DURAKOOL

DC20 Series
20A 450VDC power relays



- SPST-NO Rated 20A / 450VDC
- Will carry 40A / 450VDC for 20 mins (Fig.1)
- Magnetic arc blowout
- Miniature case size
- PCB mounting & chassis mounting
- Fits Mini-ISO footprint
- Pre-charge or discharge relay

UK CA CE cULus E305753 RoHS Compliant ✓

Contacts

Contact arrangement		SPST-NO-DM (1 Form X)
Contact material		AgCu10 (Silver alloy)
Rated current	DC1	20A / 450VDC (25A PCB Version)
Max. switching voltage		450VDC
Max. breaking current		35A (450VDC>1cycle)
Max. switching power		9kW
Current carrying capacity		See Fig 1, 20A continuously. Up to 200A 0.6s
Initial contact resistance		≤ 10mΩ at 20A
Max. operating frequency	rated load	360 cycles/hour

Coil

Operating range	DC	12 ~ 80V See Table 1
Rated power consumption		Approx. 3W

Insulation

Coil insulaton system		IEC 31, CLASS F 155°C
Insulation resistance		>100 MΩ at 500VDC, 50%RH
Dielectric strength	coil to contact	3000V_{rms} (50/60Hz, 1min, <1mA leakage)
	open contacts	2000V_{rms} (50/60Hz, 1min, <1mA leakage)

General Data

Operate time (including bounce)	max.	30ms
Contact bounce time	max.	5ms
Release time	max.	10ms
Electrical life at full rated load	cycles	1 x 10^4 20A 450VDC
		5 x 10^4 10A 450VDC
		1 x 10^5 20A 72VDC
Mechanical life	cycles	>3 x 10^5

Environmental

Environmental protection		IP67
Ambient temperature	operating	-40 to +85°C
	storage	-40 to +125°C
Mechanical shock		20g, 11ms Functional, 50g Destructive
Vibration resistance		5g (10 ~ 500Hz)
Relative humidity		20% ~ 90%
Dimensions	L x W x H	29.6 x 29.2 x 30mm approx.(excluding flanges)
Weight	approx.	55g (flange mounting type), 52g (PCB type)

Ordering Code

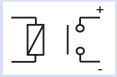
D C 2 0 - 4 0 2 1 - 3 5 - 1 0 1 2

Series

Coil code:
See table 1

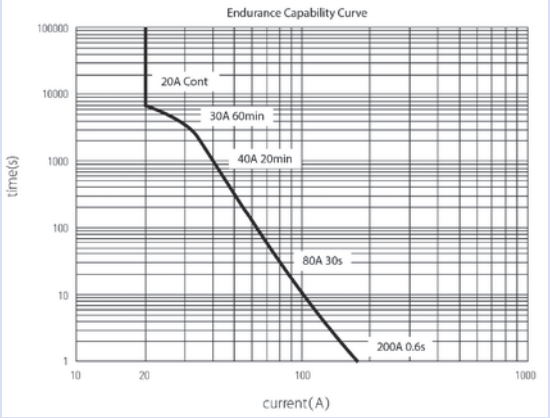
Contact material
40: AgCu10

Contact arrangement
21: SPST-NO-DM (1 Form X)



Mounting & terminations
35: PCB Mounting
46: Chassis Mounting
76: Plug in

Fig 1.



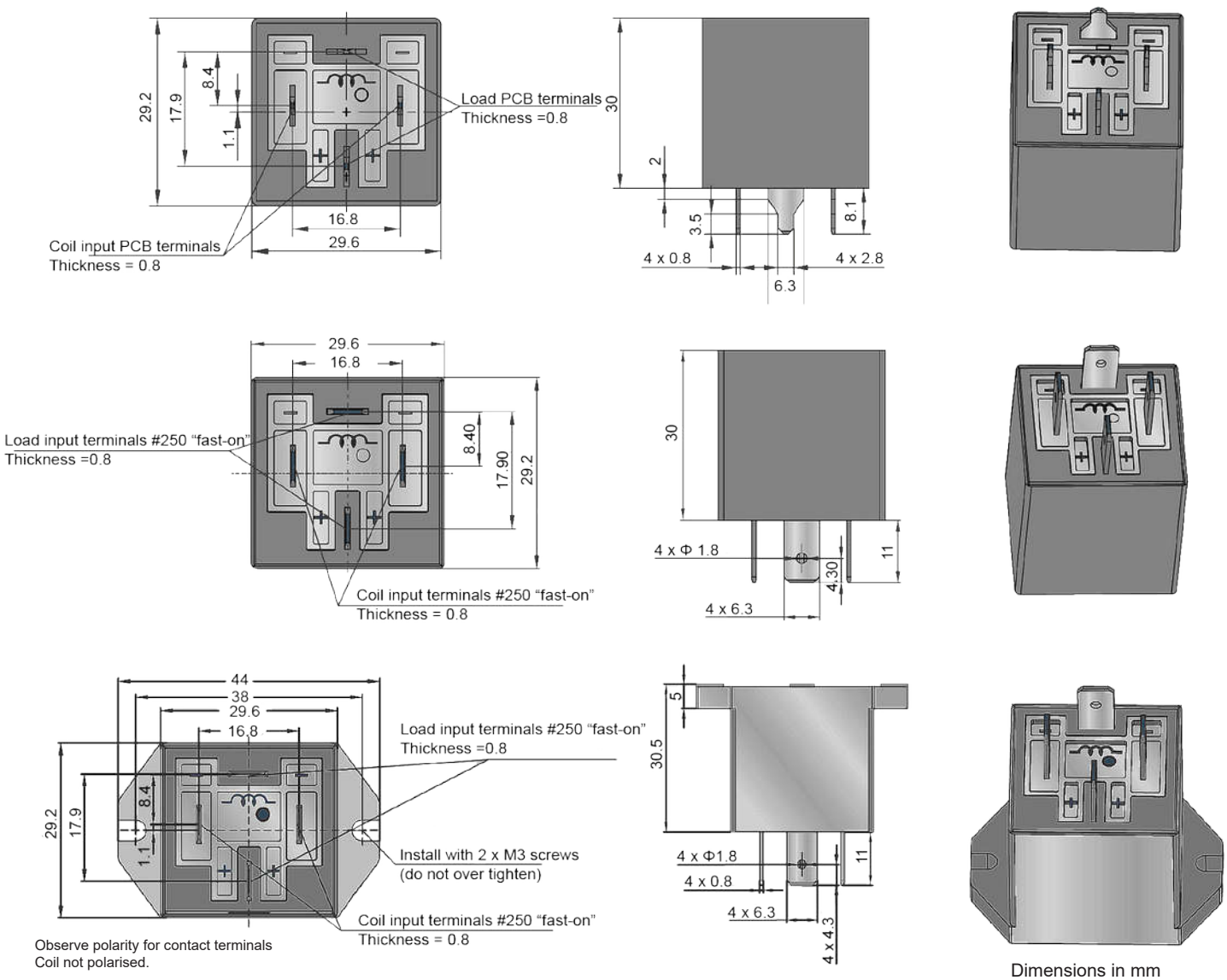
DC20 042122FW

Specifications are subject to change without notice. E&OE.

DC Coil Data — Table 1

Coil code	Nominal voltage (VDC)	Must operate voltage max. (VDC@ 20°C)	Must release voltage min. (VDC)	Coil resistance Ω ±10% (at 20°C)	Coil current (mA)
1012	12	9.00	1.0	46.5	258
1024	24	18.0	2.0	186	129
1048	48	36.0	4.0	743	65
1060	60	45.0	5.0	1230	49
1080	80	60.0	6.5	2130	38

Dimensions — Fig 2



Dimensions in mm

Specifications are subject to change without notice. E&OE.