

**Double Mini Relay DMR**

- Limiting continuous current 30 A
- Easiest PCB routing among all PCB relays

Typical applications

Car alarm, door control, door lock, immobilizer, seat control, sun roof, window lifter, wiper control.

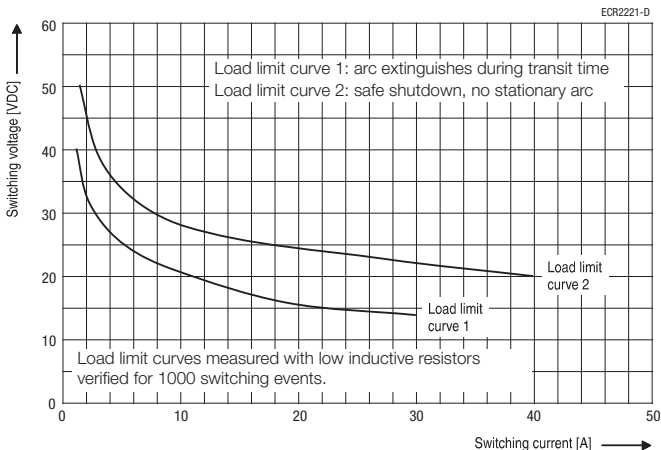


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Contact Data				
Contact arrangement	2 form C, 2 CO			
Rated voltage	12VDC			
Rated current	both systems	motor reverse <sup>1)2)</sup>	both systems	motor reverse <sup>1)2)</sup>
	20/20A	30/30A	18/18A	30/30A
Limiting continuous current				
at 23°C	20/20A	30/30A <sup>2)</sup>	18/18A	30/30A <sup>2)</sup>
at 85°C	15/15A	30/30A	12/12A	30/30A
Limiting making current <sup>1)</sup>	35A	35A	35A	35A
Limiting breaking current <sup>1)</sup>	35A	35A	35A	35A
Contact material	AgNi0.15	AgNi0.15	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Min. recommended contact load	1A at 5VDC <sup>3)</sup>			
Initial voltage drop at 10A, typ./max.	30/300mV			
Operate/release time max. at nominal voltage	typ. 3 / 1.3ms <sup>4)</sup>			
Electrical endurance				
at cyclic temperature -40/+23/+85°C and 13.5VDC, both systems AgNi0.15, motor reverse blocked, 25A, 0.77mH inductive	>10 <sup>5</sup> ops.			
AgSnO <sub>2</sub> , lamp load, 45A (on), 8A (off), 80°C	>2x10 <sup>5</sup> ops.			
AgSnO <sub>2</sub> , resistive load, 20A, 80°C	>2x10 <sup>5</sup> ops.			
Mechanical endurance	>10 <sup>7</sup> operations			

- The values apply to a resistive or inductive load with suitable spark suppression and at maximum 13.5VDC for 12VDC load voltages.
- At 50% ON period: max. make time 15s.
- See chapter Diagnostics of Relays in our Application Notes or consult the internet at <http://relays.te.com/appnotes/>
- 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

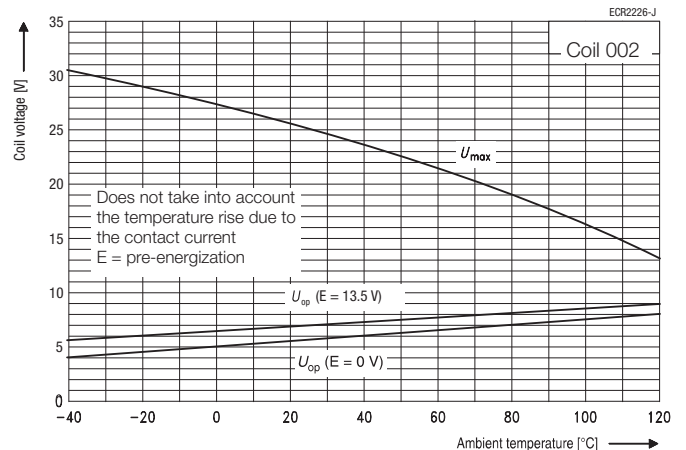
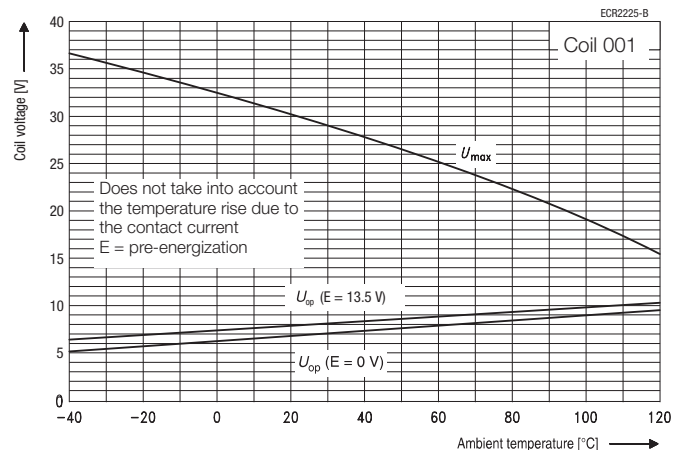


Coil Data	
Coil voltage range	-40 to +85°C
Rated coil voltage	12VDC

Coil versions, DC coil					
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated power mW
001	12	6.9	1.0	255	565
002	12	5.8	0.8	178	809

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

Coil operating range



**Double Mini Relay DMR (Continued)**

**Insulation Data**

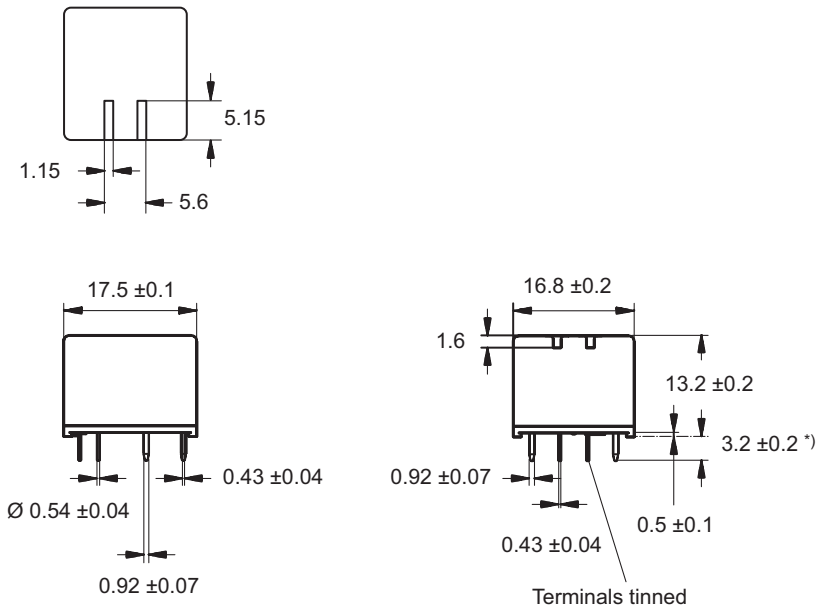
Initial dielectric strength	
between open contacts	500VAC <sub>rms</sub>
between contact and coil	500VAC <sub>rms</sub>

**Other Data**

EU RoHS/ELV compliance	compliant
Ambient temperature	-40 to 85°C
Cold storage, IEC 60068-2-1	1000h; -40°C
Dry heat, IEC 60068-2-2	1000h; +125°C
Temperature cycling (shock)	
IEC 60068-2-14, Na	1000 cycles; -40/+125°C
Temperature cycling	
IEC 60068-2-14, Nb	35 cycles; -40/+125°C
Damp heat cyclic	
IEC 60068-2-30, Db, Variant 1	6 cycles 25°C/55°C/93%RH
Damp heat constant	
IEC 60068-2-3, Ca	56 days 40°C/95%RH <sup>5)</sup>
Category of environmental protection	
IEC 61810	RT III - immersion cleanable
Sealing test	
IEC 60068-2-17	Qc, method 2, 1min, 70°C
Vibration resistance (functional)	
IEC 60068-2-6 (sine sweep)	10 to 200Hz; 6to 30g <sup>6)</sup>
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	6ms; 30g <sup>6)</sup>
Shock resistance (destructive)	
IEC 60068-2-29 (half sine)	30g: 6ms, 105 shocks 100g: 2ms, 10 shocks
Terminal type	PCB
Weight	approx. 10g (0.35oz)
Solderability (aging 3: 4h/155°C)	
IEC 60068-2-20	Ta, method 1, hot dip 5s, 215°C
Resistance to soldering heat THT	
IEC 60068-2-20	Tb, method 1A, hot dip 10s, 260°C with thermal screen
Packaging unit	600 pcs.

5) Relays have to be dried at 85°C for 24 hours after test.  
6) depending on mounting position: no change in the switching state >10µs.

**Dimensions**

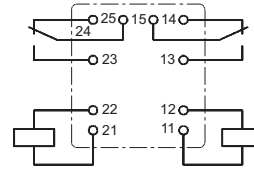


\*) Additional tin tops max. 1mm

**Terminal assignment**

Bottom view on solder pins

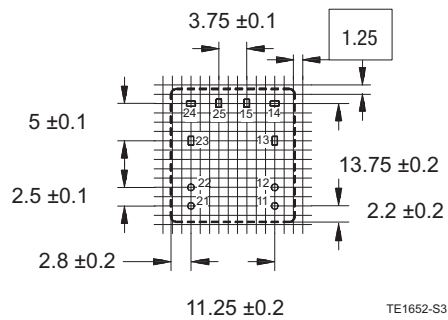
2 form C contacts, 2 CO



TE1651-J2

**PCB layout**

Bottom view on solder pins



TE1652-S3

TE1650-B3

**Double Mini Relay DMR** (Continued)

<b>Product code structure</b>		Typical product code		<b>V23084</b>	<b>-C</b>	<b>2</b>	<b>001</b>	<b>-A</b>	<b>4</b>	<b>03</b>
<b>Type</b>	<b>V23084</b> Double Mini Relay DMR									
<b>Terminal and enclosure</b>	<b>C</b> PCB version, sealed									
<b>Design</b>	<b>2</b> Double relay									
<b>Coil</b>	<b>001</b> Standard (THT)					<b>002</b> Sensitive (THT)				
<b>Contact type</b>	<b>A</b> Single contact									
<b>Contact material</b>	<b>3</b> AgNi015					<b>4</b> AgSnO <sub>2</sub>				
<b>Contact arrangement</b>	<b>02</b> 1 form A, 1 NO					<b>03</b> 1 form C, 1 CO				

Product code	Terminal/Encl.	Design	Coil	Contact type	Cont. material	Arrangement	Part number
V23084-C2001-A303	PCB,	Double relay	Standard (THT)	Single	AgNi0.15	2 form C, 2 CO	0-1393267-2
V23084-C2002-A303	immersion		Sensitive (THT)				1-1393267-0
V23084-C2001-A403	cleanable		Standard (THT)		AgSnO <sub>2</sub>		0-1393267-6
V23084-C2002-A403			Sensitive (THT)				1-1393267-2