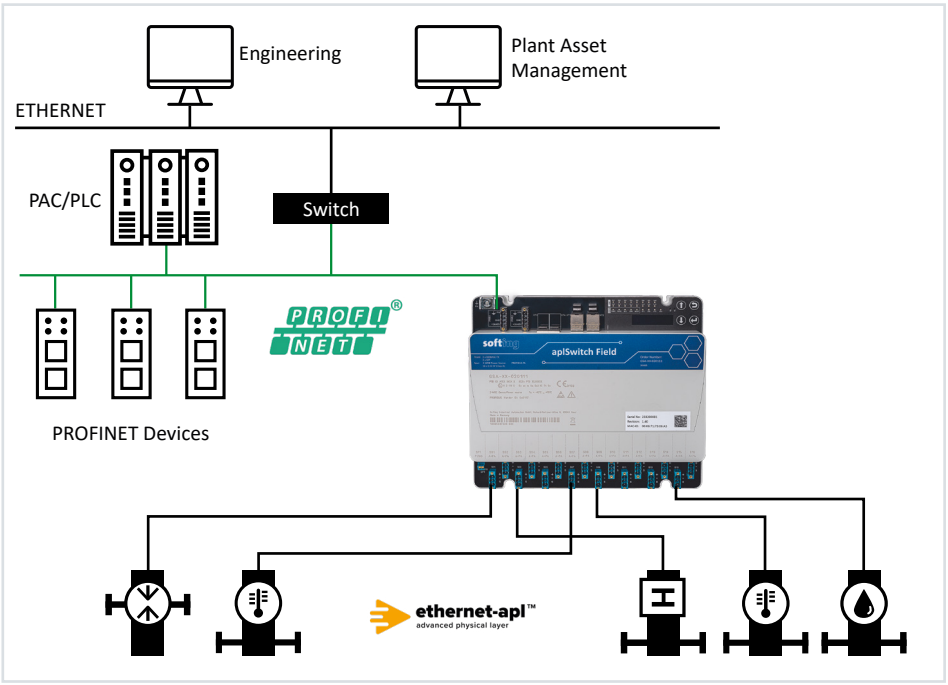
aplSwitch Field

16 port Ethernet-APL Field Switch for use in Zone 2

- **Transparent connection of intrinsically safe Ethernet-APL field devices to Industrial Ethernet networks**
- **Supplies the field devices with intrinsically safe power**
- **Installable in Ex Zone 2**
- **Easy integration into automation systems**



Ethernet-APL for seamless and reliable integration into DCS and AMS systems

- 16 Ethernet APL spur „2-WISE“ ports
- PROFINET enabled switch with support for PROFINET MRP ring topology
- Supports all major DCS and AMS systems like Emerson, Siemens, ABB and others
- Ensures stable networks via ingress/egress support

Extensive diagnostics

- Integrated PROFINET diagnostic functions for easy commission, maintaining and trouble shooting
- Local display for instant commissioning diagnostics
- Enhanced FDI support for easy device integration and parametrization

Allows installation in hazardous areas

- All product variants can be installed in Ex zone 2
- Field Devices located in Ex zone 0 and 1 can be connected to the switch
- Ruggedized and robust housing for field installation IP30

PowerClass A and B support for APL Field devices

- Allows usage of more complex/power intensive field devices
- APL power class B supports up to 1,17 W per device on 4 ports
- Futureproof since no limitation to power class A with 0,54 W

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Technical Data

Explosion Protection	Application range (zones)	2
	Ex interface zone	0
		1
		2
		20
		21
		22
	IECEx gas certificate	in preparation
	IECEx gas explosion protection	Ex ec ia [ia Ga] IIC T4 Gc
	IECEx dust certificate	in preparation
	IECEx dust explosion protection	[Ex ia Da] IIIC
	ATEX gas certificate	in preparation
	ATEX gas explosion protection	E II 3 (1) G Ex ec ia [ia Ga] IIC T4 Gc
	ATEX dust certificate	in preparation
	ATEX dust explosion protection	E II (1) D [Ex ia Da] IIIC
	Notes	Certificates in preparation
Safety Data	Max. voltage Uo	17.5 V
	Max. current Io (Ex ia)	380 mA
	Max. power Po (Ex ia)	1.67 W
	Max. permissible external capacity Co for IIC	0.25 µF
	Max. permissible external inductance Lo for IIC	0.15 mH
	Max. ext. capac. Co (IIB/IIIC)	1.5 µF
	Max. ext. induc. Lo (IIB/IIIC)	0.5 mH
	Internal inductance Li (coil)	negligible
	Internal capacitance Cii (coil)	negligible
	AC rated insulation voltage Um	60 V
	Intrinsic safety concept	2-WISE (CLC IEC/TS 60079-47)
Electrical Data	Interface 1 version	100BASE-TX
	Transfer rate interface 1	10/100 MBit/s
	Number of ports interface 1	2 (XT1, XT2)
	Connection type interface 1	RJ45 (EIA/TIA 568B)
	Cable shield earthing inter. 1	direct
	Interface 2 version	100BASE-FX
	Transfer rate interface 2	100 MBit/s
	Number of ports interface 2	2 (XT3, XT4)
	Connection type interface 2	SFP (optional)
	Link network 1 LED	LED, yellow
	Link network 2 LED	LED, yellow
	Link network 3 LED	LED, yellow
	Link network 4 LED	LED, yellow
Auxiliary Power	Auxiliary power nominal voltage	24 V DC, 48 V DC
	Auxiliary power voltage range	19.2.....57.6 V DC
	Auxiliary power 1 LED	LED, green
	Auxiliary power 2 LED	LED, green
	Max. current consumpt. 24 V DC	1.3 A
	Max. current consumpt. 48 V DC	0.65 A
	Max. power consumption 24 V DC	31.2 W
	Max. power consumption 48 V DC	31.2 W
	Max. power dissipation at 24 V	19 W
	Max. power dissipation 48 V	19 W
	Auxiliary power connection	2 (PWR1, PWR2)
	Auxil. power connection type	Plug. spr.-cl. term. 4-pin BK Plugg. screw terminal 4-pin BK
	Con. cr.-sc. rgd min. aux. pwr	0.5 mm²
	Con. cr.-sc. rgd max. aux. pwr	2.5 mm²
	Con. cr.-sc. flx min. aux. pwr	0.5 mm²
	Con. cr.-sc. flx max. aux. pwr	2.5 mm²
Galvanic Isolation	Test voltage for galvanic separation	Acc. to standard EN 60079-11
	Auxiliary power/spurs	≥ 1500 V AC
	Auxiliary power/100BASE-TX	≥ 1500 V AC
	Auxiliary power/SFP	≥ 1500 V AC
	100BASE-TX/SFP	≥ 1500 V AC
	Spurs/100BASE-TX	≥ 1500 V AC
	Between spurs	none

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Technical Data

Field Device Interface	Spurs version	Ethernet-APL (10BASE-T1L)
	Number of ports spurs	16
	Characteristic spurs	2-WISE power supply
	Transfer rate spurs	10 MBit/s vollduplex
	Link spurs LED	S01 ... S16 LED, yellow
	Power Class	A
		B
	Max. number of spurs power class A	16
	Max. number of spurs power class B	4
	Max. no. spurs PROFIBUS PA	0
	Open-circuit voltage pwr cl. A	13.65 V
	Open-circuit voltage pwr cl. B UA	12.80 V
	Output nom. cur. power class A	55.56 mA
	Output nom. curr. power class B	115.00 mA
	Output power power class A	0.54 W
	Output power power class B	1.17 W
	Cable shield earthing spurs	capacitive
	Spurs connections	16
	Spurs connection type	Plug. spr.-cl. term. 3-pin BU
		Plug. screw terminal 3-pin BU
	Con. cr.-sec. flex. min. spurs	0.50 mm²
	Con. cr.-sec. flex. max. spurs	2.50 mm²
	Con. cross-sec. rgd min. spurs	0.50 mm²
	Con. cross-sec. rgd max. spurs	2.50 mm²
Device Specific Data	Protocols 1	PROFINET
	Characteristic protocol 1	Device, conformity class B
	Availability protocol 1	System redundancy S2, MRP
	Functions protocol 1	Dynamic reconfiguration,
		Network load class I
		Pruning
		Rate limiter
	Configuration protocol 1	GSDML
	Protocols 2	EtherNet/IP
	Characteristic protocol 2	Adaptor
	Availability protocol 2	DLR
	Functions protocol 2	in progress
	Configuration protocol 2	EDS
	User interface	Web server
		Display
		LEDs
	Device integration	FDI
		OPC UA
	Ethernet functions	SNMP
		DHCP
	Security	HTTPS
		Password management
		Port lock
	Real-time clock	Yes
Diagnostics	Physical layer 10BASE-T1L	SNR
		TDR
		Shield unbalance
	Communication	Lost packets
		LLDP
	Ambient condition	Temperature, humidity
	Diagnostics connections	1 x Pt100, 2-wire (SPT)
	Maintenance required LED	LED, blue
	Start-up process LED	LED, green
	LED group error	„ERR“ LED, red
	Diagnostics connection type	Spring clamp terminal 2-pin BU
	Con. cro.-sec. flex. min. dia.	0.25 mm²
	Con. cro.-sec. flex. max. dia.	1.5 mm²
	Cond. cro.-sec. rgd min. diag.	0.25 mm²
	Cond. cro.-sec. rgd max. diag.	1.5 mm²

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Display	Display resolution	256 x 64 pixels
	Display	OLED WH/BK
	Display size in inches	2.00
	Display operation	4 operating keys, capacitive
	Retrievable information	Device data Ethernet diagnostics Physical layer diagnostics
	Device reset	Operating keys
Ambient Conditions	Ambient temperature	-40 °C ... +70 °C
	Ambient temperature note	(+60°C for B-port operation)
	Storage temperature	-40 °C ... +80 °C
	Max. operating altitude	< 2000 m
	Max. relative humidity	95% (without condensation)
	Degr. of pollution (IEC 60664)	1 2
Mechanical Data	Degree of protection (IP) (IEC 60529)	IP30
	Fire resistance (UL 94)	V0
	Pollutant class	corr. to G3 (ISA-71-04-2013)
	Enclosure material	Aluminium, painted
	Dimensions (L x W x H)	260,000 x 292,000 x 52,600 mm
	Length	260 mm
	Width	292 mm
	Height	52.6 mm
	Weight	3.8 kg
	Weight	8.38 lb
Mounting / Installation	Mounting type	On mounting plate
	Mounting orientation	Horizontal Vertical
Components	SFP module	2 x 100BASE-FX

Scope of Delivery

Hardware	aplSwitch Field
Documentation	Tbd - On website

Order Numbers

GSA-XX-020101	aplSwitch Field

Additional Products and Services

Terminal set Screw	Screw terminals, Contents: 16 x 3-pin, blue; 2 x 4-pin, black – ord# + weight tbd
Terminal set Spring	Spring clamp terminals, Contents: 16 x 3-pin, blue; 2 x 4-pin, black – ord# + weight tbd
Mounting plate	plus screws

Your local Softing contact:

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