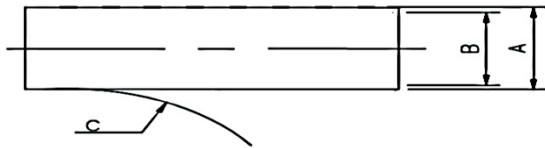


SAMHL

Anti-microbial liquid tight conduit



Anti-microbial liquid tight high temperature covered steel flexible conduit. Suitable for indoor splash zone areas or food processing equipment

Features

- Galvanized steel core string packed with Anti-microbial protection incorporated into an FDA, EC and FSA compliant DuPont Hytrel® thermoplastic jacket
- IP40 - IP69 rated
- Temperature range up to -50°C to +130°C
- High corrosion resistance
- High flexibility and fatigue life
- High chemical resistance levels
- Approvals: CE, BS EN 61386-1,-23, NSF 14159-1-2014 & NSF 169-2009

Approvals



Conformity

Low voltage directive
 NSF14159-1-2014
 NSF169-2009
 BSI Kitemark KM35161

Degree of Mechanical Protection

High corrosion resistance
 High fatigue life
 High chemical resistance
 High flexibility

Fire Performance

Test Standard	Performance Rating
IEC61386-1	Self Extinguishing

Temperature Range

Static Applications: -50°C to +130°C
 Moving Applications: -5°C to +150°C

IP Rating Appropriate Fitting

For use with: Type SAM fitting

IP40	Yes
IP65	Yes
IP68	Yes (10 bar 30mins)
IP69	Yes

Materials

Galvanised steel core with string packing (string packed up to 32mm)
 FDA, EC and FSA compliant DuPont Hytrel® thermoplastic jacket
 Anti-microbial additive incorporated into Hytrel® jacket

Part no	Conduit Size		Dimensions			Coil lengths (m)	GID Code		
	Metric (mm)	US (NPT)	Outside Diameter (A)	Inside Diameter (B)	Bend Radius (C)		10m	25m	50m
SAMHL16	16	3/8"	17.8mm	12.5mm	50mm	10 / 25 / 50	7TCA296030R0436	7TCA296030R0437	7TCA296030R0438
SAMHL20	20	1/2"	21.1mm	15.9mm	80mm	10 / 25 / 50	7TCA296030R0439	7TCA296030R0440	7TCA296030R0441
SAMHL25	25	3/4"	26.4mm	21.0mm	110mm	10 / 25 / 50	7TCA296030R0442	7TCA296030R0443	7TCA296030R0444
SAMHL32	32	1"	33.1mm	26.7mm	144mm	10 / 25 / 50	7TCA296030R0445	7TCA296030R0446	7TCA296030R0447
SAMHL40	40	1 1/4"	41.8mm	35.4mm	180mm	10 / 25	7TCA296030R0448	7TCA296030R0449	--
SAMHL50	50	1 1/2"	47.5mm	40.4mm	240mm	10 / 25	7TCA296030R0450	7TCA296030R0451	--
SAMHL63	63	2"	59.7mm	51.6mm	345mm	10 / 25	7TCA296030R0452	7TCA296030R0453	--

Part Number Example and any additional information. SAMHL20/50M. For Conduit support use part number example SSPC20

NOTE: Conduit is fully cleanable and will maintain full ingress protection under normal wet cleaning conditions with associated fittings



SAMHL

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BS EN 61386 Classification

Type	Fitting	Compression	Impact	Min Temp	Max Temp	Bending	Electrical	IP Solids	IP Water	Corrosion	Tensile	Non-Flame propagating	Suspended load
SAMHL	SPL (SAM)	4	4	2	5	4	2	6	7	-	4	1	5

Mechanical Properties

Test type	Methods / Standards	Requirements	Status
Crush Strength @ 23°C	IEC61386-1	<25% crush >90% recovery	>1250N
Crush Strength @ 23°C	IEC61386-1	10% Crush, Instantaneous value	1800N
Tensile Strength	IEC61386-1	With SAM Type fitting	>1000N
Tensile Strength		Ultimate Pullout of SAM Type fitting	>1600N
Impact Strength @ 23°C		No cracks <20% deformation	>20J
Impact Strength @ -5°C	IEC61386-1	No cracks <20% deformation	>6J
Dynamic Bend radius @ -5°C	IEC61386-23	5000 cycles minimum	6xOD

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	Requirement	Value
Dynamic Applications	IEC 61386-23	5000 Operations at MBR 2hrs	-5°C to +150°C
Static Short Term Temp		Temporary Use (3000hrs)	-50°C to +150°C
Static Long Term Temp		Permanent Use (30,000) Hours	-40°C to +135°C

Flammability

Test type	Methods / Standards	Requirement	Result	Unit
Glow Wire	BS EN 60695-2-11	Extinguish within 30s	750°C	°C
Flammability	IEC 61386-1	1Kw Burner Flame to Self Extinguish	Pass	Pass/Fail
Oxygen Index - Nylon Body	ISO 4589-2		22	%

Toxicity

Test type	Methods / Standards	Requirement	Result	Unit
Halogen Free	NFX 70-100	< 0.5%	Pass	Pass/Fail

Pre Test Conditions

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

SAMHL

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Chemical Resistance Chart				Key:
Astm No.1	Diesel oil	Methyl Bromide	Sulphur Dioxide (Gas)	Suitable
Astm No.2	Diethylamine	MEK	Sulphuric Acid (10%)	Limited Suitability
Astm No.3	Ethanol	Nitric Acid (10%)	Sulphuric Acid (70%)	Unsuitable
Acetic Acid (10%)	Ether	Nitric Acid (70%)	Toluene	Not Tested
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 dependent 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 ABB 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.

The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.

