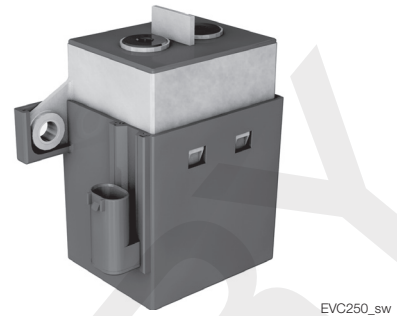


**EVC 250**

- Limiting continuous current 250A at 85°C
- Suitable for voltage levels up to 450VDC
- High peak current carrying capability up to 6000A<sup>1)</sup>

Typical applications

- DC high voltage high current applications
- Main contactors for Hybrid, full Battery Electric vehicles and Fuel-cell cars
- Battery charging systems



Contact Data	
Contact arrangement	Form X (SPST NO DM)
Rated voltage	450VDC
Max. switching voltage	500VDC, depending on load characteristics <sup>1)</sup>
Rated current	
Forward load current direction, cable 50mm <sup>2</sup>	250A
Limiting continuous current	
85°C, load cable 50mm <sup>2</sup>	250A
Limiting short-time current	
85°C, load cable 50mm <sup>2</sup>	400A 5min 600A 1min 6000A 20ms
Limiting make current	
resistive load, cable 50mm <sup>2</sup> , 23°C, 50 VDC	50000x 250A
Limiting break current	
Forward load current direction	1x2000A 10x1000A
resistive load, cable 50mm <sup>2</sup> , 23°C	
altitude max 5000 m, 400 VDC	5000x200A 50000x100A
Limiting break current	
Reverse load current direction	
resistive load, cable 50mm <sup>2</sup> , 23°C	20x200A
altitude max 5000 m, 400 VDC	10000x100A
Initial voltage drop	
at 100A	<40mV after 1min
Operate/release time max.	25ms at 14VDC (coil voltage)
Mechanical endurance	>500000 ops.

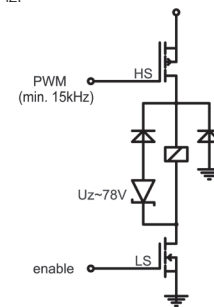
1) Please contact TE Connectivity for details  
2) Values are influenced by system temperature and load current. Please contact TE Connectivity for details.

Coil Data	
Magnetic system	monostable
Max. coil temperature	155°C

**Coil versions, DC coil**

Coil code	Rated voltage VDC	Pull - in voltage VDC <sup>3)</sup>	Hold voltage VDC <sup>3)</sup>	Maximum Voltage VDC	Coil resistance Ω±10% <sup>5)</sup>
0001 <sup>4)</sup>	12	7.0	4.0	16	4
0002 <sup>6)</sup>	12	7.0	4.0	16	3 / 36 <sup>5)</sup>

3) Valid for cold coil at 23°C ambient temperature.  
4) Requires external coil economizer, min. clamp voltage 70V (see circuit recommendation below).  
5) Internal switch from 3Ω to 36Ω max. 130ms after pull-in.  
6) Duty cycle max. 30% at 2Hz.



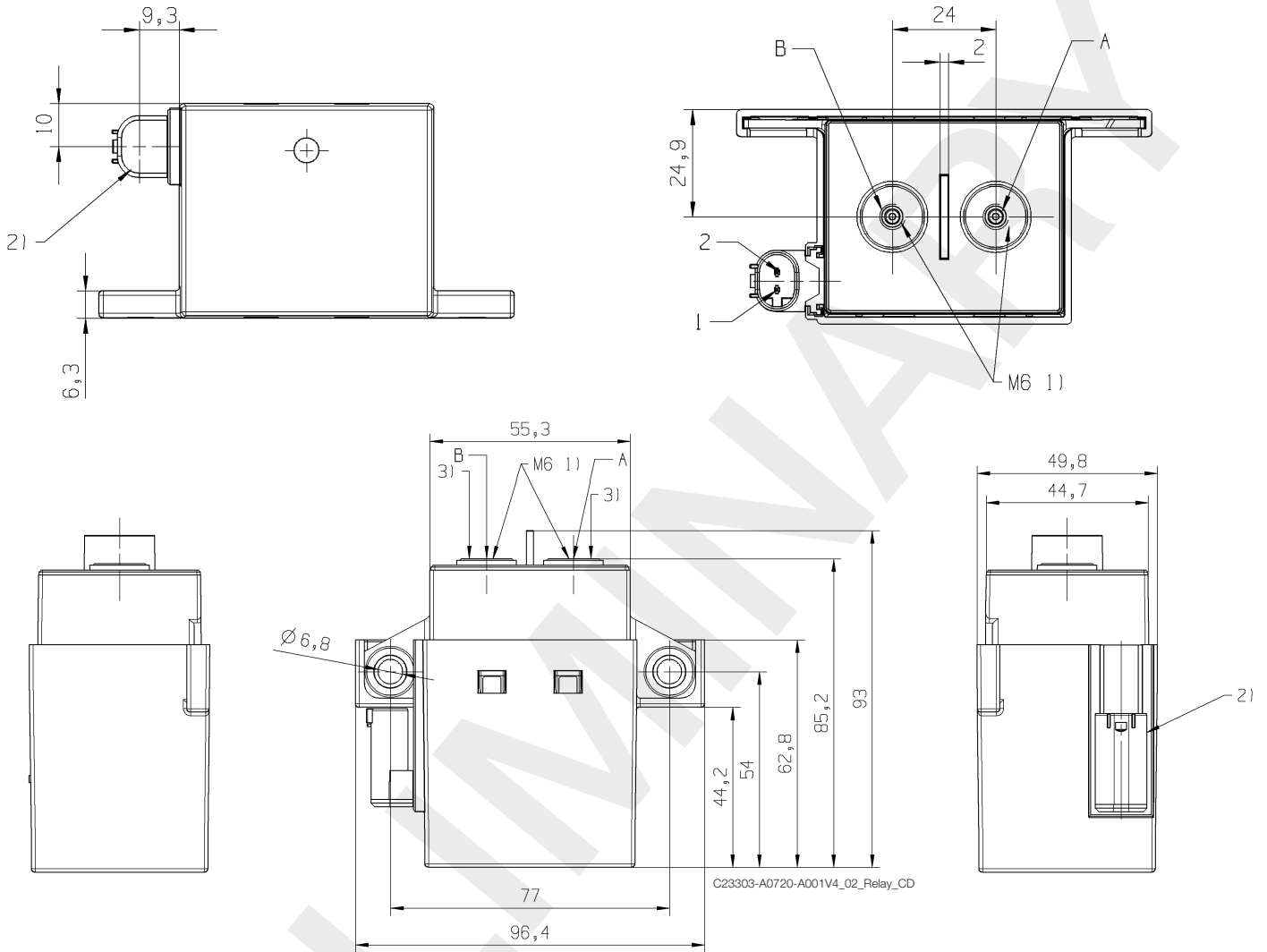
Circuit recommendation for coil 0001

Insulation Data	
Initial dielectric strength	
between open contacts	2800VDC / 3mA
between contact and coil	2800VDC / 3mA
max. altitude	5000m
Insulation resistance after 2000 A abuse test	
between open contacts	>200MΩ
between contact and coil	>200MΩ
Clearance/creepage	
acc. IEC 60664-1 (2007) for	over voltage category I, pollution degree 2

Other Data	
Ambient temperature	-40°C to +85°C
Degree of protection	
dustproof:	IP54 (IEC 60529), RT I (IEC 61810)
Vibration resistance (functional)	
IEC 60068-2-6 (sine sweep)	10 to 500Hz, min. 10g.
Shock resistance (functional) <sup>7)</sup>	
IEC 60068-2-27 (half sine)	closed: 11ms, min. 40g open: 11ms, min. 20g

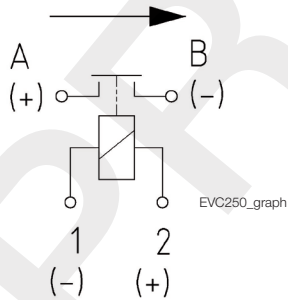
**EVC 250** (Continued)

**Dimensions**



**Terminal Assignment**

Forward load current direction



- 1) Permitted Torque 5 Nm max.
- 2) Socket Housing  
TYCO/AMP MQS-2-Pole according as C-968335

**EVC 250** (Continued)

<b>Product code structure</b>	Typical product code	<b>V23720</b>	<b>-A</b>	<b>0001</b>	<b>-A</b>	<b>2</b>	<b>00</b>
<b>Type</b>	<b>V23720</b> HV Contactor EVC250						
<b>Contact arrangement</b>	<b>A</b> SPST NO DM						
<b>Coil</b>	<b>0001</b> Single Coil		<b>0002</b> Double Coil				
<b>Protection class</b>	<b>A</b> IP54						
<b>Contact material</b>	<b>2</b> Standard						
<b>Standard version</b>	<b>00</b> Standard						

Product code	Con. arrangement	Coil	Circuit	Coil suppr.	Prot. class	Term.	Resistance	Part number
V23720-A0001-A200	SPDT-NO-DM	12VDC		external >70V	IP54	-	4Ω	tbd.
V23720-A0002-A200	SPDT-NO-DM	12VDC	coil switch	internal	IP54	-	3Ω / 36Ω	tbd.

Consult TE Connectivity for prototype availability