

CIRCUIT BREAKER 230/400V 10KA, 1-POLE, B, 80A, D=70MM



Model	
Product brand name	SENTRON
Product designation	Miniature circuit breaker
General technical data	
Number of poles	1
Number of poles / Note	1P
Tripping characteristic class	B
circuit-breaker / Design	5SY4
Mechanical service life (switching cycles) / typical	20 000
Overvoltage category	3
Voltage	
Type of voltage	AC/DC
Insulation voltage	
<ul style="list-style-type: none"> <li>with single-phase operation / at AC / rated value</li> </ul>	250 V
<ul style="list-style-type: none"> <li>with multi-phase operation / at AC / rated value</li> </ul>	440 V
Supply voltage	
Supply voltage / at AC / rated value	400 V

<b>Supply voltage frequency</b>	
• rated value	50/60 Hz
<b>Protection class</b>	
<b>Protection class IP</b>	IP20, with connected conductors
<b>Energy limiting class</b>	3
<b>Switching capacity</b>	
<b>Switching capacity current</b>	
• at DC / acc. to IEC 60947-2 / rated value	15 kA
• acc. to EN 60898 / rated value	10 kA
• acc. to IEC 60947-2 / rated value	10 kA
<b>Dissipation</b>	
<b>Power loss [W]</b>	
• for rated value of the current / at AC / in hot operating state / per pole	6.7 W
• maximum	6.7 W
<b>Electricity</b>	
Current / at AC / rated value	80 A
<b>Suitability for operation</b>	Mechanical engineering / industry
<b>Product details</b>	
Product feature / Touch protection	Yes
<b>Product component</b>	
• combined terminal top	Yes
• combined terminal bottom	Yes
<b>Product feature</b>	
• Properties for main switches in accordance with EN 60204-1	Yes
• halogen-free	Yes
• sealable	Yes
• silicon-free	Yes
Product extension / can be installed / supplementary devices	Yes
<b>Product function</b>	
Product function / neutral conductor switching	No
<b>Short circuit</b>	
<b>Breaking capacity short-circuit current (I<sub>cn</sub>)</b>	
• at AC / acc. to UL 1077 and CSA C22.2 No.235	5 kA
<b>Number</b>	
<b>Number of test cycles / for environmental testing / acc. to IEC 60068-2-30</b>	6

## Connections

<b>Connectable conductor cross-section / stranded</b>	
• minimum	0.75 mm <sup>2</sup>
• maximum	35 mm <sup>2</sup>
<b>Connectable conductor cross-section</b>	
• solid	
— minimum	0.75 mm <sup>2</sup>
— maximum	35 mm <sup>2</sup>
• finely stranded / with core end processing	
— minimum	0.75 mm <sup>2</sup>
— maximum	25 mm <sup>2</sup>
<b>AWG number / as coded connectable conductor cross section</b>	
• minimum	14
• maximum	4
<b>Tightening torque [lbf·in] / with screw-type terminals</b>	
• minimum	22 lbf·in
• maximum	26 lbf·in
<b>Tightening torque / with screw-type terminals</b>	
• minimum	2.5 N·m
• maximum	3 N·m
Position / of power supply cord	Any

## Mechanical Design

<b>Height</b>	90 mm
<b>Width</b>	18 mm
<b>Depth</b>	76 mm
<b>Mounting position</b>	any
<b>Installation depth</b>	70 mm
<b>Number of width units</b>	1
<b>Mounting type</b>	Quick assembly system
<b>Net weight</b>	153 g

## Environmental conditions

<b>Degree of pollution</b>	3
<b>Influence of the surrounding temperature</b>	Max. 95% humidity
Vibration resistance / acc. to IEC 60068-2-6	50m/s <sup>2</sup> at 25 to 150Hz and 60m/s <sup>2</sup> at 35Hz (4sec)
<b>Ambient temperature</b>	
• minimum	-25 °C
• maximum	55 °C
• during storage / minimum	-40 °C
• during storage / maximum	75 °C

## Certificates

**General Product Approval****Test Certificates**[Miscellaneous](#)[Miscellaneous](#)**Further information****Information- and Downloadcenter (Catalogs, Brochures,...)**<http://www.siemens.com/lowvoltage/catalogs>**Industry Mall (Online ordering system)**<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=5SY4180-6>**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**<https://support.industry.siemens.com/cs/ww/en/ps/5SY4180-6>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)**[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=5SY4180-6](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=5SY4180-6)**CAX-Online-Generator**<http://www.siemens.com/cax>**Tender specifications**<http://www.siemens.com/specifications>



