email: sales@impulseautomation.co.uk
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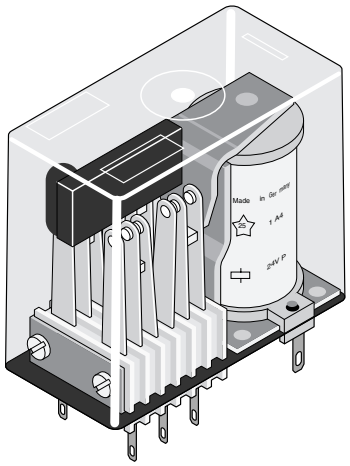
Industrial Switching Relay I

Industrial Switching Relay I

- Standard type /, specify in order
- Twin contacts for high contact making reliability
- 2, 4, 6 or 8 C/O possible
- Large contact gap, switching voltage therefore 400 V
- Supplied with blow-out magnet for high DC loads



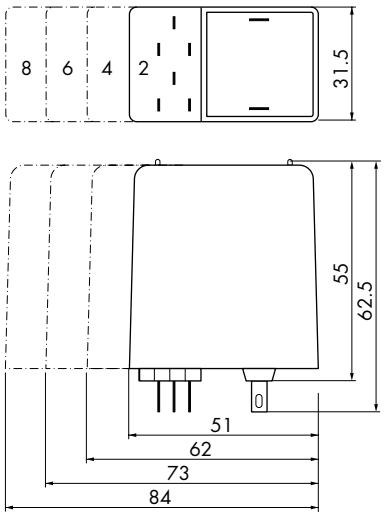
Order Code

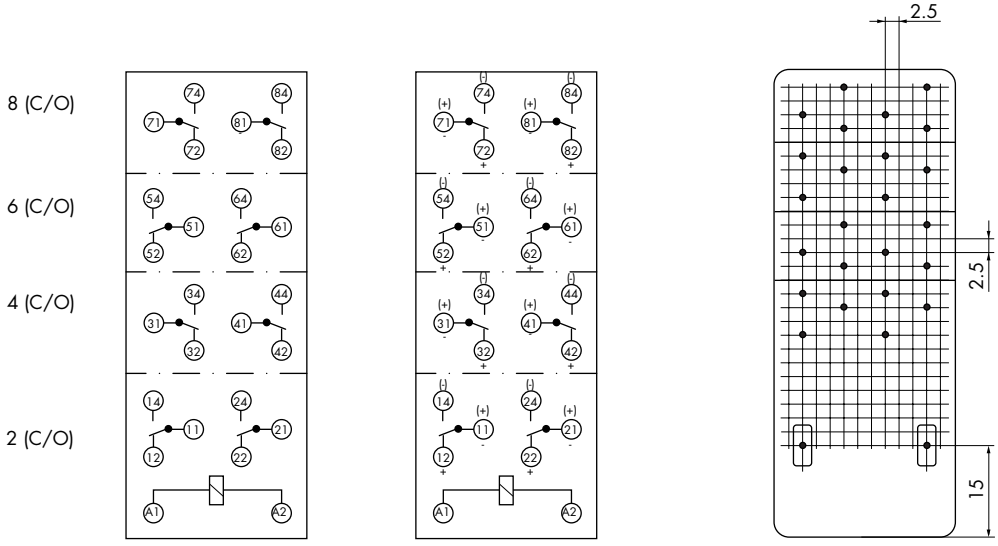
Order code	I	A	4		–	24 V	DC	
Type of relay	I							
Model								
A Plug-in type for socket or soldered connection		A						
C For 2.8 mm connector, B-extension required for EN-mounting		C						
G For printed circuit		G						
Contact arrangement								
2 C/O			2					
4 C/O			4					
6 C/O (for DC only)			6					
8 C/O (for DC only)			8					
Contact material, type of contact								
- Hard silver (no code letter)				-				
C AgCdO				C				
F Twin contacts hard silver				F				
G Twin contacts hard silver gold-plated				G				
Nominal operation coil voltage (see coil data)								
24 V						24 V		
Coil current type								
DC Direct current							DC	
AC Alternating current 50 Hz (60 Hz on request) for IA2 and IA4 only							AC	
Extensions								
- None (no code letter)								-
M Blow-out magnet								M
B Quick-action fastening for rail EN50022-35 x 7.5 (combination M/B not for IA2/C2)								B

Contact Data

	I			
Contact arrangement	2, 4, 6, 8 C/O			
Type of contact	Single contact		Twin contact	
Contact material	hard silver	AgCdO	hard silver	hard silver gold-plated
Nominal contact current	6 A		4 A	
Inrush current	≤ 20 A		≤ 10 A	
Nominal contact voltage	400 VAC, 250 V (with 8 C/O)			
Max. switching capacity (resistive)	3000 VA, 2000 VA (with 8 C/O)		1200 VA	
Min. switching capacity	50 mA / 20 VDC	50 mA / 20 VDC	20 mA / 10 VDC	1 mA / 100 mV

Dimensions, Connection Diagram(s)





I I ... M IG

General Data

	I	
Pull-in-time	approx. 15 ms	
Drop-out time	approx. 10 ms	
Bounce time	approx. 6 ms	
Mechanical service life	> 20 x 10^6 switching cycles DC > 15 x 10^6 switching cycles AC	
Test voltage		
Coil - contact	2500 VAC	
(C/O) - (C/O)	2500 VAC	
Contact - contact	1000 VAC	
Insulation group VDE 0110b/2.79	C250, B380	
Ambient temperature	-25 °C to +60 °C DC -25 °C to +40 °C AC	
Vibration resistance (30 - 100 Hz)	> 2 g	
Weight	approx. 140 g to 180 g	
Operating range	DC Class 1 (0.8 - 1.1 U_N)	AC, 50 Hz Class 1 (0.8 - 1.1 U_N)
Pull-in after coil excitation with U_N at T_U	20 °C	
Drop-out	> 0.05 U_N	> 0.15 U_N

Coil Data

Coil voltage DC*	IA2 Nom. operation coil power appr. 0.9 W Pull-in power appr. 0.5 W		Coil voltage AC, 50 Hz*	IA2 Nom. operation coil power appr. 3.5 VA Inrush current appr.1.7 x nominal current	
Nominal voltage (V)	Nom. resistance (Ω)	Nominal current (mA)	Nominal voltage (V)	Nom. resistance (Ω)	Nominal current (mA)
12	208	58	12	7.7	250
24	702	34	24	37	100
40	1980	20	42	106	67
60	4030	15	60	208	50
110	12800	8.6	110	853	22
220	48700	4.5	230	3120	13

*Other voltages on request

Coil voltage DC*	IA4 Nom. operation coil power appr. 1.7 W Pull-in power appr. 0.8 W		Coil voltage AC, 50 Hz*	IA4 Nom. operation coil power appr. 5 VA Inrush current appr. 1.7 x nominal current	
Nominal voltage (V)	Nom. resistance (Ω)	Nominal current (mA)	Nominal voltage (V)	Nom. resistance (Ω)	Nominal current (mA)
12	88	140	12	5	420
24	363	66	24	22	210
40	853	47	42	71	110
60	1980	30	60	139	80
110	8010	14	110	458	46
220	30500	7.2	230	2350	21

*Other voltages on request

Coil voltage DC*	IA6 Nom. operation coil power appr. 3.3 W Pull-in power appr. 1.4 W		Coil voltage DC*	IA8 Nom. operation coil power appr. 3.3 W Pull-in power appr. 1.4 W	
Nominal voltage (V)	Nom. resistance (Ω)	Nominal current (mA)	Nominal voltage (V)	Nom. resistance (Ω)	Nominal current (mA)
12	47	260	12	47	260
24	164	150	24	164	150
40	458	87	40	458	87
60	1060	57	60	1060	57
110	4030	27	110	4030	27
220	12800	17	220	12800	17

*Other voltages on request

Electrical Service Life

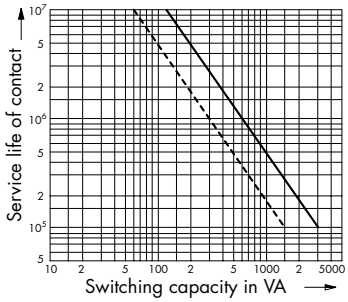
Electrical Service Life AC

90 % operating

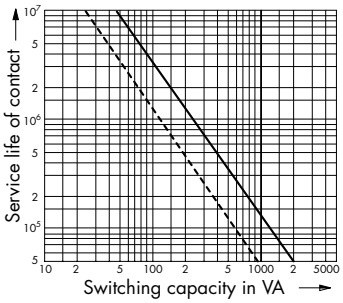
——— resistive load

- - - - - inductive load

cos φ = 0.4 ... 0.7



2, 4, 6 C/O



8 C/O

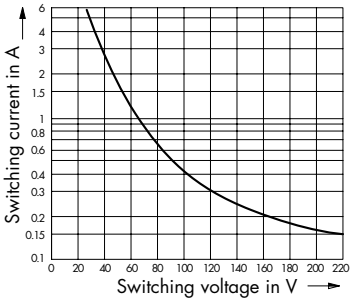
Switching Capability DC

without blow-out magnet

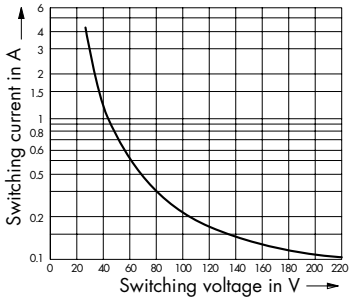
Below limiting characteristic: service life of contacts

1 x 10^6 switching cycles (90 % operating)

resistive load



2, 4, 6 C/O



8 C/O

Electrical Service Life DC

with blow-out magnet, resistive load with 2, 4, 6 and 8 C/O

Switching current (A)	Voltage (V)	Service life switching cycles approx.	Voltage (V)	Service life switching cycles approx.	Voltage (V)	Service life switching cycles approx.
1	24	-	110	0.7 x 10^6	220	0.2 x10^6
2		1.5 x10^6		0.5 x10^6		2.5 x10^6
4		0.8 x10^6		2.0 x10^6		2.5 x10^6
6		-		3.0 x10^6		0.6 x10^6
8*		2.0 x10^6		-		0.1 x10^6
10*		2.0 x10^6		0.1 x10^6		
12*		0.3 x10^6				

* not admitted for continuous current