



























PMA conduit

Conduit guide

Products			PMAFLEX Pro				PMAFLEX			
Application areas			PHT	PLU	POH	PSX	CYL	ESD	PCL	PCS
Machine building 	General applications	static					●		●	
		dynamic	●				●		●	●
	Heavy loads	static								
		dynamic								●
	Outdoor applications	static								●
		dynamic								●
	Antistatic requirements	static						●		
		dynamic						●		
Traction vehicles 	Outdoor applications with sunlight exposure	static								●
		dynamic								●
	Outdoor applications	static	●							●
		dynamic	●							●
Indoor applications	static			●	●					
	dynamic									
Rail infrastructure 	Outdoor applications with sunlight exposure	static								●
	Indoor and tunnel applications	static			●	●				
Automation/ Robotics 	Moving systems	dynamic	●				●	●	●	
	Systems with extreme movements	dynamic								
	Moving systems with antistatic requirements	dynamic						●		
Ship + Off-shore 	Outdoor general applications	static								●
		dynamic	●							●
	Indoor applications	static					●		●	
		dynamic					●		●	●
Passenger area	static			●		●	●			
Energy 	Outdoor applications with sunlight exposure	static								●
	Indoor applications	static			●		●		●	
	Exposed to radiation	static				●				
Food & Beverage 	General applications	static								
		dynamic								
Others     	Vehicle building	static	●							
	Telecommunications	indoor						●		●
		outdoor								
	Building constructions	indoor				●				
		outdoor								
	Ex hazardous areas (ATEX, IECEx)	static							●	
High temperature applications	static	●				●				

PMA conduit

Conduit guide

Products		PMAFLEX Pro				PMAFLEX					
		PHT	PLU	POH	PSX	CYL	ESD	PCL	PCS		
Material properties	Ductility	■	■	■	■	■	■	■	■		
	Reversed bending resistance	■	■	■	■	■	■	■	■		
	Compression resistance	■	■	■	■	■	■	■	■		
	Low temperature performance	■	■	■	■	■	■	■	■		
	High temperature performance	■	■	■	■	■	■	■	■		
	Resistance to weathering	■	■	■	■	■	■	■	■		
	Approvals	 Bi-National Recognition File UL1696 & CSA C22.2 No. 227.3-05 Bi-National Listing File UL1660 & CSA C22.2 No. 227.2.1 Free from halogens, REACH + RoHS compliant Non flame propagating EN61386	 	●	●						
 EN 45545-2 NFPA 130 (ASTM E162 – ASTM E662) BSS 7239/SMP 800-C ASTM E1354 PN-K 2511 GOST 12.1.044-89		 			●						
 DNV (Type approved) Lloyd's Register (Type approved) Bureau Veritas (Type approved)		  		●	●	●	●	●			
Hazardous		ATEX									
		IECEX									
Food & Beverage		NSF									
		Ecolab									
Temperature range		Continuous operating temperature (acc. to DO 9.21-4510)	Min. (-)	-50	-25	-25	-100	-40	-40	-50	-50
			Max. (+)	135	95	95	170	105	90	105	95
		Short term max. operating temperature 168h (acc. to DO 9.21-4360)	(+)	180	120	120	200	160	150	160	150
Sizes	Nominal width min.		07	10	10	10	07	07	07	07	
	Nominal width max.		48	48	48	48	125	95	125	95	
	Metric size min.		10	12	12	12	10	10	10	10	
	Metric size max.		50	50	50	50	146	106	146	106	

PMAFLEX											PMAFLEX Multilayer			PMAFLEX Plus (UL-Listed)			Divisible System		PMA Smart Line											
PCSL	PEL	PIS/PIH	POS	PUE	PVD	VAM	VAML	VCS	VOH	PLR	XESX	XPCL	XR90	XSOL	XVCS1H	XVCS2H	XPCS	XPCSF	JFBD	CUS	PUS	VUS	PACOF	PPCOF	LLPA	LLPF				
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
●																													●	
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
●											●	●	●	●							●	●	●	●	●					
●																								●	●					
●																								●	●					
●		●																											●	●
●		●																											●	●
●		●																											●	●
											●																			
											●																			
																				●										
																				●										
-50	-50	-50	-25	-60	-40	-40	-40	-50	-40	-40	-50	-50	-40	-50	-50	-50	-40	-50	-18	-40	-50	-50	-40	-20	-40	-40				
95	60	95	95	50	150	105	105	105	105	105	90	105	95	95	90	90	95	95	90	105	95	105	105	105	105	105				
150	-	150	130	-	-	160	160	160	160	160	150	160	150	150	120	120	150	150	120	160	150	160	160	150	160	160				
07	10	07	07	17	10	10	10	07	07	07	10	12	17	12	12	12	10	10	12	17	17	17	07	07	07	07				
48	48	125	95	70	29	48	125	95	125	48	48	48	48	48	48	48	48	48	48	48	48	48	70	70	125	48				
10	12	10	10	20	12	12	12	10	10	10	12	16	20	16	16	16	12	12	16	20	20	20	10	10	10	10				
50	50	146	106	80	32	50	146	106	146	50	50	50	50	50	50	50	50	50	30	50	50	50	80	80	146	50				

Key
● correct

PMA conduit

Overview

Conduit to protect cables. We offer many different conduit types for diverse applications with various technical requirements.

—
01 **CXR90** Conduit
Three layer corrugated
conduit, very flexible,
medium-duty
(Multilayer)

—
02 **PHT** Conduit
Highly flexible, medium /
heavy-duty

The product groups:

- PMAFLEX Pro
- PMAFLEX
- PMAFLEX Plus
- PMAFLEX Multilayer
- PMA Divisible System
- PMA Smart Line

Offering many different conduit types for diverse applications with various technical requirements to protect humans and cables. Conduit sizes range from 6mm to 125mm Ø, from lightweight to heavyweight, and from pliable to highly flexible. PMA also offers slit and divisible conduit. Standard colours are black and grey.

Many conduit are specially approved, e.g. CSA, UL Recognition, DNV, Lloyds, Bureau Veritas etc. All conduit are REACH and RoHS compliant.

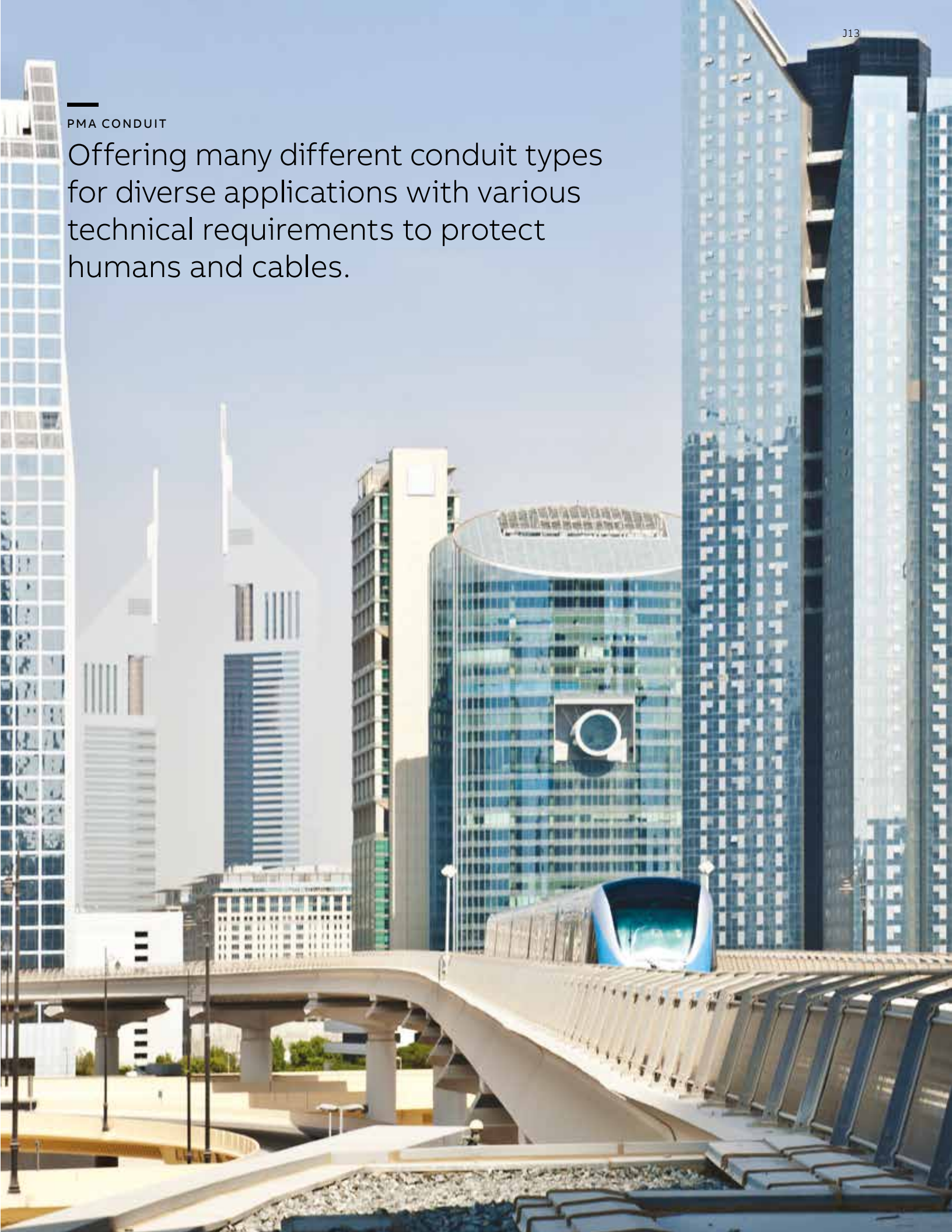


—
01

—
02

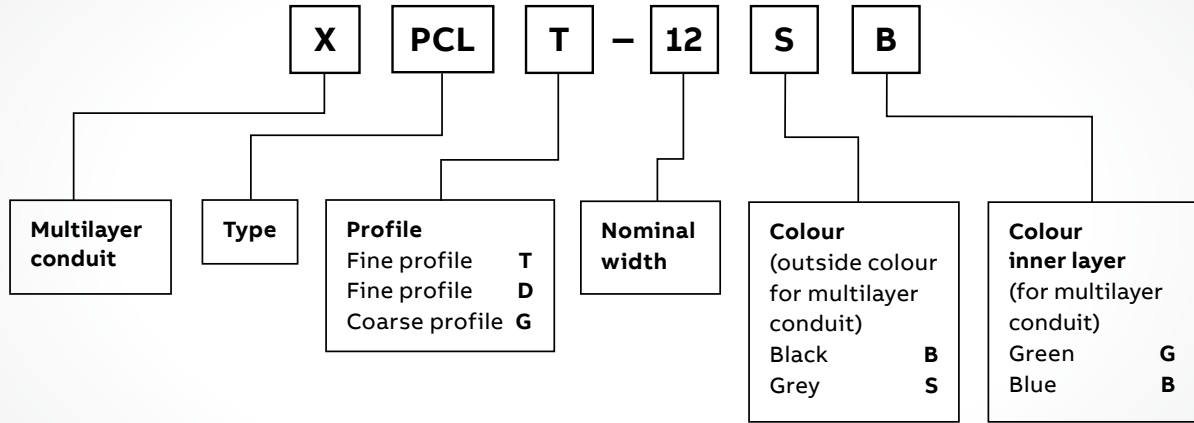
PMA CONDUIT

Offering many different conduit types for diverse applications with various technical requirements to protect humans and cables.

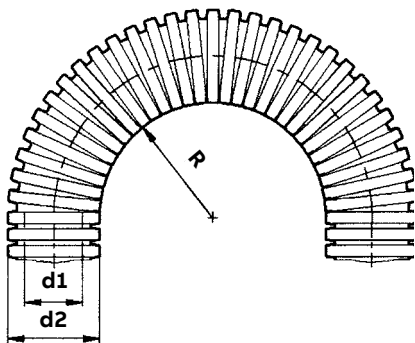


PMA conduit

Part number codes



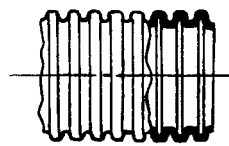
Radius



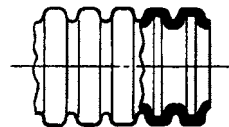
Stat. radius = Lowest recommended bending radius for static (fixed) installation.

Dyn. radius = Lowest recommended bending radius for dynamic (flexible) installation.

Profile



Fine profile T
Tight bending radius.




Coarse profile G
High pull-out strength.

PMAFLEX Pro

Type PHT & PLU conduit

Type PHT - Highly flexible, medium/heavy-duty

	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m)
		NW	Metric				
	PHTT-07B	07	10	6.2	10.0	15/40	50
	PHTT-10B	10	12	9.6	13.0	20/55	50
	PHTT-12B	12	16	12.0	15.8	30/65	50
	PHTT-17B	17	20	16.2	21.2	40/70	50
	PHTT-23B	23	25	22.6	28.5	45/95	50
	PHTG-17B	17	20	15.2	21.2	40/75	50
	PHTG-23B	23	25	22.0	28.5	45/100	50
	PHTG-29B	29	32	27.7	34.5	55/120	50
	PHTG-36B	36	40	35.8	42.5	60/180	30
	PHTG-48B	48	50	46.8	54.5	70/200	30


PHT Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance (PHTT-17B)	
Compression resistance (PHTG-17B)	
Low temperature performance	
Weathering resistance	

For applications at high and very low temperatures / dynamic applications
Specially formulated polyamide elastomer. Both excellent flexibility and high compression strength
Enhanced temperature range compared to standard polyamides
High resistance to ultra violet rays and weathering

Materials	Temperature range	Colour
Specially formulated polyamide elastomer	-50°C to +135°C	Black
Certification	Short-term to: +180°C	
Free from halogens, REACH compliant and RoHS compliant	Impact resistance	UV Resistance
	Extremely good at low temperatures	High

Type PLU - Flexible, medium-duty

	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	PLUT-10B	10	12	9.5	13.0	20	50
	PLUT-12B	12	16	11.8	15.8	30	50
	PLUG-17B	17	20	15.3	21.2	40	50
	PLUG-23B	23	25	22.4	28.5	45	50
	PLUG-29B	29	32	28.7	34.5	55	50
	PLUG-36B	36	40	36.3	42.5	65	30
	PLUG-48B	48	50	47.3	54.5	70	30

PLU Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	


For highest fire and passenger safety requirements
Excellent fire safety characteristics acc. to BS 6853 1a (interior) and LUL Engineering Standard,
approved by Metronet and Tube Line
For static interior applications
Good ductility

Materials	Temperature range	Colour
Specially modified polypropylene	-25°C to +95°C	Black
Certification	Short-term to: +120°C	
Free from halogens, REACH compliant and RoHS compliant	Impact resistance	UV Resistance
	Good impact resistance	-

PMAFLEX Pro

Type POH & PSX conduit

Type POH - Very flexible, medium-duty

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	POHT-10B	POHT-10S	10	12	9.2	13.0	13.0	50
	POHT-12B	POHT-12S	12	16	11.8	15.8	15.8	50
	POHG-17B	POHG-17S	17	20	15.7	21.2	21.2	50
	POHG-23B	POHG-23S	23	25	22.0	28.5	28.5	50
	POHG-29B	POHG-29S	29	32	27.4	34.4	34.4	50
	POHG-36B	POHG-36S	36	40	35.8	42.4	42.4	30
	POHG-48B	POHG-48S	48	50	46.8	54.4	54.5	30


For highest fire and passenger safety requirements
 Excellent fire safety characteristics acc. to BS 6853 1a (interior)
 Good ductility and reversed bending characteristics

POH Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polypropylene	-25°C to +95°C	Black/Grey
Certification	Short-term to: +120°C	
Free from halogens, REACH compliant and RoHS compliant	Fire performance	UV Resistance
	acc. to BS 6853 1a (interior)	-

Type PSX - Flexible, light-duty

	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	PSXT-10B	10	12	9.8	13.0	20	50
	PSXT-12B	12	16	12.2	15.8	30	50
	PSXT-17B	17	20	16.2	21.2	35	50
	PSXG-23B	23	25	22.3	28.5	45	50
	PSXG-29B	29	32	28.0	34.5	55	50
	PSXG-36B	36	40	36.5	42.5	60	30
	PSXG-48B	48	50	47.5	54.5	70	30

For applications with highest fire safety performance requirements / with extreme temperature conditions / exposed to radiation.
 Chemical resistance: To oils, fats, acids, alcohols and hot water (good resistance to hydrolysis)
 Excellent high and low temperature properties
 High radiation resistance
 Very good ductility

PSX Index


min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyetherimide	-100°C to +170°C	Black
Certification	Short-term to: +200°C	
Free from halogens, REACH compliant and RoHS compliant	Fire performance	UV Resistance
	Low smoke density and toxicity	-

PMAFLEX

Type CYL & ESD conduit

Type CYL - Very flexible, medium-duty conduit

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	CYLT-07B	CYLT-07S	07	10	6.2	10.0	15	50
	CYLT-10B	CYLT-10S	10	12	9.6	13.0	20	50
	CYLT-12B	CYLT-12S	12	16	12.0	15.8	30	50
	CYLT-17B	CYLT-17S	17	20	16.2	21.2	40	50
	CYLT-23B	CYLT-23S	23	25	22.6	28.5	45	50
	CYLT-29B	CYLT-29S	29	32	29.0	34.5	55	50
	CYLT-36B	CYLT-36S	36	40	36.5	42.5	60	30
	CYLT-48B	CYLT-48S	48	50	47.5	54.5	70	30
	CYLG-23B	CYLG-23S	23	25	21.9	28.5	45	50
	CYLG-29B	CYLG-29S	29	32	27.6	34.5	55	50
	CYLG-36B	CYLG-36S	36	40	36.0	42.5	60	30
	CYLG-48B	CYLG-48S	48	50	47.0	54.5	70	30
	CYLG-56B	CYLG-56S	56	68	56.3	67.2	120	30
	CYLG-70B	CYLG-70S	70	80	68.0	80.0	160	10
	CYLG-95B	CYLG-95S	95	106	91.9	106.0	210	10
CYLG-125B	CYLG-125S	125	146	126.5	146.5	450	06	

Approvals




CYL Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

For machine building and installation industries / static and slightly dynamic applications
 Very good ductility and good reversed bending characteristics
 Good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity

Materials	Temperature range	Colour
Specially formulated polyamide 6	-40°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Self extinguishing	UV Resistance
	acc. to UL 94 V2	-

Type ESD - Very flexible, medium-duty conduit

	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m)
		NW	Metric				
	ESDT-07B	07	10	6.2	10.0	15/40	50
	ESDT-10B	10	12	9.6	13.0	20/50	50
	ESDT-12B	12	16	12.0	15.8	30/70	50
	ESDT-17B	17	20	16.4	21.1	40/75	50
	ESDT-23B	23	25	22.6	28.4	45/90	50
	ESDT-29B	29	32	29.0	34.3	55/110	50
	ESDT-36B	36	40	36.5	42.5	60/160	30
	ESDT-48B	48	50	47.5	54.5	70/200	30
	ESDG-56B	56	68	56.5	67.0	110/250	30
	ESDG-70B	70	80	67.5	80.0	150/330	10
	ESDG-95B	95	106	91.5	106.0	170/440	10

ESD Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	


For dynamic applications in robotics and automation where electrostatic charge and uncontrolled discharge need to be avoided
 Prevents electrostatic charging. For indoor and outdoor use (very good cold temperature performance)

Materials	Temperature range	Colour
Specially modified polyamide 12	-40°C to +90°C	Black
Certification	Short-term to: +150°C	
Free from halogens, REACH compliant and RoHS compliant	Fatigue resistance	UV Resistance
	Excellent fatigue resistance	Excellent

PMAFLEX

Type PCL conduit

Type PCL - Very flexible, medium-duty

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	PCLT-07B	PCLT-07S	07	10	6.2	10.0	15	50
	PCLT-10B	PCLT-10S	10	12	9.6	13.0	20	50
	PCLT-12B	PCLT-12S	12	16	12.0	15.8	30	50
	PCLT-17B	PCLT-17S	17	20	16.2	21.2	40	50
	PCLT-23B	PCLT-23S	23	25	22.6	28.5	45	50
	PCLT-29B	PCLT-29S	29	32	29.0	34.5	55	50
	PCLT-36B	PCLT-36S	36	40	36.5	42.5	60	30
	PCLT-48B	PCLT-48S	48	50	47.5	54.5	70	30
	PCLG-17B	PCLG-17S	17	20	15.3	21.2	40	50
	PCLG-23B	PCLG-23S	23	25	21.9	28.5	45	50
	PCLG-29B	PCLG-29S	29	32	27.6	34.5	55	50
	PCLG-36B	PCLG-36S	36	40	36.0	42.5	60	30
	PCLG-48B	PCLG-48S	48	50	47.0	54.5	70	30
	PCLG-56B	PCLG-56S	56	68	56.3	67.2	130	30
	PCLG-70B	PCLG-70S	70	80	67.5	80.0	160	10
PCLG-95B	PCLG-95S	95	106	91.5	106.0	210	10	
PCLG-125B	PCLG-125S	125	146	126.5	146.5	450	6	

Approvals



PCL Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	


For machine building, installation and vehicle building industries / static and slightly dynamic applications
 Very good ductility and good reversed bending characteristics. Very good long-term properties
 Very good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity

Materials	Temperature range	Colour
Specially formulated polyamide 6	-50°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Self extinguishing	UV Resistance
	acc. to UL 94 V2	-

PMAFLEX

Type PCS & PCSL conduit

Type PCS - Very flexible, heavy-duty conduit

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m)
			NW	Metric				
	PCST-07B	PCST-07S	07	10	6.0	10.0	15/40	50
	PCST-10B	PCST-10S	10	12	9.2	13.0	20/50	50
	PCST-12B	PCST-12S	12	16	11.8	15.8	25/70	50
	PCST-17B	PCST-17S	17	20	16.0	21.2	35/80	50
	PCSG-17B	PCSG-17S	17	20	15.2	21.2	35/85	50
	PCSG-23B	PCSG-23S	23	25	21.5	28.5	40/110	50
	PCSG-29B	PCSG-29S	29	32	27.7	34.4	50/130	50
	PCSG-36B	PCSG-36S	36	40	35.8	42.4	60/180	30
	PCSG-48B	PCSG-48S	48	50	46.8	54.4	70/220	30
	PCSG-56B	PCSG-56S	56	68	56.1	67.2	130/280	30
	PCSG-70B	PCSG-70S	70	80	66.5	80.0	170/360	10
	PCSG-95B	PCSG-95S	95	106	91.0	106.0	250/470	10

For dynamic outside applications in railway vehicles / outdoor applications with highest requirements to UV and weathering resistance
Extensive railway approvals. Very good ductility and good reversed bending characteristics
Very good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity
Highest reversed bending resistance
Excellent resistance to ultra violet rays and weathering

PCS Index

min.
Ductility

max.

Fatigue reversed bending

Compression resistance

Low temperature performance

Weathering resistance

Materials

Specially modified polyamide 12

Certification

Free from halogens, REACH compliant
and RoHS compliant

Temperature range

-50°C to +95°C

Short-term to: +150°C

Fatigue resistance

Excellent fatigue resistance


Colour

Black/Grey

UV Resistance

Excellent

Type PCSL - Highly flexible, medium-duty conduit

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m)
			NW	Metric				
	PCSLT-07B	PCSLT-07S	07	10	6.2	10.0	15/40	50
	PCSLT-10B	PCSLT-10S	10	12	9.6	13.0	20/50	50
	PCSLT-12B	PCSLT-12S	12	16	11.9	15.8	25/65	50
	PCSLT-17B	PCSLT-17S	17	20	16.4	21.1	30/65	50
	PCSLG-17B	PCSLG-17S	17	20	15.2	21.1	30/80	50
	PCSLG-23B	PCSLG-23S	23	25	21.7	28.4	40/100	50
	PCSLG-29B	PCSLG-29S	29	32	27.4	34.3	50/120	50
	PCSLG-36B	PCSLG-36S	36	40	35.8	42.3	60/180	30
	PCSLG-48B	PCSLG-48S	48	50	46.7	54.2	70/200	30

For dynamic outside applications in railway vehicles / outdoor applications with highest requirements to UV and weathering resistance
Extensive railway approvals. Good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity
Excellent reversed bending resistance
Excellent resistance to ultra violet rays and weathering

PCSL Index

min.
Ductility

max.

Fatigue reversed bending

Compression resistance

Low temperature performance

Weathering resistance

Materials

Specially modified polyamide 12

Certification

Free from halogens, REACH compliant
and RoHS compliant

Temperature range

-50°C to +95°C

Short-term to: +150°C

Fatigue resistance

Excellent fatigue resistance

Colour

Black


UV Resistance

Excellent

PMAFLEX

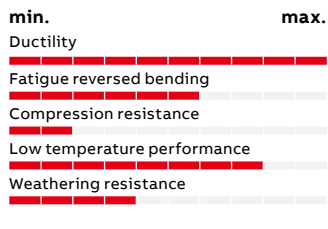
Type PEL & PIS/PIH conduit

Type PEL - Highly flexible, light-duty, soft

	Order no. (grey)	Order no. (grey, slit)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	PELT-10S	PELT-10SL	10	12	9.7	12.7	20	50
	PELT-12S	PELT-12SL	12	16	11.5	15.5	30	50
	PELT-17S	PELT-17SL	17	20	16.0	20.9	35	50
	PELT-23S	PELT-23SL	23	25	22.5	27.5	40	50
	PELT-29S	PELT-29SL	29	32	28.5	33.8	50	30
	PELT-36S	PELT-36SL	36	40	34.0	41.6	60	30
	PELT-48S	PELT-48SL	48	50	47.0	53.2	70	30


For electrical cabinets and appliance construction
 Very good ductility
 Suitable for small bending radii
 Good resistance against strong acids and bases

PEL Index



Materials	Temperature range	Colour
Specially modified polyethylene	-50°C to +60°C	Grey
Certification	UV Resistance	
Free from halogens, REACH compliant and RoHS compliant	-	

Type PIS/PIH - Highly flexible, medium- and heavy-duty

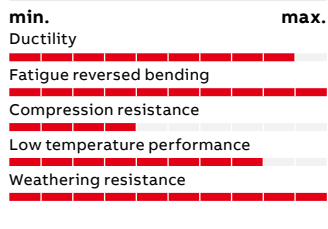
	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./dyn. radius (mm)	PU (m)
			NW	Metric				
	PIST-07B	PIST-07S	07	10	6.2	10.0	15/40	50
	PIST-10B	PIST-10S	10	12	9.6	13.0	20/50	50
	PIST-12B	PIST-12S	12	16	11.9	15.8	25/65	50
	PIST-17B	PIST-17S	17	20	16.4	21.1	30/65	50
	PIST-23B	PIST-23S	23	25	22.6	28.4	35/90	50
	PIST-29B	PIST-29S	29	32	29.0	34.3	45/110	50
	PIST-36B	PIST-36S	36	40	36.5	42.5	60/165	30
	PIST-48B	PIST-48S	48	50	47.5	54.5	70/180	30
	PISG-17B	PISG-17S	17	20	15.2	21.1	30/80	50
	PISG-23B	PISG-23S	23	25	21.7	28.4	40/100	50
	PISG-29B	PISG-29S	29	32	27.9	34.7	50/120	50
	PISG-36B	PISG-36S	36	40	35.8	42.3	60/180	30
	PISG-48B	PISG-48S	48	50	46.7	54.2	70/200	30
	PIHG-56B	PIHG-56S	56	68	56.3	67.2	110/270	30
	PIHG-70B	PIHG-70S	70	80	67.2	79.6	150/350	30
	PIHG-95B	PIHG-95S	95	106	91.3	106.0	170/450	30
	PIHG-125B	PIHG-125S	125	146	126.5	146.5	350/480	20

For robotics and automation applications. UL 94 V0. Excellent UV resistance and weathering characteristics
 PIS: Medium-wall (Nominal width 07 to 48) / PIH: Heavy-wall (Nominal width 56 to 125)
 Very good reversed bending characteristics. Good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity

Approvals



PIS/PIH Index




Materials	Temperature range	Colour
Specially modified polyamide 12	-50°C to +95°C	Black/Grey
Certification	Weathering characteristics	UV Resistance
Free from halogens, REACH compliant and RoHS compliant	Short-term to: +150°C Excellent	Excellent

PMAFLEX

Type POS & PUE conduit

Type POS - Highly flexible, medium-duty


	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m)
		NW	Metric				
	POST-10B	10	12	9.6	13	20/50	50
	POST-12B	12	16	11.9	15.8	30/70	50
	POST-17B	17	20	16.2	21.2	35/75	50
	POST-23B	23	25	22.6	28.5	40/100	50
	POST-29B	29	32	29	34.5	50/120	50
	POST-36B	36	40	36.5	42.5	60/180	30
	POST-48B	48	50	47.5	54.5	70/195	30
	POSG-29B	29	32	27.6	34.5	50/120	50
	POSG-36B	36	40	36	42.5	60/180	30
	POSG-48B	48	50	47	54.5	70/195	30
	POSG-70B	70	80	67.2	79.6	150/350	30
	POSG-95B	95	106	91.3	106	170/450	30

POS Index

For automation as well as for machine building and industrial installations, especially where continuous movements occur
Excellent reversed bending performance and flexibility
Good impact resistance. Good resistance against strong acids

min.	max.	Materials	Temperature range	Colour
Ductility				
Fatigue reversed bending		Specially modified polypropylene	-25°C to +95°C	Black
Compression resistance				
Low temperature performance		Certification	Short-term to: +130°C	
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Fatigue resistance	UV Resistance
			-	-

Type PUE - Highly flexible, medium-duty

	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m)
		NW	Metric				
	PUET-23B	23	25	22.4	28.5	35/70	50
	PUET-29B	29	32	28.8	34.5	40/90	30
	PUET-36B	36	40	35.8	42.4	50/120	30
	PUET-48B	48	50	48.6	54.5	60/130	21
	PUEG-56B	56	68	56.3	67.2	90/170	30
	PUEG-70B	70	80	68.2	80.5	100/220	30

For robotic applications with multi-axial movements
Specially suitable for tight bending-radii
Highest reversed bending resistance
Excellent chafing characteristics


PUE Index

min.	max.	Materials	Temperature range	Colour
Ductility				
Fatigue reversed bending		Specially formulated polyurethane	-60°C to +50°C	Black
Compression resistance				
Low temperature performance		Certification		
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Fatigue resistance	UV Resistance
			-	-

PMAFLEX



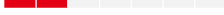


Type PVD & VAM conduit

Type PVD - Pliable, medium-duty


	Order no. (transparent)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	PVDT-10P	10	12	9.5	12.6	20	50
	PVDT-12P	12	16	11.8	15.5	30	50
	PVDT-17P	17	20	16.0	20.8	40	50
	PVDT-23P	23	25	22.6	28.0	45	50
	PVDT-29P	29	32	29.0	34.1	50	50

For long-term high temperature requirements in machine building applications
 Excellent chemical resistance also at high temperatures
 Very good abrasion resistance
 High stiffness

PVD Index






min.	max.	Materials	Temperature range	Colour
Ductility		Specially formulated PVDF	-60°C to +150°C	Transparent
Fatigue reversed bending				
Compression resistance		Certification	Fire performance	UV Resistance
Low temperature performance				
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Self-extinguishing / free from cadmium	Excellent

Type VAM - Flexible, heavy-duty

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	VAMT-10B	VAMT-10S	10	12	9.2	13.0	25	50
	VAMT-12B	VAMT-12S	12	16	11.8	15.8	30	50
	VAMG-17B	VAMG-17S	17	20	15.2	21.2	40	50
	VAMG-23B	VAMG-23S	23	25	22.0	28.5	50	50
	VAMG-29B	VAMG-29S	29	32	27.7	34.4	60	50
	VAMG-36B	VAMG-36S	36	40	35.8	42.4	70	30
	VAMG-48B	VAMG-48S	48	50	46.8	54.4	80	30

For high fire and passenger safety requirements in interior applications such as passenger areas or public buildings
 HL3 acc. to EN 45545-2
 NFPA 130 compliant
 High impact and compression strength
 High stiffness


VAM Index

min.	max.	Materials	Temperature range	Colour
Ductility		Specially formulated polyamide 6	-40°C to +105°C	Black/Grey
Fatigue reversed bending				
Compression resistance		Certification	Short-term to: +160°C	UV Resistance
Low temperature performance				
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Minimal development of smoke and gases	-

PMAFLEX

Type VAML & VCS conduit

Type VAML - Flexible, medium-duty

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	VAMLT-10B	VAMLT-10S	10	12	9.6	13.0	20	50
	VAMLT-12B	VAMLT-12S	12	16	12.0	15.8	30	50
	VAMLG-17B	VAMLG-17S	17	20	15.3	21.2	40	50
	VAMLG-23B	VAMLG-23S	23	25	22.6	28.5	45	50
	VAMLG-29B	VAMLG-29S	29	32	27.6	34.5	55	50
	VAMLG-36B	VAMLG-36S	36	40	36.0	42.5	65	30
	VAMLG-48B	VAMLG-48S	48	50	47.0	54.5	75	30
	VAMLG-56B	VAMLG-56S	56	68	56.3	67.2	140	30
	VAMLG-70B	VAMLG-70S	70	80	67.5	80.0	160	10
	VAMLG-95B	VAMLG-95S	95	106	91.5	106.0	210	10
	VAMLG-125B	VAMLG-125S	125	146	126.0	146.5	450	6

VAML Index


min. Ductility **max.**

Fatigue reversed bending
 Compression resistance
 Low temperature performance
 Weathering resistance

For high fire and passenger safety requirements in interior applications such as passenger areas or public buildings
 HL3 acc. to EN 45545-2
 NFPA 130 compliant
 Good flexibility. Good impact strength

Materials	Temperature range	Colour
Specially formulated polyamide 6	-40°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Fire performance	UV Resistance
	Minimal development of smoke and gases	-

Type VCS - Flexible, heavy-duty

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	VCST-07B	VCST-07S	07	10	6.0	10.0	20	100
	VCST-10B	VCST-10S	10	12	9.2	13.0	25	50
	VCST-12B	VCST-12S	12	16	11.8	15.8	30	50
	VCST-17B	VCST-17S	17	20	16.0	21.2	40	50
	VCSG-17B	VCSG-17S	17	20	15.2	21.2	40	50
	VCSG-23B	VCSG-23S	23	25	22.0	28.5	50	50
	VCSG-29B	VCSG-29S	29	32	27.7	34.4	60	50
	VCSG-36B	VCSG-36S	36	40	35.8	42.4	70	30
	VCSG-48B	VCSG-48S	48	50	46.8	54.4	80	30
	VCSG-56B	VCSG-56S	56	68	56.1	67.2	150	30
	VCSG-70B	VCSG-70S	70	80	66.5	80.0	200	10
	VCSG-95B	VCSG-95S	95	106	91.0	106.0	300	10

VCS Index

min. Ductility **max.**

Fatigue reversed bending
 Compression resistance
 Low temperature performance
 Weathering resistance


For static external installations, especially in railway vehicles
 High compression and impact strengths at low temperatures and low humidity
 Good ductility. Very good resistance to ultra violet rays and weathering

Materials	Temperature range	Colour
Specially formulated polyamide 6	-50°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Fatigue resistance	UV Resistance
	-	Very good

PMAFLEX

Type VOH & PLR conduit

Type VOH - Pliable, very heavy-duty

	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	VOHD-07B	VOHD-07S	07	10	5.8	10.0	30	50
	VOHD-10B	VOHD-10S	10	12	9.0	13.0	35	50
	VOHD-12B	VOHD-12S	12	16	11.6	15.8	40	50
	VOHG-17B	VOHG-17S	17	20	14.5	21.0	60	50
	VOHG-23B	VOHG-23S	23	25	21.1	28.5	70	50
	VOHG-29B	VOHG-29S	29	32	26.6	34.5	80	50
	VOHG-36B	VOHG-36S	36	40	35.0	42.5	90	30
	VOHG-48B	VOHG-48S	48	50	46.5	54.5	100	30
	VOHG-56B	VOHG-56S	56	68	55.5	67.2	135	10
	VOHG-70B	VOHG-70S	70	80	67.0	80.0	200	10
	VOHG-95B	VOHG-95S	95	106	90.5	106.0	300	10
	VOHG-125B	VOHG-125S	125	146	126.0	146.5	480	6


For applications in heavy machine and plant construction
 High compression resistance
 Highest degree of mechanical protection
 Very good UV and weathering resistance
 Good fire safety characteristics

VOH Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyamide 6	-40°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Fire performance	UV Resistance
	Good	Very good

Type PLR - flexible, medium-wall

	Order no. (black)	Order no. (grey)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric	Profile				
	PLRT-07B	PLRT-07S	07	10	T	6.2	10.0	15	50
	PLRT-10B	PLRT-10S	10	12	T	9.6	13.0	20	50
	PLRT-12B	PLRT-12S	12	16	T	12.0	15.8	30	50
	PLRG-17B	PLRG-17S	17	20	G	15.8	21.2	40	50
	PLRG-23B	PLRG-23S	23	25	G	21.9	28.5	45	50
	PLRG-29B	PLRG-29S	29	32	G	27.6	34.5	55	50
	PLRG-36B	PLRG-36S	36	40	G	36.0	42.5	60	30
	PLRG-48B	PLRG-48S	48	50	G	47.0	54.5	70	30

In light rail rolling stock applications e.g. Tram, Metro, Monorail
 HL2 acc. to EN 45545-2
 Good pressure resistance
 Very good fire safety characteristics

PLR Index


min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyamide 6	-40°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Fire performance	UV Resistance
	Self-extinguishing / Very good	-

PMAFLEX Multilayer






Type XPCL & XSOL conduit

Type XPCL - Highly flexible, medium-duty


	Order no. (black/blue)	Order no. (grey/blue)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric				
	XPCLT-10BB	XPCLT-10SB	10	12	9.6	13.0	20	50
	XPCLT-12BB	XPCLT-12SB	12	16	11.8	15.6	30	50
	XPCLT-17BB	XPCLT-17SB	17	20	16.6	21.0	40	50
	XPCLG-17BB	XPCLG-17SB	17	20	15.6	20.9	40	50
	XPCLG-23BB	XPCLG-23SB	23	25	21.9	28.5	45	50
	XPCLG-29BB	XPCLG-29SB	29	32	27.6	34.5	55	50
	XPCLG-36BB	XPCLG-36SB	36	40	36.0	42.5	60	30
	XPCLG-48BB	XPCLG-48SB	48	50	47.0	54.5	70	30

For machine building and equipment with high requirements
 Allows easy cable insertion due to low friction inner layer
 Very good ductility and good reversed bending characteristics
 Good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity

XPCL Index

min.	max.	Materials	Temperature range	Colour
Ductility		Outer layer: Specially formulated polyamide 6	-50°C to +105°C	Black/Blue
Fatigue reversed bending		Intermediate layer: Specially bonding compound	Short-term to: +160°C	Grey/Blue
Compression resistance		Inner layer: Specially modified polyethylene		
Low temperature performance		Certification	Fire performance	UV Resistance
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Self-extinguishing	-

Type XSOL - Highly flexible, medium-duty






	Order no. (black/green)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	XSOLT-10BG	10	12	9.6	13.0	25	50
	XSOLT-12BG	12	16	11.8	15.6	30	50
	XSOLG-17BG	17	20	15.2	21.0	40	50
	XSOLG-23BG	23	25	22.0	28.5	50	50
	XSOLG-29BG	29	32	27.5	34.4	60	50
	XSOLG-36BG	36	40	35.8	42.4	70	30
	XSOLG-48BG	48	50	46.8	54.4	80	30

All-purpose, especially in long-term external applications, e.g. energy technology
 Very good resistance to UV and weathering
 Very high ductility and reversed bending resistance
 Very good mechanical strength
 High impact resistance even under extreme conditions, such as low temperatures and low humidity

Approvals




XSOL Index

min.	max.	Materials	Temperature range	Colour
Ductility		Outer layer: Specially formulated polyamide 12	-50°C to +95°C	Black/Green
Fatigue reversed bending		Intermediate layer: Specially bonding compound	Short-term to: +150°C	
Compression resistance		Inner layer: Specially modified polyamide 6		
Low temperature performance		Certification	Fire performance	UV Resistance
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Good fire safety characteristics Self-extinguishing	Very good

PMAFLEX Multilayer




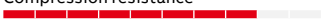

Type XVCS1H & XVCS2H conduit

Type XVCS1H - Flexible, heavy-duty


	Order no. (black/green)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	XVCS1H-10BG	10	12	9.2	13.0	25	50
	XVCS1H-12BG	12	16	11.7	15.5	30	50
	XVCS1H-17BG	17	20	15.2	21.0	40	50
	XVCS1H-23BG	23	25	21.7	28.4	50	50
	XVCS1H-29BG	29	32	27.5	34.3	60	50
	XVCS1H-36BG	36	40	35.8	42.2	70	30
	XVCS1H-48BG	48	50	46.8	54.3	80	30

For track side applications and other exterior static applications
 Easy layouting through: High conduit ductility and formability / Low friction inner layer facilitates cable insertion
 Excellent impact characteristics at low temperatures

XVCS1H Index




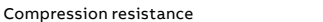

min.	max.	Materials	Temperature range	Colour
Ductility		Outer layer: Specially formulated polyamide 6	-50°C to +90°C	Black/Green
Fatigue reversed bending		Intermediate layer: Specially bonding compound	Short-term to: +120°C	
Compression resistance		Inner layer: Specially modified polyolefin		
Low temperature performance		Certification	Atmospheric corrosion resistance	UV Resistance
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Very good	Very good

Type XVCS2H - Flexible, heavy-duty

	Order no. (black/green)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	XVCS2H-10BG	10	12	9.2	13.0	20	50
	XVCS2H-12BG	12	16	11.7	15.5	25	50
	XVCS2H-17BG	17	20	15.2	21.0	35	50
	XVCS2H-23BG	23	25	22.0	28.4	40	50
	XVCS2H-29BG	29	32	27.7	34.3	50	50
	XVCS2H-36BG	36	40	35.8	42.2	60	30
	XVCS2H-48BG	48	50	46.8	54.3	70	30

For track side applications and other exterior static applications with high UV exposure
 Easy layouting through: High conduit ductility and formability / Low friction inner layer facilitates cable insertion
 Excellent impact characteristics at low temperatures


XVCS2H Index

min.	max.	Materials	Temperature range	Colour
Ductility		Outer layer: Specially formulated polyamide 12	-50°C to +90°C	Black/Green
Fatigue reversed bending		Intermediate layer: Specially bonding compound	Short-term to: +120°C	
Compression resistance		Inner layer: Specially modified polyolefin		
Low temperature performance		Certification	Atmospheric corrosion resistance	UV Resistance
Weathering resistance		Free from halogens, REACH compliant and RoHS compliant	Excellent	Excellent

PMAFLEX Multilayer






Type XPCS & XPCSF conduit

Type XPCS - Very flexible, heavy-duty


	Order no. (black/green)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	Dyn. radius (mm)	PU (m)
		NW	Metric					
	XPCST-10BG	10	12	9.2	13.0	20	50	50
	XPCST-12BG	12	16	11.8	15.8	25	70	50
	XPCSG-17BG	17	20	15.2	21.2	35	85	50
	XPCSG-23BG	23	25	21.5	28.5	40	110	50
	XPCSG-29BG	29	32	27.7	34.4	50	130	50
	XPCSG-36BG	36	40	35.8	42.4	60	180	30
	XPCSG-48BG	48	50	46.8	54.4	70	220	30

For dynamic outside applications in railway vehicles
 For outdoor applications with highest requirements to UV and weathering resistance
 Extensive railway approvals
 Good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity
 HL2 acc. to EN 45545-2
 NFPA 130 compliant

XPCS Index






min.	max.	Materials	Temperature range	Colour
Ductility		Outer layer: Specially formulated polyamide 12	-40°C to +95°C	Black/Green
Fatigue reversed bending		Inner layer: Specially formulated polyamide 6	Short-term to: +150°C	
Compression resistance				
Low temperature performance				
Weathering resistance				
		Certification	Fire performance	UV Resistance
		Free from halogens, REACH compliant and RoHS compliant	Self-extinguishing	Excellent

Type XPCSF - Very flexible, heavy-duty

	Order no. (black/orange)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	Dyn. radius (mm)	PU (m)
		NW	Metric					
	XPCSFT-07BO	07	10	06	10	15	40	100
	XPCSFT-10BO	10	12	9.2	13.0	20	50	50
	XPCSFT-12BO	12	16	11.8	15.8	25	70	50
	XPCSFG-17BO	17	20	15.2	21.2	35	85	50
	XPCSFG-23BO	23	25	21.5	28.5	40	110	50
	XPCSFG-29BO	29	32	27.5	34.4	50	130	50
	XPCSFG-36BO	36	40	35.8	42.4	60	180	30
XPCSFG-48BO	48	50	46.8	54.4	70	220	30	

For dynamic outside applications in railway vehicles
 For outdoor applications with highest requirements to UV and weathering resistance
 Extensive railway approvals
 Excellent flexibility
 Very good mechanical characteristics even under extreme conditions, such as low temperatures and low humidity
 HL3 acc. to EN 45545-2


XPCSF Index

min.	max.	Materials	Temperature range	Colour
Ductility		Outer layer: Specially formulated polyamide 12	-40°C to +95°C	Black/Orange
Fatigue reversed bending		Inner layer: Specially formulated polyamide 12	Short-term to: +150°C	
Compression resistance				
Low temperature performance				
Weathering resistance				
		Certification	Fire performance	UV Resistance
		Free from halogens, REACH compliant and RoHS compliant	Self-extinguishing	Excellent

PMA OXC Overextruded

Type JFBD conduit

Type JFBD - Flexible, medium-duty

	Order no.	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	Dyn. radius (mm)	PU (mm)
		NW	Metric					
	JFBTD-12C01	12	16	11.8	16.0	70	100	50
	JFBGD-17C01	17	20	15.6	21.6	85	125	50
	JFBGD-23C01	23	25	21.7	28.8	110	160	50
	JFBGD-29C01	29	32	27.4	34.7	140	200	50
	JFBGD-36C01	32	40	35.8	42.7	200	260	30
	JFBGD-48C01	48	50	46.7	54.6	230	300	30

Smooth easy to clean out layer
 High reversed bending stresses
 Excellent flexibility in combination with high strength
 High resistance to chemicals and cleaning agents
 For indoor food zone – non contact
 Outer layer made from FDA compliant material
 Corrosion free

Approvals




JFBD Index

min.	max.	Materials	Colour
Ductility		Conduit: made from high-grade, specially formulated polyamide 12	Corrugated conduit: blue
Fatigue reversed bending		Overextrusion: made from modified polyamide elastomer	Overextrusion: blue, translucent
Compression resistance		Certification	UV Resistance
Low temperature performance		FDA 21 CFR / EU 10/2011 compliant outer layer material; ECOLAB certificate	-
Weathering resistance			

PMAFLEX Plus

Type CUS & PUS conduit

Type CUS - Very flexible, medium-duty

	Order no. (black)	Order no. (grey)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m/ft)
			Inch	NW	Metric				
	CUSG-17B	CUSG-17S	½	17	20	15.2	21.2	40	31/100
	CUSG-23B	CUSG-23S	¾	23	25	21.9	28.5	45	31/100
	CUSG-29B	CUSG-29S	1	29	32	27.6	34.5	55	31/100
	CUSG-36B	CUSG-36S	1¼	36	40	36.0	42.5	60	31/100
	CUSG-48B	CUSG-48S	1½	48	50	47.0	54.5	70	31/100

For machine building and installation industries
 For electrical installations, especially in the US market
 Inexpensive solution for requirements acc. to UL 1660 (UL Listing)
 Good ductility and reversed bending characteristics
 Very good mechanical properties even under extreme conditions, such as low temperatures and low humidity

Approvals




CUS Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyamide 6	-40°C to +105°C	Black/Grey
Certification	Short-term to: +160°C	
Free from halogens, REACH compliant and RoHS compliant	Fire protection	UV Resistance
	Self-extinguishing, acc. to UL 94 V2	-

Type PUS - Very flexible, heavy-duty

	Order no. (black)	Order no. (grey)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat./Dyn. radius (mm)	PU (m/ft)
			Inch	NW	Metric				
	PUSG-17B	PUSG-17S	½	17	20	15.2	21.2	35/85	31/100
	PUSG-23B	PUSG-23S	¾	23	25	22.0	28.5	40/110	31/100
	PUSG-29B	PUSG-29S	1	29	32	27.7	34.4	50/130	31/100
	PUSG-36B	PUSG-36S	1¼	36	40	35.8	42.4	60/180	31/100
	PUSG-48B	PUSG-48S	1½	48	50	46.8	54.4	70/220	31/100

For long-term external applications with approval acc. to UL 1660 (UL Listing)
 For dynamic applications
 Very good reversed bending resistance
 Very good mechanical strength at low temperatures
 Excellent resistance to ultra violet rays and weathering
 cULus listed

Approvals



PUS Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyamide 12	-50°C to +95°C	Black/Grey
Certification	Short-term to: +150°C	
Free from halogens, REACH compliant and RoHS compliant	Fire protection	UV Resistance
	Self-extinguishing, acc. to UL 94 V2	Excellent

PMAFLEX Plus

Type VUS conduit

Type VUS - Flexible, heavy-duty



	Order no. (black)	Order no. (grey)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m/ft)	
			Inch	Metric					
VUS	VUSG-17B	VUSG-17S	½	17	20	15.2	21.2	40	31/100
	VUSG-23B	VUSG-23S	¾	23	25	22.0	28.5	50	31/100
	VUSG-29B	VUSG-29S	1	29	32	27.7	34.4	60	31/100
	VUSG-36B	VUSG-36S	1 ¼	36	40	35.8	42.4	70	31/100
	VUSG-48B	VUSG-48S	1 ½	48	50	46.8	54.4	80	31/100

For static exterior installations with approval acc. to UL 1660 (UL Listing)
 For applications requiring high compression resistance
 Good ductility
 High mechanical strength even under extreme conditions, such as low temperatures and low humidity
 Very good resistance to ultra violet rays and weathering

Approvals



VUS Index


min. max.
 Ductility

	Materials	Temperature range	Colour
Fatigue reversed bending	Specially modified polyamide 6	-50°C to +105°C	Black/Grey
Compression resistance			
Low temperature performance	Certification	Short-term to: +160°C	
Weathering resistance	Free from halogens, REACH compliant and RoHS compliant	Fire performance	UV Resistance
		-	Very good

PMA Divisible System

Type PACOF conduit & stainless steel overbraiding for conduit

Type PACOF - Flexible, divisible

	Order no. (black)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric	Profile				
	PACOF-07B	07	10	T	5.6	10.0	30	50
	PACOF-10B	10	12	T	8.5	12.8	33	50
	PACOF-12B	12	16	T	11.0	15.6	35	50
	PACOF-17B	17	20	T	15.5	21.1	45	50
	PACOF-23B	23	25	T	22.1	28.4	70	50
	PACOF-29B	29	32	T	27.2	34.5	120	50
	PACOF-36B	36	40	T	32.0	42.4	145	30
	PACOF-48B	48	50	T	43.9	54.1	150	30
	PACOF-70B	70	80	T	62.0	79.0	190	10

HL3 according to EN45545-2

NFPA 130 compliant

For machine building and plant construction

For trouble-free retrofitting and applicable for repairs

Can be opened and closed again in longitudinal direction any time

Good ductility


Good compression resistance

PACOF Index

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyamide 6	-40°C to +105°C	Black
Certification	Fire performance	UV Resistance
Free from halogens, REACH compliant and RoHS compliant	Short-term to: +160°C	-

Type LLPO - Very flexible, light-duty

	Order no. (black)	Order no. (grey)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric	Profile				
	LLPO-07A	LLPO-07S	07	10	T	6.2	10.0	15	50
	LLPO-10A	LLPO-10S	10	12	T	9.6	13.0	20	50
	LLPO-12A	LLPO-12S	12	16	T	12.0	15.8	30	50
	LLPO-17A	LLPO-17S	17	20	T	16.2	21.2	40	50
	LLPO-23A	LLPO-23S	23	25	T	22.6	28.5	45	50
	LLPO-29A	LLPO-29S	29	32	T	29.0	34.5	55	50
	LLPO-36A	LLPO-36S	36	40	T	36.5	42.5	60	30
	LLPO-48A	LLPO-48S	48	50	T	47.5	54.5	70	30

For machine building and installation

Excellent reversed bending characteristics

Very good resistance against acids and hydrolysis

LLPO Index


min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polyolefine	-20°C to +90°C	Black/Grey
Certification	Fire protection	UV Resistance
Free from halogens, REACH compliant and RoHS compliant	Short-term to: +130°C	-
	Good flammability	-

PMA Smart Line

Type PPCOF & LLPA conduit

Type PPCOF - Flexible, divisible

	Order no. (black)	Conduit size		Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
		NW	Metric				
	PPCOF-07B	07	10	5.6	10.0	25	50
	PPCOF-10B	10	12	8.5	12.8	28	50
	PPCOF-12B	12	16	11.0	15.6	35	50
	PPCOF-17B	17	20	15.1	21.1	45	50
	PPCOF-23B	23	25	22.1	28.4	60	50
	PPCOF-29B	29	32	26.6	34.5	100	50
	PPCOF-36B	36	40	31.8	42.4	120	30
	PPCOF-48B	48	50	43.9	54.1	140	30
	PPCOF-70B	70	80	60.5	78.0	200	10


PPCOF Index

For machine building and plant construction
 For trouble-free retrofitting and applicable for repairs
 Can be opened and closed again in longitudinal direction any time
 Good reversed bending resistance

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	

Materials	Temperature range	Colour
Specially modified polypropylene PP	-20°C to +105°C	Black
	Short-term to +150°C	
Certification	Fire performance	UV Resistance
-	-	-


Type LLPA - Very flexible, medium-duty

	Order no. (black)	Order no. (grey)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric	Profile				
	LLPA-07A	LLPA-07S	07	10	T	6.2	10.0	15	50
	LLPA-10A	LLPA-10S	10	12	T	9.6	13.0	20	50
	LLPA-12A	LLPA-12S	12	16	T	12.0	15.8	30	50
	LLPA-17A	LLPA-17S	17	20	T	16.2	21.2	40	50
	LLPA-23A	LLPA-23S	23	25	T	22.6	28.5	45	50
	LLPA-29A	LLPA-29S	29	32	T	29.0	34.5	55	50
	LLPA-36A	LLPA-36S	36	40	T	36.5	42.5	60	30
	LLPA-48A	LLPA-48S	48	50	T	47.5	54.5	70	30

Approvals



LLPA Index

	LLPAG-17A	LLPAG-17S	17	20	G	15.8	21.2	40	50
	LLPAG-23A	LLPAG-23S	23	25	G	21.9	28.5	45	50
	LLPAG-29A	LLPAG-29S	29	32	G	27.6	34.5	55	50
	LLPAG-36A	LLPAG-36S	36	40	G	36.0	42.5	60	30
	LLPAG-48A	LLPAG-48S	48	50	G	47.0	54.5	70	30
	LLPAG-56A	LLPAG-56S	56	68	G	56.3	67.2	120	30
	LLPAG-70A	LLPAG-70S	70	80	G	68.0	80.0	160	10
	LLPAG-95A	LLPAG-95S	95	106	G	91.9	106.0	210	10
	LLPAG-125A	LLPAG-125S	125	146	G	126.5	146.5	450	06

min.	max.
Ductility	
Fatigue reversed bending	
Compression resistance	
Low temperature performance	
Weathering resistance	


For machine building, installation and construction industries
 Good ductility
 Good mechanical characteristics

Materials	Temperature range	Colour
Specially modified polyamide 6	-40°C to +105°C	Black/Grey
	Short-term to: +160°C	
Certification	Self extinguishing	UV Resistance
Free from halogens, REACH compliant and RoHS compliant	acc. to UL 94 V2	-

PMA Smart Line

Type LLPF & LLPG conduit

Type LLPF - Very flexible, medium-duty

	Order no. (black)	Order no. (grey)	Conduit size			Inside Ø (mm)	Outside Ø (mm)	Stat. radius (mm)	PU (m)
			NW	Metric	Profile				
	LLPF-07A	LLPF-07S	7	10	T	6.2	10.0	15	50
	LLPF-10A	LLPF-10S	10	12	T	9.6	13.0	20	50
	LLPF-12A	LLPF-12S	12	16	T	12.0	15.8	30	50
	LLPF-17A	LLPF-17S	17	20	T	16.2	21.2	40	50
	LLPF-23A	LLPF-23S	23	25	T	22.6	28.5	45	50
	LLPF-29A	LLPF-29S	29	32	T	29.0	34.5	55	50
	LLPFG-17A	LLPFG-17S	17	20	G	15.8	21.2	40	50
	LLPFG-23A	LLPFG-23S	23	25	G	21.9	28.5	45	50
	LLPFG-29A	LLPFG-29S	29	32	G	27.6	34.5	55	50
	LLPFG-36A	LLPFG-36S	36	40	G	36.0	42.5	60	30
LLPFG-48A	LLPFG-48S	48	50	G	47.0	54.5	70	30	

For machine building, installation and construction industries
For applications with high fire safety requirements
UL 94 V0

LLPF Index

min. Ductility
max. Good pressure resistance
Very good fire safety characteristics

	Materials	Temperature range	Colour
Fatigue reversed bending	Specially modified polyamide 6	-40°C to +105°C	Black/Grey
Compression resistance			
Low temperature performance	Certification	Short-term to: +160°C	
Weathering resistance	Free from halogens, REACH compliant and RoHS compliant	Fire protection	UV Resistance
		Self-extinguishing	-

PMA stainless steel overbraiding for conduit

Order no. (black)	Conduit size		for conduit profile	fits to metal connector	braid spec (mm)	d1 Ø (mm)	d2 Ø (mm)	weight net without conduit (kg/100 m)	PU (m)
	NW	Metric							
xxxT-12x/S	12	16	T	MONK-M162	24 x 8 x 0.30	*	17.5	11.9	50
xxxT-17x/S	17	20	T	MONK-M207	32 x 7 x 0.30	*	23.0	13.8	50
xxxG-17x/S	17	20	G	-	32 x 7 x 0.30	*	23.0	13.8	50
xxxG-23x/S	23	25	G	MONK-M253	36 x 8 x 0.30	*	31.0	17.8	50
xxxG-29x/S	29	32	G	MONK-M329	36 x 10 x 0.30	*	36.0	22.2	50
xxxG-36x/S	36	40	G	MONK-M406	36 x 12 x 0.30	*	44.5	26.7	30
xxxG-48x/S	48	50	G	MONK-M508	36 x 14 x 0.30	*	58.5	30.7	30

Our customer service or your local distribution partner will be pleased to help you concerning product availability and lead time

Application: in machine and railway construction; for high mechanical loads; in areas with hot swarf and flying sparks

Characteristics: increased mechanical conduit protection; extremely high abrasion resistance

Coverage: > 90%

Suitable for PMAFLEX, PMA Smart Line; Special metal fittings (MONK)

Materials	Temperature range	Colour
Braid made with stainless steel AISI	-70°C to +1000°C	Metal
Certification	Fire performance	UV Resistance
RoHS compliant		-