

product type designation

product description

MM991-2FM (BFOC)

XR-300 media module

SCALANCE X accessory; Media module MM991-2FM; 2x 100 Mbit/s BFOC ports, optical; multimode optical up to max. 5 km.



product brand name

SCALANCE

Technical Product Detail Page

<https://i.siemens.com/1P6GK5991-2AB01-8AA0>

interfaces

number of electrical/optical connections / for network components or terminal equipment / maximum	2
number of optical interfaces / for network components or terminal equipment / maximum	2
number of 100 Mbit/s ST(BFOC) ports / for multimode / integrated	2
design of the optical interface / for network components or terminal equipment	ST/BFOC
wavelength / of the optical interface	1310 nm; Multi-mode
connectable optical power relative to 1 mW	
• of the transmitter output / minimum	-19 dB
• of the transmitter output / maximum	-14 dB
• of the receiver input / maximum	-3 dB
optical sensitivity relating to 1 mW / of the receiver input / minimum	-32 dB
attenuation factor / of the FOC transmission link / minimum necessary	0 dB
range / at the optical interface / depending on the optical fiber used	0 ... 5 km

ambient conditions

ambient temperature	
• during operation	-40 ... +70 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
protection class IP	IP20

design, dimensions and weights

design	Media module
width	60 mm
height	22 mm
depth	100 mm
net weight	0.08 kg
fastening method	latched
• installation in media module slot	Yes

standards, specifications, approvals

standard	
• for FM • for hazardous zone • for safety / from CSA and UL • for hazardous zone / from CSA and UL • for emitted interference • for interference immunity	FM3611: Class 1, Division 2, Group A, B, C, D / T4, Class 1, Zone 2, Group IIC, T4 EN 60079-0: 2006, EN60079-15: 2005, II 3(2) G Ex nA [op is] IIC T4 DEKRA 11 ATEX 0060 X UL 60950-1, CSA C22.2 No. 60950-1 UL 1604 and UL 2279-15 (Hazardous Location), CSA C22.2 No. 213-M1987, Class 1 / Division 2 / Group A, B, C, D / T4, Class 1 / Zone 2 / Group IIC / T4 EN 61000-6-4:2007 (Class A) EN 61000-6-2:2005
certificate of suitability	EN 61000-6-2:2005, EN 61000-6-4:2007
• CE marking • C-Tick • KC approval • CCC / for hazardous zone according to GB standard • CCC / for hazardous zone according to GB standard / as marking	Yes Yes Yes Yes; GB3836.1, GB3836.8 Ex nA IIC T4 Gc
Marine classification association	
• French marine classification society (BV)	Yes
MTBF	135 a
standards, specifications, approvals / Environmental Product Declaration	
Environmental Product Declaration	Yes
global warming potential [CO2 eq]	
• total • during manufacturing • during operation • after end of life	71.77 kg 10.1 kg 61.57 kg 0.1 kg
further information / internet links	
internet link	
• to website: Selection guide for cables and connectors • to web page: selection aid TIA Selection Tool • to website: Industrial communication • to web page: SiePortal • to website: Image database • to website: CAX-Download-Manager • to website: Industry Online Support	https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://www.siemens.com/simatic-net https://sieportal.siemens.com/ https://www.automation.siemens.com/bilddb https://www.siemens.com/cax 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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[China RoHS](#)



[FM](#)

For use in hazardous locations	Maritime application
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[CCC-Ex](#)



[NK / Nippon Kaiji Kyokai](#)

Maritime application	Environment
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