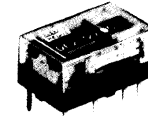


- High contact reliability
- 8cN bifurcated contact force
- Au/Ag bifurcated contact
- 1-2 μ V thermovoltage
- For switching dry loads or power
- Protection class IP67

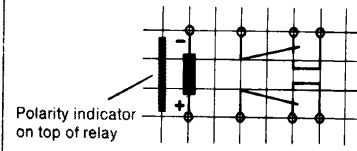


Weight 2.4 g

Data sheet

Characteristics		
Contact arrangement		2CO
Contact material		Gold-clad silver
Volumetric resistance	m Ω	<50
Max. switching current	A	1
Max. rated current	A	1
Max. switching voltage	V	125
Max. switching power (resistive load)	W/VA	30/30
Nominal operating power	mW	200
Operational life ¹⁾ : mech. (180 ops./min.)	sw. ops.	5 · 10 ⁶
1 A/30 VDC, 0.5 A/30 VAC (20 ops./min.)	sw. ops.	10 ⁵
Breakdown voltage: open contact	V _{rms} ~	500
contact-coil	V _{rms} ~	1000
Pick up-, drop-out time	ms	3/1
Coil temperature rise max. (at nominal voltage)	°C	35
Ambient temperature	°C	-40 ... +70
Shock-, vibration resistance	g, g/Hz	30, 10/55
Insulation resistance (at 500 VDC)	M Ω	> 100
Non MBB operation with the contacts connected in parallel		

Connection diagram

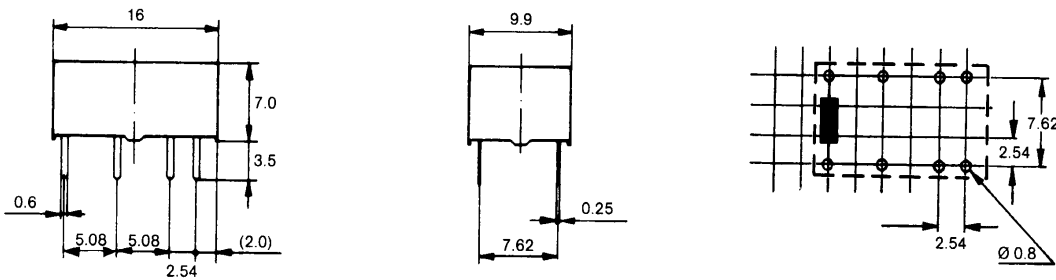


Bottom view

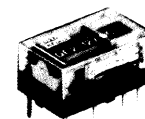
Coil data

Type & rated voltage V	Pick-up voltage at 20°C V	Drop-out voltage at 20°C V	Max. allowable voltage at 70°C V	Resistance \pm 10% at 20°C Ω
DF2-DC 4.5V-H1	2.93	0.45	5.4	101
DF2-DC 9V-H2	5.85	0.9	10.8	405
DF2-DC 12V-H3	7.8	1.2	14.4	720
DF2-DC 20V-H4	13.0	2.0	24.0	2000
DF2-DC 24V-H5	15.6	2.4	28.8	2880

Dimension drawing and pcb hole layout



- High contact reliability
- 8cN bifurcated contact force
- Au/Ag bifurcated contact
- 1-2 μ V thermovoltage
- For switching dry loads or power
- Protection class IP67
- Approvals: UL, CSA



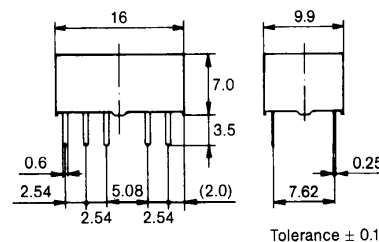
Weight 2.4 g

Data sheet

Characteristics

Contact arrangement	2CO	Capacitance cont./cont.-earth	pF	1.5/2.5
Contact material	Ag/Au plated	Pick up-/drop out-/bounce time	ms	3/2/1
Min. contact force	cN 8	Temperature limits	C	-40/+100
Contact-/volumetric resistance	m Ω 20/50	Shock-/vibration resistance	g.g/Hz	30, 10/55
Max. make-/rated-/break current	A -/1/1	Insulation resistance (at 500 VDC)	Ω	10 ⁸
Max. switched voltage	V-/V~ 125	Test voltage contact-/contact-coil	V _{rms}	500/1000
Max. switched load	W/VA 30/30	Max. switching frequency	Hz	50
Operational life ¹⁾ 1A, 30 VDC	sw. ops 10 ⁵	Thermal resistance	K/W	123
mech. monostable sw. ops	5 x 10 ⁶	Degree of protection		IP 67
mech. latching sw. ops	10 ⁶	Approvals		UL, CSA

Dimensions

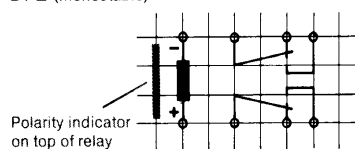


Coil data

Rated voltage V	DF2 monostable				DF2-L bistable 1-coil			DF2-L2 bistable 2-coils		
	Pick-up voltage at 25°C V	Drop-out voltage at 25°C V	Permissible voltage at 40°C V	Coil-resistance $\pm 10\%$ Ω	Pick-up voltage at 25°C V	Permissible voltage at 40°C V	Coil-resistance $\pm 10\%$ Ω	Pick-up voltage at 25°C V	Permissible voltage at 40°C V	Coil-resistance $\pm 10\%$ per coil Ω
1.5	1.05	0.15	2.6	11.25	1.2	3.6	22.5	1.2	2.6	11.25
3	2.1	0.3	5.1	45	2.4	7.2	90	2.4	5.1	45
5	3.5	0.5	8.5	125	4.0	12.0	250	4.0	8.5	125
6	4.2	0.6	10.2	180	4.8	14.4	360	4.8	10.2	180
9	6.3	0.9	15.3	405	7.2	21.6	810	7.2	15.3	405
12	8.4	1.2	20.4	720	9.6	28.8	1440	9.6	20.4	720
24	16.8	2.4	40.7	2880	19.2	57.6	5760	19.2	40.7	2880

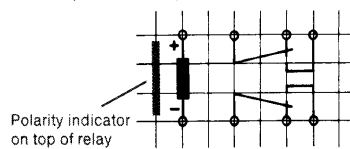
Connection diagram (viewed from wiring side; take note of polarity)

DF2 (monostable)



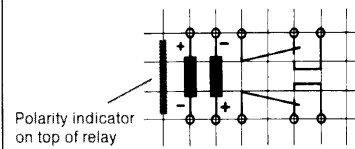
View from pin side of de-energised relay

DF2-L (bistable 1-coil)

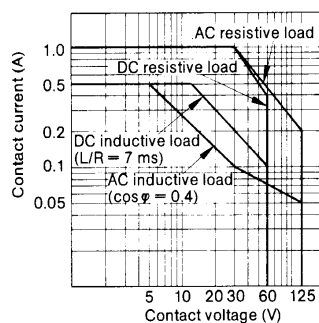


Latching relay with 1 or 2 coils. Contact position shown after (or during) excitation with polarity shown. Changeover by impulse (> 5 ms) or continuous excitation of one coil with opposite polarity or with C-switching circuit.

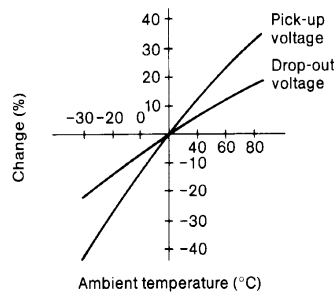
DF2-L2 (bistable 2-coils)



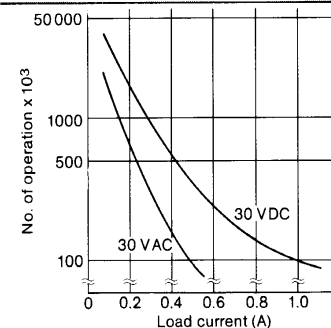
Maximum switching capacity



Temperature dependence of pick-up and drop-out voltage



Life curve ¹⁾ (resistive load)



Ordering example

Type DF2-L - 24V
Coil rated voltage

Prices (excl VAT) in £ per piece

	1	50	100	500	1000
DF2- 1.5...24 V					
DF2-L- 1.5...24 V					
DF2-L2- 1.5...24 V					

Excitation voltage ripple should be maintained below 5% by use of appropriate smoothing.
If UL/CSA approved devices are required this must be stated at time of ordering. Refer to SDS for further technical information.
Suitable for most common washing methods except ultrasonic cleaning.
May also be supplied with "AROMATI", "MATSUSHITA" or "NATIONAL" brand names. Refer to SDS for further information.
Strong external magnetic fields influence relay data.
¹⁾ Data concerning operational life is based on resistive loads and ambient temperature of 20-30°C.

operating features is available on request. We reserve the right to make alterations and changes to specifications

Matsushita Automation Controls Ltd.
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