

Mini Relay K (Open - Sealed)

- Limiting continuous current 20A
- 24VDC coil versions available

Typical applications

Car alarm, hazard warning signal, heated rear screen, immobilizer, lamps front/rear, fog light, interior lights, sun roof, turn signal, wiper control.



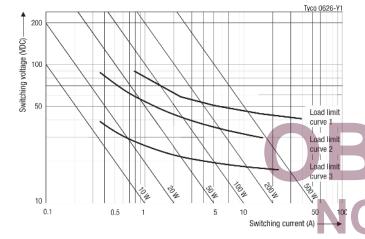


F072A/C_fcw2b

Contact Data						
Load	resistive/inductive	resistive/inductive	resistive/inductive	head/indicator	head/indicator	
	load	load	load	lamp	lamp	
	V23072-C10**-A302	V23072-C10**-A303	V23072-C10**-A308	V23072-C1061-A402	V23072-C1061 A408	
Contact arrangement	1 form A, 1 NO	1 form C, 1 CO	1 form U/X, 2 NO	1 form A, 1 NO	1 form U/X, 2 NO	
Rated voltage	12VDC	12VDC	12VDC	12VDC	12VDC	
Rated current	15A	10/15A	2x10A	12A	2x6A	
Limiting continuous current						
23°C	15A	10/15A	2x10A	12A	2x6A	
85°C 10A		5/10A	2x6A	10A	2x5A	
Limiting making current ¹⁾²⁾	60A	NC/NO 12/60A	2×40A	60A ³⁾	120A ³⁾	
Limiting breaking current	20A	10/20A	2x20A	6A	12A	
Contact material	AgNi0.15	AgNi0.15	AgNi0.15	AgSnO.2	AgSnO.2	
Min. recommended contact load 4)	1A at 5VDC	1A at 5VDC	1A at 5VDC	1A at 5VDC	1A at 5VDC	
Initial voltage drop at 10A, typ./max	ζ.	50/300mV	50/300mV	2x50/300mV	150/300mV	
150/300mV						
Operate/release time max.			typ. 3/1.5ms ⁵⁾			
Electrical endurance	>2x10 ⁵ ops.	>2x10 ⁵ ops.	>2x10 ⁵ ops.	>1x10 ⁶ ops.	>1.5 x 10 ⁶ ops.	
	at 13.5VDC, 10A	at 13.5VDC, 10A	at 13.5VDC, 10A	up to 6x21W	up to 6x21W	
				>1.5x10 ⁵ ops.	>7.5x10 ⁵ ops.	
				100A (on), 10 A (off)	100A (on), 10A (off)	
				high beam	high beam	

¹⁾ The values apply to a resistive load or inductive load with suitable spark suppression and at maximum 13.5VDC for 12VDC and 27VDC for 24VDC load voltages.

Max. DC load breaking capacity



Load limit curve 1: safe shutdown, connected as form X, load on pin 5 and 7.

Load limit curve 2: safe shutdown, no stationary arc (NO contact).

Load limit curve 3: arc extinguishes during transit time (CO contact).

Load limit curve 3; are extinguishes during transit time (CO contact).

Load limit curves measured with low inductive resistors verified for 1000 switching events.

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²⁾ For a load current duration of maximum 3s for a make/break ratio of 1:10.

³⁾ Corresponds to the 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 (monostable version only).



Mini Relay K (Open - Sealed) (Continued)

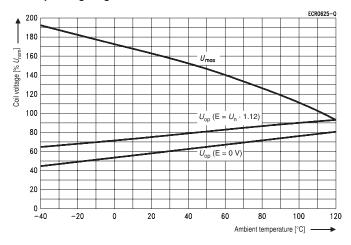
Coil Data	
Rated coil voltage	12VDC, 24VDC

Coil versions, DC coil

	Coil	Rated	Operate	Release	Coil	Rated coil
	code	voltage	voltage	voltage	resistance	power
		VDC	VDC	VDC	Ω±10%	W
	061	12	6.9	1.2	130	1.1
C	062	24	14.1	2.4	520	1.1

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

Coil operating range



Does not take into account the temperature rise due to the contact current $\mathsf{E} = \mathsf{pre}\text{-}\mathsf{energization}.$

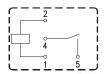
Damp heat constant IEC 60068-2-3, Ca 56 days, upper air temperatue 55°C Corrosive gas IEC 60068-2-42 IEC 60068-2-43 Vibration resistance (functional) IEC 60068-2-6 (sine sweep), 10 to 200Hz, 23 to 35g ⁶) Shock resistance (functional) IEC 60068-2-27 (half sine), 4 to 6ms Terminal type Weight, open/sealed Solderability (aging 3: 4h/155°C) IEC 60068-2-20 Ta, method 1, hot dip 5s, 215°C Sealing, IEC 60068-2-17 Corrosive gas 10 days 10 days 110 days 12 days 12 days 12 days 13 to 280g ⁶) PCB Approx. 8/9g (0.28/0.32oz) Ta, method 1, hot dip 5s, 215°C Qc, method 2, 1min/70°C	Other Data				
RT II - open (V23072-A), RT III - imm. cleanable (V23072-C)	EU RoHS/ELV compliance	compliant			
RT III – imm. cleanable (V23072-C) Climatic cycling with condensation EN ISO 6988					
Climatic cycling with condensation EN ISO 6988 20 cycles, storage 8/16h Temperature cycling (shock)	IEC 61810	1 (//			
EN ISO 6988 20 cycles, storage 8/16h Temperature cycling (shock) IEC 60068-2-14, Na 720 cycles, -40/+85°C (dwell time 1h Damp heat constant IEC 60068-2-3, Ca 56 days, upper air temperatue 55°C Corrosive gas IEC 60068-2-42 10 days IEC 60068-2-43 10 days Vibration resistance (functional) IEC 60068-2-6 (sine sweep), 10 to 200Hz, 23 to 35g ⁶) Shock resistance (functional) IEC 60068-2-27 (half sine), 4 to 6ms 23 to 280g ⁶) Terminal type Weight, open/sealed approx. 8/9g (0.28/0.32oz) Solderability (aging 3: 4h/155°C) IEC 60068-2-20 Ta, method 1, hot dip 5s, 215°C Sealing, IEC 60068-2-17 Qc, method 2, 1min/70°C		RT III – imm. cleanable (V23072-C)			
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IEC 60068-2-20 Ta, method 1, hot dip 5s, 215°C Sealing, IEC 60068-2-17 Qc, method 2, 1min/70°C	Weight, open/sealed	approx. 8/9g (0.28/0.32oz)			
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, ,	IEC 60068-2-20	Ta, method 1, hot dip 5s, 215°C			
	Sealing, IEC 60068-2-17	Qc, method 2, 1min/70°C			
Storage conditions according IEC 600688 ⁷⁾	Storage conditions	according IEC 6006887)			
Packaging unit	Packaging unit				
open 600 pcs.	open	600 pcs.			
sealed 504 pcs.	sealed	504 pcs.			

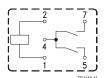
- Values weekest direction. Depending on mounting position: no change in the switching state >10 up.
- 7) For general storage and processing recommendations please refer to our Application Notes and especially to Storage in the Definitions or at http://relays.te.com/appnotes/

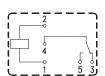
Terminal Assignment (Open and Sealed version)

Bottom view on solder pins

1 form A, NO 1 form U/X, 2 NO 1 form C, CO





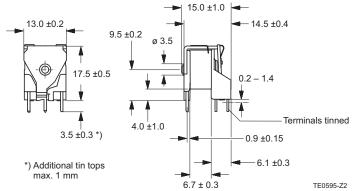




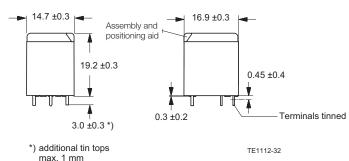
Mini Relay K (Open - Sealed) (Continued)

Dimensions

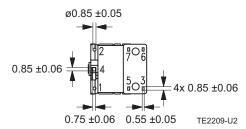
Mini Relay K Open Version



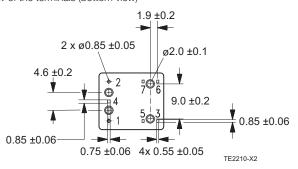
Mini Relay K Sealed Version



View of the terminals (bottom view)

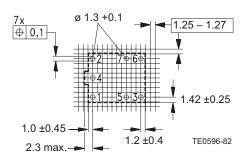


View of the terminals (bottom view)



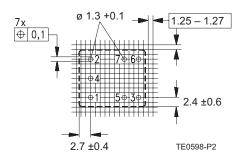
PCB Layout

Bottom view on solder pins, grid 1.25 to 1.27mm



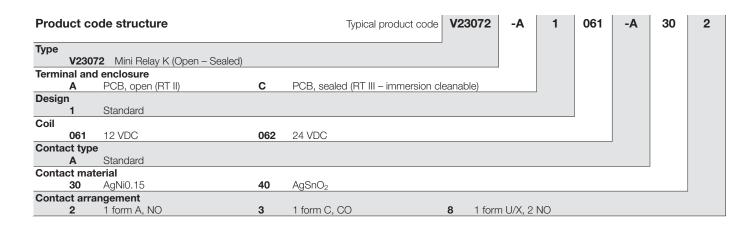
PCB Layout

Bottom view on solder pins, grid 1.25 to 1.27mm





Mini Relay K (Open - Sealed) (Continued)



Product code	Terminal/Encl.	Design	Coil	Contact type	Cont. material	Arrangement	Part number
V23072-A1061-A303	PCB, open	Single relay	12VDC	Standard	AgNi0.15	1 form C, CO	3-1393272-2
V23072-A1062-A303			24VDC				5-1393272-2
V23072-A1061-A308			12VDC			1 form U/X, 2 NO	3-1393272-6
V23072-A1062-A308			24VDC				5-1393272-3
V23072-C1061-A302			12VDC			1 form A, NO	4-1393273-9
V23072-C1062-A302	PCB, sealed		24VDC				7-1393273-6
V23072-C1061-A303			12VDC			1 form C, CO	5-1393273-6
V23072-C1062-A303			24VDC				7-1393273-8
V23072-C1062-A303-EV-USBX*)							2-1414939-5
V23072-C1061-A308			12VDC			1 form U/X, 2 NO	6-1393273-0
V23072-C1062-A308			24VDC				8-1393273-2
V23072-C1061-A402			12VDC			1 form A, NO ⁸⁾	2-1416001-0
V23072-C1061-A408					AgSnO ₂	1 form U/X, 2 NO ⁸⁾	1-1416001-4

^{*)} Americas market only.