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Data sheet 6GK5416-4GS00-2AM2



SCALANCE XM416-4C; managed modular IE switch; 16x 10/100/1000 Mbit/s RJ45; 4x 100/1000 Mbit/s SFP; contains 4 combo ports; in total 16 ports can be used; expandable to 24 ports electrical or optical; assembly: DIN rail/S7 mounting rail, PROFINET IO device; redundancy functions; office features (RSTP, VLAN, IGMP,..); C-plug in scope of delivery; Layer 3 with key plug available

product type designation	**SCALANCE XM416-4C**
transfer rate	
transfer rate	10 Mbit/s, 100 Mbit/s, 1000 Mbit/s
number of ports / maximum	24
interfaces / for communication / maximum configuration for modular devices	
number of electrical ports / maximum	24
number of electrical ports / with PoE / maximum	8
number of optical ports / maximum	12
interfaces / for communication / integrated	
number of electrical connections	
● for network components or terminal equipment	16; RJ45 with securing collar
number of 10/100/1000 Mbit/s RJ45 ports / integrated	
● with securing collar	16
number of electrical connections	
● for SFP	4; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver
number of combo ports / with RJ45 interface for optical plug-in transceiver	4; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver
number of connectable extender modules	1
interfaces / for communication / plug-in	
number of 10/100/1000 Mbit/s RJ45 ports	
● with securing collar	8
● with securing collar / with PoE	8
number of 100 Mbit/s LC ports	
● for multimode	12
● for single mode (LD)	12
● for single mode (LH+)	12
● for single mode (ELH200)	12
number of 1000 Mbit/s LC ports	
● for multimode	12
● for single mode (LD)	12
● for single mode (LH)	12
● for single mode (LH+)	12
● for single mode (ELH)	12
number of electrical connections	
● for SFP	12; 100 Mbit/s or 1000 Mbit/s SFP plug-in transceiver
interfaces / other	
number of electrical connections	

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● for operator console	1
● for management purposes	1
● for signaling contact	1
● for power supply	1
type of electrical connection	
● for operator console	RJ11
● for management purposes	RJ45
● for signaling contact	2-pole terminal block
● for power supply	4-pole terminal block
number of extender expansion interfaces	2
design of the removable storage	
● C-PLUG/KEY-PLUG	Yes
product feature / hot-swappable interface modules	Yes
signal inputs/outputs	
operating voltage / of the signaling contacts	
● at DC / rated value	24 V
operational current / of the signaling contacts	
● at DC / maximum	0.1 A
supply voltage, current consumption, power loss	
product component / connection for redundant voltage supply	Yes
type of voltage supply / redundant power supply unit	No
supplied active power / of PSE / with PoE	
● per port / maximum	30 W
● total / maximum	180 W
type of voltage / 1 / of the supply voltage	DC
● supply voltage / 1 / rated value	24 V
● power loss [W] / 1 / rated value	48 W
● supply voltage / 1 / rated value	19.2 ... 28.8 V
● consumed current / 1 / maximum	2 A
● type of electrical connection / 1 / for power supply	4-pole terminal block
● product component / 1 / fusing at power supply input	Yes
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	modular
width	140 mm
height	147 mm
depth	125 mm
net weight	1.25 kg
fastening method	
● 19-inch installation	No
● 35 mm top hat DIN rail mounting	Yes
● wall mounting	No
● S7-300 rail mounting	Yes
● S7-1500 rail mounting	Yes
product features, product functions, product components / general	
cascading in cases of star topology	any (depending only on signal propagation time)
product functions / management, configuration, engineering	
product function	
● CLI	Yes

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● web-based management	Yes
● MIB support	Yes
● TRAPs via email	Yes
● configuration with STEP 7	Yes
● RMON	Yes
● port mirroring	Yes
● multiport mirroring	Yes
● CoS	Yes
● PROFINET IO diagnosis	Yes
PROFINET conformity class	B
product function / switch-managed	Yes
telegram length / for Ethernet / maximum	9216 byte
protocol / is supported	
● Telnet	Yes
● HTTP	Yes
● HTTPS	Yes
● TFTP	Yes
● FTP	Yes
● BOOTP	Yes
● GMRP	Yes
● DCP	Yes
● LLDP	Yes
● SNMP v1	Yes
● SNMP v2	Yes
● SNMP v3	Yes
● IGMP (snooping/querier)	Yes
identification & maintenance function	
● I&M0 - device-specific information	Yes
● I&M1 – higher level designation/location designation	Yes
product functions / diagnostics	
product function	
● port diagnostics	Yes
● statistics Packet Size	Yes
● statistics packet type	Yes
● error statistics	Yes
● SysLog	Yes
product functions / VLAN	
product function	
● VLAN - port based	Yes
● VLAN - protocol-based	Yes
● VLAN - IP-based	Yes
● VLAN dynamic	Yes
number of VLANs / maximum	255
number of VLANs - dynamic / maximum	255
protocol / is supported / GVRP	Yes
product functions / DHCP	
product function	
● DHCP client	Yes
● DHCP Option 82	Yes
● DHCP Option 66	Yes
● DHCP Option 67	Yes
product functions / routing	
service / routing / note	IP routing in combination with KEY-PLUG XM-400
product function	
● static IP routing	Yes
● static IP routing IPv6	Yes
● dynamic IP routing	Yes
● dynamic IP routing IPv6	Yes

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protocol / is supported	
● RIPv2	Yes
● RIPnG for IPv6	Yes
● OSPFv2	Yes
● OSPFv3 for IPv6	Yes
● VRRP	Yes
● VRRP for IPv6	Yes
product functions / redundancy	
product function	
● ring redundancy	Yes
● High Speed Redundancy Protocol (HRP)	Yes
● high speed redundancy protocol (HRP) with redundancy manager	Yes
● high speed redundancy protocol (HRP) with standby redundancy	Yes
protocol / is supported / Media Redundancy Protocol (MRP)	Yes
product function	
● media redundancy protocol (MRP) with redundancy manager	Yes
● Media Redundancy Protocol Interconnection (MRP-I)	Yes
● redundancy procedure STP	Yes
● redundancy procedure RSTP	Yes
● redundancy procedure RSTP+	Yes
● redundancy procedure MSTP	Yes
● passive listening	Yes
protocol / is supported	
● LACP	Yes
product functions / security	
product function	
● ACL - MAC-based	Yes
● ACL - port/MAC-based	Yes
● IEEE 802.1x (radius)	Yes
● broadcast/multicast/unicast limiter	Yes
● broadcast blocking	Yes
protocol / is supported	
● SSH	Yes
product functions / time	
product function	
● SICLOCK support	Yes
protocol / is supported	
● NTP	Yes
● SNTP	Yes
standards, specifications, approvals	
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: 2009, EN60079-15: 2010, II 3 G Ex nA IIC T4 Gc, KEMA 07 ATEX 0145 X, IECEx DEK 14.0025X
● for safety / from CSA and UL	UL 508, UL 60950-1, CSA C22.2 Nr. 60950-1-03
● for hazardous zone / from CSA and UL	ISA 12.12.01-2012 (Hazardous Location), Class 1 / Division 2 / Group A, B, C, D / T4, Class 1 / Zone 2 / Group IIC / T4
● for emitted interference	EN 61000-6-4 (Class A)
● for interference immunity	EN 61000-6-2
MTBF	22 y
standards, specifications, approvals / CE	
certificate of suitability / CE marking	Yes
standards, specifications, approvals / other	

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certificate of suitability	EN 61000-6-2, EN 61000-6-4
● C-Tick	Yes
● KC approval	Yes
standards, specifications, approvals / marine classification	
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	Yes
● French marine classification society (BV)	Yes
● Det Norske Veritas (DNV)	No
● Germanische Lloyd (GL)	No
● DNV GL	Yes
● Lloyds Register of Shipping (LRS)	Yes
● Nippon Kaiji Kyokai (NK)	Yes
● Polski Rejestr Statkow (PRS)	Yes
● Royal Institution of Naval Architects (RINA)	Yes
further information / internet-Links	
Internet-Link	
● to web page: selection aid TIA Selection Tool	http://www.siemens.com/snst
● to website: Industrial communication	http://www.siemens.com/simatic-net
● 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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