smar - PS302P

USER'S MANUAL

FIELDBUS POWER SUPPLY

MAY / 13

PS302P

FOUNDATION

PS302PME

smar

www.smar.com

Specifications and information are subject to change without notice.
Up-to-date address information is available on our website.

web: www.smar.com/contactus.asp

AVOIDING ELECTRICAL DISCHARGES

ATTENTION
Electrostatic discharges may damage semiconductor electronic components in printed circuit boards. They usually occur when touching components or connector pins from modules and racks, without wearing the appropriate equipment to prevent discharges. It is recommended to take the following precautions: • Before handling modules and racks, remove the electrostatic charge from your body by wearing a proper wristband or touching grounded devices; • Avoid touching electronic components or connector pins from racks and modules.

PS302P - POWER SUPPLY FOR FIELDBUS

Description

These modules were specially designed to supply the fieldbus networks. The only difference between them is the input voltage:

PS302P (90 ~264 Vac)
PS302P DC (20 ~30 Vdc)

The **PS302P** power supply unit is a non-intrinsically safe equipment with a universal AC input (90 to 264 Vac, 47 to 63 Hz or 127 to 135 Vdc), and a 24 Vdc output, isolated, with short circuit and overcurrent protection, ripple and fault indication, appropriated to supply fieldbus elements.

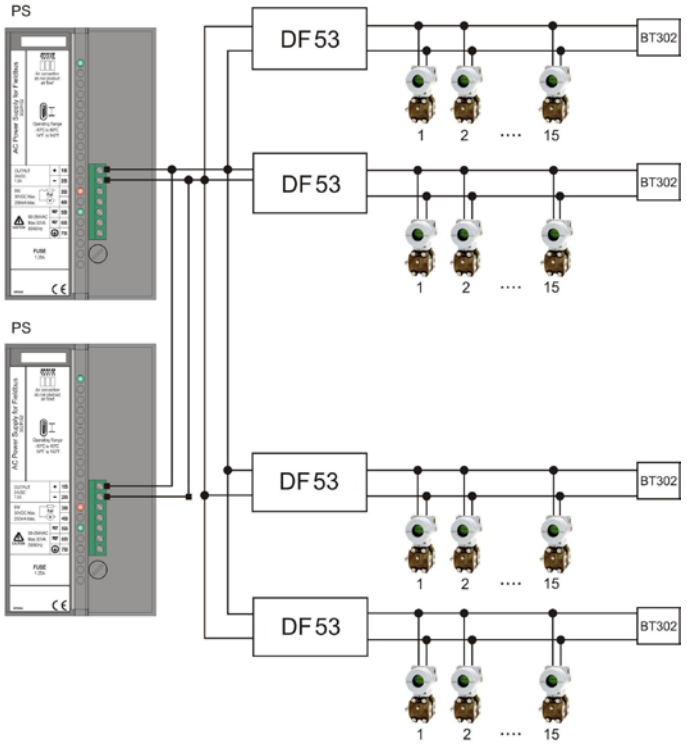
The **PS302P DC** power supply unit is a non-intrinsically safe equipment with a DC input (20 to 30 Vdc) and a 24 Vdc output isolated, with short circuit and overcurrent protection, ripple and fault indication, appropriated to power fieldbus elements.

The interconnection of fieldbus elements to the **PS302P/PS302P DC** is indicated in the figure below. There is no overshoot when it is switched on or off. The **PS302P/PS302P DC** can power on up to 4 fully loaded fieldbus networks.

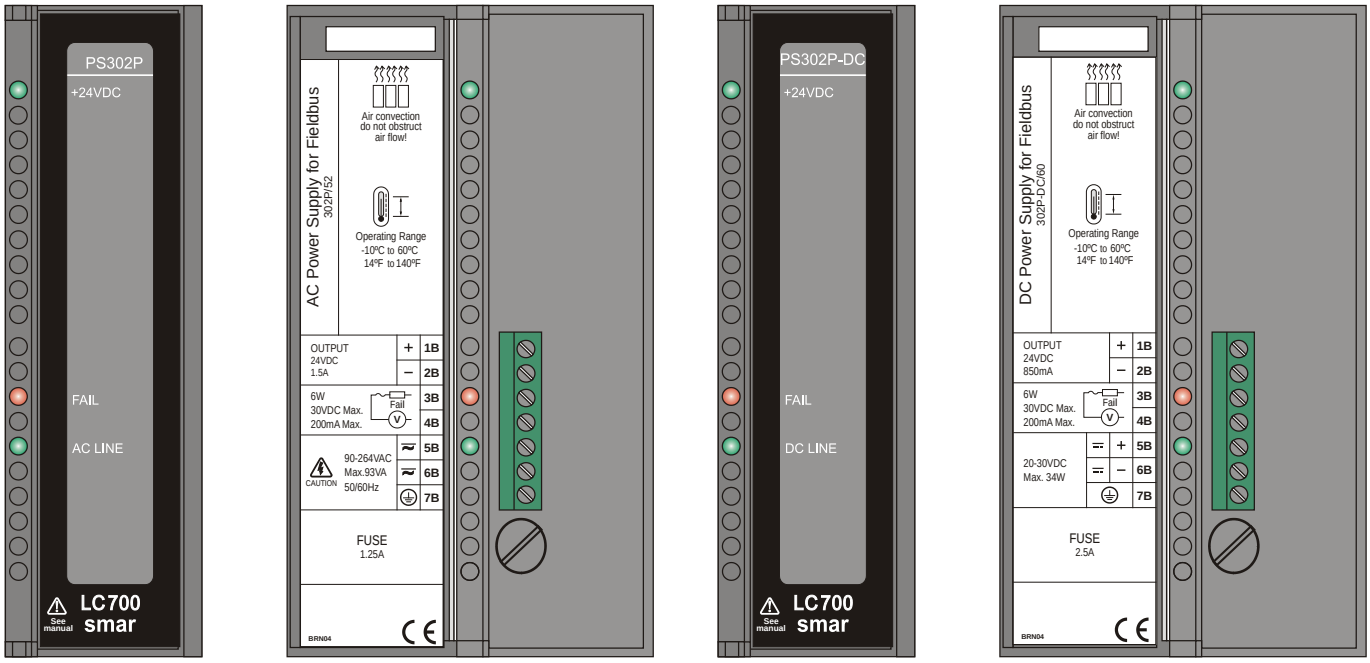
NOTE
The length of the cables that interconnect the **PS302P/PS302P DC** modules to **DF53/DF98** must not exceed 3 meters.

If any abnormal condition occurs in the output such as overloading or short circuit, the **PS302P/PS302P DC** internal switching is automatically switched off, thus protecting its circuit. Upon the outputs return to normal conditions of operation, the circuit is automatically switched on.

The **PS302P/PS302P DC** allows redundancy without requiring any component coupled to its output.



Connection Diagram of Fieldbus Elements to PS302P



Power Supply for Fieldbus: PS302P/PS302P DC

Technical Specifications

PS302P INPUTS	
DC	127 to 135 Vdc.
AC	90 to 264 Vac, 50/60 Hz (nominal), 47 to 63 Hz (range)
Maximum Inrush Current	<30 A @ 220 Vac [ΔT < 640 µs]
Maximum Consumption	93 VA
Indicator	AC LINE (Green LED)

PS302P DC INPUTS	
DC	20 to 30 Vdc.
Maximum Inrush Current	<24 A @ 30 Vdc [ΔT < 400 µs]
Maximum Consumption	34 W
Indicator	DC LINE (Green LED)

OUTPUTS		
Output	24 Vdc ± 1%	
Current	**PS302P**	**PS302P DC**
	1.5 A maximum	850 mA maximum
Ripple	20 mVpp maximum	
Indicators	+ 24 Vdc (Green LED)	
	Fail (Red LED)	

ISOLATION		
Input signal, internal outputs and the external output are isolated between them	**PS302P**	**PS302P DC**
Between the outputs and ground	1000 Vrms	500 Vrms
Between input and output	2500 Vrms	1500 Vrms

FAILURE RELAY	
Type of Output	Solid State relay, normally closed (NC), isolated
Limits	6 W, 30 Vdc Max, 200 mA Max
Maximum Initial Contact Resistance	<13Ω
Overload Protection	Should be provided externally
Operation Time	5 ms maximum

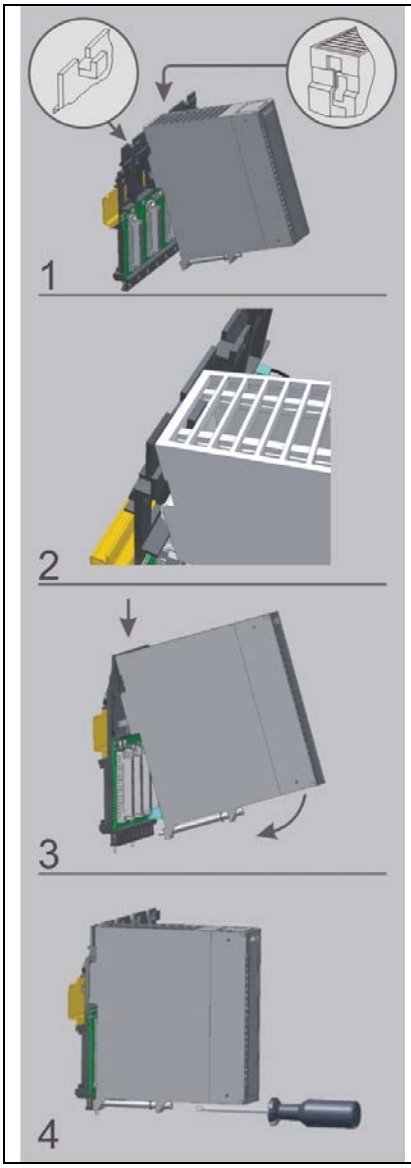
TEMPERATURE	
Operation	-10 ºC to 60 ºC (14 ºF to 140 ºF)
Storage	-30 ºC to 70 ºC

DIMENSIONS AND WEIGHT	
Dimensions (W x H x D)	39.9 x 137.0 x 141.5 mm; (1.57 x 5.39 x 5.57 in)
Weight	0.450 kg

NOTE
To meet the EMC standards requirements, the wires' length to the failure relay must be less than 30 meters. The power supply of activated load by the failure relay must not be from external network.

Installing Modules in the Rack

Follow the steps below to install a module in the rack.

	Attach the top of the module (with a 45° inclination) to the module support located on the upper part of the rack. Mounting detail. Push the module fixing it to the module connector. Next, fix the module to the rack using a screwdriver, and fasten the fixation screw at the bottom of the module.

Appendix A

smar	SRF – SERVICE REQUEST FORM	
	LC700 – User's Guide	**Proposal Nº:**

COMPANY INFORMATION

Company: _____

Unit: _____

Invoice: _____

COMMERCIAL CONTACT

Full Name: _____

Phone: _____ _____ _____ _____ **Fax:** _____

E-mail: _____

TECHNICAL CONTACT

Full Name: _____

Phone: _____ _____ _____ _____ **Extension:** _____

E-mail: _____

EQUIPMENT DATA

Model: _____

Serial Number: _____

PROCESS DATA

Process Type (Ex. boiler control)**:** _____

Operation Time: _____

Failure Date: _____

FAILURE DESCRIPTON

(Please, describe the failure. Can the error be reproduced? Is it repetitive?)

_____

_____

_____

_____

OBSERVATIONS

_____

_____

_____

USER INFORMATION

Company: _____

Contact: _____

Section: _____

Title: _____ **Signature:** _____

Phone: _____ _____ _____ _____ **Extension:** _____

E-mail: _____ **Date:** _____/ _____/ _____

For warranty or non-warranty repair, please contact your representative.
Further information about address and contacts can be found on **www.smar.com/contactus.asp**