EN: This Datasheet/Document is presented by the manufacturer.

Please visit our website for pricing and availability at www.hestore.hu.

Power Relay K (Sealed)

- **Limiting continuous current 45A**
- **Wide voltage range**
- **24VDC coil versions available**


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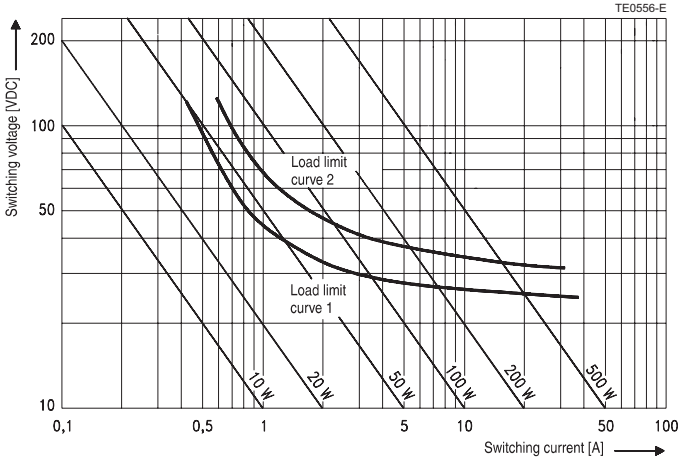
Typical applications
ABS control, blower fans, car alarm, cooling fan, engine control, fuel pump, hazard warning signal, heated front screen, heated rear screen, ignition, lamps front/rear/fog light, interior lights, main switch/supply relay, seat control, seatbelt pretensioner, sun roof, turn signal, valves, window lifter, wiper control.

Contact Data

Typical applications	Resistive/inductive loads	Resistive/inductive loads	Indicator lamps	Headlights, capacitive loads	Headlights capacitive loads
Contact arrangement	1 form A, 1 NO	1 form C, 1 CO	1 form A, 1 NO	1 form A, 1 NO	1 form C, 1 CO
Rated voltage	12VDC	12VDC	12VDC	12VDC	12VDC
		A/B (NO/NC)			A/B (NO/NC)
Rated current	45A	45/30A	30A	40A	40/25A
Limiting continuous current					
23°C	45A	45/30A	30A	40A	40/25A
85°C	30A	30/25A	25A	25A	25/20A
Limiting making current[1]	100A	100/30A	120A[3]	180A	180/60A
Limiting breaking current[2]	60A	60/30A	60A	60A	60/30A
Contact material	AgNi0.15	AgNi0.15	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$
Min. recommended contact load		1A at 5VDC[4]			
Initial voltage drop, at 10A, typ./max.		20/300mV			
Operate/release time		typ. 5/3ms[5]			
Electrical endurance	>$2x10^5$ ops. at 13.5VDC, 40A	>$2x10^5$ ops. at 13.5VDC, 40A	>$2.2x10^6$ ops. up to 8x21W	>10^5 ops. up to 4x60W	>10^5 ops. up to 4x60W
Mechanical endurance, DC coil		>10^7 ops.			

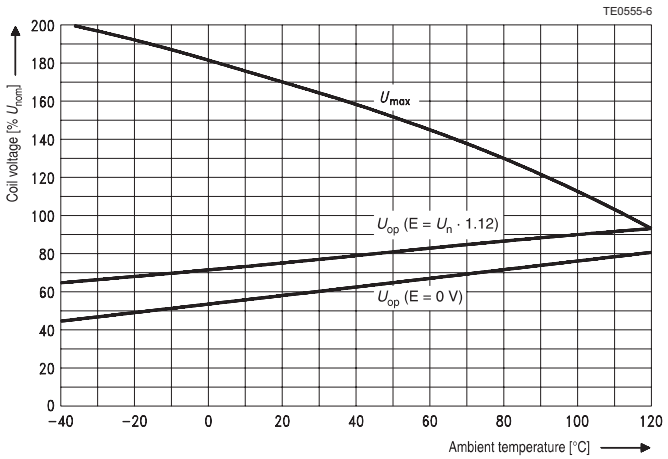
1) The values apply to a resistive or inductive load with suitable spark suppression and at maximum 13.5VDC for 12VDC or 27VDC for 24VDC load voltages.
2) For a load current duration of maximum 3s for a make/break ratio of 1:10.
3) Corresponds to a peak inrush current on initial actuation (cold filament).
4) See chapter Diagnostics of Relays in our Application Notes or consult the internet at http://relays.te.com/appnotes/
5) For unsuppressed relay coil. A low resistive suppression device in parallel to the relay coil increases the release time and reduces the lifetime caused by increased erosion and/or higher risk of contact tack welding.

Max. DC load breaking capacity



Load limit curve 1: arc extinguishes, during transit time (changeover contact).
Load limit curve 2: safe shutdown, no stationary arc (make contact).
Load limit curves measured with low inductive resistors verified for 1000 switching events.

Coil operating range



Does not take into account the temperature rise due to the contact current
E = pre-energization

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Power Relay K (Sealed) (Continued)

Coil Data

Rated coil voltage	12VDC / 24VDC

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power W
001	12	6.9	1.2	90	1.6
022	24	14.1	2.4	362	1.6

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coils on request.

Insulation Data

Initial dielectric strength	
between open contacts	500VAC$_{rms}$
between contact and coil	500VAC$_{rms}$

Other Data

EU RoHS/ELV compliance	compliant
Ambient temperature, DC coil	-40 to +85°C[6)]
Climatic cycling with condensation, EN ISO 6988	3 cycles, storage 8/16h
Temperature cycling (shock), IEC 60068-2-14, Na	20 cycles, -40/+85°C (dwell time 1h)
Damp heat cyclic, IEC 60068-2-30, Db, Variant 1	6 cycles, upper air temperature 55°C

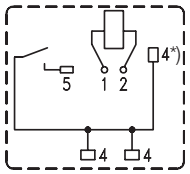
Other Data (continued)

Damp heat constant, IEC 60068-2-3, method Ca	56 days, upper air temperature 55°C RT III – immersion cleanable version
Corrosive gas,	
IEC 60068-2-42	10 days
IEC 60068-2-43	10 days
Vibration resistance (functional), IEC 60068-2-6 (sine pulse form), acceleration, acc. to position	10 to 200Hz, 20 to 40g[7)]
Shock resistance (functional), IEC 60068-2-27 (half sine form single pulses), acceleration, acc. to position	8ms 30g[7)]
Terminal type	PCB
Weight	
sealed version	approx. 22g (0.77oz)
open version	approx. 19g (0.67oz)
Solderability (aging 3: 4h/155°C) for leaded process (Tm = 183°C), for Pb-free process (Tm = 217°C), IEC 60068-2-20	Ta, method 1, hot dip 5s, 215°C
Storage conditions	according IEC 600688 [8)]
Packaging unit	
sealed version	525 pcs.

6) See coil operating range DC.
7) No change in the switching state >10µs.
8) For general storage and processing recommendations please refer to our Application Notes and especially to Storage in the Definitions or at http://relays.te.com/appnotes/

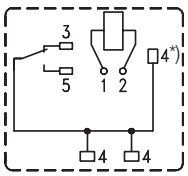
Terminal Assignment
Bottom view on solder pins

1 form A, 1 NO



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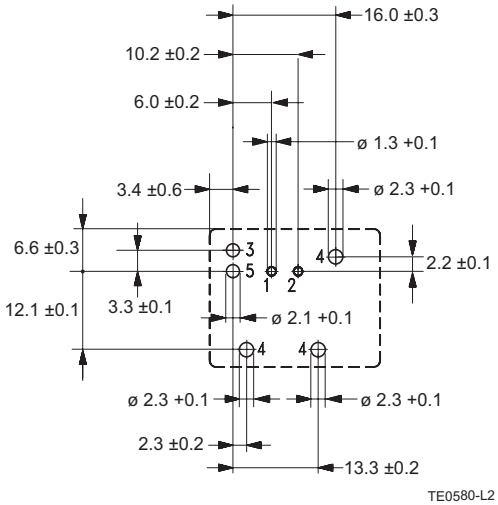
1 form C, 1 CO



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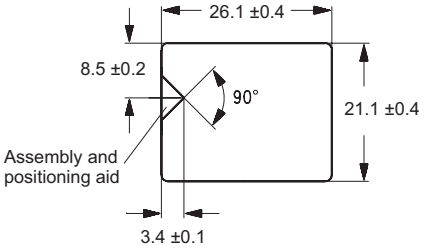
*) Terminals 4 to be bridged

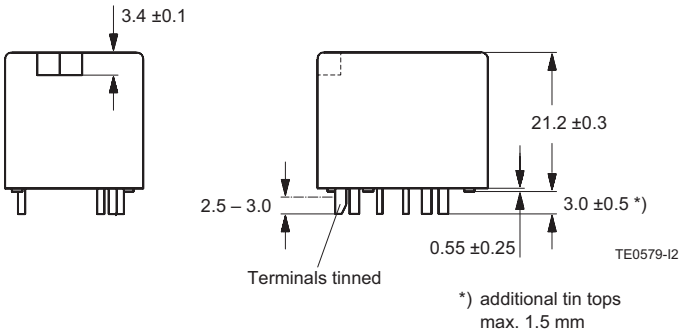
Mounting Hole Layout
Bottom view on solder pins



TE0580-L2

Dimensions





TE0579-I2

*) additional tin tops max. 1.5 mm

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Power Relay K (Sealed) (Continued)

Product code structure Typical product code **V23076 -A 1 022 -C 13 3**

Type
V23076 Power Relay K, sealed

Terminal
A PCB

Design
1 Single relay
3 Single relay

Coil
001 12VDC
022 24VDC

Contact type
C Single contact
D Single contact

Contact material
13 AgNi0.15
14 $AgSnO_2$
15 $AgSnO_2$ (Special)

Contact arrangement
2 1 form A, 1 NO
3 1 form C, 1 CO

Product code	Terminal/Encl.	Design	Coil	Contact	Contact mat.	Arrangement	Part number
V23076-A1001-C133	PCB, sealed	Single relay	12VDC	Single	AgNi0.15	1 form C, CO	1393277-4
V23076-A1001-D143					$AgSnO_2$		1393277-6
V23076-A3001-C132					AgNi0.15	1 form A, NO	1-1393277-4
V23076-A3001-D142					$AgSnO_2$		1-1393277-7
V23076-A3001-D152[1)]					$AgSnO_2$ special		1-1414175-0
V23076-A1022-C133			24VDC		AgNi0.15	1 form C, CO	1393277-8
V23076-A1022-D143					$AgSnO_2$		1393277-9
V23076-A3022-C132					AgNi0.15	1 form A, NO	1-1393277-8
V23076-A3022-D142					$AgSnO_2$		1-1393277-9
V23076-A3022-D152[1)]					$AgSnO_2$ special		4-1904101-8

1) For indicator lamps.

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