

SSAMHL

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

- Stainless 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

IP Rating

IP Rating	Appropriate Fitting
For use with: Type SAM fitting	
IP40	Yes
IP65	Yes
IP68	Yes (10 bar 30mins)
IP69	Yes

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

Degree of Mechanical Protection

High corrosion resistance
 High fatigue life
 High chemical resistance
 High flexibility

Materials

Stainless steel core string packing (up to 32mm), larger sizes double interlocked
 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 (m)	Coil lengths (ft)	GID Code (ft)
	US (NPT)	Metric (mm)	Outside Diameter (A)	Inside Diameter (B)	Bend Radius (C)				
SSAMHL16	3/8"	16	17.8mm	12.5mm	50mm	10	7TCA296030R0509	100	7TCA296030R0520
						25	7TCA296030R0510		
SSAMHL20	1/2"	20	21.1mm	15.9mm	80mm	10	7TCA296030R0511	100	7TCA296030R0521
						25	7TCA296030R0512		
SSAMHL25	3/4"	25	26.4mm	21.0mm	110mm	10	7TCA296030R0513	100	7TCA296030R0522
						25	7TCA296030R0514		
SSAMHL32	1"	32	33.1mm	26.7mm	144mm	10	7TCA296030R0515	100	7TCA296030R0523
						25	7TCA296030R0516		
SSAMHL40	1 1/4"	40	41.8mm	35.4mm	180mm	10	7TCA296030R0517	50	7TCA296030R0524
SSAMHL50	1 1/2"	50	47.5mm	40.4mm	240mm	10	7TCA296030R0518	50	7TCA296030R0525
SSAMHL63	2"	63	59.7mm	51.6mm	345mm	10	7TCA296030R0519	50	7TCA296030R0526

Part Number Example and any additional information. SSAMHL20/25m
 Part Number Example and any additional information. SSAMHL20/100ft.
 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



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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 propgating	Suspended load
SSAMHL	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 (%)



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Chemical Resistance Chart

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%)	

Key:

■	Suitable
■	Limited Suitability
■	Unsuitable
■	Not Tested

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.