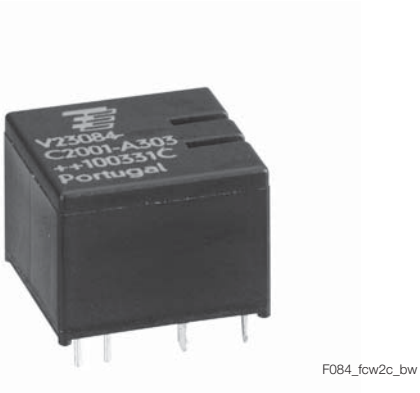
Double Mini Relay DMR

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



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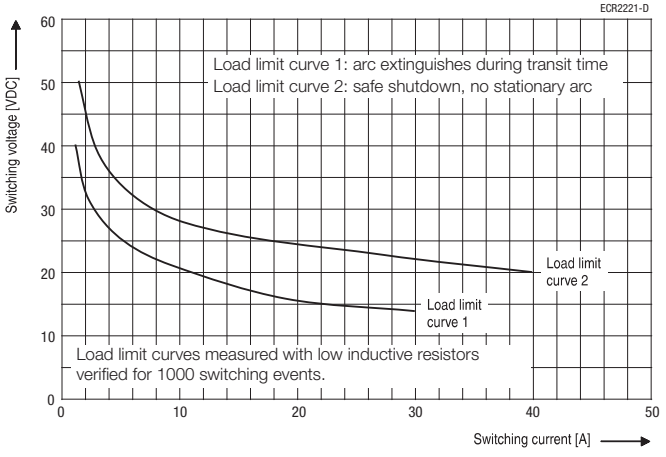
Typical applications
Car alarm, door control, door lock, immobilizer, seat control, sun roof, window lifter, wiper control.

Contact Data

Contact arrangement	2 form C, 2 CO			
Rated voltage	12VDC			
Rated current	both systems 20/20A	motor reverse[1)2)] 30/30A	both systems 18/18A	motor reverse[1)2)] 30/30A
Limiting continuous current				
at 23°C	20/20A	30/30A[2)]	18/18A	30/30A[2)]
at 85°C	15/15A	30/30A	12/12A	30/30A
Limiting making current[1)]	35A	35A	35A	35A
Limiting breaking current[1)]	35A	35A	35A	35A
Contact material	AgNi0.15	AgNi0.15	$AgSnO_2$	$AgSnO_2$
Min. recommended contact load	1A at 5VDC[3)]			
Initial voltage drop at 10A, typ./max.	30/300mV			
Operate/release time max. at nominal voltage	typ. 3 /1.3ms[4)]			
Electrical endurance				
at cyclic temperature -40/+23/+85°C and 13.5VDC, both systems AgNi0.15, motor reverse blocked, 25A, 0.77mH inductive	$>10^5$ ops.			
$AgSnO_2$, lamp load, 45A (on), 8A (off), 80°C	$>2x10^5$ ops.			
$AgSnO_2$, resistive load, 20A, 80°C	$>2x10^5$ ops.			
Mechanical endurance	$>10^7$ operations			

1) The values apply to a resistive or inductive load with suitable spark suppression and at maximum 13.5VDC for 12VDC load voltages.
2) At 50% ON period: max. make time 15s.
3) See chapter Diagnostics of Relays in our Application Notes or consult the internet at http://relays.te.com/appnotes/
4) 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

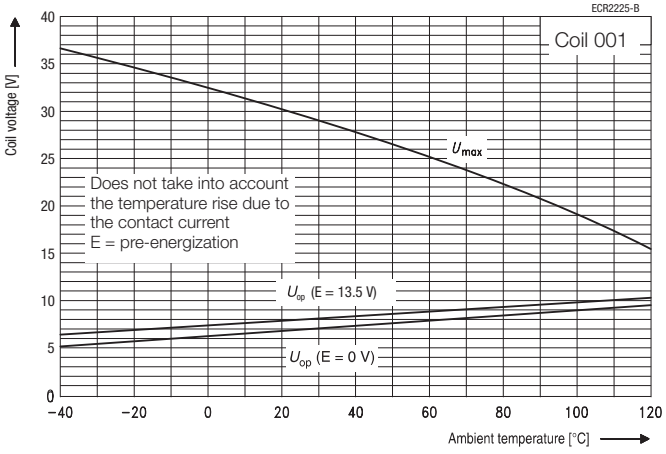
Coil voltage range	-40 to +85°C
Rated coil voltage	12VDC

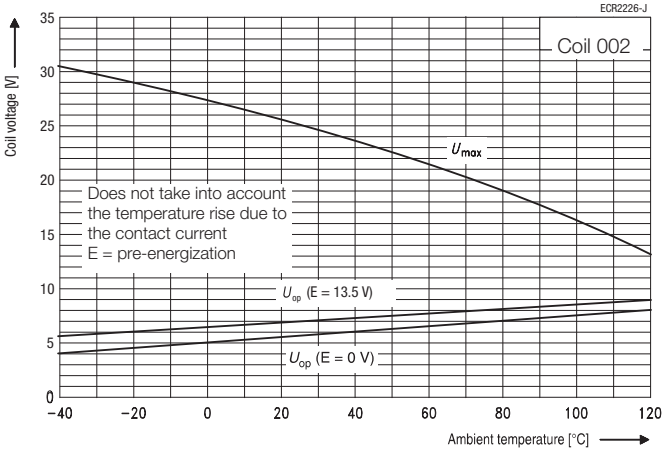
Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil 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





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Double Mini Relay DMR (Continued)

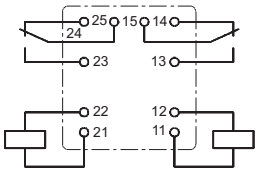
Insulation Data	
Initial dielectric strength	
between open contacts	500VAC$_{rms}$
between contact and coil	500VAC$_{rms}$

Other Data	
EU RoHS/ELV compliance	compliant
Ambient temperature	-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[5)]
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[6)]
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	6ms; 30g[6)]
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.

Terminal assignment
Bottom view on solder pins

2 form C contacts, 2 CO



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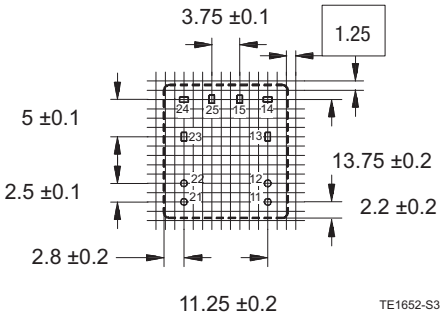
PCB layout
Bottom view on solder pins



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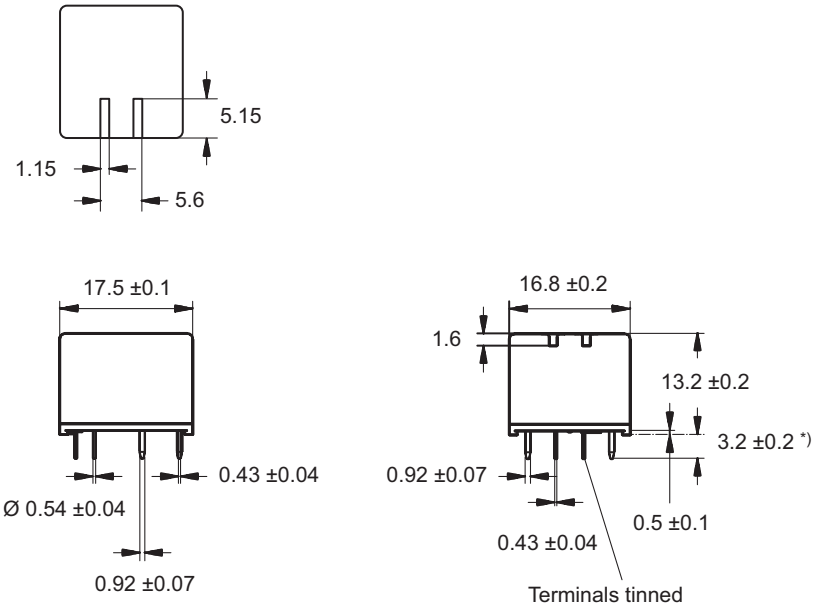
Dimensions



*) Additional tin tops max. 1mm

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Double Mini Relay DMR (Continued)

Product code structure

Typical product code	V23084	-C	2	001	-A	4	03

Type
V23084 Double Mini Relay DMR

Terminal and enclosure
C PCB version, sealed

Design
2 Double relay

Coil
001 Standard (THT) **002** Sensitive (THT)

Contact type
A Single contact

Contact material
3 AgNi015 **4** $AgSnO_2$

Contact arrangement
02 1 form A, 1 NO **03** 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)		$AgSnO_2$		0-1393267-6
V23084-C2002-A403			Sensitive (THT)				1-1393267-2

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