



- HVDC 900A carry current (60s)
- Max. switching current = 2500A / 800VDC
- Contacts sealed in inert gas
- Magnet arc blowout
- Non-polarised power terminals
- Ceramic arc chamber
- Dual coil economiser as standard
- Auxiliary contact as standard



### Contacts

|   |                    |  |
|---|--------------------|--|
| Contact arrangement   | SPST-NO-DM         |  |
| Contact material  | Oxygen Free Copper |  |
| Max. switching voltage                                      | AC/DC              | 1500VDC                                    |
| Rated load (resistive, $\cos \phi=1$ )                      | DC1                | 400A 1500VDC (break only above 350A)       |
| Max. continuous thermal current at 23°C ambient temperature | 120s               | 750A (with 185mm <sup>2</sup> conductors)  |
|   | 60s                | 900A (with 185mm <sup>2</sup> conductors)  |
|   | 5ms                | 8000A (with 185mm <sup>2</sup> conductors) |
| Max switching current (1 time only)                         | V DC               | 800V: 2500A / 1000V: 2000A / 1500V: 1000A  |
| Initial contact resistance                                  | max.               | 0.3mΩ @ 20A / 6VDC                         |
| Auxiliary contact   | arrangement        | SPST-NO (1 Form A) (SPST-NC by request)    |
|   | max. current       | 2A @ 24VDC / 3A @ 125VAC                   |
|   | min. current       | 100mA @ 8VDC                               |

### Coil

|                              |      |  |
|------------------------------|------|--|
| Nominal voltage (see page 2) | DC   | 12VDC, 24VDC (with dual coil economiser) |
| Rated power consumption      | hold | <5W                                      |

### Insulation

|                       |  |  |
|-----------------------|--|--|
| Insulation resistance | initial                                    | ≥ 1000MΩ (Min.) (1000VDC, 1 minute)    |
| Dielectric strength   | coil to contact                            | 4000Vrms / ≤1mA / 1 min (at sea level) |
|                       | between main contacts, main & aux contacts | 4000Vrms / ≤1mA / 1 min (at sea level) |
|                       | between open auxiliary contacts            | 750Vrms / ≤1mA / 1 min (at sea level)  |

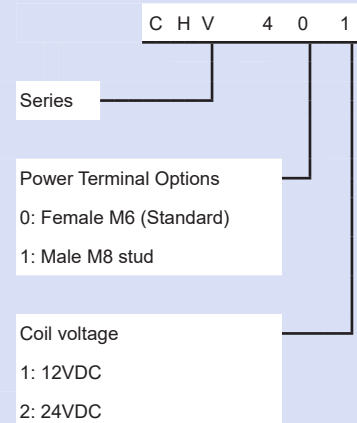
### General Data

|                      |          |  |
|----------------------|----------|--|
| Operate time at 23°C | max.     | 50ms (+ 5ms bounce time)                   |
| Release time at 23°C | max.     | 30ms                                       |
| Electrical life      | ops.     | Voltage and current dependent - see fig. 1 |
| Mechanical life      | ops.     | >2 x 10 <sup>5</sup>                       |
| Capacitive make      | (RC=1ms) | 10,000 cycles, 500A peak at 50V            |

### Environmental

|                      |           |  |
|----------------------|-----------|--|
| Ambient temperature  | operating | -40 to +85°C   |
| Relative humidity    |           | 5 to 85% RH  |
| Altitude             |           | ≤4000m (derate by 0.83 between 3000 & 4000m)               |
| Shock resistance     | impact    | >50G, 490m/s <sup>2</sup> 6ms ½ sine                       |
|                      | stability | >20G, 11ms ½ sine (malfunction <10µs)                      |
| Vibration resistance | sine wave | >5G, 49m/s <sup>2</sup> , 10Hz ~ 500Hz (malfunction <10µs) |
| Dimensions           | L x W x H | 104 x 70 x 108.1mm (max.)                                  |
| Weight               | approx.   | 1100g  |

### Ordering Code



### Coil Data

Table 1

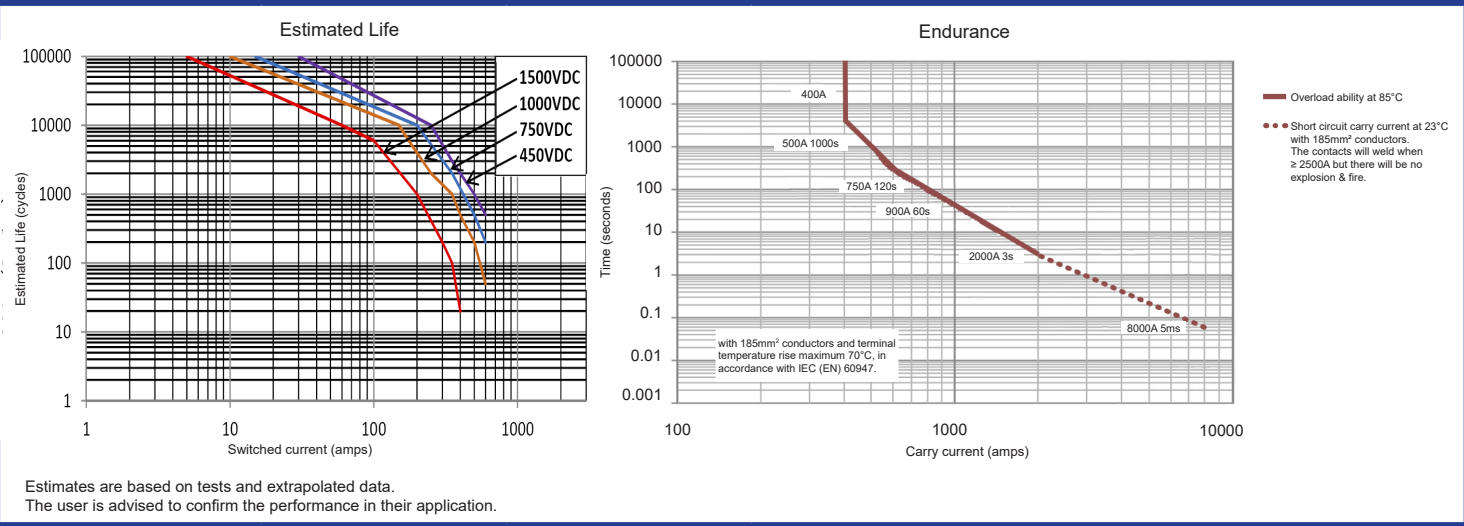
| Order code       | Nominal voltage (VDC) | Must operate voltage max. (VDC) | Max. allowable voltage (VDC) | Must hold voltage max.** (VDC) | Must release voltage min. (VDC) | Inrush Current ±10% (A) | Hold Current ± 10%(A) | Rated Coil Power    |
|------------------|-----------------------|---------------------------------|------------------------------|--------------------------------|---------------------------------|-------------------------|-----------------------|---------------------|
| CHV401<br>CHV411 | 12.0                  | 9.0                             | 16.0                         | 7.8                            | 1.2                             | 4.2                     | 0.42                  | 5W (Hold)           |
| CHV402<br>CHV412 | 24.0                  | 18.0                            | 32.0                         | 15.6                           | 2.4                             | 2.1                     | 0.21                  | 50W, 0.2s (Operate) |

Twin coil economiser standard. No additional coil back emf suppression required. Other coils available upon special request.

\*\* Max. Non-release voltage @ 85°C and max. continuous current load, pre-energized at 1.1Un

### Electrical Performance

Fig. 1



### Dimensions

Fig. 2

### Circuit Diagram

Fig. 3

