

TECHNICAL DATA SHEET

PMA Smart Line - LLPO - Corrugated Conduit

Very flexible, light-grade

PMA



Very flexible conduit ideal for machine building, installation and vehicle construction

CE

Applications:

- In machine building and installation industries, vehicle construction

Features & Benefits:

- Very good insulating characteristics
- Good fire safety characteristics
- Self-extinguishing
- Very Good flexibility
- Good impact resistance
- Good resistance against strong acids

Materials:

- Specially modified polypropylene

Compatible with:

- PMAFIX, PMA Smart Line fittings
- PMA accessories

Temperature range:

- 20°C ... +90°C continuous, +130°C short-term

Weathering resistance:

- Good UV resistance and weathering characteristics, particularly in black

Colour:

- Black
- Grey



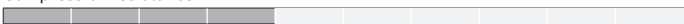


Chemical properties:

- Please refer to www.pma.ch (Technical Information / Chemical Resistance)

Environmental properties:

- Free from halogens and cadmium
- RoHS and REACH compliant

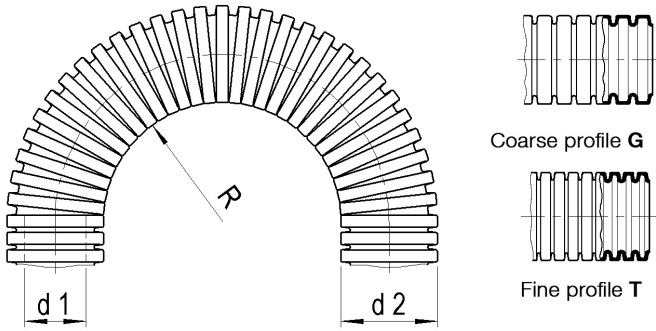
LLPO-Index

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

Product selection:

Part no.		Profile	Conduit size		rec. fitting thread size		Dimensions in mm (nom.)			Weight	Packing unit
black	grey	T/G	NW	metric	PG	metric	d1	d2	stat. R	kg/100 m	metre
LLPO-07A	LLPO-07S	T	7	10	7	M12 x 1.5	6.8	10.0	15	1.5	50
LLPO-10A	LLPO-10S	T	10	12	9	M12 x 1.5	9.8	12.8	20	2.2	50
LLPO-12A	LLPO-12S	T	12	16	11	M16 x 1.5	12.2	15.6	25	3.1	50
LLPO-17A	LLPO-17S	T	17	20	16	M20 x 1.5	16.8	21.1	35	4.8	50
LLPO-23A	LLPO-23S	T	23	25	21	M25 x 1.5	23.4	28.4	45	8.6	50
LLPO-29A	LLPO-29S	T	29	32	29	M32 x 1.5	29.1	34.5	55	11.3	50
LLPO-36A	LLPO-36S	T	36	40	36	M40 x 1.5	36.2	42.4	65	15.0	30
LLPO-48A	LLPO-48S	T	48	50	48	M50 x 1.5	47.3	54.5	80	21.0	30

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



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

Mechanical Properties:	Value:	Test parameters:	Test method:
Impact strength	> 4 J		PMA DO 9.21-4330
Density	0.90 ... 0.94 g/cm ³		DIN 53479
Compression strength	> 150 N	(50 mm)	PMA DO 9.21-4320
	> 300 N	(100 mm)	
Reverse bending resistance	> 300'000 cycles		PMA DO 9.21-4420
	> 1'000'000 cycles		PMA DO 9.21-4425
Pull-out resistance conduit - fitting series			
PMAFIX IP66	> 250 N		PMA DO 9.21-4610
PMAFIX IP68	> 200 N		PMA DO 9.21-4610
PMA Smart Line	> 150 N		PMA DO 9.21-4610
PMA Smart Line, PMAFIX Pro, PMAFIX IP66 & IP68	class 1		IEC EN 61386

Note: Testing at 23°C, 50% r.h., conduit nominal width 17, unless otherwise stated

Thermal properties:	Value:	Test parameters:	Test method:
Temperature range	-20 ... +90°C		PMA DO 9.21-4510
Short-term	+130°C	(168 h)	PMA DO 9.21-4360

Fire safety properties:	Value:	Test parameters:	Test method:
Free from halogens	yes		DIN 53474
Fire performance	V2		UL 94
Fire performance	compliant		UL 224
Fire performance	30 s		EN ISO 11925-2
Fire risk level	LR4		UNI CEI 11170-3 Ed. 2005
Flame classification	S4 / SR2 / ST2		DIN 5510
Non-flame propagating	pass		EN 50086 / IEC 61386
Smoke emission class	F1		NF F 16-101 + 102

ABB Switzerland Ltd,
PMA Cable Protection
Aathalstrasse 90
8610 Uster, Switzerland
Phone: +41 58 585 00 11
pma-info@ch.abb.com
www.pma.ch

Let's write the future.
Together. **abb.com**

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB Installation Products Inc. does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB Inc. Copyright© 2019 ABB Installation Products Inc. All rights reserved

