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Data sheet	**6GK5778-1GY00-0AB0**

product type designation	**W778-1 M12 (USA)**

IWLAN access point, SCALANCE W778-1 M12, 1 radio, 2 N-CON antenna port, iFeatures support via KEY-PLUG, IEEE 802.11a/b/g/h/n, 2.4/5 GHz, gross data rate 300 Mbps, 2x M12 max. 100 Mbps, PoE integrated 2-port switch, redundant 24 V DC, M12 A-coded IP65, -30... 65°C, plug slot WPA2/802.11i/e, observe national approvals! CERT ID: MSN65-W1-M12-E2 FCC ID: LYHMSN65V1 scope of delivery: manuals on CD-ROM, German/English; M12 sealing caps, for operation in the USA.

transfer rate	
transfer rate	
● with WLAN / maximum	300 Mbit/s
● for Industrial Ethernet	10, 100 Mbit/s
transfer rate / for Industrial Ethernet	
● minimum	10 Mbit/s
● maximum	100 Mbit/s

interfaces	
number of electrical connections	
● for network components or terminal equipment	2
● for power supply	1
● for redundant voltage supply	1
type of electrical connection	
● for network components or terminal equipment	M12 interface (4-pole, D-coded), PoE
● for power supply	M12 interface (4-pole, A-coded)
design of the removable storage	
● C-PLUG	Yes
● KEY-PLUG	Yes

memory	
design of the removable storage	
● C-PLUG	Yes
● KEY-PLUG	Yes

interfaces / wireless	
number of radio cards / permanently installed	1
transmission mode / for multiple input multiple output (MIMO)	2x2
number of spatial streams	2
number of electrical connections / for external antenna(s)	2
type of electrical connection / for external antenna(s)	N-Connect (socket)
product feature / external antenna can be mounted directly on device	Yes

supply voltage, current consumption, power loss	
type of voltage / of the supply voltage	DC
supply voltage	
● from Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af	48 V
consumed current	
● at DC / at 24 V / typical	0.25 A
● with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	0.125 A
power loss [W]	

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● at DC / at 24 V / typical	6 W
● with Power-over-Ethernet according to IEEE802.3at for type 1 and IEEE802.3af / typical	6 W
supply voltage / 1	
● from M12 Power Connector (A-coded) for redundant power supply	16.8 V
supply voltage / 2	
● from M12 Power Connector (A-coded) for redundant power supply	31.2 V

ambient conditions

ambient temperature	
● during operation	-20 ... +60 °C
● during storage	-40 ... +85 °C
● during transport	-40 ... +85 °C
relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
ambient condition / for operation	When used under hazardous conditions (Zone 2), the SCALANCE W778-1 M12 or W738-1 M12 product must be installed in an housing with at least IP54 degree of protection according to EN 60529 within the scope of EN 50021.
protection class IP	IP65

design, dimensions and weights

width	140 mm
height	160 mm
depth	45 mm
width / of the enclosure / without antenna	140 mm
height / of the enclosure / without antenna	149 mm
depth / of the enclosure / without antenna	45 mm
net weight	0.95 kg
fastening method	35 mm DIN rail mounting only per accessories
● S7-300 rail mounting	No
● S7-1500 rail mounting	No
● 35 mm top hat DIN rail mounting	Yes
● wall mounting	Yes

radio frequencies

operating frequency	
● for WLAN in 2.4 GHz frequency band	2.41 ... 2.48 GHz; depending on the country approvals
● for WLAN in 5 GHz frequency band	4.9 ... 5.8 GHz; depending on the country approvals

product features, product functions, product components / general

product function / Access Point Mode	Yes
product function / client Mode	Yes
number of SSIDs	4
product function	
● iPCF Access Point	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures'
● iPCF client	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
● iPCF-MC Access Point	No
● iPCF-MC client	Yes; Only in combination with 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iPCF-capable radio modules	1
product function / iREF	Yes; Only in combination with the 'KEY-PLUG W780 iFeatures' or 'KEY-PLUG W740 iFeatures'
number of iREF-capable radio modules	1
product function / iPRP	Yes; In combination with the 'KEY-PLUG W780 iFeatures' only

product functions / management, configuration, engineering

number of manageable IP addresses / in client	8
product function	
● CLI	Yes
● web-based management	Yes
● MIB support	Yes
● TRAPs via email	Yes
● configuration with STEP 7	Yes
● configuration with STEP 7 in the TIA Portal	Yes
● operation with IWLAN controller	No

● operation with Enterasys WLAN controller	No
● forced roaming on IP down with IWLAN	Yes
● forced roaming on link down with IWLAN	Yes
● WDS	Yes
protocol / is supported	
● Address Resolution Protocol (ARP)	Yes
● ICMP	Yes
● Telnet	Yes
● HTTP	Yes
● HTTPS	Yes
● TFTP	Yes
● DCP	Yes
● LLDP	Yes
identification & maintenance function	
● I&M0 - device-specific information	Yes
● I&M1 - higher level designation/location designation	Yes

product functions / diagnostics

product function	
● PROFINET IO diagnosis	Yes
● link check	No
● connection monitoring IP-Alive	No
● localization via Aeroscout	Yes
● SysLog	Yes
protocol / is supported	
● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v3	Yes

product functions / VLAN

product function	
● function VLAN with IWLAN	Yes

product functions / DHCP

product function	
● DHCP client	Yes
● DHCP server	Yes
● DHCP Option 82	Yes

product functions / redundancy

protocol / is supported	
● STP/RSTP	Yes
● MSTP	Yes
● RSTP	Yes

product functions / security

product function	
● ACL - MAC-based	Yes
● management security, ACL-IP based	Yes
● IEEE 802.1x (radius)	Yes
● NAT/NAPT	Yes
● access protection according to IEEE802.11i	Yes
● WPA/WPA2	Yes
● TKIP/AES	Yes
protocol / is supported	
● SSH	Yes
● RADIUS	Yes

product functions / time

protocol / is supported	
● NTP	Yes
● SNTP	Yes
● SIMATIC time synchronization (SIMATIC Time)	Yes

standards, specifications, approvals

standard	
● for FM	FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4. FM16US0205X

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certificate of suitability	
● EC Declaration of Conformity	Yes
● CE marking	Yes
● C-Tick	Yes
● E1 approval	Yes
● railway application in accordance with EN 50155	No
● railway application in accordance with EN 50121-4	No
● NEMA TS2	No
● IEC 61375	No
● IEC 61850-3	No
● NEMA4X	No
● Power-over-Ethernet according IEEE802.3at for type 1 and IEEE802.3af	Yes
● Power-over-Ethernet according to IEEE802.3at for type 2	Yes
standard for wireless communication	
● IEEE 802.11a	Yes
● IEEE 802.11b	Yes
● IEEE 802.11e	Yes
● IEEE 802.11g	Yes
● IEEE 802.11h	Yes
● IEEE 802.11i	Yes
● IEEE 802.11n	Yes
wireless approval	You will find the current list of countries at: www.siemens.de/funkzulassungen

standards, specifications, approvals / marine classification

Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	Yes
● French marine classification society (BV)	Yes
● DNV GL	Yes
● Korean Register of Shipping (KRS)	Yes
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (NK)	Yes
● Polski Rejestr Statkow (PRS)	Yes
● Royal Institution of Naval Architects (RINA)	Yes

standards, specifications, approvals / hazardous environments

standard / for hazardous zone	EN 60079-15:2005, EN 60079-0:2006, II 3 G Ex nA II T4 KEMA 07 ATEX 0145X
● from CSA and UL	ANSI/ISA 12.12.01-2013, CAN/CSA C22.2 No.213-M1987, Cl. 1, div. 2, GP. A, B, C, D, T4 / Cl. 1, Zone 2, GP IIC E240480
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
● as marking	Ex nA IIC T4 Gc

further information / internet links

internet link	
● to website: TIA Selection Tool	http://www.siemens.com/tia-selection-tool
● to web page: selection aid TIA Selection Tool	http://www.siemens.com/tia-selection-tool
● to the website: IWLAN	http://www.siemens.com/iwlan
● to website: Industry Mall	https://mall.industry.siemens.com
● to website: Information and Download Center	http://www.siemens.com/industry/infocenter
● to website: Image database	http://automation.siemens.com/bilddb
● to website: CAx-Download-Manager	http://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 security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action(e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit http://www.siemens.com/industrialsecurity. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit http://support.automation.siemens.com. (V3.4)

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