

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}

Typical applications

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

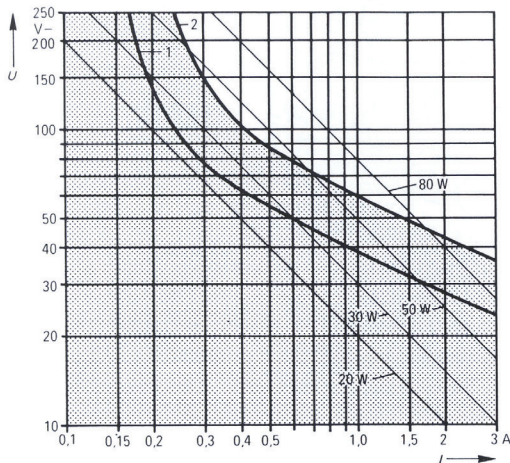


Contact Data	A104	A106	A204	A206
Contact arrangement	4 form C, (4 CO)	6 form C, (6 CO)	4 form C, (4 CO)	6 form C, (6 CO)
Max. switching voltage	250VDC 250VAC	250VDC 250VAC	30VDC 36VAC	30VDC 36VAC
Limiting continuous current				
≤50°C ambient	2A	2A	2A	2A
≤75°C ambient	1A	1A	1A	1A
Limiting making/breaking 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 aapprox. 10⁸ 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 4/6 pole	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:

$U_{I \text{ tamb}} = k_I \cdot U_I 20^\circ\text{C}$, $U_{II \text{ tu}} = k_{II} \cdot U_{II} 20^\circ\text{C}$; t_{amb} = ambient temperature,

$U_{I \text{ tamb}}$ = minimum voltage at ambient temperature,

$U_{II \text{ tamb}}$ = 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}

Card SN Relay V23030 (Continued)

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.

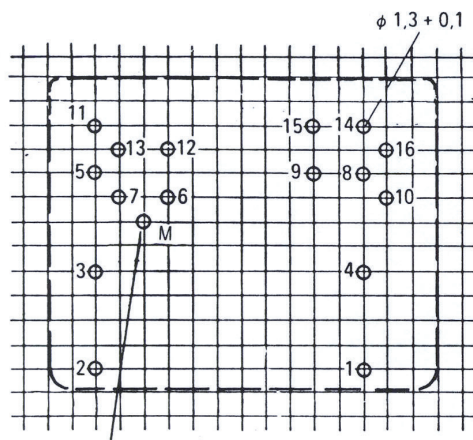
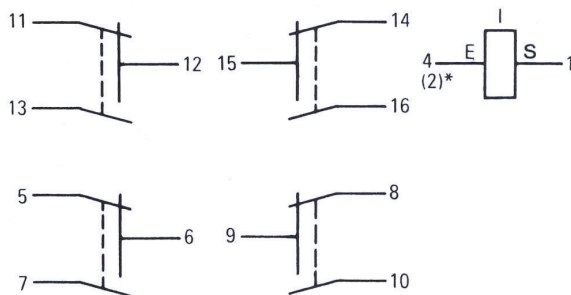
PCB layout / terminal assignment

Bottom view on solder pins

4 form C (4 CO) contacts

V23030-Axxxx-xx04

V23030-Hxxxx-xx04

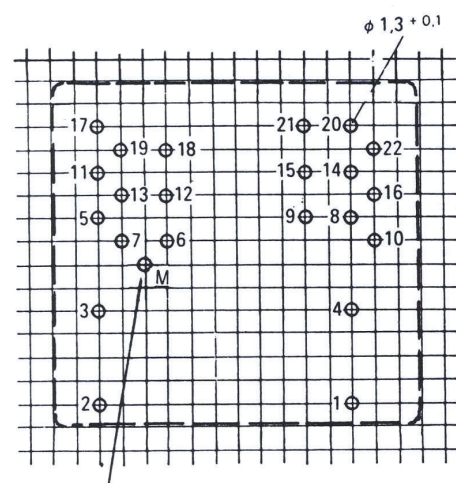
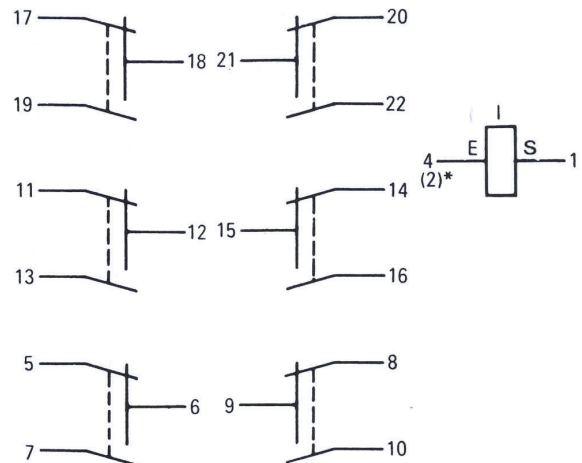


Hole M required only for relays with earth connection.

6 form C (6 CO) contacts

V23030-Axxxx-xx04

V23030-Hxxxx-xx04

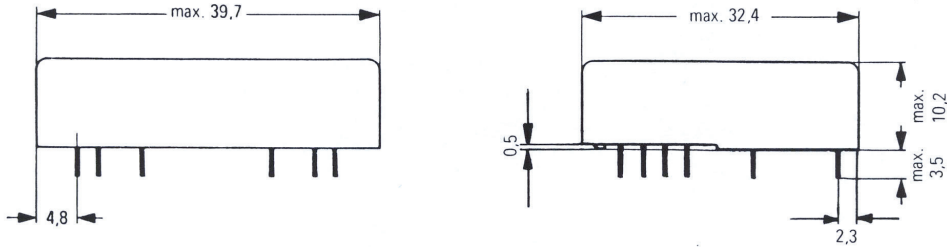


Hole M required only for relays with earth connection.

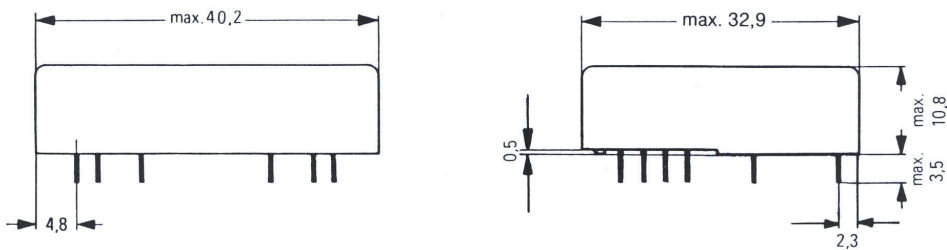
Card SN Relay V23030 (Continued)

Dimensions

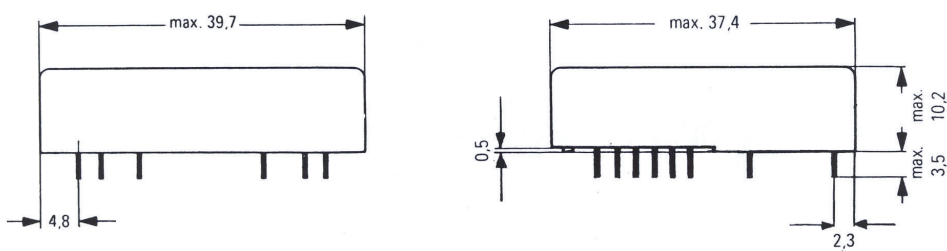
V23030-Axxx, 4 form C (4 CO) contacts, dust protected



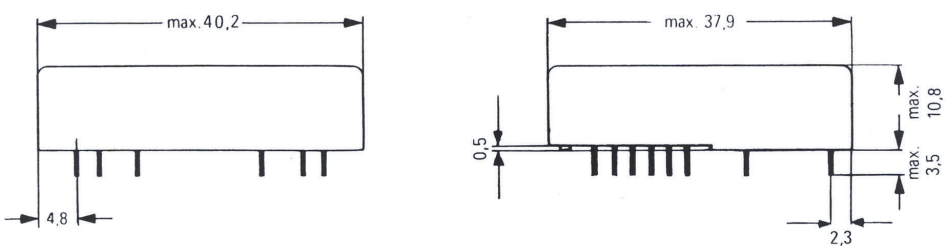
V23030-Hxxx, 4 form C (4 CO) contacts, immersion cleanable



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 V23030 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