

DF67

smar
First in Fieldbus

APR / 06
DF67
VERSION 2.0

INSTALLATION MANUAL

Pulse Inputs Module High Frequency - AC



smar

web: www.smar.com

**Specifications and information are subject to change without notice.
For the latest updates, please visit the SMAR website above.**

BRAZIL

Smar Equipamentos Ind. Ltda.
Rua Dr. Antonio Furlan Jr., 1028
Sertãozinho SP 14170-480
Tel.: +55 16 3946-3510
Fax: +55 16 3946-3554
e-mail: insales@smar.com.br

GERMANY

Smar GmbH
Rheingastrasse 9
55545 Bad Kreuznach
Germany
Tel: + 49 671-794680
Fax: + 49 671-7946829
e-mail: infoservice@smar.de

USA

Smar International Corporation
6001 Stonington Street, Suite 100
Houston, TX 77040
Tel.: +1 713 849-2021
Fax: +1 713 849-2022
e-mail: sales@smar.com

CHINA

Smar China Corp.
3 Baishiqiao Road, Suite 30233
Beijing 100873, P.R.C.
Tel.: +86 10 6849-8643
Fax: +86-10-6894-0898
e-mail: info@smar.com.cn

MEXICO

Smar Mexico
Cerro de las Campanas #3 desp 119
Col. San Andrés Atenco
Tlalnepantla Edo. Del Méx - C.P. 54040
Tel.: +53 78 46 00 al 02
Fax: +53 78 46 03
e-mail: ventas@smar.com

Smar Laboratories Corporation

6001 Stonington Street, Suite 100
Houston, TX 77040
Tel.: +1 713 849-2021
Fax: +1 713 849-2022
e-mail: sales@smar.com

FRANCE

Smar France S. A. R. L.
42, rue du Pavé des Gardes
F-92370 Chaville
Tel.: +33 1 41 15-0220
Fax: +33 1 41 15-0219
e-mail: smar.am@wanadoo.fr

SINGAPORE

Smar Singapore Pte. Ltd.
315 Outram Road
#06-07, Tan Boon Liat Building
Singapore 169074
Tel.: +65 6324-0182
Fax: +65 6324-0183
e-mail: info@smar.com.sg

Smar Research Corporation

4250 Veterans Memorial Hwy. Suite 156
Holbrook, NY 11741
Tel: +1-631-737-3111
Fax: +1-631-737-3892
e-mail: sales@smarresearch.com

NETHERLANDS

Smar Nederland
De Oude Wereld 116
2408TM Alphen aan den Rijn
Tel: +31 172 494 922
Fax: +31 172 479 888
e-mail : info@smarnederland.nl

UNITED KINGDOM

Smar UK Ltd
3, Overhill Road - Cirencester
Gloucestershire -
GL7 2LG
Tel: +44 (0)797 0094138
Fax: +44 (0)797 4747502
e-mail: info@smarUK.co.uk

AVOIDING ELECTROSTATIC DISCHARGES



ATTENTION

Electrostatic discharges may damage semiconductors electronics components found in the boards. Generally, they may occur when these components or connectors pins in the modules and racks are touch, without using any appropriated equipment to prevent the electrostatic discharges.

It is extremely recommendable the following procedures:

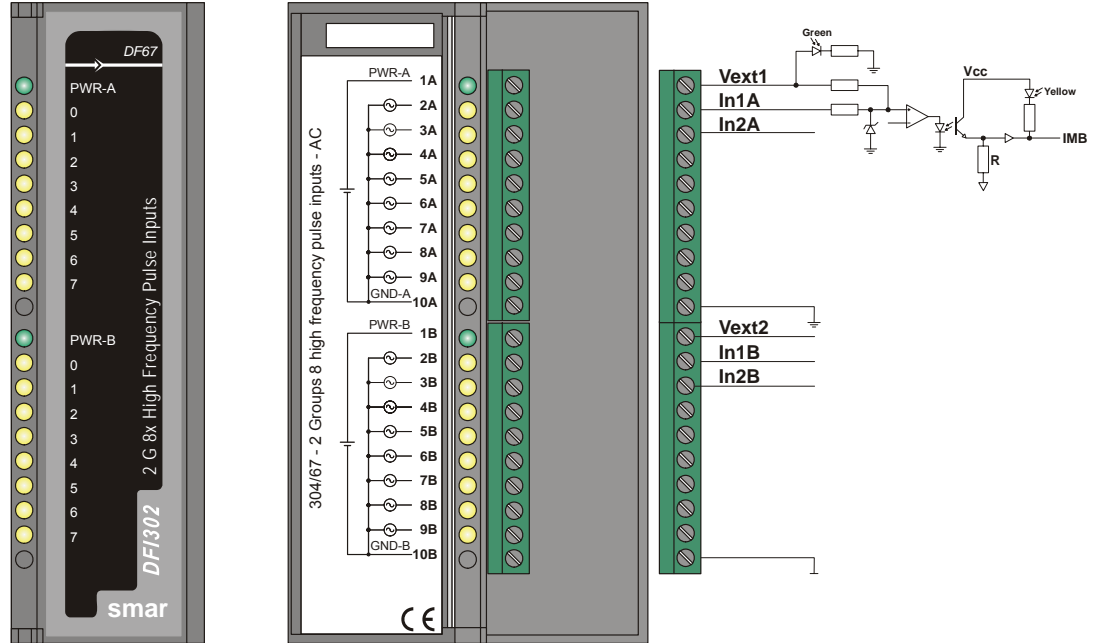
- Before handling the modules and racks, discharge the electrostatic charge found in the body through appropriated equipments or even touching grounded equipments;
- Avoid touching in the electronics components or in the connectors pins in the racks and modules.

DF67 - PULSE INPUTS MODULE HIGH FREQUENCY - AC

DF67 (2 Groups of 8 High Frequency (0 - 10KHz) AC Pulse Inputs)

Description

This module was designed to be connected to sensors that generate AC signals. It has 2 groups with 8 inputs to count and store pulses until the processor module reads them. The DF67 can read AC frequencies ranging from 0 to 10 KHz. A single pole filter cuts off around 20 KHz in order to eliminate high frequency noises.



NOTE

In order to attend EMC standards, use shielded cables in signals inputs (ground the shield in the panel only in one side of the cable) and cables less then 30 meters for power source inputs.

IMPORTANT

This module has 12-bit counters to accumulate up to 4096 pulses, for each one of 16 channels, before an overflow occurs. Therefore, considering the maximum operation frequency, it has the following minimum overflow time:

- DF67 : 4096 pulses / 10000 Hz = 0,4096 s

The system macro cycle must be lower than the pulse counter module overflow time.

Technical Specifications

| ARCHITECTURE | |
|----------------------------|----|
| Number of inputs | 16 |
| Number of groups | 2 |
| Number of points per group | 8 |

| ISOLATION | |
|-------------------------------------|----------------|
| The groups are isolated separately. | |
| Optical Isolation | Up to 5000 Vac |

| EXTERNAL POWER | |
|-------------------------------|----------------|
| Source | 20 – 30 Vdc |
| Typical Consumption per Group | 12 mA @ 24 Vdc |
| Indicator of Source | Green LED |

| INTERNAL POWER | |
|--------------------------------|--------|
| Provided by the IMB bus (5Vdc) | 130 mA |
| Maximum Dissipation | 650 mW |
| Indicator of source | None |

| INPUTS | |
|-------------------------------|------------------------|
| Maximum Input Voltage | $V_{in} = 30 V_p$ (AC) |
| ON State Level (True Logic) | $V_{in} < -1.5 V$ |
| OFF State Level (False Logic) | $V_{in} > +1.5 V$ |
| Status Display | Yellow LED |
| Typical Impedance | 3K9 Ω |
| Maximum Input Frequency | 10 KHz |

| DIMENSION AND WEIGHT | |
|-----------------------|--|
| Dimension (W x D x H) | 39.9 x 137.0 x 141.5mm; (1.57 x 5.39 x 5.57 in) |
| Weight | 0.342 kg |

| CABLES | |
|-----------|-------------------------------|
| One wire | 14 AWG (2 mm ²) |
| Two wires | 20 AWG (0.5 mm ²) |

