

smar

FIRST IN FIELDBUS

DF28 / DF69

MAY / 02

DF28 / DF69

VERSION 1.0

INSTALLATION MANUAL

# HIGH DENSITY RELAY OUTPUT MODULE



# smar

**web: [www.smar.com](http://www.smar.com)**

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

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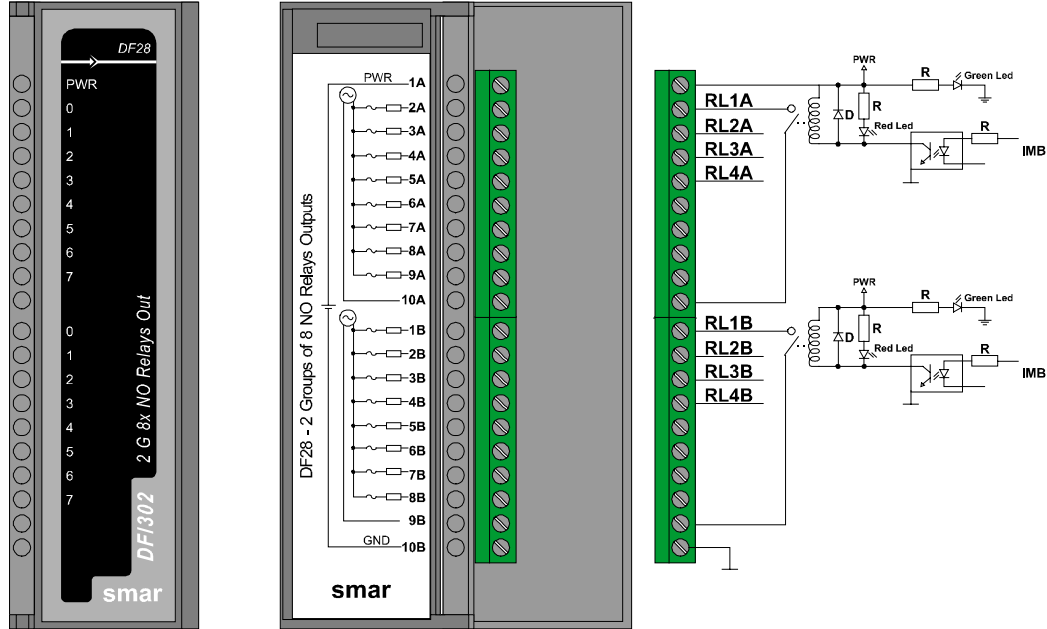
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## High Density Relay Output Module DF28/DF69

DF28 (2 groups of 8 NO relay outputs)  
 DF69 (2 groups of 8 NO relay outputs with a RC circuit)

### Description

This high density relay output Module is designed to switch pilot lamps, valves, as well as relay coils up to 5 A per output. The relays can drive loads ranging from 20 to 110 Vdc or from 20 to 250 Vac. Every group of 8 relays has a common terminal and just one screw terminal is reserved for each relay output.



### Technical specifications

Architecture	
Number of Outputs	16
Number of Groups	2
Number of Points per Group	8

Isolation	
The driver for each relays is optically Isolated from IMB up to:	5000 Vac
Each group of 8 relays has one common contact	

External Power	
Voltage Source for each Group	20 – 30 Vdc
Maximum Current per Group	90 mA @ 24 Vdc
Maximum Consumption per Point	11.3 mA @ 24 Vdc
Indicator of Source per Group	Green LED

<b>Internal Power</b>	
Provided by the IMB bus	5 Vdc, @ 30 mA, Maximum
Total Maximum Dissipation	0.15 W
Indicator of source	None

<b>Outputs</b>	
Vac Range	20 – 250 Vac
Vdc Range	20 – 110 Vdc
Maximum Current for 250 Vac	5A ( resistive); 2A (inductive)
Maximum Current for 30 Vdc	5A ( resistive); 2A (inductive)
Maximum total current per group	10 A
Initial contact resistance maximum	100 mΩ
Status display	Yellow LED
Indicator Logic	ON if the relay coil is active
Leakage Current	DF28: 0 DF69: 500 μA @ 100 Vac
Over load protection per output	Should be provided externally

<b>Switching Information</b>	
Operate Time	10 ms maximum
Release Time	10 ms maximum

<b>Electrical service life</b>	
Mechanic Switching Cycles	20.000.000 operations minimum @ 5 to 250 Vac

<b>Dimensions and Weight</b>	
Dimensions (WxHxD)	39.9x137.0x141.5 mm; (1.57x5.39x5.57 in)
Weight	0.301 kg

<b>Wire</b>	
One wire	14 AWG (2 mm <sup>2</sup> )
Two wires	20 AWG (0.5 mm <sup>2</sup> )

<b>NOTE</b>	
To increase the service life of the contacts and to protect the DF28 module from potential reverse voltage damage, externally connect a clamping diode in parallel with each inductive DC load or connect an RC snubber circuit in parallel with each inductive AC load.	