

POWER SUPPLY FOR FIELDBUS





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.

DF52/DF60 - POWER SUPPLY FOR FIELDBUS

Description

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

DF52 (90 ~ 264 Vac)

DF60 (20 ~ 30 Vdc)

The **DF52** 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 over-current protection, ripple and fault indication, appropriated to power fieldbus elements.

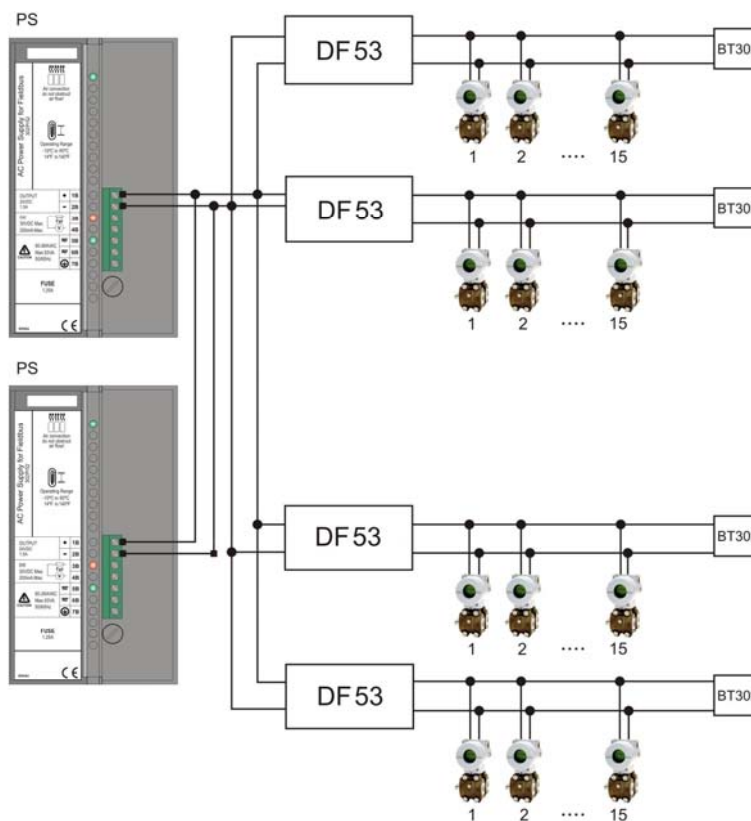
The **DF60** power supply unit is a non-intrinsically safe equipment with a DC input (20 to 30 Vdc) and a 24 Vdc output, isolated, with short-circuit and over-current protection, ripple and fault indication, appropriated to power fieldbus elements.

The interconnection of fieldbus elements to the **DF52/DF60** is indicated in figure bellow. There is no overshoot when it is switched on or off. The **DF52/DF60** can power on up to 4 fully loaded fieldbus networks.

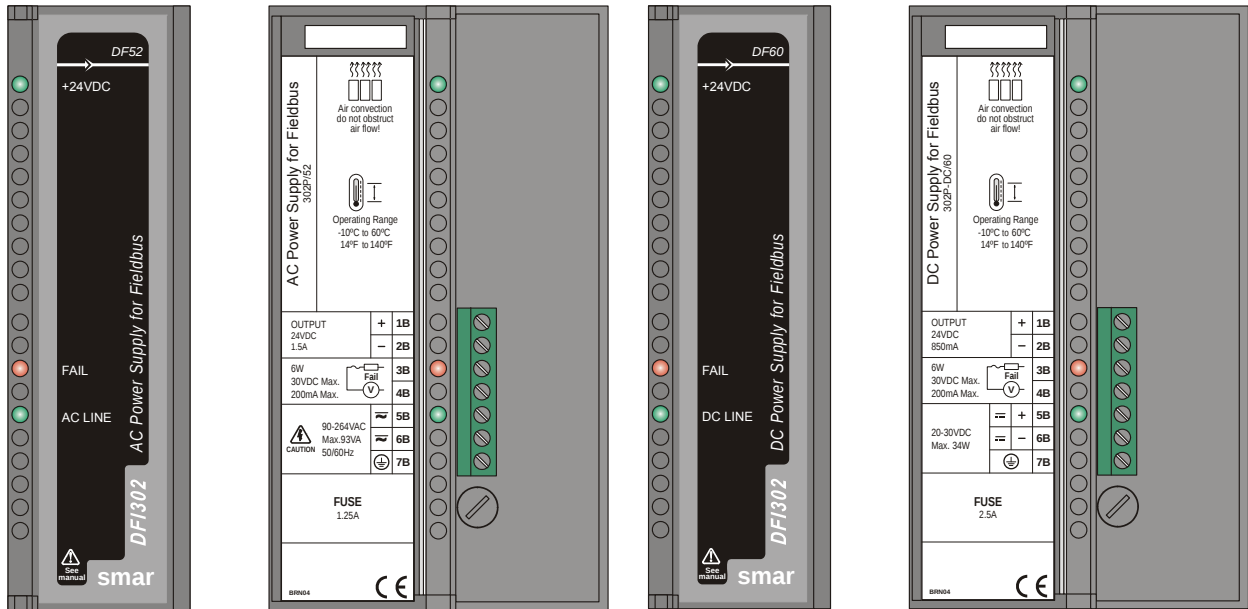
NOTE

The length of the cables that interconnect the DF52/DF60 to the DF53/DF98 modules must not exceed 3 meters.

If any abnormal condition occurs in the output like overloading or short circuit, the **DF52/DF60** internal switching is automatically switched off protecting its circuit. Upon the outputs return to normal conditions of operation, the circuit is automatically switched on.



DF52/DF60 allows redundancy without any component accomplished to their outputs.



Power Supply for Fieldbus: DF52/DF60

Technical Specifications

INPUTS DF52	
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 [$\Delta T < 640 \mu s$]
Maximum Consumption	93 VA
Indicator	AC LINE (green LED)

INPUTS DF60	
DC	20 to 30 Vdc
Maximum Inrush Current	< 24 A @ 30 Vdc [$\Delta T < 400 \mu s$]
Maximum Consumption	34 W
Indicator	DC LINE (green LED)

OUTPUTS		
Output	24 Vdc $\pm 1\%$	
Current	DF52	DF60
	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:	DF52	DF60
Among the Outputs and Ground	1000 Vrms	500 Vrms
Between the 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

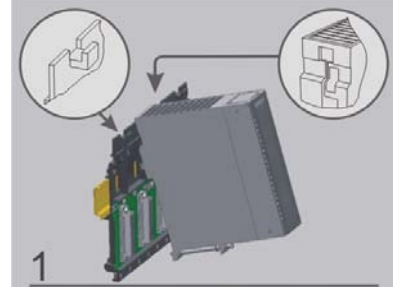
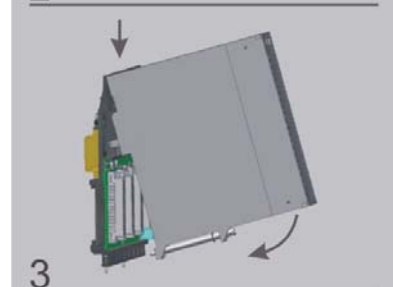
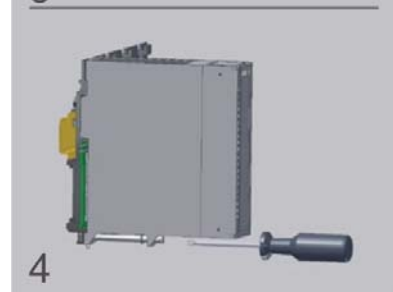
DIMENSIONS AND WEIGHT	
Dimensions (WxHxD)	39.9x137.0x141.5 mm (1.57x5.39x5.57 in)
Weight	0.450 kg

TEMPERATURE	
Operation	-10 °C to 60 °C (14 °F to 140 °F)
Storage	-30 °C to 70 °C

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.

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

Appendix

	SRF – SERVICE REQUEST FORM	
	DFI302 – Fieldbus Universal Bridge	Proposal N°:
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 DESCRIPTION		
(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		

