Product: OCTOPUS 4GE-16FE-PoE-LV

Configurator: OCTOPUS 4GE-16FE-PoE-LV

Configurator Description

Specially designed for use at the field level with automation networks, the switches in the OCTOPUS family ensure the highest industrial protection ratings (IP67, IP65 or IP54) regarding mechanical stress, humidity, dirt, dust, shock and vibrations. They are also capable of withstanding heat and cold, while fulfilling the strictest fire prevention requirements. The rugged design of the OCTOPUS switches are ideal for installing directly on machinery, outside of control cabinets and distribution boxes. The switches can be cascaded as often as required – permitting implementation of decentralized networks with short paths to the respective devices to considerably reducing costs for cabling.

Technical Specifications

Product description

Type	OCTOPUS 4GE-16FE-PoE-LV (Product code: OS34-151604T6T6T5-TFFZ999HHSE2SXX.X.XX)
Description	Managed IP65 / IP67 switch in accordance with IEEE 802.3, store-and-forward-switching, HiOS Layer 2 Standard , Fast-Ethernet and Gigabit-Ethernet Type , power sourcing equipment in accordance with IEEE 802.3at (PoE+ inline power) , electrical Gigabit Ethernet uplink-ports
Part Number	942133011
Port type and quantity	; TP-cable, auto-crossing, auto-negotiation, auto-polarity. 20 ports in total; Uplink ports 10/100/1000BASE-TX, M12 "X"-coded, 8-pins ; Local ports 10/100BASE-TX M12 "D"-coded, 4-pin ; 15 x PoE(+) Ports (phantom power)

More Interfaces

Power supply/signaling contact	7/8" connector, 5 pins / M12 connector, 5 pins, "A"-coding
V.24 interface	1 x M12 4-pin socket, A coding
USB interface	1 x M12 5-pin socket, A coding

Network size - length of cable

Twisted pair (TP)	0-100 m

Network size - cascadibility

Line - / star topology	any
Ring structure (HIPER-Ring) quantity switches	MRP, HIPER-Ring max. 50 switches (reconfiguration time 0.3 s), RSTP

Power requirements

Operating Voltage	2 x 24/36/48 VDC (16.8 .. 60 VDC)
Power consumption	max. 106 W with 60W PoE
Power output in BTU (IT)/h	max. 149

Software

Switching	Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Interface Trust Mode, CoS Queue Management, Queue-Shaping / Max. Queue Bandwidth, Flow Control (802.3X), Egress Interface Shaping, Ingress Storm Protection, Jumbo Frames, VLAN (802.1Q), VLAN Unaware Mode, Voice VLAN, IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP)
Redundancy	Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2), RSTP 802.1D-2004 (IEC62439-1), RSTP Guards
Management	Dual Software Image Support, TFTP, SFTP. SCP. LLDP (802.1AB), LLDP-MED, SSHv2, V.24, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet
Diagnostics	LEDs Management Address Conflict Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, Port Monitoring with Auto-Disable, Link Flap Detection, Overload Detection, Duplex Mismatch Detection, Link Speed and Duplex Monitoring, RMON (1,2,3,9), Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, System Information, Self-Tests on Cold Start, Copper Cable Test, SFP Management, Configuration Check Dialog, Switch Dump, Snapshot Configuration Feature
Configuration	Automatic Configuration Undo (roll-back), Configuration Fingerprint, Text-based Configuration File (XML), BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port, DHCP Server: Pools per VLAN, AutoConfiguration Adapter ACA21/22 (USB), HiDiscovery, DHCP Relay with Option 82, Command Line Interface (CLI), CLI Scripting, Full-featured MIB Support, Web-based Management, Context-sensitive Help, Backup config on a remote server when saving, Clear config but keep IP settings, CLI script handling over ENVM at boot, HTML5 based Management

Security	MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, Denial-of-Service Prevention, VLAN-based ACL, Ingress VLAN-based ACL, Basic ACL, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, CLI Logging, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, Configurable Password Policy, Configurable Number of Login Attempts, SNMP Logging, Multiple Privilege Levels, Local User Management, Remote Authentication via RADIUS, User Account Locking, Password change on first login
Time synchronisation	PTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), ModbusTCP, PROFINET IO Protocol
Miscellaneous	PoE (802.3AF), PoE+ (802.3AT), PoE+ Manual Power Management, PoE Fast Startup Manual Cable Crossing, Port Power Down
Presettings	Standard firmware

Ambient conditions

Operating temperature	-40-+70 °C
Storage/transport temperature	-40-+85 °C
Relative humidity (also condensing)	5-100 %

Mechanical construction

Dimensions (WxHxD)	261 mm x 186 mm x 95 mm
Weight	3.5 kg
Mounting	Wall mounting
Protection class	IP65 / IP67

Mechanical stability

IEC 60068-2-6 vibration	3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks

EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD)	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80-3000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 4 kV data line
EN 61000-4-5 surge voltage	power lines: 2 kV (line/earth), 1 kV (line/line), data lines: 1 kV (line/earth)
EN 61000-4-6 Conducted Immunity	10 V (150 kHz-80 MHz)

EMC emitted immunity

EN 55022	EN 55032 Class A
FCC CFR47 Part 15	FCC 47CFR Part 15, Class A

Approvals

Basis Standard	CE; FCC; EN61131
Safety of industrial control equipment	EN60950-1

Scope of delivery and accessories

Scope of delivery	1 × Device, 1 x connector for power connection, General safety instructions