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Ethernet Smart Managed Compact Switch with six 10/100/1000 Mbps RJ45 ports and two 1000 Mbps SFP slots

#### **Product Description**

The Smart Managed Compact Switch (SMCS) is an Ethernet switch suitable for industrial applications with six Gigabit Ethernet ports in RJ45 format and 2 Gigabit Ethernet ports in SFP format.

#### Your advantages

- ✓ SNMP
- ✓ VLANs
- MRP (client and master)
- ✓ RSTP



## **Key Commercial Data**

Packing unit	1 pc
GTIN	4 046356 166089
GTIN	4046356166089
Weight per Piece (excluding packing)	797.000 g
Custom tariff number	85176200
Country of origin	Germany

### Technical data

### Dimensions

Width	128 mm
Height	110 mm



# Technical data

## Dimensions

Depth	69 mm
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### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	0 °C 55 °C (non-condensing)
Ambient temperature (storage/transport)	-40 °C 85 °C
Permissible humidity (operation)	5 % 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % 95 % (non-condensing)
Air pressure (operation)	86 kPa 108 kPa (2000 m above sea level)
Air pressure (storage/transport)	66 kPa 108 kPa (3500 m above sea level)

### Interfaces

Interface	Ethernet (RJ45)
No. of ports	6 (RJ45 ports)
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Соррег
Transmission speed	10/100/1000 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Supply voltage, data transmission, error, link, activity
Interface	Fiber optic interface
No. of ports	2 (SFP ports)
Transmission physics	Depending on the SFP module
Transmission speed	1000 Mbps (full duplex)
Transmission length	up to 80 km (Depending on the fiber/SFP module used)
Interface	Serial (RS-232)
Connection method	RS-232-C, 6-pos. MINI-DIN socket (PS/2)

### Function

Basic functions	Store-and-forward switch complies with IEEE 802.3 4 priority classes in acc. with IEEE 802.1 P TCP/IP protocol, BootP-capable, port-mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), PROFINET Device, Media Redundancy Protocol (MRP).
Management	Web-based management (HTTP)
	SNMP v1/v2
	Serial interface (V.24)
Diagnostic functions	RMON History
	N:1-Portmirroring
	LLDP (Link Layer Discovery Protocol)
	SNMP-Traps



## Technical data

### Function

	ACD (Address Conflict Detection)
Filter functions	Quality of Service (4 priority classes)
	Port-Priorisierung
	VLAN
	IGMP Snooping (128 groups)
	IGMP Query
	Auto-Query-Port
	Extended Multicast Filtering
	Static Multicast Filtering
Redundancy	MRP (Media Redundancy Protocol)
	RSTP (Rapid Spanning Tree Protocol)
	FRD (Fast Ring Detection)
	Large Tree Support
Additional functions	BootP
	DHCP-Client DHCP-Client
Supported browsers	Internet Explorer 5.5 or higher
MAC address table	4000
PROFINET device function	PROFINET device
	Fast Startup
PROFINET conformance class	Conformance-Class B
Time synchronization	SNTP
Status and diagnostic indicators	LEDs: US1, US2 (power supply), Fail (alarm contact), 2 LEDs per Etherner port (Link and switchable Activity/Speed/Duplex)
Signal contact control voltage	24 V (typical)
Signal contact control current	650 mA

## Security functions

Link Layer Discovery Protocol (LLDP)  As per protocol 802.2
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## Network expansion parameters

Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m

# Supply voltage

Supply voltage	24 V DC (redundant)
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Supply voltage range	18 V DC 32 V DC
Typical current consumption	600 mA (at U <sub>S</sub> = 24 V DC)
Current consumption	650 mA



## Technical data

### General

Mounting type	DIN rail
Type AX	Block design
Net weight	650 g

### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm

## Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-3 +A11
Noise immunity	EN 61000-6-2:2005
Vibration (storage/transport)	5g, 10 Hz 150 Hz, in accordance with IEC 60068-2-6
Free from substances that could impair the application of coating	Yes
Vibration (operation)	in accordance with IEC 60068-2-6: 5g, 10 Hz 150 Hz

## **Environmental Product Compliance**

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Classifications

## eCl@ss

eCl@ss 10.0.1	19170401
eCl@ss 4.0	27250500
eCl@ss 4.1	27250500
eCl@ss 5.0	19030100
eCl@ss 5.1	19030100
eCl@ss 6.0	19170100
eCl@ss 7.0	19170106
eCl@ss 8.0	19170106



## Classifications

$\sim$	$\sim$
Δί.	l@ss
-	nwaa

eCl@ss 9.0

ETIM	
ETIM 2.0	EC000734
ETIM 3.0	EC000734
ETIM 4.0	EC000734

19170106

ETIM 5.0	EC000734
ETIM 6.0	EC000734
ETIM 7.0	EC000734

### **UNSPSC**

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201410
UNSPSC 13.2	43222612
UNSPSC 18.0	43222612
UNSPSC 19.0	43222612
UNSPSC 20.0	43222612
UNSPSC 21.0	43222612

# Approvals

Approvals

Approvals

BV / LR / ABS / UL Listed / cUL Listed / EAC / EAC / DNV GL / EAC / cULus Listed

Ex Approvals

ATEX

Approval details

BV



http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials

22386/B0 BV



# Approvals

LR	Lloyds Register	http://www.lr.org/en	LR2002355TA
ABS		http://www.eagle.org/eagleExternalPortalWEB/	19-HG1937645-PDA
UL Listed	UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Listed	c (UL)	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
EAC	EAC		EAC-Zulassung
EAC	EAC		RU *- DE.A*30.B.01735
DNV GL	(DNVGL)	https://approvalfinder.dnvgl.com/	TAA00000DF
EAC	EAC		RU*-DE.*.B.00741/19
cULus Listed	C UL US		

## Accessories

Accessories

Configuration memory



#### Accessories

Configuration memory - FL MEM PLUG - 2891259



Exchangeable configuration memory of the device settings for simple device exchange and set-up

Configuration memory - FL MEM PLUG/MRM - 2891275



Exchangeable configuration memory of the device settings for simple device exchange and set-up In addition, the Media Redundancy Manager (MRM) license for use is stored within the Media Redundancy protocol (MRP).

### Data cable preassembled

FO patch cable - FL MM PATCH 1,0 LC-LC - 2989158



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: LC/LC, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 LC-LC - 2989255



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: LC/LC, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 5,0 LC-LC - 2901799



Assembled FO cable, break out cable, multimode fiberglass  $50/125 \, \mu m$  (OM2), connector: LC/LC, degree of protection: IP20, for installation in cable ducts or control cabinets, length:  $5 \, m$ 



#### Accessories

FO patch cable - FL MM PATCH 1,0 LC-SC - 2989161



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 LC-SC - 2989268



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 5,0 LC-SC - 2901800



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL MM PATCH 1,0 LC-ST - 2989174



Assembled FO cable, break out cable, multimode fiberglass 50/125 μm (OM2), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 LC-ST - 2989271



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m



#### Accessories

FO patch cable - FL MM PATCH 5,0 LC-ST - 2901801



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL MM PATCH 5,0 LC-ST - 2901801



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL MM PATCH 2,0 LC-SCRJ - 2901803



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 5,0 LC-SCRJ - 2901804



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu$ m (OM2), connector: LC/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL SM PATCH 1,0 LC-LC - 2989187



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber), connector: LC/LC, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m



#### Accessories

FO patch cable - FL SM PATCH 2,0 LC-LC - 2989284



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber), connector: LC/LC, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL SM PATCH 5,0 LC-LC - 2901826



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber), connector: LC/LC, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL SM PATCH 1,0 LC-SC - 2989190



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber) connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL SM PATCH 2,0 LC-SC - 2989297



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber) connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL SM PATCH 5,0 LC-SC - 2901827



Assembled fiber optic cable, break-out cable, fiberglass single mode  $9/125 \, \mu m$  (OS2, Low Water Peak Fiber) connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length:  $5 \, m$ 



#### Accessories

FO patch cable - FL SM PATCH 1,0 LC-ST - 2989242



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL SM PATCH 2,0 LC-ST - 2989349



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL SM PATCH 5,0 LC-ST - 2901828



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber), connector: LC/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

#### Drivers and interfaces

Software - FL SNMP OPC SERVER V3 - 2701139



SNMP-OPC server, German and English, for monitoring and configuration of SNMP-capable equipment in HMI and SCADA systems

#### Patch cable

Patch cable - FL CAT6 PATCH 0,3 - 2891181



Patch cable, CAT6, pre-assembled, 0.3 m



### Accessories

Patch cable - FL CAT6 PATCH 0.5 - 2891288



Patch cable, CAT6, pre-assembled, 0.5 m

Patch cable - FL CAT6 PATCH 1,0 - 2891385



Patch cable, CAT6, pre-assembled, 1.0 m

Patch cable - FL CAT6 PATCH 1,5 - 2891482



Patch cable, CAT6, pre-assembled, 1.5 m

Patch cable - FL CAT6 PATCH 2,0 - 2891589



Patch cable, CAT6, pre-assembled, 2.0 m

Patch cable - FL CAT6 PATCH 3,0 - 2891686



Patch cable, CAT6, pre-assembled, 3.0 m



### Accessories

Patch cable - FL CAT6 PATCH 5,0 - 2891783



Patch cable, CAT6, pre-assembled, 5.0 m

Patch cable - FL CAT6 PATCH 7,5 - 2891880



Patch cable, CAT6, pre-assembled, 7.5 m

Patch cable - FL CAT6 PATCH 10 - 2891877



Patch cable, CAT6, pre-assembled, 10 m

Patch cable - FL CAT6 PATCH 12,5 - 2891369



Patch cable, CAT6, pre-assembled, 12.5 m

Patch cable - FL CAT6 PATCH 15,0 - 2891372



Patch cable, CAT6, pre-assembled, 15.0 m



### Accessories

Patch cable - FL CAT6 PATCH 20,0 - 2891576



Patch cable, CAT6, pre-assembled, 20.0 m

### Programming cable

Connecting cable - COM CAB MINI DIN - 2400127



Connecting cable, for connecting the controller to a PC (RS-232) for PC WORX with flow control, 3 m in length

### SFP module

Media module - FL SFP SX - 2891754



Gigabit SFP module for transmission up to 1 km with a wavelength of 850 nm.

Media module - FL SFP LX - 2891767



Gigabit SFP module for transmission up to 30 km with a wavelength of 1310 nm.

Media module - FL SFP LH - 2989912



Gigabit SFP module for transmission up to 80 km with a wavelength of 1,550 nm.



### Accessories

#### Software - IPASSIGN - 2701094



IPAssign is an easy to use tool for setting the IP address of devices which rely on BOOTP. No installation or administrative rights are required to use IPAssign.

This product is free and only available from the "Downloads" tab.

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