

Conduit very flexible, medium-duty

PCSL



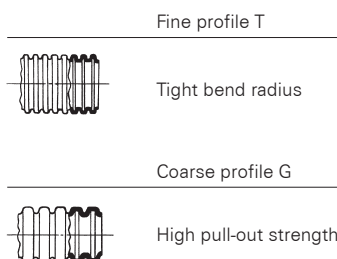
PMAFLEX

application	• dynamic installations in railway vehicles • external applications, e.g. solar systems, signalling, CCTV
material	• high-grade, specially formulated polyamide 12
characteristics	• excellent resistance to ultra violet rays and atmospheric corrosion • excellent flexibility • good mechanical strength at low temperatures and dry conditions • self-extinguishing • free from halogens and cadmium
temperature range	-50°C ... +95°C continuous, +150°C short-term
compatible with	PMAFIX, PMAFIX Pro, PMA Smart Line, PMAGRIP
colour	black, grey

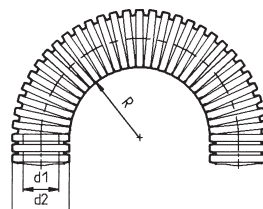


order no.		conduit size		fits to threads		dimensions in mm (nom.)				weight	packing unit
black	grey	NW	metr.	metric	PG	d1	d2	stat. R.	dyn. R.	kg/100 m	PU/m
T/PCSLT-07B	T/PCSLT-07S	07	10	M12x1.5	07	6.2	10.0	15	40	2.2	50
T/PCSLT-10B	T/PCSLT-10S	10	12	M12x1.5	09	9.6	13.0	20	50	2.8	50
T/PCSLT-12B	T/PCSLT-12S	12	16	M16x1.5	11	11.9	15.8	25	65	3.8	50
T/PCSLT-17B	T/PCSLT-17S	17	20	M20x1.5	16	16.4	21.1	30	65	5.7	50
T/PCSLG-17B	T/PCSLG-17S	17	20	M20x1.5	16	15.2	21.1	30	80	6.3	50
T/PCSLG-23B	T/PCSLG-23S	23	25	M25x1.5	21	21.7	28.4	40	100	9.9	50
T/PCSLG-29B	T/PCSLG-29S	29	32	M32x1.5	29	27.4	34.3	50	120	13.3	50
T/PCSLG-36B	T/PCSLG-36S	36	40	M40x1.5	36	35.8	42.3	60	180	16.0	30
T/PCSLG-48B	T/PCSLG-48S	48	50	M50x1.5	48	46.7	54.2	70	200	22.8	30

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

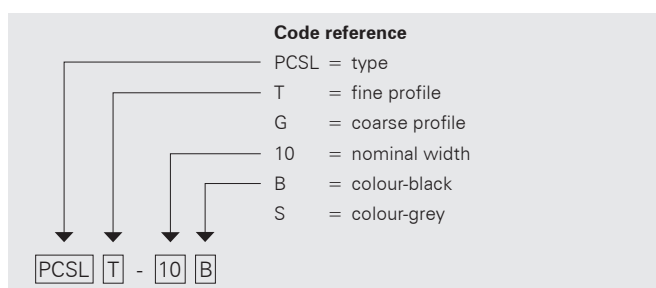


Dimensions



stat. R. = lowest recommended bending radius
for static (fixed) installation

dyn. R. = lowest recommended bending radius
for dynamic (flexible) installation



PCSL-Index

	min.					max.
ductility						
fatigue / reversed bending						
pressure resistance						
cold temperature performance						
weather resistance						

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properties		unit	value	test method according to
Mechanical properties				
Impact strength	(+23 °C)	J	> 5	PMA DO 9.21-4330
	(−18 °C)	J	> 12.2	CSA C22.2 Nr. 227.3
	(−45 °C)		class 3 (> 2 J)	IEC EN 61386
	(−15 °C)		class 4 (> 6 J)	IEC EN 61386
	(+23 °C)		class 5 (> 20 J)	IEC EN 61386
Compression strength		N	> 175 (50 x 50 mm)	PMA DO 9.21-4320
		N	> 350 (100 x 100 mm)	PMA DO 9.21-4320
Reversed bending stresses			class 1	IEC EN 61386
		cycles	> 1'000'000	PMA DO 9.21-4420
		cycles	> 4'000'000	PMA DO 9.21-4220
	(−45 °C)	cycles	> 5'000	IEC EN 61386-23
Pull-out resistance conduit/PMAFIX:				
Connector type IP68		N	> 300	PMA DO 9.21-4610
Connector type IP66		N	> 200	PMA DO 9.21-4610
			class 1	IEC EN 61386
Testing at 23°C, 50% r.h., conduit nominal width 17, unless otherwise stated				
Thermal properties				
Continuous application temperature		°C	−50 ... +95	PMA DO 9.21-4510
Upper application temperature		°C	+110 20'000 h	PMA DO 9.21-4360
Short-term		°C	+150 168 h	PMA DO 9.21-4360
Application temperature range		°C	−45 ... +105	IEC EN 61386
Temperature change characteristics:			Kat. A	PMA DO 9.21-4370
Cold-warm shock test			excellent	
Fire safety characteristics				
Free from halogens			yes	DIN 53474
Fire performance			non flame-propagating	IEC EN 61386
Glowing wire flammability index		°C	850	EN 60695-2-10
Oxygen index		%	> 29	EN ISO 4589-2
Self-extinguishing class			I3	NF F 16-101 / 102
Smoke emission class			F2	NF F 16-101 / 102
Fire protection category			Cat. II	BS 6853
Fire protection grades / toxicity			S4 / SR2 / ST2	DIN 5510-2:2009
			FED 30 <1	
			compliant LR4	
Fire risk level				UNI CEI 11170-3 Ed. 2005
Fire performance		s	30	EN ISO 11925-2
Fire performance			V2	UL 94
Fire performance			compliant	UL 224
Fire hazard level			HL2 (requirement set R23)	EN 45545-2
			compliant with M-7	
Smoke emission toxicity				Boeing BSS 7239
Fire performance NFPA 130:				
- Flammability			compliant	NFPA 130:
- Smoke density			compliant	ASTM E 162-02
- Heat and visible smoke			30.44	ASTM E 662-06
- Smoke emission toxicity		MJ/kg	compliant	ASTM E 1354-02a
				Bombardier SMP 800-C

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www.ttsafrica.com

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properties	unit	value	test method according to
Fire safety characteristics			
Fire performance		A P2 B D2 B T1	PN-K-02508 : 1999 UIC Code 564-2 Ap 9 PN-K-02511 : 2000 UIC Code 564-2 Ap 7 PN-K-02501 : 2000 UIC Code 564-2 Ap 15 PN-93/K-02505
Weathering resistance			
Weathering (UV/humidity) for black colour		excellent	
Chemical properties			
Please refer to www.pma.ch			
Environmental properties			
RoHS and REACH compliant		yes	EU Directive 2002/95/EC
Application approvals/releases			
SEV CNTK		CE (IEC 61386 low voltage directive) homologation	accredited laboratory operating company
Content of delivery			
Conduit			

In addition to the national and international standards which consider mainly material properties and general product performance, PMA applies its own internally developed standards when assessing the system suitability of cable protection products. The PMA standards are based on 30 years experience and allow a better assessment of whether a product is practically appropriate for a specific application.

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