Description

Single pole thermal circuit breaker with press-to-reset, tease-free, trip-free, snap action mechanism. Type 2-5000 is available with optional manual release (+H), type 2-5700 can be supplied as a push-pull switch/circuit breaker (R-type TO CBE to EN 60934 in press-to-reset configuration; M-type when fitted with manual release -H; S-type with push-push operation). Fitted with flange or threadneck for panel mounting. Options include an additional unprotected circuit tap (-A3). Approved to CBE standard EN 60934 (IEC 60934).

Typical applications

Motors, transformers, solenoids, battery chargers, power supplies, appliances, machinery, extra low voltage systems.

Ordering information

Type No.
2-5000 flange mounting
2-5700 threadneck panel mounting (hardware bulk shipped)

Threadneck design – type 2-5700 only
IG1 moulded threadneck 3/8”-27UNS-2A
IG2 moulded threadneck M12x1

Terminal design
P10 blade terminals 6,3-0.8 mm (QC .250)
K10 screw terminals M3x6
A3 shunt terminal (up to 1.5 A per 6 A max. load)

Manual release (optional)
H manual release facility (type 2-5000 only)
DD push to release/push to reset (type 2-5700 only)

Ordering example
2-5700 - IG1 - P10 - .. - DD - 8 A

The exact part number required can be built up from the table of choices shown above. Ordering references for optional features should be omitted if not required.

Standard current ratings and typical internal resistance values

<table>
<thead>
<tr>
<th>Current rating (A)</th>
<th>Internal resistance (Ω)</th>
<th>Current rating (A)</th>
<th>Internal resistance (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>280</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>0.08</td>
<td>100</td>
<td>3.5</td>
<td>0.06</td>
</tr>
<tr>
<td>0.1</td>
<td>110</td>
<td>4</td>
<td>0.06</td>
</tr>
<tr>
<td>0.2</td>
<td>29</td>
<td>4.5</td>
<td>0.05</td>
</tr>
<tr>
<td>0.3</td>
<td>14</td>
<td>5</td>
<td>0.05</td>
</tr>
<tr>
<td>0.4</td>
<td>7</td>
<td>6</td>
<td>0.02</td>
</tr>
<tr>
<td>0.5</td>
<td>4.9</td>
<td>7</td>
<td>0.02</td>
</tr>
<tr>
<td>0.6</td>
<td>3.4</td>
<td>8</td>
<td>0.02</td>
</tr>
<tr>
<td>0.7</td>
<td>2.5</td>
<td>10</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>0.8</td>
<td>1.8</td>
<td>12</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>1</td>
<td>1.2</td>
<td>13</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>1.2</td>
<td>0.8</td>
<td>15</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>1.5</td>
<td>0.6</td>
<td>16</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>1.8</td>
<td>0.4</td>
<td>20</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>2</td>
<td>0.3</td>
<td>22</td>
<td>&lt; 0.02</td>
</tr>
<tr>
<td>2.5</td>
<td>0.2</td>
<td>25</td>
<td>&lt; 0.02</td>
</tr>
</tbody>
</table>

Technical data

Voltage rating
AC 250 V; DC 28 V

Current rating range
0.05…25 A

Typical life
5,000 operations at 2 x I N

Ambient temperature
-20…+60 °C (-4…+140 °F)

Insulation co-ordination
rated impulse withstand voltage 2.5 kV
reinforced insulation in operating area

Dielectric strength
(test voltage)
operating area AC 3,000 V

Insulation resistance
> 100 MΩ (DC 50 V)

Interrupting capacity
Icn 0.05…2.5 A 8 x I N
3…  5 A 20 x I N
6…12 A 200 A
(3…  5 A 20 x I N)
6…12 A 200 A
(6…12 A 200 A)

Degree of protection
IP40 (IEC 60529/DIN 40050)

Vibration
8 g (57-500 Hz) ±0.61 mm (10-57 Hz),
to IEC 60068-2-6, test Fc,
10 frequency cycles/axis

Shock
25 g (11 ms)
to IEC 60068-2-27, test Ea

Corrosion
96 hours at 5 % salt mist,
to IEC 60688-2-11, test Ka

Humidity
240 hours at 95 % RH

to IEC 6068-2-3, test Ca

Mass
approx. 29 g

Approvals

Authority Voltage ratings Current ratings
VDE (EN 60934) AC 250 V; DC 28 V 0.05…25 A
CSA/ UL AC 250 V; DC 50 V 0.05…20 A
Semko (EN 60934) AC 250 V; DC 28 V 0.05…25 A
SEV AC 250 V; DC 28 V 0.05…25 A

Type 2-5700 only:

LRoS AC 250 V; DC 28 V 0.1 …25 A
BV AC 250 V; DC 28 V 0.2 …25 A
Temperature Overcurrent Circuit Breakers 2-5000/2-5700-...
Internal connection diagrams

0.05 ... 2.5 A
(with or without shunt terminal)

3 ... 25 A
(without shunt terminal)

Typical time/current characteristics at +23°C/+73.4°F

<table>
<thead>
<tr>
<th>Ambient temperature °F</th>
<th>-4</th>
<th>+14</th>
<th>+32</th>
<th>+73.4</th>
<th>+104</th>
<th>+122</th>
<th>+140</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td>-20</td>
<td>-10</td>
<td>0</td>
<td>+23</td>
<td>+40</td>
<td>+50</td>
<td>+60</td>
</tr>
<tr>
<td>Derating factor</td>
<td>0.76</td>
<td>0.84</td>
<td>0.92</td>
<td>1.08</td>
<td>1.16</td>
<td>1.24</td>
<td></td>
</tr>
</tbody>
</table>

The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below. See also section 9 – Technical information.

This is a metric design and millimeter dimensions take precedence (mm).
Accessories for types 2-5000 and 2-5700 with screw terminals -K10

Bus bar
Y 303 563 01

Accessories for type 2-5000--...

Water splash cover, transparent for push button (IP64)
Y 300 728 01

Fixing plate
Y 3012 056 02

Rear terminal shroud, transparent (IP64)
Y 300 476 01

Accessories for type 2-5700--...

With 3/8” threadneck (-iG1)
Water splash cover, transparent Y 300 538 01 and knurled nut Y 300 628 01
X 200 799 01 (IP64)

Water splash cover, transparent with special knurled nut
X 200 799 02 (IP64)

Hex nut with splash cover black with O ring
X 201 799 03 (IP64)

Separate hardware
Hex nut
Y 300 192 01

Knurled nut
Y 307 117 02

With M12 threadneck (-iG2)
Hex nut with splash cover, black
X 201 296 01 without O ring (IP66)

Hex nut with splash cover, transparent
X 200 801 03 with O ring (IP66)

Hex nut with splash cover, transparent with knurled nut and O ring
X 210 663 01 (IP64)

Water splash cover, transparent Y 300 538 01 and
knurled nut Y 300 628 01
X 200 799 01 (IP64)

Water splash cover, transparent with knurled nut and O ring
X 210 663 01 (IP64)

This is a metric design and millimeter dimensions take precedence (mm).

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.