

### Product type designation

### SFP991-1LH+

SCALANCE X accessory, Plug-in transceiver SFP991-1SFP991-1LH+ 1x 100 Mbit/s LC port, optical; single-mode optical up to max. 70 km



### Interfaces

Number of electrical/optical connections / for network components or terminal equipment / maximum	1
Number of optical interfaces / for network components or terminal equipment / maximum	1
Number of 100 Mbit/s LC ports	1
Design of the optical interface / for network components or terminal equipment	LC
Wavelength / of the optical interface	1550 nm; Single-mode
Connectable optical power relative to 1 mW	
<ul style="list-style-type: none"> <li>• of the transmitter output / minimum</li> <li>• of the transmitter output / maximum</li> <li>• of the receiver input / maximum</li> </ul>	<p>-5 dB</p> <p>0 dB</p> <p>-10 dB</p>
Optical sensitivity relating to 1 mW / of the receiver input / minimum	-34 dB
Damping ratio / of the FOC transmission link / minimum necessary	3 dB
Range / at the optical interface / depending on the optical fiber used	12 ... 70 km

## Ambient conditions

Ambient temperature	
<ul style="list-style-type: none"><li>during operation</li><li>during storage</li><li>during transport</li><li>Note</li></ul>	<p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p> <p>A maximum operating temperature of +85 °C is permissible for a duration of 16 hours</p>
Relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
Protection class IP	IP20

## Design, dimensions and weights

Design	SFP Module
Width	14 mm
Height	9 mm
Depth	57 mm
Net weight	0.01 kg
Mounting type	latched

## Standards, specifications, approvals

Standard	
<ul style="list-style-type: none"><li>for FM</li><li>for hazardous zone</li><li>for safety / from CSA and UL</li><li>for emitted interference</li><li>for interference immunity</li></ul>	<p>FM3611: Class 1, Divison 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4</p> <p>EN 60079-0: 2006, EN60079-15: 2005, II 3 G Ex nA II T4, KEMA 07 ATEX 0145 X</p> <p>UL 60950-1, CSA C22.2 No. 60950-1-03</p> <p>EN 61000-6-4:2007 (Class A)</p> <p>EN 61000-6-2:2005</p>
Certificate of suitability	EN 61000-6-2:2005, EN 61000-6-4:2007
<ul style="list-style-type: none"><li>CE marking</li><li>C-Tick</li><li>KC approval</li></ul>	<p>Yes</p> <p>Yes</p> <p>No</p>
Marine classification association	
<ul style="list-style-type: none"><li>Bureau Veritas (BV)</li></ul>	Yes
MTBF	420 y

## Further information / Internet-Links

Internet-Link	
<ul style="list-style-type: none"><li>to website: Selector SIMATIC NET SELECTION TOOL</li><li>to website: Industrial communication</li><li>to website: Industry Mall</li><li>to website: Information and Download Center</li><li>to website: Image database</li><li>to website: CAx Download Manager</li></ul>	<p><a href="http://www.siemens.com/snst">http://www.siemens.com/snst</a></p> <p><a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a></p> <p><a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a></p> <p><a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a></p> <p><a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a></p> <p><a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a></p>

- to website: Industry Online Support

<https://support.industry.siemens.com>

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