

product type designation



M816-1 ADSL2+ (Annex B)

SCALANCE M816-1 ADSL router; for wire-bound IP communication from Ethernet-based automation devices via Internet service provider; VPN, Firewall, NAT; 4-port switch; 1x digital input, 1x digital output; ADSL2+, Annex B, yes .

transfer rate	
transfer rate / for Industrial Ethernet	10 Mbit/s, 100 Mbit/s
transfer rate	
<ul style="list-style-type: none"> for ADSL2+ transmission / with downlink / maximum 	25 Mbit/s
<ul style="list-style-type: none"> for ADSL2+ transmission / with uplink / maximum 	1.4 Mbit/s
interfaces	
number of electrical connections	
<ul style="list-style-type: none"> for internal network 	4
<ul style="list-style-type: none"> for external network 	1
number of electrical connections	
<ul style="list-style-type: none"> for power supply 	2
type of electrical connection	
<ul style="list-style-type: none"> for internal network 	RJ45 port (10/100 Mbit/s, TP, autocrossover)
<ul style="list-style-type: none"> for external network 	RJ45 DSL Port
<ul style="list-style-type: none"> for power supply 	Terminal strip
WAN connection	
type of WAN connection / is supported	ADSL, ADSL2, ADSL2+
operating mode for ADSL2/ADSL2+ / is supported	Annex B, Annex J
supply voltage, current consumption, power loss	
supply voltage / rated value	24 V
supply voltage / rated value	10.8 ... 28.8
type of voltage / of the supply voltage	DC
consumed current	
<ul style="list-style-type: none"> at DC / at 24 V / typical 	0.33 A
power loss [W]	
<ul style="list-style-type: none"> maximum 	8 W
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> during operation 	0 ... 60 °C
<ul style="list-style-type: none"> during storage 	-40 ... +70 °C
relative humidity / at 25 °C / during operation / maximum	95 %
protection class IP	IP20
design, dimensions and weights	
design	compact
depth	127 mm
height	147 mm
width	35 mm
net weight	400 g
fastening method	

<ul style="list-style-type: none"> • 35 mm top hat DIN rail mounting 	Yes
<ul style="list-style-type: none"> • S7-300 rail mounting 	Yes
<ul style="list-style-type: none"> • S7-1500 rail mounting 	Yes
<ul style="list-style-type: none"> • wall mounting 	Yes
product features, product functions, product components / general	
product function	
<ul style="list-style-type: none"> • DynDNS client 	Yes
<ul style="list-style-type: none"> • no-ip.com client 	Yes
product functions / management, configuration, engineering	
product function	
<ul style="list-style-type: none"> • CLI 	Yes
<ul style="list-style-type: none"> • web-based management 	Yes
<ul style="list-style-type: none"> • MIB support 	Yes
<ul style="list-style-type: none"> • TRAPs via email 	Yes
protocol / is supported	
<ul style="list-style-type: none"> • Telnet 	Yes
<ul style="list-style-type: none"> • HTTP 	Yes
<ul style="list-style-type: none"> • HTTPS 	Yes
type of configuration	Web-based management
product functions / diagnostics	
protocol / is supported	
<ul style="list-style-type: none"> • SNMP v1 	Yes
<ul style="list-style-type: none"> • SNMP v2 	Yes
<ul style="list-style-type: none"> • SNMP v2c 	Yes
<ul style="list-style-type: none"> • SNMP v3 	Yes
product function	
<ul style="list-style-type: none"> • statistics Packet Size 	No
<ul style="list-style-type: none"> • statistics packet type 	No
<ul style="list-style-type: none"> • error statistics 	No
<ul style="list-style-type: none"> • SysLog 	Yes
<ul style="list-style-type: none"> • packet filter log 	Yes
product functions / DHCP	
product function	
<ul style="list-style-type: none"> • DHCP client 	Yes
<ul style="list-style-type: none"> • DHCP server - internal network 	Yes
product functions / routing	
router function	
<ul style="list-style-type: none"> • NAT (IP masquerading) 	Yes
<ul style="list-style-type: none"> • port forwarding 	Yes
<ul style="list-style-type: none"> • NAT traversal 	Yes
<ul style="list-style-type: none"> • 1:1 NAT 	Yes
<ul style="list-style-type: none"> • DNS cache 	Yes
product functions / security	
suitability for operation / Virtual Private Network	Yes
firewall version	Statefull Inspection
product function	
<ul style="list-style-type: none"> • password protection 	Yes
<ul style="list-style-type: none"> • packet filter 	Yes
<ul style="list-style-type: none"> • broadcast/multicast/unicast limiter 	No
product function	
<ul style="list-style-type: none"> • broadcast blocking 	No
<ul style="list-style-type: none"> • with VPN connection 	IPsec, OpenVPN (as Client)
number of possible connections / with VPN connection	20
type of authentication / with Virtual Private Network / PSK	Yes
protocol / is supported	
<ul style="list-style-type: none"> • IPsec tunnel and transport mode 	Yes
key length	
<ul style="list-style-type: none"> • 1 / with IPsec AES / with Virtual Private Network 	128 bit
<ul style="list-style-type: none"> • 2 / with IPsec AES / with Virtual Private Network 	192 bit
<ul style="list-style-type: none"> • 3 / with IPsec AES / with Virtual Private Network 	256 bit

<ul style="list-style-type: none"> • with IPsec 3DES / with Virtual Private Network 	168 bit
type of Internet key exchange / with Virtual Private Network	
<ul style="list-style-type: none"> • main mode 	Yes
<ul style="list-style-type: none"> • quick mode 	Yes
type of packet authentication / with Virtual Private Network	MD5, SHA-1, SHA-256, SHA-384, SHA-512
IETF profile / with Virtual Private Network / X.509v3 certificate	Yes
product functions / time	
protocol / is supported	
<ul style="list-style-type: none"> • NTP 	Yes
<ul style="list-style-type: none"> • SNTP 	Yes
standards, specifications, approvals	
standard	
<ul style="list-style-type: none"> • for EMC 	EN 55022, EN 55024
<ul style="list-style-type: none"> • for FM 	FM16US0205X, FM 3611: Class I, Division 2, Groups A,B,C,D, T4 / Class 1, Zone 2, Group IIC, T4
<ul style="list-style-type: none"> • for hazardous zone 	EN 60079-15, EN 60079-0, II 3 G Ex nA IIC T4 Gc, KEMA 07ATEX0145 X
<ul style="list-style-type: none"> • for hazardous zone / 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
<ul style="list-style-type: none"> • for emitted interference 	EN 55022 Class A
<ul style="list-style-type: none"> • for interference immunity 	EN 55024
certificate of suitability	
<ul style="list-style-type: none"> • CE marking 	Yes
<ul style="list-style-type: none"> • CCC approval 	Yes; GB3836.1, GB3836.8, Ex nA IIC T4 Gc
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool 	http://www.siemens.com/tia-selection-tool
<ul style="list-style-type: none"> • to website: Industrial communication 	http://www.siemens.com/simatic-net
<ul style="list-style-type: none"> • to website: Industry Mall 	https://mall.industry.siemens.com
<ul style="list-style-type: none"> • to website: Information and Download Center 	http://www.siemens.com/industry/infocenter
<ul style="list-style-type: none"> • to website: Selection guide for cables and connectors 	http://www.siemens.com/snst
<ul style="list-style-type: none"> • to website: Image database 	http://automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: CAx-Download-Manager 	http://www.siemens.com/cax
<ul style="list-style-type: none"> • 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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