

15096E00

- > For FOUNDATION™ fieldbus H1 segments
- > Complete set with bus-Carrier and fieldbus power supply modules
- > High availability due to auxiliary power supply for 4 or 8 fieldbus segments, simplex or redundant
- > Slot for the diagnostics communication module 9415 for the transmission of physical layer diagnostics data via FF H1
- > Integrated basic diagnostic modules for monitoring the auxiliary power and the segment overload / short circuit
- > Error messages via relay contacts



The 9420 fieldbus power supply set is a time and cost-saving solution for supplying FOUNDATION™ fieldbus H1 segments. The set consists of a bus-Carrier Series 9419 incl. 8 or 16 fieldbus power supply modules Series 9412.

Carrier versions for 8 segments with simplex supply and for 4 or 8 segments with redundant supply are available. Due to a high output power of up to 28 V and 500 mA for each segment, a large number of devices can be operated even over long distances.

The fieldbus segments will be monitored during operation in the case of overload and short circuit.

By monitoring the redundant auxiliary power the maximum possible system availability is guaranteed.

An error message is outputted via each integrated relay contact.

A special slot can be optionally used to install the diagnostics communication module Series 9415 which will transmit the physical layer values measured by the fieldbus power supplies online to a host and asset management system via an FF H1 segment.



	ATEX / IECEx						Zone	NEC 505 Class I						Division	NEC 500					
	0	1	2	20	21	22		0	1	2	20	21	22		1	2	1	2	1	2
Installation in			x			x			x			x		x		x		x		

WebCode 9420A

Fieldbus Power Supply Set

Series 9420



Selection table

Version	Connection	Trunk supply	Number of segments	Set content	Order number	Weight
Fieldbus power supply set	to any FF H1 host	simplex	8	bus-Carrier + 8 fieldbus power supplies *)	9420/08F-XX1-01C1	1.700 kg
		redundant	4	bus-Carrier + 8 fieldbus power supplies *)	9420/04R-XX1-02C1	1.700
			8	bus-Carrier + 16 fieldbus power supplies *)	9420/08R-XX1-02C1	3.400
Note	*) corresponds to the fieldbus power supply 9412/00-300-10 (available only in the set) with following functional limitations: boost mode, switchable terminator, without base bolt, without PC interface on the module, no monitoring of warning and alarm values					
Please order diagnostics communication module Series 9415 separately - see Accessories						

Explosion protection

Version	Fieldbus power supply Series 9412	bus-Carrier Series 9419
Global (IECEX) Gas	IECEX BVS 09.0043X Ex nAc nCc II T4	IECEX BVS 09.0042X Ex nA nC IIC T4 Gc
Europe (ATEX) Gas	BVS 09 ATEX E 099 X Ⓢ II 3G Ex nAc nCc II T4	BVS 09 ATEX E 100 X Ⓢ II 3 G Ex nA nC IIC T4 Gc
Version	Fieldbus power supply set Series 9420	
Certificates Certificates Ship approval	IECEX, ATEX, Canada (cFM), USA (FM) DNV	
Safety data Max. voltage U _o	30.4 V	
Further parameters Installation Further information	in Zone 2 and in the safe area see respective certificate and operating instructions	

Technical data

Electrical data			
Auxiliary power			
Version	9420/08F-XX1-01C1, 9420/04R-XX1-02C1, fully equipped		9420/08R-XX1-02C1, fully equipped
Nominal voltage U _N	24 V DC		24 V DC
Maximum current consumption	Voltage range 18 V DC 24 V DC 32 V DC 7.76 A 5.84 A 4.4 A		Voltage range 18 V DC 24 V DC 32 V DC 15.52 A 11.68 A 8.8 A
Maximum power dissipation	Voltage range 18 V DC 24 V DC 32 V DC 25.68 W 26.16 W 26.80 W		Voltage range 18 V DC 24 V DC 32 V DC 51.36 W 52.32 W 53.60 W
Operation indication	all data at max. output current / output voltage LED, green, "PWR" 2 LEDs, green "pri", "red"		
Polarity reversal protection	yes		
Electromagnetic compatibility	Tested under the following standards and regulations: EN 61326-1 Use in industrial environment; NAMUR NE 21		
Ambient conditions Ambient temperature	-20 ... +70 °C for further information, see operating instructions for Type 9412		
Storage temperature	-40 ... +80 °C		
Maximum relative humidity	< 95 % (without condensation)		
Galvanic separation Fieldbus to power supply	250 V AC eff.		
Fieldbus Specification EOL resistor	IEC 61158-2, FOUNDATION™ fieldbus H1 FF-831 integrated into fieldbus power supplies		

Technical data

Segment supply

Output voltage	≥ 28 V DC
Output current	
simplex	10 ... 500 mA
redundant	10 ... 500 mA (= 2 x 250 mA)
Overload	500 ... 540 mA
Short-circuit current	≤ 0 mA (output switched off)
Residual ripple	corresponds to chapter 22.6.2 of IEC 61158-2

Diagnostics

Error detection	
Auxiliary power error (primary or redundant)	< 18 V
Segment overload	> 500 mA (output active)
Segment short circuit	> 540 mA (output switched off)
Physical layer error (online message)	trunk current/voltage, signal level, noise, jitter, asymmetry
Error message	
Auxiliary power failure (primary/redundant)	contact "PF (Power Fail)" (35 V / 100 mA), closed in good conditions
Diagnostics	contact "Dia" (Diagnostics) (35 V / 100 mA), closed in good conditions
Error indications	
On the bus-Carrier	LED, green "pri", off for missing auxiliary power (primary) LED, green "red", off for missing auxiliary power (redundant)
On the fieldbus power supply	LED, red "ERR", flashes
Online message	via FF H1 with diagnostics communication module 9415 (see Accessories)

Mechanical data






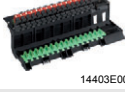
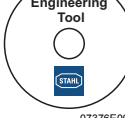
Mounting type	on top hat rail (NS35/15, NS35/7.5) or mounting plate (4 x screws M6)	
Mounting orientation	horizontal or vertical for further information, see operating instructions for Type 9412	
Connection		
Trunk	to the terminals of the bus-Carrier or of the fieldbus power supply	
Host / red. host	to the terminals of the bus-Carrier or of the fieldbus power supply	
Diagnostics communication module	via ribbon cable using plug connectors (DCM 9415)	
Shield	via integrated shield bar with strain relief	
Earthing	via terminal 0.2 ... 2.5 mm ²	
Connection cross-section	Pluggable screw terminals	
	Single-wire connection	
	- rigid	0.2 ... 2.5 mm ²
	- flexible	0.2 ... 2.5 mm ²
	- flexible with core end sleeves (without / with plastic sleeve)	0.25 ... 2.5 mm ²
	Two-wire connection	
	- rigid	0.2 ... 1 mm ²
	- flexible	0.2 ... 1.5 mm ²
	- flexible with core end sleeves	0.25 .. 1 mm ²
Degree of protection	IP00	
Terminals	IP20	
Enclosure material	PA 6.6	
Fire resistance (UL-94)	V0	

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Accessories and spare parts

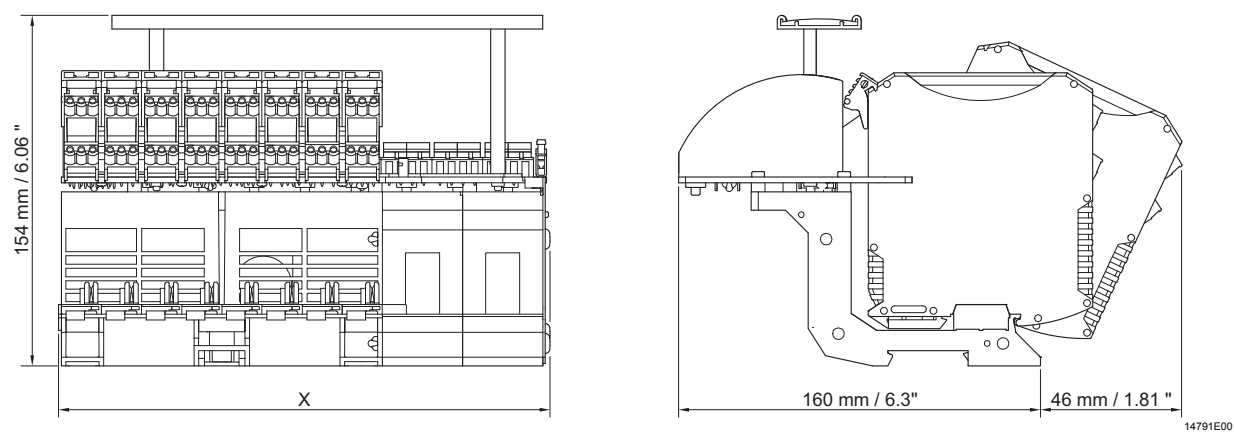
Designation	Figure	Description	Order number	Weight kg
Fieldbus power supply 9412	 12783E00	fieldbus power supply and diagnostics	9412/00-310-11s	0.135
	 12809E00	fieldbus power supply, diagnostics and adjustable warning level		
Diagnostics communication module 9415	 14406E00	transmission of diagnostics data for up to 8 segments via FF H1	9415/00-310-42	0.240
bus-Carrier, simplex	 14402E00	bus-Carrier for 8 segments, simplex	9419/08F-XX1-01C1	0.600
bus-Carrier, redundant	 14402E00	bus-Carrier for 4 segments, redundant	9419/04R-XX1-02C1	0.600
	 14403E00	bus-Carrier for 8 segments, redundant	9419/08R-XX1-02C1	1.200
Fieldbus wizard engineering tool	 07376E00	Engineering tool for design of fieldbus foundation of Profibus PA fieldbus segments Download under www.fieldbus-solutions.info	Download under www.fieldbus-solutions.info	

Fieldbus Power Supply Set

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Dimensional drawing (all dimensions in mm / inch) - subject to alterations



type	dimension X
9420/04R-XX1-02C1	217 mm / 8.55 "
9420/08F-XX1-01C1	217 mm / 8.55 "
9420/08R-XX1-02C1	359 mm / 14.13 "

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.

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