

# Molded Case Circuit Breaker Specifications

Bulletin Number 140U-D

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## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

| Resource  | Description   |
|---|---|
| Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a> | Provides general guidelines for installing a Rockwell Automation industrial system. |
| Product Certifications website, <a href="http://www.ab.com">http://www.ab.com</a>           | Provides declarations of conformity, certificates, and other certification details. |

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.






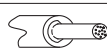
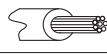


| Frame Reference  | D-Frame            |
|--|--------------------|
| Max. Current $I_n$   | 30 A               |
| Current Range  | 0.5...30 A         |
| Thermal Magnetic   | ✓                  |
| Rotary Operators   | ✓                  |
| Internal Control Modules (Field installed)   | ✓                  |
| Standards Compliance (For information regarding specific breakers, please consult <a href="http://www.ab.com">www.ab.com</a> . Standards compliance varies by catalog number.) |                    |
| UL 489   | ✓                  |
| UL File Nos.   | E334037,<br>E33916 |
| CSA C22.2, No. 5   | ✓                  |
| IEC 60947-2  | ✓                  |
| CE   | ✓                  |



## General Data

| Attribute  | 140U-D   |
|--|--|
| <b>Number of Poles</b>   | 2 and 3  |
| <b>Rated Insulation Voltage <math>U_i</math></b>   |  |
| IEC / EN [V]   | 690  |
| UL, CSA [V]  | 600  |
| <b>Ratings</b>   | HACR   |
| Suitable for continuous operation at 100 percent of rating only if used in cubicle space for | 0.5...10 A, cubicle space 250 x 175 x 150 mm (10 x 7 x 6 inches).  |
| <b>Rated Impulse Withstand Voltage <math>U_{imp}</math></b>                                  |  |
| Pollution degree   | 3  |
| Main circuits $U_{imp}$ /Overvoltage Category  | 6 kV/III   |
| Auxiliary circuits $U_{imp}$ /Overvoltage Category   | 6 kV/III   |
| Safe separation between main and auxiliary circuits  | up to 400V   |
| <b>Rated Frequency</b> [Hz]  | 50/60  |
| <b>Utilization Category</b>  |  |
| IEC 60947-2 (Circuit breaker)  | A  |
| <b>Life Span</b>   |  |
| Mechanical [operations]  | 100 000  |
| Electrical ( $I_e$ max.) [operations]  | 10 000   |
| Switching Frequency [operations/h]   | max. 25  |
| <b>Ambient Temperature</b>   |  |
| Storage [°C]   | -40...+80  |
| Operation [°C]   | -25...+60 (70 with 15 % $I_n$ current reduction)   |
| <b>Climatic resistance</b>   |  |
| Moisture change climate (600068-2-30)  | 23 °C / 83 % relative humidity and 40 °C / 92 % relative humidity, 56 cycles   |
| Dry heat (60086-2-2)   | 100 °C, relative humidity <50 %, 7 days  |
| Moisture heat (60068-2-3)  | 40 °C, relative humidity 93 %, 56 days   |
| <b>Site Altitude</b> [m]   | to 2000 N.N.   |
| <b>Protection Class</b>  | IP2X, when wired   |
| <b>Resistance to Shock</b> , Transport (60068-2-27)  | 30 g, 11 ms, all axes  |
| <b>Resistance to Vibration</b> , Operation (60068-2-6)                                       | 18 g   |
| <b>Overload Protection</b> [°C]  | Yes acc. IEC/EN 60947-2, UL489, CSA 22.2, Ambient Temperature Compensation -25...+60   |
| Phase-loss Protection  | No phase loss protection   |
| Short circuit protection (Magnetic)  | fixed setting 15...20 x $I_n$  |
| <b>Total Power loss <math>P_v</math></b>   |  |
| @ $I_n$ max. [W]   | 7.5  |
| <b>Main Disconnect Switch Application</b>  | Yes, with accessories  |
| <b>Application Conditions</b>  | For utilization outside North America, Assemblies (of products) shall comply to the IEC61439-1 requirements<br><br>140U circuit breakers are intended for use in closed areas without hazardous operating conditions such as dust or explosive or corrosive gases. Enclosures of appropriate manner need to be in place to protect devices in such environments. |
| <b>Standards</b>   | UL489; CSA C22.2 No. 5; IEC / EN 60947-1, -2   |
| <b>Certifications</b>  | CE; cULus listed Circuit Breaker, File No. E334037 and E33916 (accessories)  |

## Terminal Specifications 140U-D

| Attribute  | 140U-D...  |
|--|--|
| Use 75°C Cu wire only  |  |
| <b>Terminal Parts</b>  |  |
| Type of terminals  |  |
| Screwdriver  | Pozidriv No. 2 / Blade No. 3   |
|  1. conductor [mm <sup>2</sup> ] / [AWG]<br>2. conductor [mm <sup>2</sup> ] / [AWG] | 1...6/—<br>1...4/—   |
|  1. conductor [mm <sup>2</sup> ] / [AWG]<br>2. conductor [mm <sup>2</sup> ] / [AWG] | 1...6/—<br>1...6/—   |
|  1. conductor [mm <sup>2</sup> ] / [AWG]<br>2. conductor [mm <sup>2</sup> ] / [AWG] | —/No. 18...10<br>—/No. 18...10   |
|  1. conductor [mm <sup>2</sup> ] / [AWG]<br>2. conductor [mm <sup>2</sup> ] / [AWG] | 1...6/No. 18...10<br>1...6/No. 18...10   |
| Tightening torque [N•m] / [lb•in]  | 2...2.5 / 18...22  |