

Metallic Systems

SPL Conduit



Technical Characteristics

Conforms to BSI Kitemark KM-35161
 Low voltage directive
 Lloyds Register of Shipping (Type Approval)
 UL Recognised E135398

Approvals and Standards



Degree of mechanical protection Medium flexibility & fatigue life

Degree of protection IP69k - with SPL type M fitting
 IP68 - with SPL type M fitting
 IP67 - with SPL type A, B & M fittings
 IP66 - with SPL type M & C90 fittings

UV protection Very High

Finish Black, Orange ,Grey

Application Liquid tight - Indoors / Outdoors, marine, buildings

Normal operating temperature range	Application	Min Temp	Max Temp
	Static	- 20°C	+105°C
	Dynamic	- 5°C	+105 °C

For use with - Fitting range [Adaptasteel](#) - Type [A](#) ,[B](#), [E](#), [M](#) [C90](#) & [45](#)

Fire performance	Test Standard	Performance Rating
	IEC 61386-1	Pass

(See Fire testing [data](#) for fire performance overview)

Testing data [Click](#) or See pages [3](#) & [4](#)

Type of material Galvanised steel core - string packing - PVC covering

Image



In support of our policy of continuous product improvement we reserve the right to change materials and specifications without notice. Drawings, where used, are not to scale. All dimensions are in millimetres and sizes given are approximate. Where possible, technical MSDS data sheets are made available on the website. All products should be installed and used in accordance with manufacturer’s instructions provided. Warning: products may be the subject of registered designs and patents. Refer to website for terms and conditions on warranty.

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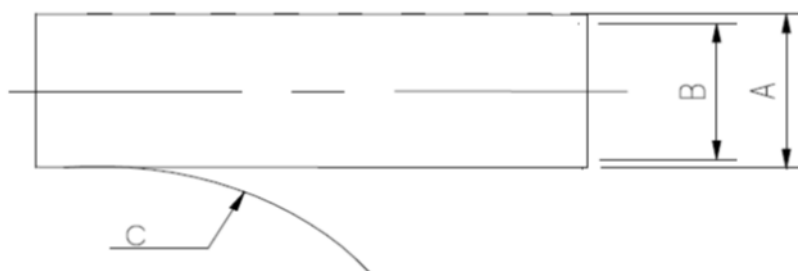
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Technical & Dimensional Data

Conduit size metric (mm)	10	12	16	20	25	32	40	50	63	75
Conduit size US trade (inches)	1/4"	5/16"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Part code	SPL*	SPL*	SPL*	SPL*	SPL*	SPL*	SPL*	SPL*	SPL*	-
Coil length (m)	25/50	10/25/50	10/25/50	10/25/50	10/25/50	10/25	10/25	10/25	10/25	-
A - Outside diameter (mm)	11.8	14.2	17.8	21.1	26.4	33.1	41.8	47.5	59.7	-
B - Inside diameter (mm)	7.0	10.0	12.5	15.9	21.0	26.7	35.4	40.4	51.6	-
C - Static bend radius (mm)	40	45	50	80	110	145	180	240	345	-
Average weight (KG/100m)	12.1	14.8	22.1	30.2	35.3	60.3	94.6	116.6	76.5	180

**For ordering code add coil length to part code - e.g SPL25/BL/25M*



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BS EN 61386 Clarification

	Fitting	Compression	Impact	Min temp	Max temp	bending	electrical	IP solids	IP water	Corrosion	Tensile	Non-flame Propogating	Suspended load
SPL	SPL(M)	4	4	2	3	4	2	6	7	-	4	1	5

Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Crush Strength @ 23°C	IEC61386-1	<25% crush >90% recovery	>1250N
Crush Strength @ 23 °C		10% Crush, Instantaneous Value	1800N
Impact Strength @ 23 °C	IEC61386-1	No Cracks <20% deformation	>20J
Impact Strength @-5 °C	IEC61386-1	No Cracks. <20% deformation	>6J
Tensile Strength	IEC61386-1	With M Type Fitting	>1000N
Tensile Strength		Ultimate pull-out of M-Type Fitting	1600N
Dynamic Bend radius @ -5 °C	IEC61386-23	5000 cycles minimum	4xOD

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Temperature	IEC61386-23	Dynamic 5000 cycles	-5°C
Maximum Temperature	IEC61386-23	Dynamic 5000 cycles	105°C
Minimum Static		Permanent Use	-20°C
Maximum Static		Permanent Use	105°C

Chemical Resistance Chart

Key:	Chemical Resistance Legend			
Suitable :	● Astm No.1	● Diesel oil	● Methyl Bromide	● Sulphur Dioxide (Gas)
Limited Suitability :	● Astm No.2	● Diethylamine	● MEK	● Sulphuric Acid (10%)
Unsuitable :	● Astm No.3	● Ethanol	● Nitric Acid (10%)	● Sulphuric Acid (70%)
Not Tested :	● Acetic Acid (10%)	● Ether	● Nitric Acid (70%)	● Toluene
	● Acetone	● Ethylamine	● Oxalic Acid	● Transformer Oil
	● Aluminium Chloride	● Ethylene Glycol	● Ozone (Gas)	● 1,1,1-Trichloroethane
	● Aniline	● Ethyl Ethanoate	● Paraffin oil	● Trichloroethylene
	● Benzaldehyde	● Freon 32	● Petrol	● Turpentine
	● Benzene	● Hydrochloric Acid (10%)	● Phenol	● Vegetable Oil
	● Carbon tetrachloride	● Hydrochloric Acid (36%)	● Sea Water	● Vinyl Acetate
	● Chlorine water	● Hydrogen Peroxide (35%)	● Silver Nitrate	● Water
	● Chloroform	● Hydrogen Peroxide (87%)	● Skydrol	● White Spirit
	● Citric Acid	● Lactic Acid	● Sodium Chloride	● Zinc Chloride
	● Copper Sulphate	● Lubricating oil	● Sodium Hydroxide (10%)	
	● Cresol	● Methanol	● Sodium Hydroxide (60%)	

The information above is given as a guide only and is based on published technical data and experience. The chemical resistance of the above products is dependant on factors such as chemical exposure, concentration of the chemical and temperature. The above chemicals are valid for a temperature of 23°C. Use of the above table is at the users own discretion and risk. Those using it must satisfy themselves that their application presents no health and safety risks. The end user should assess compatibility with their application and contact Thomas & Betts for further information.

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Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Flammability	IEC 61386-1	1Kw Burner @ 45°	Pass	Pass/Fail

Fire Performance Overview

Property	Low Fire Hazard	Enhanced Low Fire Hazard	Super Low Fire Hazard	Inherent Low Fire Hazard
				
Property	LFH	EFLH	SLFH	ILFH
Oxygen Index ISO4589	32% ≥ OI ≥ 28%	OI ≥ 32%	OI ≥ 32%	Inherent Low Fire Hazard i.e
BS6853 Smoke Density 3m ³	0.02 ≤ A _s ≤ 0.03	0.0005 ± A _s ≤ 0.02	A _s ≤ 0.005	Hazard i.e
Zero Halogen	✓	✓	✓	Type , S, SS
Zero Phosphorus	✓	✓	✓	Metallic Conduit & Fittings
Zero Sulphur	✓	✓	✓	
NFF16-102	I3F2	I2F2	I2F1	
EN45545-2	HL2	HL3	HL3	

Pre Test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	IEC61386	23 (°C)	50 (%)

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