500 4G 50/125 OM3	50/125 OM3	4	9.6	88
27500308	HITRONIC® HUW1500 8G 50/125 OM3	50/125 OM3	8	9.6	88
27500312	HITRONIC® HUW1500 12G 50/125 OM3	50/125 OM3	12	9.6	88
27500324	HITRONIC® HUW1500 24G 50/125 OM3	50/125 OM3	24	9.6	88
Multimode G 50 OM2					
27500204	HITRONIC® HUW1500 4G 50/125 OM2	50/125 OM2	4	9.6	88
27500208	HITRONIC® HUW1500 8G 50/125 OM2	50/125 OM2	8	9.6	88
27500212	HITRONIC® HUW1500 12G 50/125 OM2	50/125 OM2	12	9.6	88
27500224	HITRONIC® HUW1500 24G 50/125 OM2	50/125 OM2	24	9.6	88
Multimode G 62.5 OM1					
27500104	HITRONIC® HUW1500 4G 62.5/125 OM1	62.5/125 OM1	4	9.6	88
27500108	HITRONIC® HUW1500 8G 62.5/125 OM1	62.5/125 OM1	8	9.6	88
27500112	HITRONIC® HUW1500 12G 62.5/125 OM1	62.5/125 OM1	12	9.6	88
27500124	HITRONIC® HUW1500 24G 62.5/125 OM1	62.5/125 OM1	24	9.6	88
Single-mode E 9 OS2					
27500904	HITRONIC® HUW1500 4E 9/125 OS2	9/125 OS2	4	9.6	88
27500908	HITRONIC® HUW1500 8E 9/125 OS2	9/125 OS2	8	9.6	88
27500912	HITRONIC® HUW1500 12E 9/125 OS2	9/125 OS2	12	9.6	88
27500924	HITRONIC® HUW1500 24E 9/125 OS2	9/125 OS2	24	9.6	88

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.

Accessories

- STAR STRIP stripping tool refer to page 1000
- SMART STRIP stripping tool
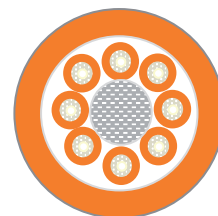
HITRONIC® HRH Breakout Cable

Info

- J-V(ZN)HH
- Breakout cable for direct connector assembly

LAPP KABEL STUTTGART HITRONIC® HRH1700 12G 50/125 OM2

LAPP KABEL STUTTGART HITRONIC® HRH400 2G 50/125 OM3

Benefits

- Suitable for field assembly
- Universal cable for cabling of buildings
- Very easy to install due to compact design, high flexibility, and small bending radii
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For indoor use
- Tertiary cabling
- Structured cabling – backbone
- Methods of Deployment: laying in trunking, ducts, trays, empty plastic pipes, building riser, raised floors and plenums

Product features

- Installation cable with up to 12 Simplex cables
- Outer sheath flame-retardant and halogen-free
- Mechanically robust

Product Make-up

- 2.1 mm tight-buffered sub-cable with LSZH sheath (identified by numbers)
- Central GRP strength element
- Aramid yarns as strain relief
- LSZH inner and outer sheaths
- Colour: aqua (RAL 6027) for OM3, orange (RAL 2003) for OM2 and OM1

Technical data

ETIM
ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: -20°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
26000302	HITRONIC® HRH400 2G 50/125 OM3	50/125 OM3	2	7	35
26000304	HITRONIC® HRH600 4G 50/125 OM3	50/125 OM3	4	7	44
26000308	HITRONIC® HRH1200 8G 50/125 OM3	50/125 OM3	8	9.7	77
26000312	HITRONIC® HRH1700 12G 50/125 OM3	50/125 OM3	12	10.3	100
Multimode G 50 OM2					
26000202	HITRONIC® HRH400 2G 50/125 OM2	50/125 OM2	2	7	35
26000204	HITRONIC® HRH600 4G 50/125 OM2	50/125 OM2	4	7	44
26000208	HITRONIC® HRH1200 8G 50/125 OM2	50/125 OM2	8	9.7	77
26000212	HITRONIC® HRH1700 12G 50/125 OM2	50/125 OM2	12	10.3	100
Multimode G 62.5 OM1					
26000102	HITRONIC® HRH400 2G 62.5/125 OM1	62.5/125 OM1	2	7	35
26000104	HITRONIC® HRH600 4G 62.5/125 OM1	62.5/125 OM1	4	7	44
26000108	HITRONIC® HRH1200 8G 62.5/125 OM1	62.5/125 OM1	8	9.7	77
26000112	HITRONIC® HRH1700 12G 62.5/125 OM1	62.5/125 OM1	12	10.3	100

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
Available on request with Multimode OM4 fibres.
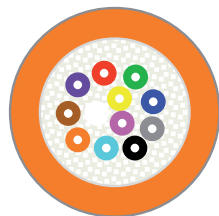
Accessories

- DATA STRIP stripping tool refer to page 1001

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HITRONIC® HDH Mini-Breakout Cable

LAPP KABEL STUTTGART HITRONIC® HDH 12G 50/125 OM2

LAPP KABEL STUTTGART HITRONIC® HDH 4G 50/125 OM3

Info

- J-V(ZN)H
- Mini breakout/distribution cable for direct connector assembly

Benefits

- Very easy to install due to small dimensions, high flexibility, and small bending radius
- Suitable for field assembly
- Universal cable for cabling of buildings
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For indoor use
- Tertiary cabling
- Structured cabling - backbone
- Methods of Deployment: laying in trunking, ducts, trays, empty plastic pipes, building riser, raised floors and plenums

Product features

- Up to 12 tight-buffered fibres (900µm)
- Colour-coded fibres
- Outer sheath flame-retardant and halogen-free
- Mechanically robust

Product Make-up

- Tight-buffered fibres
- Water-blocking reinforced glass yarn strain relief
- LSZH outer sheath
- Colour: aqua (RAL 6027) for OM3, orange (RAL 2003) for OM2 and OM1
- Available on request: single-mode OS2 (yellow) and multimode OM4 (violet)

Technical data

ETIM 5.0 Class-ID: EC000034
ETIM 5.0 Class-Description: Fibre optic cable

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 15 x outer diameter
Dynamic: ≥ 20 x outer diameter

Temperature range
Fixed installation: -20°C to +70°C

Article number	Article designation	Fibre type	Number of fibres	Outer diameter (mm)	Weight (kg/km)
Multimode G 50 OM3					
26010302	HITRONIC® HDH 2G 50/125 OM3	50/125 OM3	2	6	34
26010304	HITRONIC® HDH 4G 50/125 OM3	50/125 OM3	4	6.3	37
26010308	HITRONIC® HDH 8G 50/125 OM3	50/125 OM3	8	7.5	57
26010312	HITRONIC® HDH 12G 50/125 OM3	50/125 OM3	12	8.3	69
Multimode G 50 OM2					
26010202	HITRONIC® HDH 2G 50/125 OM2	50/125 OM2	2	6	34
26010204	HITRONIC® HDH 4G 50/125 OM2	50/125 OM2	4	6.3	37
26010208	HITRONIC® HDH 8G 50/125 OM2	50/125 OM2	8	7.5	57
26010212	HITRONIC® HDH 12G 50/125 OM2	50/125 OM2	12	8.3	69
Multimode G 62.5 OM1					
26010102	HITRONIC® HDH 2G 62.5/125 OM1	62.5/125 OM1	2	6	34
26010104	HITRONIC® HDH 4G 62.5/125 OM1	62.5/125 OM1	4	6.3	37
26010108	HITRONIC® HDH 8G 62.5/125 OM1	62.5/125 OM1	8	7.5	57
26010112	HITRONIC® HDH 12G 62.5/125 OM1	62.5/125 OM1	12	8.3	69

Unless specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
The cables can also be supplied as pre-terminated fibre optic trunks.
Photographs are not to scale and do not represent detailed images of the respective products.
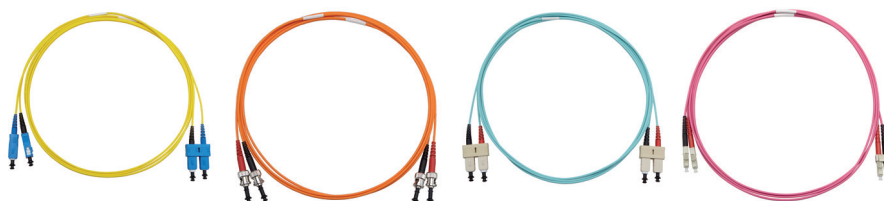
Accessories

- DATA STRIP stripping tool refer to page 1001

GOF DUPLEX Patchcord

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Info

- J-VH 2x1G/E
- Pre-terminated tight buffered duplex cable with durable ceramic ferrules
- Other types are available on www.lappgroup.com/assemblyfinder or upon request

Benefits

- "Plug & Play" connection between any optical devices
- Non-permanent connections allow for easy change of equipment
- Direct connection between two active optical components
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For indoor use
- LAN connections
- Data Centers
- Distributor cabinet

Product features

- Outer sheath flame-retardant and halogen-free
- High flexibility
- Cable termination with durable ceramic ferrules

Product Make-up

- Tight-buffered duplex cable with LSZH outer sheath
- Connector: LC, SC or ST
- Cable colour:
  violet for multimode OM4,
  aqua for multimode OM3,
  orange for multimode OM2 and OM1,
  yellow for single-mode OS2
- Standard length: 2 m
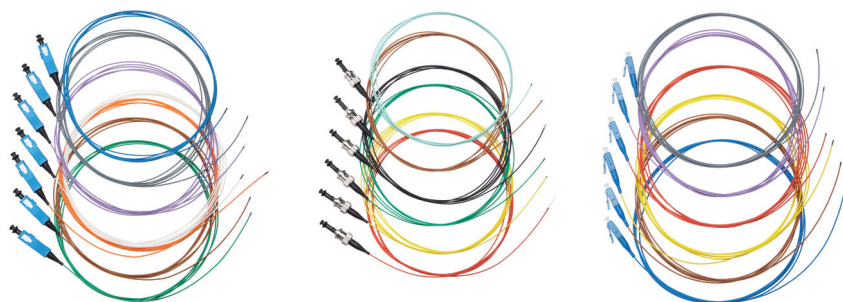- On request: 1 m, 3 m, 5 m and 10 m

Technical data

ETIM ETIM 5.0 Class-ID: EC001263
ETIM 5.0 Class-Description: Fibre optic patch cord

Optical fibre type
Core material: glass
Cladding material: glass

Permissible bending radius
Static: ≥ 30 mm
Dynamic: ≥ 40 mm

Permissible tensile force
Fixed installation: 100 N

Temperature range
Fixed installation: -20°C to +60°C
Occasional flexing: -5°C to +50°C

Article number	Article designation	PU
Multimode G 50 OM4		
29011402	GOF Duplex Patchcord SC/SC G50 OM4, 2m	1 piece
29021402	GOF Duplex Patchcord ST/SC G50 OM4, 2m	1 piece
29022402	GOF Duplex Patchcord ST/ST G50 OM4, 2m	1 piece
29031402	GOF Duplex Patchcord LC/SC G50 OM4, 2m	1 piece
29032402	GOF Duplex Patchcord LC/ST G50 OM4, 2m	1 piece
29033402	GOF Duplex Patchcord LC/LC G50 OM4, 2m	1 piece
29044402	GOF Duplex Patchcord FC/FC G50 OM4, 2m	1 piece
Multimode G 50 OM3		
29011302	GOF Duplex Patchcord SC/SC G50 OM3, 2m	1 piece
29021302	GOF Duplex Patchcord ST/SC G50 OM3, 2m	1 piece
29022302	GOF Duplex Patchcord ST/ST G50 OM3, 2m	1 piece
29031302	GOF Duplex Patchcord LC/SC G50 OM3, 2m	1 piece
29032302	GOF Duplex Patchcord LC/ST G50 OM3, 2m	1 piece
29033302	GOF Duplex Patchcord LC/LC G50 OM3, 2m	1 piece
29044302	GOF Duplex Patchcord FC/FC G50 OM3, 2m	1 piece
Multimode G 50 OM2		
29011202	GOF Duplex Patchcord SC/SC G50 OM2, 2m	1 piece
29021202	GOF Duplex Patchcord ST/SC G50 OM2, 2m	1 piece
29022202	GOF Duplex Patchcord ST/ST G50 OM2, 2m	1 piece
29031202	GOF Duplex Patchcord LC/SC G50 OM2, 2m	1 piece
29032202	GOF Duplex Patchcord LC/ST G50 OM2, 2m	1 piece
29033202	GOF Duplex Patchcord LC/LC G50 OM2, 2m	1 piece
29044202	GOF Duplex Patchcord FC/FC G50 OM2, 2m	1 piece
Multimode G 62.5 OM1		
29011102	GOF Duplex Patchcord SC/SC G62.5, 2m	1 piece
29021102	GOF Duplex Patchcord ST/SC G62.5, 2m	1 piece
29022102	GOF Duplex Patchcord ST/ST G62.5, 2m	1 piece
29031102	GOF Duplex Patchcord LC/SC G62.5, 2m	1 piece
29032102	GOF Duplex Patchcord LC/ST G62.5, 2m	1 piece
29033102	GOF Duplex Patchcord LC/LC G62.5, 2m	1 piece
29044102	GOF Duplex Patchcord FC/FC G62.5, 2m	1 piece
Single-mode E 9 OS2		
29011902	GOF Duplex Patchcord SC/SC E9 OS2, 2m	1 piece
29021902	GOF Duplex Patchcord ST/SC E9 OS2, 2m	1 piece
29022902	GOF Duplex Patchcord ST/ST E9 OS2, 2m	1 piece
29031902	GOF Duplex Patchcord LC/SC E9 OS2, 2m	1 piece
29032902	GOF Duplex Patchcord LC/ST E9 OS2, 2m	1 piece
29033902	GOF Duplex Patchcord LC/LC E9 OS2, 2m	1 piece
29033802	GOF DUPLEX Patchcord LC/LC 9/125 APC, 2m	1 piece
29039902	GOF DUPLEX Patchcord LC/SC-APC E9 OS2, 2m	1 piece

Other lengths and types of connectors are available upon request.
Photographs are not to scale and do not represent detailed images of the respective products.

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GOF SIMPLEX Pigtail

Info
• J-VH 1G/E
• Pre-terminated tight-buffered simplex cable with one durable ceramic ferrule

Benefits

- Ease of installation and assembly
- Create a direct plug connection for installation cables with splicing
- Zero electromagnetic interference as the cable contains no metal (totally dielectric)

Application range

- For indoor use
- Connection to an end optical device

Product features

- Outer sheath flame-retardant and halogen-free
- High flexibility
- Cable termination with durable ceramic ferrules
- Set consisting of 12 colour-coded pigtails

Product Make-up

- Tight-buffered simplex fibre with LSZH outer sheath
- Connector: LC, SC or ST
- Colour-coded primary and secondary coatings
- Standard length: 2 m

Technical data

ETIM 5.0 Class-ID: EC000748
ETIM 5.0 Class-Description: Pigtail

Optical fibre type
Core material: glass
Cladding material: glass

Permissible tensile force
Fixed installation: 100 N

Temperature range
Fixed installation: –20°C to +60°C
Occasional flexing: –5°C to +50°C

Article number	Article designation	PU
Multimode G 50 OM4		
29310402	GOF Simplex Pigtail SC G50 OM4, 2m	12 piece
29320402	GOF Simplex Pigtail ST G50 OM4, 2m	12 piece
29330402	GOF Simplex Pigtail LC G50 OM4, 2m	12 piece
Multimode G 50 OM3		
29310302	GOF Simplex Pigtail SC G50 OM3, 2m	12 piece
29320302	GOF Simplex Pigtail ST G50 OM3, 2m	12 piece
29330302	GOF Simplex Pigtail LC G50 OM3, 2m	12 piece
Multimode G 50 OM2		
29310202	GOF Simplex Pigtail SC G50 OM2, 2m	12 piece
29320202	GOF Simplex Pigtail ST G50 OM2, 2m	12 piece
29330202	GOF Simplex Pigtail LC G50 OM2, 2m	12 piece
Multimode G 62.5 OM1		
29310102	GOF Simplex Pigtail SC G62.5, 2m	12 piece
29320102	GOF Simplex Pigtail ST G62.5, 2m	12 piece
29330102	GOF Simplex Pigtail LC G62.5, 2m	12 piece
Single-mode E 9 OS2		
29310902	GOF Simplex Pigtail SC E9 OS2, 2m	12 piece
29320902	GOF Simplex Pigtail ST E9 OS2, 2m	12 piece
29330902	GOF Simplex Pigtail LC E9 OS2, 2m	12 piece

Other types of connectors (e.g. LC, MTRJ, E2000) are available upon request.Judy Lim: This will not apply to Hitronic anymore, as LC will become a standard product and MTRJ/E2000 will be removed.
Photographs are not to scale and do not represent detailed images of the respective products.

GOF Connector

Benefits
- Ideal for assembling
- For assembly process: cable preparation/ glueing/crimping/polishing
- Assembly instructions can be found in the GOF assembly toolbox (not included in Lapp product range)
- Trained optical installers should be used in all connector assembly

Application range
- For connector assemblies in production or laboratory environment

Product features
- Connector sets include all needed parts for assembly

Norm references / Approvals
- LC comply with IEC standard 61754-20
- SC comply with IEC standard 61754-4
- ST comply with IEC standard 61754-2

Product Make-up
- Ferrule diameter:
  LC: 1.25mm (zirconia)
  SC, ST: 2.5mm (zirconia)
- Can be assembled with cables of 1.7mm-2.1mm diameter
- LC and SC connector sets available in green (single-mode APC), blue (single-mode PC) and grey (multimode)

Technical data

ETIM 5.0 Class-ID: EC001122
ETIM 5.0 Class-Description: Fibre optic connector

Permissible tensile force
Tensile load 70N
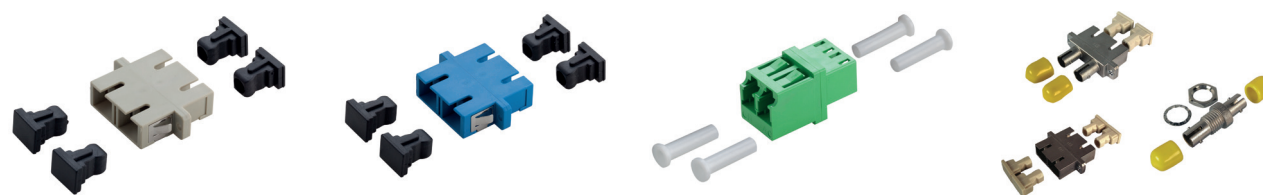Tensile strength after assembly > 100N

Temperature range
Operating
LC: -40°C to 75°C
SC: -40°C to 75°C
ST: -40°C to 85°C
Humidity 95%
Flammability UL 94 V-0

Article number	Article designation	PU
Singlemode		
29110999	GOF Connector SC Single-mode Blue /4PC	4 piece
29110998	GOF Connector SC Single-mode Blue /50PC	50 piece
29110989	GOF Connector SC Single-mode APC Green/ 4PC	4 piece
29110988	GOF Connector SC Single-mode APC Green/ 50PC	50 piece
29130999	GOF Connector LC Single-mode Blue /4PC	4 piece
29130998	GOF Connector LC Single-mode Blue /50PC	50 piece
29130989	GOF Connector LC Single-mode APC GR /4PC	4 piece
29130988	GOF Connector LC Single-mode APC GR/50PC	50 piece
29120999	GOF Connector ST Single-mode /4PC	4 piece
29120998	GOF Connector ST Single-mode /50PC	50 piece
29140999	GOF Connector FC Single-mode /4PC	4 piece
Multimode		
29110199	GOF Connector SC Multimode Beige /4PC	4 piece
29110198	GOF Connector SC Multimode Beige /50PC	50 piece
29130199	GOF Connector LC Multimode Beige /4PC	4 piece
29130198	GOF Connector LC Multimode Beige /50PC	50 piece
29120199	GOF Connector ST Multimode /4PC	4 piece
29120198	GOF Connector ST Multimode /50PC	50 piece
29140199	GOF Connector FC Multimode /4PC	4 piece

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GOF Adapters

Product features
- The couplings connect the glass fibre connectors with the same or different connector types.

Norm references / Approvals
- LC comply with IEC standard 61754–20
- SC comply with IEC standard 61754–4
- ST comply with IEC standard 61754–2
- Comply with IEC, EIA/TIA standards

Product Make-up
- Zirconia sleeves
- LC and SC adapters available in green (single-mode APC), blue (single-mode PC) and grey (multimode)

Technical data

ETIM 5.0 Class-ID: EC000752
ETIM 5.0 Class-Description: Fibre optic coupler

Attenuation
Attenuation (dB) < 0.2
Repeatability
1000 cycles (dB) < 0.2

Temperature range
Operating
LC: –25°C to 70°C
SC: –40°C to 75°C
ST: –40°C to 85°C
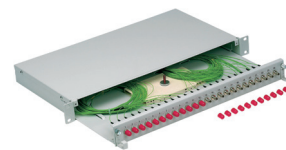Humidity 95%
Flammability UL 94 V-0

Article number	Article designation	PU
Singlemode		
29410999	GOF Adapter Duplex SC Single-mode Blue /4PC	4 piece
29410989	GOF Adapter Duplex SC Single-mode APC Green /4PC	4 piece
29430999	GOF Adapter Duplex LC Single-mode Blue /4PC	4 piece
29430989	GOF Adapter Duplex LC Single-mode APC Green /4PC	4 piece
29420999	GOF Adapter Simplex ST(BFOC) Single-mode /4PC	4 piece
29421999	GOF Adapter Duplex ST-SC Single-mode /4PC	4 piece
Multimode		
29410199	GOF Adaper Duplex SC Multimode Beige /4PC	4 piece
29430199	GOF Adaper Duplex LC Multimode Beige /4PC	4 piece
29420199	GOF Adapter Simplex ST(BFOC) Multimode /4PC	4 piece
29421199	GOF Adaper Duplex ST-SC Multimode /4PC	4 piece

Photographs are not to scale and do not represent detailed images of the respective products.

19" Splice Box for ST

Product features
- For up to 12 or 24 fibres
- Can be pulled out
- Unpopulated
- For a maximum of 4 splicing catridges

- Height: 1 RU
- Dimensions (WxHxD):
  483 x 44.5 x 244 mm
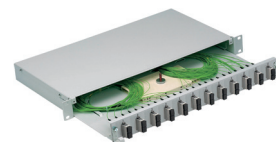- Material: steel plate, 1.5 mm
- Colour: light grey (RAL 7035)

Article number	Article designation	PU
Splice Box Compact		
CE9138	19" Splice Box for 12 ST	1 piece
CE9139	19" Splice Box for 24 ST	1 piece

Splice boxes for more fibres with other types of connectors are available upon request. Also available in pre-assembled versions with couplings and pigtails.
Photographs are not to scale and do not represent detailed images of the respective products.

19" Splice Box for SC

Product features
- For up to 24 fibres
- Included: front panel with 12 SC-duplex holes
- Can be pulled out
- Unpopulated

- Height: 1 RU
- Dimensions (WxHxD):
  483 x 44.5 x 170 mm
- Material: steel plate, 1.5 mm
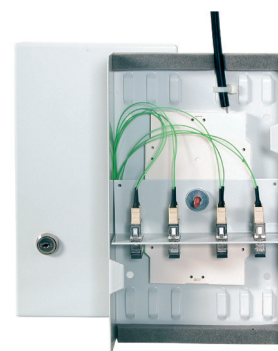- Colour: light grey (RAL 7035)

Article number	Article designation	PU
Splice Box Compact		
CE9135	19" Splice Box for SC	1 piece

Splice boxes for more fibres with other types of connectors are available upon request. Also available in pre-assembled versions with couplings and pigtails.
Photographs are not to scale and do not represent detailed images of the respective products.

Splice Box Compact

Product features
- Panel mounting
- Lockable
- Max. capacity of 8 splicing cartridges or 4 splicing cartridges and one distribution plate

- Includes distributor plate for 8 ST couplings
- Includes distributor plate for 4 SC duplex couplings
- Dimensions (WxHxD):
  265 x 150 x 55 mm
- Colour: light grey (RAL 7035)

Article number	Article designation	PU
Splice Box Compact		
CE9147	Splice Box Compact	1 piece

Photographs are not to scale and do not represent detailed images of the respective products.
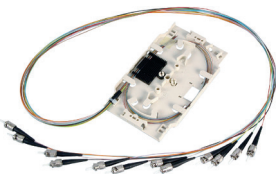
Mini wall-mounted rack

Product features

- Panel mounting
- Lockable
- Max. capacity of 8 splicing cartridges or 4 splicing cartridges and one distribution plate

- Accessories for Mini wall-mounted rack:
  - Distributor plate for 24 ST couplings
  - Distributor plate for 24 SC Simplex couplings
  - Distributor plate for 12 SC Duplex couplings
- Dimensions (W x H x D): 320 x 280 x 54 mm
- Colour: light grey (RAL 7035)

Article number	Article designation	PU
Mini wall-mounted rack		
CE9150	Mini wall-mounted rack	1 piece
Accessories for Mini wall-mounted rack		
CE9151	Distribution plate for 24 x ST-Couplers	1 piece
CE9152	Distribution plate for 24 x SC-simplex-Couplers	1 piece
CE9153	Distribution plate for 12 x SC-duplex-Couplers	1 piece

Photographs are not to scale and do not represent detailed images of the respective products.

Accessories for splice boxes and wall-mounted rack

Product features

- Splicing cassette for up to 2 splicing protection holders
- Cover for splicing cartridge
- 12-fold splicing protection holder

- Splicing protection sleeve for ANT splicing device
- Blind cap instead of E2000 coupling
- Blind cap instead of ST coupling
- Dummy cap instead of SC duplex coupling

Article number	Article designation	PU
Accessories for splice boxes and wall-mounted rack		
CE9914	Splicing cassette for up to 2 splicing protection holders	1 piece
CE9914D	Cover for splicing cartridge	1 piece
CE9916	12-fold splicing protection holder	1 piece
CE9913	Splicing protection sleeve for ANT splicing device	15 pieces
CE9917	Blind cap instead of E2000 coupling	10 pieces
CE9918	Blind cap instead of ST coupling	10 pieces
CE9919	Blind cap instead of SC duplex coupling	10 pieces

Photographs are not to scale and do not represent detailed images of the respective products.