

Non-Metallic Systems

Hi-Spec PB Type B



Technical Characteristics

Conforms to	BSI Kitemark KM-35161 Low voltage directive		
Approvals and Standards			
Degree of mechanical protection	High Tensile Strength		
Degree of protection	IP66 - As standard IP67 - As standard		
UV protection	Very High		
Fitting Characteristics		Straight fitting - Swivel external male thread	
Application	For insertion into threaded entries or knockouts using a locknut to secure		
Normal operating temperature range	Application	Min Temp	Max Temp
	Static	- 60°C	+260°C
	Dynamic	- 45°C	+250 °C
For use with - Conduit Series	Hi-Spec braided - PKTC , PKSS , PRTC & PRSS		

Fire performance

or fire performance information, please refer to relevant conduit data sheet as highlighted above.



Testing data	Click or See page 3
Type of material	Nickel Plated Brass body & back nut

Image



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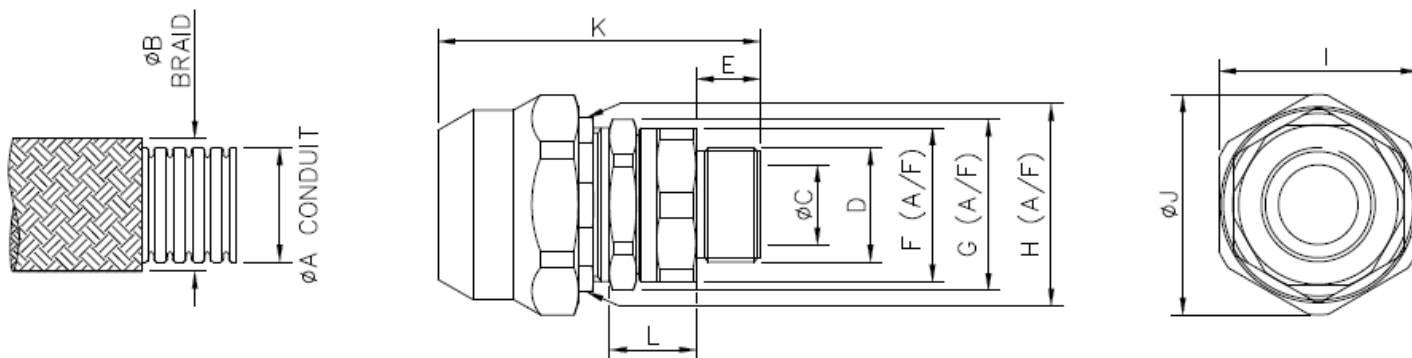
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Dimensional & Thread Data

Part No	Metric Threads	To Suit Conduit ϕA	Braid ϕB	Thread D	Nominal Dimensions (mm)								Weight (kg)	
					Bore ϕC	E	F	G	H	I	J	K		L
PBF13/M16/B		13.0	14.1	M16x1.5	9.5	12.0	22.0	22.0	24.0	28.0	30.5	50.0	13.0	0.103
PBF16/M16/B		15.8	17.2	M16x1.5	10.5	12.0	24.0	24.0	25.4	30.0	33.0	57.1	15.0	0.113
PBF21/M20/B		21.2	23.6	M20x1.5	14.5	12.2	27.0	25.4	30.0	35.0	39.0	59.1	15.0	0.147
PBC28/M25/B		28.5	30.0	M25x1.5	17.5	12.2	34.0	32.0	38.0	45.0	49.0	70.0	15.0	0.264
PBC34/M32/B		34.5	36.0	M32x1.5	24.0	17.0	42.0	38.0	45.0	50.0	55.0	75.0	15.0	0.359
PBC42/M40/B		42.4	43.5	M40x1.5	33.0	20.0	52.0	54.0	57.0	75.0	77.0	90.0	20.0	0.757
PBC54/M50/B		54.0	56.5	M50x1.5	45.0	17.0	60.0	70.0	70.0	84.0	90.0	92.0	30.0	1.100



NOTE: REMOVE DIMENSION "L" PER FITTING TO CALCULATE THE CONDUIT LENGTH FACE-TO-FACE

Metric	Standard thread conforming to EN60423 & BS3643		
Thread Size	Ext Thread Outside Diameter	Int Thread Inside Diameter	Pitch
M12	12mm	10.9mm	1.5mm
M16	16mm	14.4mm	1.5mm
M20	20mm	18.4mm	1.5mm
M25	25mm	23.4mm	1.5mm
M32	32mm	30.4mm	1.5mm
M40	40mm	38.4mm	1.5mm
M50	50mm	48.4mm	1.5mm
M63	63mm	61.4mm	1.5mm

NOTE: Dimensions are nominal

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BS EN 61386 Classification

Fitting	Compression	Impact	Min temp	Max temp	bending	electrical	IP solids	IP water	Corrosion	Tensile	Non-flame Propogating	Suspended load
PB	N/A	4	5	6	N/A	1	6	7	0	3	1	0

Mechanical Properties

Test Type	Methods / Standards	Requirements	Value
Tensile Strength	IEC61386-1	2 mins at Specified Value (<i>PKSS Conduit</i>)	Class 3
Tensile Strength		Ultimate Pullout (<i>PKSS Conduit</i>)	850N
Impact Strength @ -45°C	IEC61386-1	No visible damage	Class 4
Impact Strength @ -5°C	IEC61386-1	No visible damage	Class 5
Impact Strength @ 23°C	IEC61386-1	No visible damage	Class 5

Tensile Tests to IEC 61386 gives the minimum classification value only. Actual values will depend on the type and size of the fittings used and will always be greater than the minimum – Impact strength is the minimum classification value at the minimum temperature – actual values will depend on size and temperature. Specific values available on request.

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Dynamic Applications	IEC 61386-23	5000 Operations at MBR 2hrs	-45°C to +250°C
Static Short Term Temp		Temporary Use (3000hrs)	-60°C to +260°C
Static Long Term Temp		Permanent Use (30,000) Hours	-45°C to +260°C

Chemical Resistance Chart

Key:	Green Circle	Yellow Circle	Red Circle	Black Circle
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.

ADHERENCE TO THE CURRENT WIRING REGULATIONS BS7671 OR NEC WIRING REGULATIONS (FOR USA) IS STRONGLY ADVISED.

MINIMUM BEND RADIUS FOR FLEXING IS DEPENDANT UPON MINIMUM TEMPERATURE, BENDING FREQUENCY AND CHEMICAL ENVIRONMENT.

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