# 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 c UL us 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. breaking power | | 15kW |
| 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 | 3000$V_{rms}$ (50/60Hz, 1min, <1mA leakage) |
| | open contacts | 2000$V_{rms}$ (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

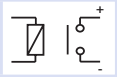
D C 2 0 - 4 0 2 1 - 3 5 - 1 0 1 2

**Series**

**Coil code:**
See table 1

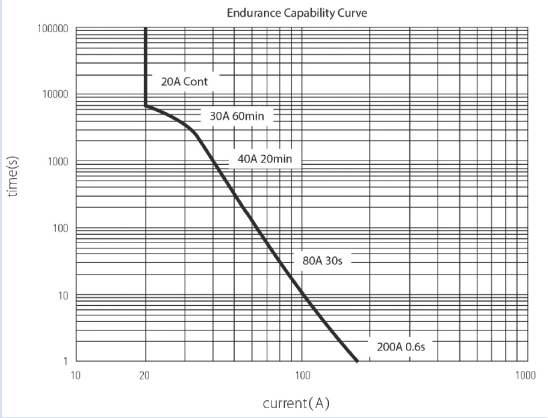
**Contact material**
40: AgCu10

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



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

**Fig 1.**



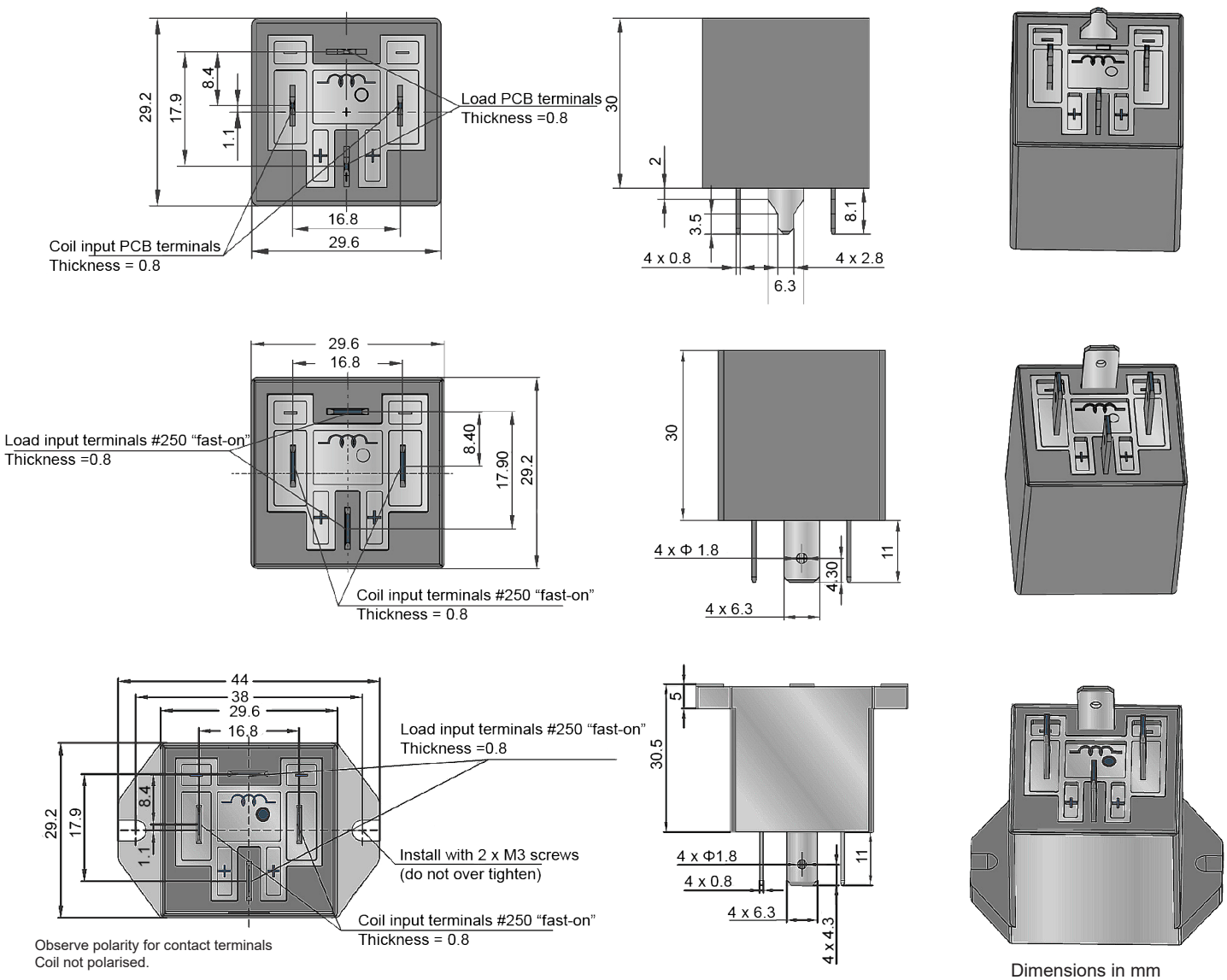

DC20 03-Mar-25KS

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 | 12.0 | 9.00 | 1.0 | 46.5 | 258.0 |
| 1024 | 24.0 | 18.0 | 2.0 | 186.0 | 129.0 |
| 1048 | 48.0 | 36.0 | 4.0 | 743.0 | 65.0 |
| 1060 | 60.0 | 45.0 | 5.0 | 1230.0 | 49.0 |
| 1080 | 80.0 | 60.0 | 6.5 | 2130.0 | 38.0 |

**Dimensions** — Fig 2




Dimensions in mm