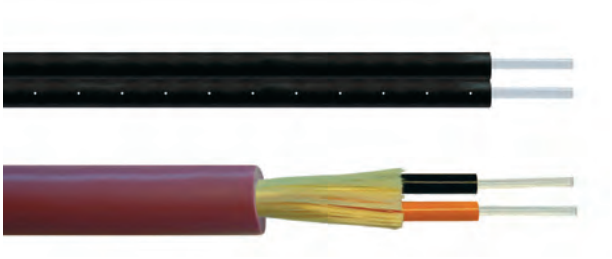
POF

IMCAVI
SPECIAL CABLES SINCE 1973

POF Cores, POF Bus Cables



Application

The use of POF (**P**olymer **O**ptical **F**ibres) for optical signal transmission combines easy installation with the advantages of fibre optic transmission systems (i.e. no influencing by electric or magnetic field interference, etc.)

Special material compounds guarantee smooth operation in harsh industrial environments. POF cables can be used in a variety of bus systems (such as e.g. PROFIBUS, INTERBUS, etc.) due to the application of suitable interfaces, or rather, media converters.

The Simplex and Duplex core versions are predominantly used in applications with low mechanical stress such as e.g. in cabinets, etc. Sheathed cables for increased mechanical stress applications as well as our POF hybrid cables complete the delivery range.

The cables presented in these pages represent only a fraction of our wide range.

In case of interest we will gladly design a cable based on your requirements and specifications.

Transmission distances max. 80 m

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Construction

Conductor:	Data pairs: Step index fibre consisting of polymethylmethacrylate (PMMA) POF 980/1000 µm Power supply cores: Extra fine stranded bare copper wires 1.0 mm² or 1.5 mm²
Insulation:	Data pairs: Polyolefin or polyamide (PA), orange, black, red, green, blue, white and brown Power supply cores: polyolefin (blue and brown) or special compound of polyvinylchloride (PVC), black (with numbers)
Strengh members:	Aramid (optional)
Sheath:	Special compound of polyvinylchloride (PVC) or thermoplastic polyurethane compound (PUR), matt, low adhesion, halogen-free and flame-retardant, violet (similar RAL 4001), red (similar RAL 3000) or green (similar RAL 6018) (optional)

Mechanical Properties

Operating temperature:	-50°C to +80°C POF cores -20°C to +70°C POF cables
Temperature at laying:	-10°C to +50°C
Min. bending radius:	10 x cable diameter

Optical Properties

Attenuation:	max. 160 dB/km at 650 nm (laser) max. 230 dB/km at 660 nm (LED)
Bandwidth:	min. 10 MHz x 100 m
Numeric aperture:	0.5

Supported Connector Types

- ST (BFOC)-connector
- FSMA-connector
- HFBR 4501 / 4503 / 4506 / 4511 / 4513 / 4516 / 4531 / 4532 / 4533-connector
- F05-pin (TOSLINK compatible), F07-connector (TOSLINK compatible)
- SCRJ-connector

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Technical Data

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Type	Sheath	OD mm	Insulation mm	Insulation colour	Weight [kg/km]	Part number	UL/ resistances
POF SIMPLEX 1 P980/1000 PE BK	PE	2.2	-	-	3.8	51890	PE BS1
for use at low mechanical load, halogen-free[1)] ; also available in orange (Art. 110845), red (Art. 110846), green (Art. 110847), white (Art. 110848), grey (Art. 110850), a.o.							
POF SIMPLEX 1 P980/1000 PA BK	PA	2.2	-	-	4.0	110851	PA BS1
for flexible application without compulsory guide in harsh industrial environment, halogen-free[1)], also available in orange (Art. 51889) , other colors on request							
POF DUPLEX 2 P980/1000 PE BK	PE	4.4x2.2	-	-	7.6	51956	PE BS1
for use at low mechanical load, halogen-free[1)]							
POF DUPLEX 2 P980/1000 PA BK	PA	4.4x2.2	-	-	8.0	26494	PA BS1
for flexible application without compulsory guide in harsh industrial environment, halogen-free[1)]							
POF BUS CABLE 1 P980/1000 PE/FR-PUR RD	PUR	3.6	2.2	BK	11	110853	PUR BS1
for flexible SERCOS applications without compulsory guide and in harsh industrial environment, halogen-free[1)]							
POF BUS CABLE highflex 1 P980/1000 PE/FR-PUR RD	PUR	5.5	2.2	BK	30	110854	PUR BS1
at high mechanical load, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF BUS CABLE highflex 1 P980/1000 PE/FR-PUR RD	PUR	6.0	2.2	BK	30	74255	PUR BS1
for SERCOS applications at high mechanical load, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF BUS CABLE highflex heavy 1 P980/1000 PA/FR-PUR RD	PUR	6.0	2.2	BK	33	68872	PUR BS1
for SERCOS applications at extreme mechanical load, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF BUS CABLE 2 P980/1000 PE/FR-PUR VT DESINA	PUR	6.0	2.2	BK/OG	31	110924	PUR BS1
for flexible INTERBUS applications without compulsory guide in harsh industrial environment, halogen-free[1)]							
POF BUS CABLE heavy 2 P980/1000 PA/FR-PUR RD	PUR	6.0	2.2	BK/OG	34	55709	PUR BS1
for flexible INTERBUS applications without compulsory guide in very harsh industrial environment, halogen-free[1)]							
POF BUS CABLE 2 P980/1000 PA/FR-PVC VT DESINA	PVC	7.8	2.2	BK/OG	59	84159	PVC BS2
for flexible PROFIBUS applications without compulsory guide in industrial environment							
POF BUS CABLE 2 P980/1000 PA/FR-PVC GN	PVC	7.8	2.2	BK/OG	59	110861	PVC BS2
for flexible PROFINET applications without compulsory guide in industrial environment							
POF BUS CABLE highflex 2 P980/1000 PE/FR-PUR VT DESINA	PUR	6.0	2.2	BK/OG	31	110857	PUR BS1
at high mechanical load, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF BUS CABLE highflex heavy 2 P980/1000 PA/FR-PUR GN	PUR	8.0	2.2	BK/OG	53	110860	PUR BS1
for PROFIBUS/PROFINET applications at extreme mechanical load, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF BUS CABLE highflex 4 P980/1000 PE/FR-PUR VT DESINA	PUR	7.5	2.2	BK/OG BU/GN	50	106844	PUR BS1
at high mechanical load, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF HYBRIDBUS CABLE highflex 2 P980/1000+2x1.0 PE/FR-PUR VT DESINA	PUR	7.5	2.2	BK/OG BU/BN	63 Cu: 20	110859	PUR BS1
for PROFIBUS/PROFINET applications at high mechanical load with integrated power supply cores, for continuous flexing, e.g. in drag chains halogen-free[1)]							
POF HYBRIDBUS CABLE highflex 2 P980/1000+4x1.5 PA/FR-PVC/FR-PUR VT DESINA	PUR	9.4	2.2 2.5	BK/OG BK (No.)	120 Cu: 60	84180	PUR BS1
for PROFIBUS ECOFAST applications at high mechanical load with integrated power supply cores, for continuous flexing, e.g. in drag chains							

[1)] with the exception of the fibre coating

Resistances

	Oil resistance		Flame resistance		UV resistance	
PE BS1	+		-		++	
PA BS1	+		-		o	
PUR BS1	++	IEC 60811-2-1	-		+	
PVC BS2	o		o	IEC 60332-1-2	+	

++ excellent / + good / o adequate / - poor