

TECHNICAL DATA SHEET

# Type LFH-SP

## Liquid resistant, enhanced low fire hazard conduit



Liquid resistant, enhanced low fire hazard covered galvanized steel flexible conduit.

### Certifications / Approvals:



### Fire performance / EMC:

Please refer to TDS000081 for the chemical resistance guide



### Applications:

- Rail & buildings where low smoke & toxicity is a primary concern



### Material / Materials / Finishes:

- Galvanised steel core
- Low fire hazard polyolefin jacket
- Colour - black only

### Degree of mechanical protection:

- Medium flexibility and fatigue life

### Temperature range:

| °C      | -65 | -45 | -25 | -5 | 0  | 5  | 60  | 90  | 105 | 120 | 150 | 250 |
|---------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|
| °F      | -85 | -49 | -13 | 23 | 32 | 41 | 140 | 194 | 221 | 248 | 302 | 482 |
| Static  |     |     |     |    |    |    |     |     |     |     |     |     |
| Dynamic |     |     |     |    |    |    |     |     |     |     |     |     |

### Ingress protection:

| Fitting | IP54 | IP65 |
|---------|------|------|
| A       | •    | –    |
| B       | •    | –    |
| M       | –    | •    |

### Conforms to:

- BS EN 61386
- NF F16-101 (I1 F1)
- London Underground 1-085
- EN45545-2 HL3 - R22 & R23
- LVD (Low Voltage Directive) 2014/35/EU
- NFPA130 / ASTM E 162, ASTM E 662 and Bombardier SMP 800-C

### Fire performance:

- Halogen free
- Very low smoke and toxicity
- Self extinguishing
- ELFH - Enhanced low fire hazard

| Test standard* | Performance rating |
|----------------|--------------------|
| EN 45545       | HL3                |
| NF F16-101     | I1 F1              |
| LUL 1-085      | ✓                  |
| BS 6853        | Class 1 A          |

\*For detailed test reports contact [cmg.conduitsystems@abb.com](mailto:cmg.conduitsystems@abb.com)

### Chemical resistance:

- High - Please refer to TDS000081

### UV Resistance:

- High - Please refer to TDS000081

### Compatible with:

- Adaptasteel Type SP - Type A ,B, C, E, F, M and C90 fittings

## Type LFH-SP Conduit – Part numbers and dimensions

| Part No. | Conduit size |             |    | Dimensions (mm)  |                 |               | Coil                 |        |
|----------|--------------|-------------|----|------------------|-----------------|---------------|----------------------|--------|
|          | IEC/EN (mm)  | US / CAN in | mm | Outside Dia. (A) | Inside Dia. (B) | Bend radi (C) | Standard lengths (m) | Colour |
| LFH-SP12 | 12           | 1/2"        | 12 | 14.0             | 10.3            | 30            | 25, 50               | ●      |
| LFH-SP16 | 16           | 5/8"        | 16 | 17.0             | 13.0            | 35            | 10, 25, 50           | ●      |
| LFH-SP20 | 20           | 2/3"        | 20 | 21.5             | 16.9            | 45            | 10, 25, 50           | ●      |
| LFH-SP25 | 25           | 1"          | 25 | 26.0             | 21.4            | 55            | 10, 25, 50           | ●      |
| LFH-SP32 | 32           | 1 1/3"      | 32 | 34.0             | 28.1            | 60            | 10, 25               | ●      |
| LFH-SP40 | 40           | 1 1/2"      | 40 | 44.5             | 37.7            | 80            | 10, 25               | ●      |
| LFH-SP50 | 50           | 2"          | 50 | 55.0             | 48.4            | 90            | 10, 25               | ●      |
| LFH-SP63 | 63           | 2 1/2"      | 63 | 64.5             | 57.5            | 115           | 10                   | ●      |
| LFH-SP75 | 75           | 3"          | 75 | 79.0             | 70.0            | 150           | 10                   | ●      |

Part number example: To order quote part number, colour & conduit coil length, e.g. LFH-SP16/BL/50m.

### IEC/EN 61386 Classification

| Type                 | Fitting | Compression | Impact | Min. Temp | Max. Temp | Bending  | Electrical |
|----------------------|---------|-------------|--------|-----------|-----------|----------|------------|
| LFH-SP               | SP (M)  | 4           | 4      | 2         | 3         | 4        | 2          |
| Classification level |         | >1250N      | >6J    | -5°C      | 105°C     | Flexible | Insulator  |

| Type                 | Fitting | IP Solids | IP Water | Corrosion | Tensile propagating | Non-flame | Suspended load |
|----------------------|---------|-----------|----------|-----------|---------------------|-----------|----------------|
| LFH-SP               | SP (M)  | 6         | 5        | –         | 4                   | 1         | 5              |
| Classification level |         | IP(6)X    | IPX(5)   | –         | <1000N              | n/a       | >850N          |

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.

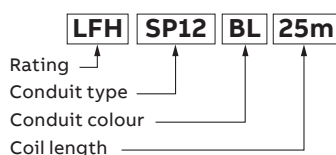
### Mechanical properties

| Standard       | Test type                       | Requirement                | Status |
|----------------|---------------------------------|----------------------------|--------|
| IEC/EN 61386-1 | Maximum compression @ 23°C      | 10% crush                  | 1800N  |
| IEC/EN 61386-1 | Maximum tensile strength @ 23°C | –                          | 1450N  |
| IEC/EN 61386-1 | Maximum impact strength @ 23°C  | No cracks <20% deformation | >20J   |

### Thermal properties

| Standard        | Test type | Requirement                               | Min. temperature | Long term max. temperature |
|-----------------|-----------|-------------------------------------------|------------------|----------------------------|
| IEC/EN 61386-23 | Static    | Retention of 50% of mechanical properties | -25°C            | +90°C                      |
| IEC/EN 61386-23 | Dynamic   | Dynamic 5000 cycles                       | -5°C             | +105°C                     |

### Part number information



Type LFH-SP conduit - Low fire hazard SP Conduit for a 12mm Metric thread, in black and a 25m coil length.