SIEMENS

Data sheet 6GK5991-1AE00-8AA0

product type designation	**SFP991-1LH+**
	SCALANCE X accessory, Plug-in transceiver SFP991-1LH+ 1x 100 Mbps LC port, optical; single-mode optical up to max. 70 km.



product brand name	SCALANCE
Technical Product Detail Page	https://i.siemens.com/1P6GK5991-1AE00-8AA0
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	
● of the transmitter output / minimum	-5 dB
● of the transmitter output / maximum	0 dB
● of the receiver input / maximum	-10 dB
optical sensitivity relating to 1 mW / of the receiver input / minimum	-34 dB
attenuation factor / of the FOC transmission link / minimum necessary	3 dB
range / at the optical interface / depending on the optical fiber used	12 ... 70 km
transmission method / for connection type 1	100BASE-LX
ambient conditions	
ambient temperature	
● during operation	-40 ... +85 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
● note	A maximum operating temperature of +85 °C is permissible for a duration of 16 hours
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
fastening method	latched
standards, specifications, approvals	

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standard	
● for FM	FM3611: Class 1, Divison 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4
● for hazardous zone	EN 60079-0: 2006, EN60079-15: 2005, II 3 G Ex nA II T4, KEMA 07 ATEX 0145 X
● for safety / from CSA and UL	UL 62368-1 and CAN/CSA C22.2 No. 62368-1:19
● for emitted interference	EN 61000-6-4:2007 (Class A)
● for interference immunity	EN 61000-6-2:2005
certificate of suitability	EN 61000-6-2:2005, EN 61000-6-4:2007
● CE marking	Yes
● C-Tick	Yes
● KC approval	No
● CCC / for hazardous zone according to GB standard	Yes; GB3836.1, GB3836.8
● CCC / for hazardous zone according to GB standard / as marking	Ex nA IIC T4 Gc
Marine classification association	
● French marine classification society (BV)	Yes
MTBF	420 a
product function / is supported / identification link	Yes; acc. to IEC 61406-1:2022
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
● total	15.09 kg
● during manufacturing	2.2 kg
● during operation	12.88 kg
● after end of life	0.01 kg
further information / internet links	
internet link	
● to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
● to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
● to website: Industrial communication	https://www.siemens.com/simatic-net
● to web page: SiePortal	https://sieportal.siemens.com/
● to website: Image database	https://www.automation.siemens.com/bilddb
● to website: CAx-Download-Manager	https://www.siemens.com/cax
● to website: Industry Online Support	https://support.industry.siemens.com
security information	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit www.siemens.com/cybersecurity-industry. Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under https://www.siemens.com/cert. (V4.7)

Approvals / Certificates

General Product Approval

Declaration of Conformity | China RoHS

General Product Approval	For use in hazardous locations

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Manufacturer Declaration

China RoHS

For use in hazardous locations		Maritime application			
FM	CCC-Ex				

Maritime application			Environment
NK / Nippon Kaiji Kyokai			

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