

Card SN Relay V23030

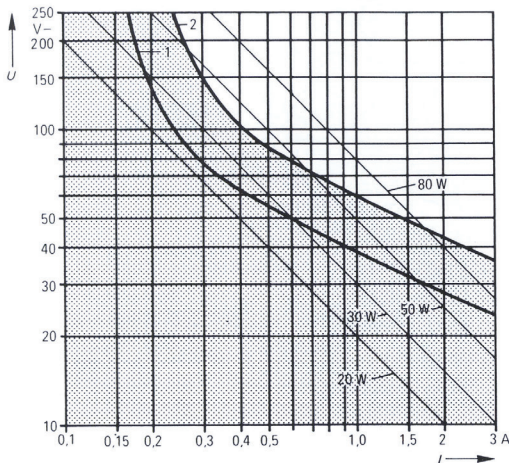
- Low profile, therefore particularly suited for flat pack components grouping
- For relays with 1 or 2 form C (CO) contacts:
 - creepage and clearance distances between contacts and frame >5mm or >10mm (depending on the relay version)
 - dielectric strength between contacts and frame 4kV_{rms} or 6kV_{rms}
- PTB certificate for safe electrical separation between intrinsically safe and not intrinsically safe circuit

Typical applications
measuring and control systems, alarm and security equipment, road traffic and railway signaling systems



Contact Data	A104	A106	A204	A206
Contact arrangement	4 form C, (4 CO)	6 form C, (6 CO)	4 form C, (4 CO)	6 form C, (6 CO)
Max. switching voltage	250VDC 250VAC	250VDC 250VAC	30VDC 36VAC	30VDC 36VAC
Limiting continuous current				
≤50°C ambient	2A	2A	2A	2A
≤75°C ambient	1A	1A	1A	1A
Limiting making/breaking current				
	3A ¹⁾	3A ¹⁾	0.2A	0.2A
Contact material	Ag, Au-flashed	Ag, Au-flashed	Gold F ²⁾	Gold F ²⁾
Contact style	bifurcated contacts			
Frequency of operation, without load	max. 30 operations/s			
Operate / release time approx.	8/2ms			

Max. DC breaking capacity (contacts Ag, gold flashed)



Curve 1: arc extinguished within contact transit period (limit curve I)
Curve 2: safe breaking, arc extinguished (limit curve II)

Electrical endurance

Type	Load	Operations
Ag, gold-flashed	2.4A, 24VDC, resistive	appr. 1x10 ⁶
Ag, gold-flashed	3A, 24VDC, resistive	appr. 0.3x10 ⁶
Ag, gold-flashed	1.35A, 30VDC, resistive	appr. 6x10 ⁶
Ag, gold-flashed	0.85A, 40VDC, resistive	appr. 2x10 ⁷
Ag, gold-flashed	0.36A, 60VDC, resistive	appr. 8x10 ⁷
Ag, gold-flashed	0.21A, 110VDC, resistive	appr. 10x10 ⁷
Ag, gold-flashed	2.4A, 24VDC, resistive+100µH3)	appr. 1x10 ⁶
Ag, gold-flashed	0.6A, 60VDC, resistive+100µH3)	appr. 10x10 ⁶
Ag, gold-flashed	0.24A, 110VDC, resistive+100µH3)	40x10 ⁶

Contact Data (continued)

Mechanical endurance	appr. 10 ⁸ operations
1) The current of 3 A for max 4s at 10% on-time.	
2) Gold F on request only	
3) Self inductance in accordance with IEC 255-0-20	

Coil Data

Magnetic system	neutral, monostable
Coil voltage range	5 to 60VDC
Max. coil temperature	110°C
Thermal resistance	35K/W

Coil versions, monostable

Coil code	Rated voltage VDC	Operate voltage VDC	Limiting Voltage VDC	Coil resistance Ω±10% ⁴⁾	Rated coil power mW
032	5	3.3/4.0	10.8	38	658
012	6	3.9/4.6	12.4	50	720
017	12	7.8/9.5	24.0	185	778
021	24	15.5/18.5	47.0	730	789
026	48	32/37	88.0	2700 ⁴⁾	853
014	60	38/45	109.0	4100 ⁴⁾	878

4) Coil resistance ±15%

All figures are given for coil without pre-energization, at ambient temperature +23°C

The operating voltage limits U_I and U_{II} depend on temperature according to the following formula:

$$U_{I \text{ t amb}} = k_i \cdot U_i \text{ 20}^\circ\text{C}, U_{II \text{ t tu}} = k_{II} \cdot U_{II} \text{ 20}^\circ\text{C}; t_{\text{amb}} = \text{ambient temperature,}$$

U_{I t amb} = minimum voltage at ambient temperature,

U_{II t amb} = maximum voltage at ambient temperature, k_i and k_{II} are factors.

t _{amb}	20°C	30°C	40°C	50°C	60°C	70°C
k _i	1	1.04	1.085	1.13	1.17	1.21
k _{II}	1	0.93	0.86	0.79	0.7	0.6

Insulation Data

Initial dielectric strength	
between coil and frame	500V _{rms}
between contact and contact	1000V _{rms}
between contact and frame	1000V _{rms}
between contact and coil	1000V _{rms}

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Other Data

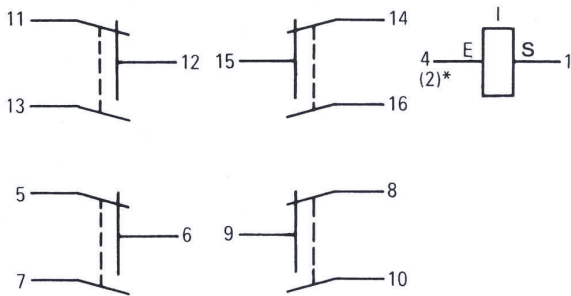
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

Ambient temperature	-40 to +70°C
Category of environmental protection IEC 61810	RT I - dust protected, RT III - immersion cleanable
Degree of protection, IEC 60529	IP30, IP67
Terminal type	PCB-THT
Weight	
V23030-Axxx	approx. 12g
V23030-Cxxx	approx. 30g
V23030-Hxxx	approx. 25g
V23030-Jxxx	approx. 30g
Ultrasonic cleaning	not recommended
Packaging unit	5 pcs.

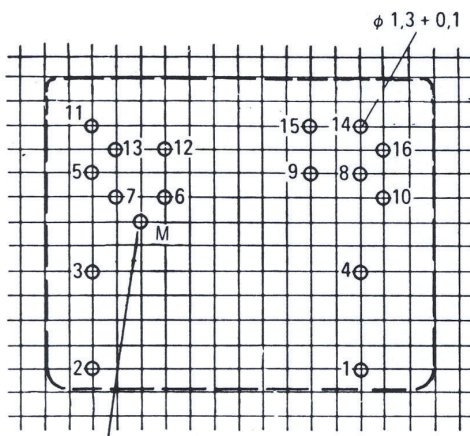
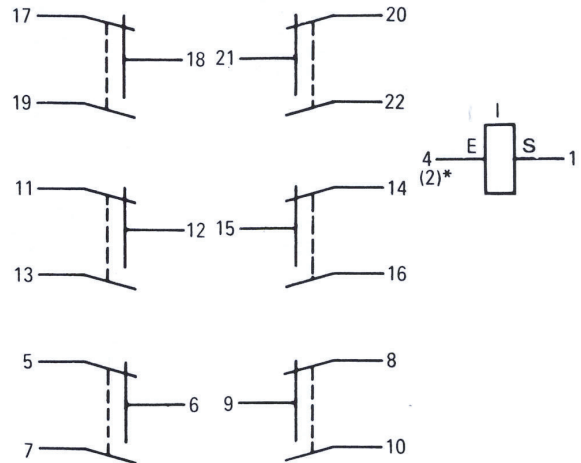
PCB layout / terminal assignment

Bottom view on solder pins

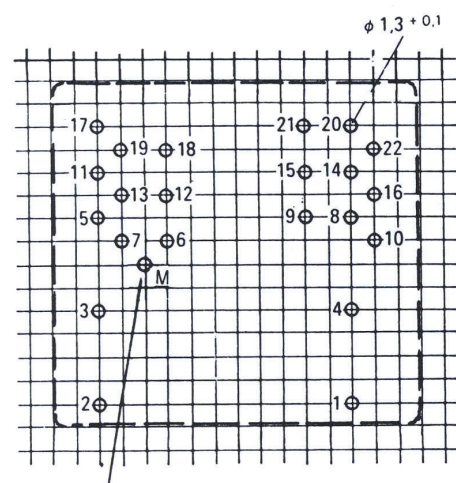
4 form C (4 CO) contacts
V23030-Axxxx-xx04
V23030-Hxxxx-xx04



6 form C (6 CO) contacts
V23030-Axxxx-xx04
V23030-Hxxxx-xx04



Hole M required only for relays with earth connection.

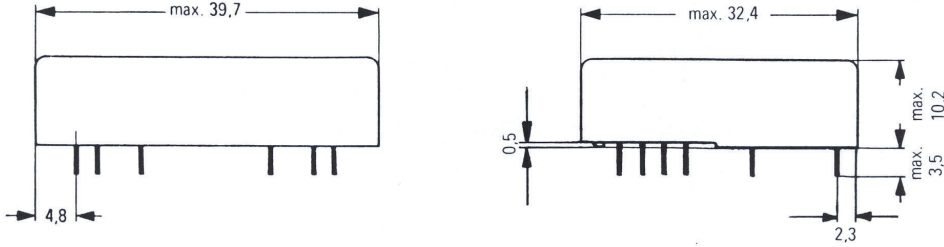


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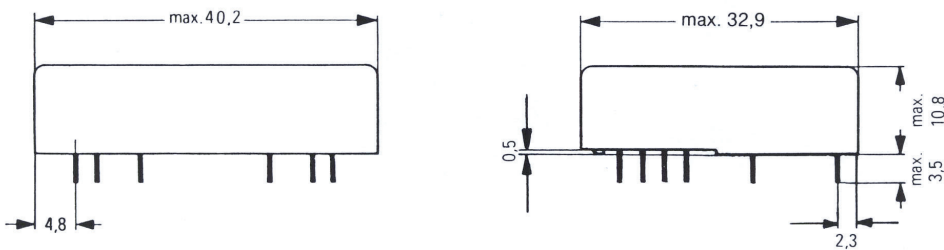
Card SN Relay V23030 (Continued)

Dimensions

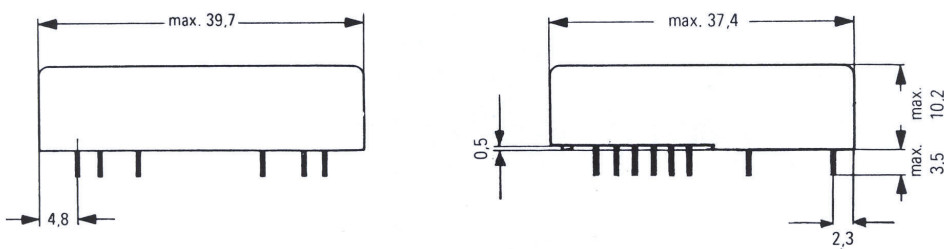
V23030-Axxx, 4 form C (4 CO) contacts, dust protected



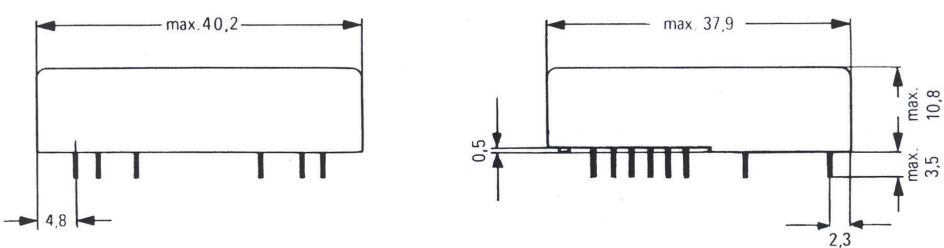
V23030-Hxxx, 4 form C (4 CO) contacts, immersion cleanable



V23030-Cxxx, 6 form C (6 CO) contacts, dust protected



V23030-Jxxx, 6 form C (6 CO) contacts, immersion cleanable



Card SN Relay V23030 (Continued)

Product code structure		Typical product code	V23030	-A	1	021	-A1	04
Type		Card SN Relay						
Contact arrangement		A 4 form C, 4 CO, dust proof C 6 form C, 6 CO, dust proof H 4 form C, 4 CO, immersion cleanable J 6 form C, 6 CO, immersion cleanable						
Earth connection		1 Without earth connection 2 With earth connection						
Coils		Coil code: please refer to coil versions table						
Contact material		A1 Silver, gold flashed A2 Gold F						
Contact arrangement		04 4 form C, 4 CO 06 6 form C, 6 CO						

Other types on request

Product code	Version	Coil	Arrangement	Enclosure	Part number
V23030-A1xxx, 4 pole, without earth connection, dust protected					
V23030-A1017-A104	4 pole, without earth conn.	12VDC	4 form C (4 CO)	Dust protected	3-1393801-6
V23030-A1021-A104	4 pole, without earth conn.	24VDC	4 form C (4 CO)	Dust protected	3-1393801-8
V23030-A1026-A104	4 pole, without earth conn.	48VDC	4 form C (4 CO)	Dust protected	4-1393801-1
V23030-A2xxx, 4 pole, with earth connection, dust protected					
V23030-A2012-A104	4 pole, with earth conn.	6VDC	4 form C (4 CO)	Dust protected	4-1393801-4
V23030-A2017-A104	4 pole, with earth conn.	12VDC	4 form C (4 CO)	Dust protected	4-1393801-8
V23030-A2017-A204	4 pole, with earth conn.	12VDC	4 form C (4 CO)	Dust protected	4-1393801-9
V23030-A2021-A104	4 pole, with earth conn.	24VDC	4 form C (4 CO)	Dust protected	5-1393801-0
V23030-A2026-A104	4 pole, with earth conn.	48VDC	4 form C (4 CO)	Dust protected	5-1393801-2
V23030-A2014-A104	4 pole, with earth conn.	60VDC	4 form C (4 CO)	Dust protected	4-1393801-6
V23030-C1xxx, 6 pole, without earth connection, dust protected					
V23030-C1017-A104	6 pole, without earth conn.	12VDC	6 form C (6 CO)	Dust protected	6-1393801-2
V23030-C1021-A104	6 pole, without earth conn.	24VDC	6 form C (6 CO)	Dust protected	6-1393801-3
V23030-C1021-A204	6 pole, without earth conn.	24VDC	6 form C (6 CO)	Dust protected	6-1393801-4
V23030-C1026-A104	6 pole, without earth conn.	48VDC	6 form C (6 CO)	Dust protected	6-1393801-7
V23030-C2xxx, 6 pole, with earth connection, dust protected					
V23030-C2012-A104	6 pole, with earth conn.	6VDC	6 form C (6 CO)	Dust protected	6-1393801-9
V23030-C2017-A104	6 pole, with earth conn.	12VDC	6 form C (6 CO)	Dust protected	7-1393801-1
V23030-C2017-A204	6 pole, with earth conn.	12VDC	6 form C (6 CO)	Dust protected	7-1393801-2
V23030-C2021-A104	6 pole, with earth conn.	24VDC	6 form C (6 CO)	Dust protected	7-1393801-3
V23030-C2014-A104	6 pole, with earth conn.	60VDC	6 form C (6 CO)	Dust protected	7-1393801-0