

Metallic Systems - Galvanised Steel

FLH - High Temperature - Liquid Tight



Technical Characteristics

Conforms to BSI Kitemark KM-90009
Low voltage directive

Approvals and Standards



Degree of mechanical protection High flexibility & fatigue life

Degree of protection IP67 - Standard with XQM, XQMS, XQAS, XQA, XRM, XSM, XSA & XMM
IP66 - Standard with XQM, XQMS, XQAS, XQA, XRM, XSM, XSA & XMM

UV protection High (Blue) Very High (Black)

Finish Blue, Black

Application Liquid tight - Extreme temperature environments

Normal operating temperature range	Application	Min Temp	Max Temp
	Static	- 50°C	+130°C
	Dynamic	- 45°C	+150 °C

For use with - Fitting range KF-F - [XQM](#), [XQMS](#), [XQAS](#), [XQA](#), [XRM](#), [XSM](#), [XSA](#) & KF-C - [XMM](#)

Fire performance	Test Standard	Performance Rating	(See Fire testing data for fire performance overview)
	ISO 4589-2	22%	
	IEC 60695	750°C	
	UL94	V2	
	IEC 61386-1	Pass	

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

Type of material Galvanised steel core - string packing with thermoplastic rubber covering



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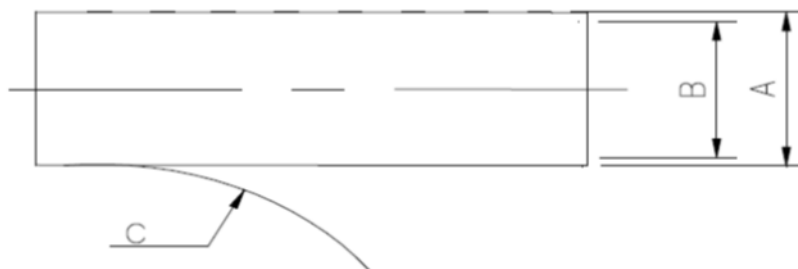
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Technical & Dimensional Data

Conduit size metric (mm)	16	20	25	32	40	50	63
Conduit size US trade (inches)	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Part code	FLH03*	FLH04*	FLH05*	FLH06*	FLH07*	FLH08* (Black Only)	FLH09* (Black Only)
Coil length (m)	10/30	10/30	10/30	10	10	10	10
A - Outside diameter (mm)	17.8	21.1	26.4	33.1	41.8	47.9	59.7
B - Inside diameter (mm)	12.5	15.9	21.0	26.7	35.4	40.4	51.6
C - Static bend radius (mm)	50	80	110	145	180	240	345
Average weight (KG/100m)	29.4	38.5	48.7	67.7	-	-	-

**For ordering code add coil length to part code - e.g FLH0410 (Black) or FLLH0410 (Blue)*



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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
FLH04	XQM	4	4	2	5	4	0	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 XQM Fitting	>1000N
Tensile Strength		Ultimate pull-out of XQM Fitting	1600N
Dynamic Bend radius @ -5 °C	IEC61386-23	5000 cycles minimum	120mm

Thermal Properties

Test Type	Methods / Standards	Requirements	Value
Minimum Temperature	IEC61386-23	Dynamic 5000 cycles	-5°C
Maximum Temperature	IEC61386-23	Dynamic 5000 cycles	150°C
Minimum Static		Permanent Use	-50°C
Maximum Static		Permanent Use	130°C

Chemical Resistance Chart

Key:

Suitable :



Limited Suitability :



Unsuitable :



Not Tested :



● Astm No.1	● Diesel oil	● Methyl Bromide	● Sulphur Dioxide (Gas)
● Astm No.2	● Diethylamine	● MEK	● Sulphuric Acid (10%)
● Astm No.3	● Ethanol	● Nitric Acid (10%)	● Sulphuric Acid (70%)
● 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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The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.

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Flammability

Test Type	Method / Standard	Requirement	Result	Unit
Oxygen Index	ISO 4589-2	% Oxygen to support combustion	22	%
Glow Wire Rating	IEC 60695	No Ignition to Extinguish with 30s	750	°C
Flammability	UL94	Vertical (V0, V2) or Horizontal (HB)	V2	
Flammability	IEC 61386-1	1Kw Burner @ 45°	Pass	Pass/Fail

Pre Test Conditions

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