

## Flexible RF cable

**SPUMA\_400-FR-75**    **Item: 85022187**

### Description

Spuma: Flexible, low-loss RF cables (LMR\* alternatives)

75 Ohm, 3 GHz, 85°C, ø10.25 mm, LSFH jacket, Flame retardant, Railway qualified



### Technical Data

#### Construction

|                  | Material                     | Detail                  | Diameter         |
|------------------|------------------------------|-------------------------|------------------|
| Centre conductor | Copper                       | Wire                    | 1.65 mm          |
| Dielectric       | SPE (Foamed Polyethylene)    |                         | 7.24 mm          |
| Outer conductor  | Aluminum / PES               | longitudinal Foil, 100% | 7.4 mm           |
| Outer conductor  | Copper, Tin plated           | Braid, 78 %             | 8.15 mm          |
| Jacket           | LSFH (modified polyethylene) | RAL 9005 - bk           | 10.25 mm +/- 0.1 |

Print: HUBER+SUHNER SPUMA 400-FR-75 75 Ohm (production order number)

#### Electrical Data

|                                |  |
|--------------------------------|--|
| Impedance                      | 75 Ω +/- 3                             |
| Operating Frequency            | 3 GHz                                  |
| Capacitance                    | 53 pF/m                                |
| Velocity of signal propagation | 84 %                                   |
| Signal delay                   | 3.9 ns/m                               |
| Screening effectiveness        | ≥ 90 dB (up to 3 GHz)                  |
| Operating voltage              | ≤ 1.6 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 3 kV <sub>rms</sub> (50 Hz/1 min)      |

#### Mechanical Data

|                     |        |             |
|---------------------|--------|-------------|
| Weight              |        | 12 kg/100 m |
| Min. bending radius | static | 25 mm       |
|                     |        | 100 mm      |

#### Environmental Data

|  |                              |
|--|------------------------------|
| Temperature range                                    | -40 °C ... +85 °C            |
| Installation temperature                             | -20 °C... +60 °C             |
| Uv resistance test                                   | ISO 4892-2A                  |
| Flame propagation test                               | EN 60332-1-2, IEC 60332-3-25 |
| Smoke density test                                   | EN 61034-2                   |
| Halogen test   | IEC 60754                    |
| Halogen free   | Yes                          |
| 2011/65/EU (RoHS - including 2015/863 and 2017/2102) | compliant                    |
| 1907/2006/EC (REACH)                                 | compliant                    |
| 2000/53/EC (ELV)                                     | compliant                    |
| 2012/19/EU (WEEE)                                    | no special marking needed    |

### Additional Information

EN 45545-2 compliant hazard level for indoor cables: HL3 NFPA-130 compliant An operating temperature of -55°C is feasible for static applications. \*) LMR is a registered trademark of Times Microwave Inc.

#### Remarks

(For details refer to the HUBER+SUHNER RF CABLES GENERAL CATALOGUE or contact your nearest HUBER+SUHNER partner)

#### Suitable Connectors

|             |                   |
|-------------|-------------------|
| Cable group | X33 7 mm / 75 Ohm |
|-------------|-------------------|

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**Matrix**      typical Attenuation [ formula:  $(a \cdot f^{0.5} + b \cdot f)$  ] and maximum Power CW [ formula:  $(p/f^{0.5})$  ]

Coefficients:

a = 0.119

b = 0.015

f<sub>max</sub> = 3

P at 1GHz = 400

| Frequency<br>(GHz) | Nom. attenuation<br>(dB / m)<br>sea level 25° C<br>ambient<br>temperature | Nom. attenuation<br>(dB / ft)<br>sea level 25° C<br>ambient<br>temperature | Max. CW power<br>(W)<br>sea level 40° C<br>ambient<br>temperature |
|--------------------|---|--|---|
| 0,15               | 0,05  | 0,015  | 1033  |
| 0,3                | 0,07  | 0,021  | 730   |
| 0,45               | 0,09  | 0,026  | 596   |
| 0,6                | 0,1   | 0,031  | 516   |
| 0,75               | 0,11  | 0,035  | 462   |
| 0,9                | 0,13  | 0,039  | 422   |
| 1,05               | 0,14  | 0,042  | 390   |
| 1,2                | 0,15  | 0,045  | 365   |
| 1,35               | 0,16  | 0,048  | 344   |
| 1,5                | 0,17  | 0,051  | 327   |
| 1,65               | 0,18  | 0,054  | 311   |
| 1,8                | 0,19  | 0,057  | 298   |
| 1,95               | 0,2   | 0,060  | 286   |
| 2,1                | 0,2   | 0,062  | 276   |
| 2,25               | 0,21  | 0,065  | 267   |
| 2,4                | 0,22  | 0,067  | 258   |
| 2,55               | 0,23  | 0,070  | 250   |
| 2,7                | 0,24  | 0,072  | 243   |
| 2,85               | 0,24  | 0,074  | 237   |
| 3,0                | 0,25  | 0,077  | 231   |

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