

# 9926 Series Branch Circuit Breakers and Supplementary Protectors



Weidmüller's range of industrial, DIN-rail mounted circuit breakers are part of our broad electronics portfolio, which provides isolation and protection solutions for automation control systems. Compared with traditional fused protection, these compact circuit breakers can be closely tailored to the application, in order to simplify control and minimize equipment downtime in the event of a fault.

Product ratings and mechanical construction are designed to provide the high levels of reliability expected from automation and control equipment installed on capital plant, and specifications conform to recognized international standards.

## Overview of 9926 Series

### Model QL

- AC Branch-rated circuit breakers
- UL489 Listed, CSA, VDE, CE conformity
- 1, 2 and 3 pole units (NEW)
- Ratings up to 240V/25A

### Model QY

- DC Branch-rated circuit breakers
- UL489A Listed, VDE, CE conformity
- 1 and 2 pole units (NEW)
- Ratings up to 125V/60A

### Model QZ

- AC Supplementary circuit breakers
- UL1077 Recognized, VDE, CE conformity, CSA
- 1, 2 and 3 pole units
- Ratings up to 277/480V/60A

### Model GFCI

- AC Supplementary circuit breakers
- UL1077 and UL1053 Recognized, CE conformity
- 1 pole (+N) units
- Ratings up to 240V/63A

## 9926 Series Features

- For industrial AC and DC installations
- Models either for branch applications cULus (UL489/CSA C22.2 No 5.02) approvals or supplemental cURus/UL1077 approved /CSA C22.2 No. 235.
- Single and multi-pole models, with auxiliary/trip options
- Trip point unaffected by ambient temperature changes
- Variety of trip characteristics available, to suit equipment protected
- Narrow width on mounting rail – 13mm per pole
- GFCI models with standard ratings up to 240V/50A
- Full set of approved accessories, such as busbars, power lugs, lock-out handles

9926 Series Branch Circuit Breakers (AC)

Circuit Breakers Hydraulic Magnetic Type

- 1, 2 and 3 pole versions
- 120/240 VAC, 50/60 Hz
- Up to 25A
- Just 13 mm wide, per pole
- Mounts on 35mm DIN-rail
- cULus listed according to UL489 CSA C22.2 No. 5.02, CE, VDE

9926 Series Single Pole



9926 Series Double Pole



9926 Series Triple Pole



Technical Data	
Voltage	120/240 VAC, 50/60Hz
Current minimum	0.5A
Current maximum	25A
Interrupting capacity	10,000A
Dielectric strength	1500V, 50/60Hz
Insulation resistance	100 MΩ
Operating Life	10000 mechanical operations
Operating temperature	-40...+65°C
Wire size*	
*0.5-15A:	14AWG min., 10AWG max.
20-25A:	10AWG min.
Torque	20 in.-lb

Accessories

Type	Part No.
Bus-bar (1 pole, insulated, 1 m)	67101904
Bus-bar (2 pole, insulated, 1 m)	67101972
Bus-bar end cap, 1 pole	67101973
Bus-bar end cap, 2 pole	67101974
Power lug, straight (14 mm)	67101960
Power lug, 90° (14 mm)	67101961
Power lug, straight (32 mm)	67102480
Power lug, 90° (32 mm)	67102479
Lock-out handle	67101913

\*Wire sizes: gauges specified are the minimum allowable as per CSA and UL standards.

The 9926 circuit breakers do not have provisions for marking tags. A possible solution is to cut the adhesive SchS2 tag rail to length (approximately 20 mm on a single pole unit so the current rating remains visible or approximately 30 mm on a two pole unit). The SchS2 accepts DEK, WS and ESG 8/17 marking tags. The part number for adhesive SchS2 is 172060000.

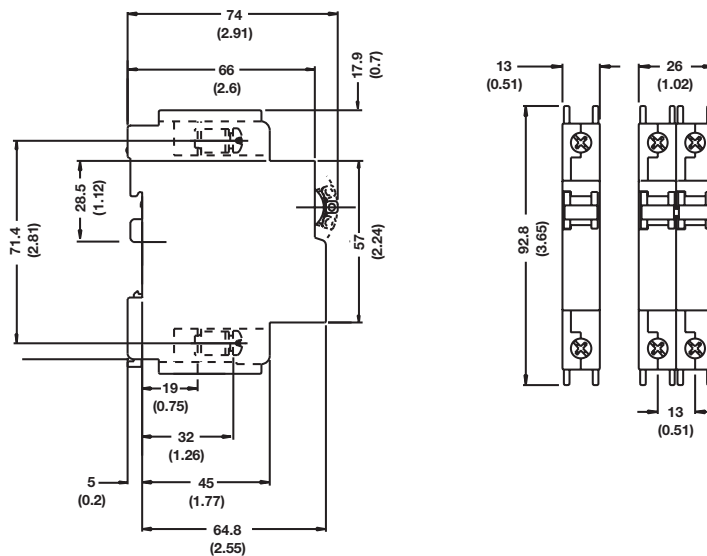
See Trip Curves 1, 3, 9, KM, OP - Page 26

Type: Single Pole (up to 120 VAC)			
Current Ratings (amps)	Description	Part No.	
0.5	QL-1-13-DM-KM-0.5	9926251000	
1	QL-1-13-DM-KM-01	9926251001	
2	QL-1-13-DM-KM-02	9926251002	
3	QL-1-13-DM-KM-03	9926251003	
4	QL-1-13-DM-KM-04	9926251004	
5	QL-1-13-DM-KM-05	9926251005	
6	QL-1-13-DM-KM-06	9926251006	
7	QL-1-13-DM-KM-07	9926251007	
8	QL-1-13-DM-KM-08	9926251008	
10	QL-1-13-DM-KM-10	9926251010	
13	QL-1-13-DM-KM-13	9926251013	
15	QL-1-13-DM-KM-15	9926251015	
16	QL-1-13-DM-KM-16	9926251016	
20	QL-1-13-DM-KM-20	9926251020	
25	QL-1-13-DM-KM-25	9926251025	

Type: Double Pole (up to 240 VAC)			
Current Ratings (amps)	Description	Part No.	
0.5	QL-2-13-DM-KM-0.5	9926252000	
1	QL-2-13-DM-KM-01	9926252001	
2	QL-2-13-DM-KM-02	9926252002	
3	QL-2-13-DM-KM-03	9926252003	
4	QL-2-13-DM-KM-04	9926252004	
5	QL-2-13-DM-KM-05	9926252005	
6	QL-2-13-DM-KM-06	9926252006	
7	QL-2-13-DM-KM-07	9926252007	
8	QL-2-13-DM-KM-08	9926252008	
10	QL-2-13-DM-KM-10	9926252010	
13	QL-2-13-DM-KM-13	9926252013	
15	QL-2-13-DM-KM-15	9926252015	
16	QL-2-13-DM-KM-16	9926252016	
20	QL-2-13-DM-KM-20	9926252020	
25	QL-2-13-DM-KM-25	9926252025	

Type: Triple Pole (up to 240 VAC)			
Current Ratings (amps)	Description	Part No.	
1	QL-3(13)-DM-KM-1A	9926253001	
2	QL-3(13)-DM-KM-2A	9926253002	
5	QL-3(13)-DM-KM-5A	9926253005	
10	QL-3(13)-DM-KM-10A	9926253010	
15	QL-3(13)-DM-KM-15A	9926253015	
20	QL-3(13)-DM-KM-20A	9926253020	
25	QL-3(13)-DM-KM-25A	9926253025	

Dimension Diagrams in mm (in.)





9926 Series Branch Circuit Breakers - DC Version

**Circuit Breakers Hydraulic Magnetic Type**

- Single and double pole versions
- U2 trip curve for general purpose applications
- 80 and 125 VDC
- Up to 60A
- Just 13 mm wide, per pole
- Mounts on 35 mm DIN-rail
- UL 489A listed
- VDE

**9926 Series Single Pole (80 VDC)**



**9926 Series Single Pole (125 VDC)**



Technical Data	
Voltage	120/240 VAC, 50/60Hz
Current minimum	0.5A
Current maximum	60A
Interrupting capacity	10,000A
Dielectric strength	1500V, 50/60Hz
Insulation resistance	100 MΩ
Operating Life	10000 mechanical operations
Operating temperature	-40...+65°C
Wire size*	
1-15A:	14AWG min., 10AWG max.
20-25A:	10AWG min.
Torque	20 in.-lb

Approval	
UL listed to UL489	

\*Wire sizes: gauges specified are the minimum allowable as per CSA and UL standards.

The 9926 circuit breakers do not have provisions for marking tags. A possible solution is to cut the adhesive SchS2 tag rail to length (approximately 20 mm on a single pole unit so the current rating remains visible or approximately 30 mm on a two pole unit). The SchS2 accepts DEK, WS and ESG 8/17 marking tags. The part number for adhesive SchS2 is **1720600000**.

Type	Part No.
Bus-bar (1 pole, insulated, 1 m)	67101904
Bus-bar end cap, 1 pole	67101973
Power lug, straight (14 mm)	67101960
Power lug, 90° (14 mm)	67101961
Power lug, straight (32 mm)	67102480
Power lug, 90° (32 mm)	67102479
Lock-out handle	67101913

See Trip Curves 1, 9, OP, U2 - Page 26

Type: Single Pole (80 VDC)			
Current Ratings (amps)	Description	Part No.	
0.5	QY-1-13-DM-U2-0.5	9926251900	
1	QY-1-13-DM-U2-01	9926251901	
2	QY-1-13-DM-U2-02	9926251902	
3	QY-1-13-DM-U2-03	9926251903	
4	QY-1-13-DM-U2-04	9926251904	
5	QY-1-13-DM-U2-05	9926251905	
10	QY-1-13-DM-U2-10	9926251910	
15	QY-1-13-DM-U2-15	9926251915	
20	QY-1-13-DM-U2-20	9926251920	
25	QY-1-13-DM-U2-25	9926251925	
30	QY-1-13-DM-U2-30	9926251930	
35	QY-1-13-DM-U2-35	9926251935	
40	QY-1-13-DM-U2-40	9926251940	
45	QY-1-13-DM-U2-45	9926251945	
50	QY-1-13-DM-U2-50	9926251950	
60	QY-1-13-DM-U2-60	9926251960	

Type: Single Pole (125 VDC)			
Current Ratings (amps)	Description	Part No.	
1	QY-1-13-DM-U2-01-B1	9926251801	
2	QY-1-13-DM-U2-02-B1	9926251802	
3	QY-1-13-DM-U2-03-B1	9926251803	
4	QY-1-13-DM-U2-04-B1	9926251804	
5	QY-1-13-DM-U2-05-B1	9926251805	
10	QY-1-13-DM-U2-10-B1	9926251810	
15	QY-1-13-DM-U2-15-B1	9926251815	
20	QY-1-13-DM-U2-20-B1	9926251820	
25	QY-1-13-DM-U2-25-B1	9926251825	
30	QY-1-13-DM-U2-30-B1	9926251830	
35	QY-1-13-DM-U2-35-B1	9926251835	
40	QY-1-13-DM-U2-40-B1	9926251840	
45	QY-1-13-DM-U2-45-B1	9926251845	
50	QY-1-13-DM-U2-50-B1	9926251850	
60	QY-1-13-DM-U2-60-B1	9926251860	

**9926 Series Double Pole (80 VDC)**



**9926 Series Double Pole (125 VDC)**



Type: Double Pole (80 VDC)			
Current Ratings (amps)	Description	Part No.	
5	QY-2-13-DM-U2-5A	9926252905	
10	QY-2-13-DM-U2-10A	9926252910	
15	QY-2-13-DM-U2-15A	9926252915	
16	QY-2-13-DM-U2-16A	9926252916	
20	QY-2-13-DM-U2-20A	9926252920	
40	QY-2-13-DM-U2-40A	9926252940	

Type: Double Pole (125 VDC)			
Current Ratings (amps)	Description	Part No.	
5	QY-2-13-DM-U2-5A-B1	9926252805	
10	QY-2-13-DM-U2-10A-B1	9926252810	
15	QY-2-13-DM-U2-15A-B1	9926252815	
20	QY-2-13-DM-U2-20A-B1	9926252820	
30	QY-2-13-DM-U2-30A-B1	9926252830	
32	QY-2-13-DM-U2-32A-B1	9926252832	
40	QY-2-13-DM-U2-40A-B1	9926252840	
50	QY-2-13-DM-U2-50A-B1	9926252850	
60	QY-2-13-DM-U2-60A-B1	9926252860	

## Supplementary Circuit Protection



Compared to traditional fuse installation, the UL1077/CSA C22.2 No.235 compliant circuit breakers listed here assist with the complex task of selecting correct types and characteristics and offer a less bulky installation solution. Our range of miniature, molded-case circuit breakers, in combination with our accessories for factory or on-site installation, offer enhanced control and monitoring capabilities. Installation kits include all parts and instructions to make the on-site job easy.

We supply UL1077/CSA C22.2 No.235 compliant 1, 2 and 3-pole-type circuit breakers from 0.5 to 60 Ampere and with type C and D characteristics.

Attachments such as neutral switches, auxiliary contacts and shunt trips are also available for this system. All accessories for modern busbar installations are available in compliance with the relevant UL standards.



Supplementary Circuit Breakers

Circuit Breakers  
Thermal Magnetic Type

Our range of UL1077/GSA C22.2 No.235 supplementary protectors can be used where additional protection is required in control circuits. Combined with the accessories it also offers enhanced monitoring and control capabilities.

Single Pole - D Curve

Single Pole - C Curve

Current Ratings (amps)	Description	Part No.	Description	Part No.
0.5	Suppl / 1P Cct Brkr / D Curve / 0.5A	SU1D05AC	Suppl / 1P Cct Brkr / C Curve / 0.5A	SU1C05AC
1	Suppl / 1P Cct Brkr / D Curve / 1A	SU1D1AC	Suppl / 1P Cct Brkr / C Curve / 1A	SU1C1AC
2	Suppl / 1P Cct Brkr / D Curve / 2A	SU1D2AC	Suppl / 1P Cct Brkr / C Curve / 2A	SU1C2AC
3	Suppl / 1P Cct Brkr / D Curve / 3A	SU1D3AC	Suppl / 1P Cct Brkr / C Curve / 3A	SU1C3AC
5	Suppl / 1P Cct Brkr / D Curve / 5A	SU1D5AC	Suppl / 1P Cct Brkr / C Curve / 5A	SU1C5AC
10	Suppl / 1P Cct Brkr / D Curve / 10A	SU1D10AC	Suppl / 1P Cct Brkr / C Curve / 10A	SU1C10AC
15	Suppl / 1P Cct Brkr / D Curve / 15A	SU1D15AC	Suppl / 1P Cct Brkr / C Curve / 15A	SU1C15AC
20	Suppl / 1P Cct Brkr / D Curve / 20A	SU1D20AC	Suppl / 1P Cct Brkr / C Curve / 20A	SU1C20AC
25	Suppl / 1P Cct Brkr / D Curve / 25A	SU1D25AC	Suppl / 1P Cct Brkr / C Curve / 25A	SU1C25AC
30	Suppl / 1P Cct Brkr / D Curve / 30A	SU1D30AC	Suppl / 1P Cct Brkr / C Curve / 30A	SU1C30AC
40	Suppl / 1P Cct Brkr / D Curve / 40A	SU1D40AC	Suppl / 1P Cct Brkr / C Curve / 40A	SU1C40AC
50	Suppl / 1P Cct Brkr / D Curve / 50A	SU1D50AC	Suppl / 1P Cct Brkr / C Curve / 50A	SU1C50AC
60	Suppl / 1P Cct Brkr / D Curve / 60A	SU1D60AC	Suppl / 1P Cct Brkr / C Curve / 60A	SU1C60AC



Double Pole - D Curve

Double Pole - C Curve

Current Ratings (amps)	Description	Part No.	Description	Part No.
0.5	Suppl / 2P Cct Brkr / D Curve / 0.5A	SU2D05AC	Suppl / 2P Cct Brkr / C Curve / 0.5A	SU2C05AC
1	Suppl / 2P Cct Brkr / D Curve / 1A	SU2D1AC	Suppl / 2P Cct Brkr / C Curve / 1A	SU2C1AC
2	Suppl / 2P Cct Brkr / D Curve / 2A	SU2D2AC	Suppl / 2P Cct Brkr / C Curve / 2A	SU2C2AC
5	Suppl / 2P Cct Brkr / D Curve / 5A	SU2D5AC	Suppl / 2P Cct Brkr / C Curve / 5A	SU2C5AC
10	Suppl / 2P Cct Brkr / D Curve / 10A	SU2D10AC	Suppl / 2P Cct Brkr / C Curve / 10A	SU2C10AC
15	Suppl / 2P Cct Brkr / D Curve / 15A	SU2D15AC	Suppl / 2P Cct Brkr / C Curve / 15A	SU2C15AC
20	Suppl / 2P Cct Brkr / D Curve / 20A	SU2D20AC	Suppl / 2P Cct Brkr / C Curve / 20A	SU2C20AC
25	Suppl / 2P Cct Brkr / D Curve / 25A	SU2D25AC	Suppl / 2P Cct Brkr / C Curve / 25A	SU2C25AC
30	Suppl / 2P Cct Brkr / D Curve / 30A	SU2D30AC	Suppl / 2P Cct Brkr / C Curve / 30A	SU2C30AC
40	Suppl / 2P Cct Brkr / D Curve / 40A	SU2D40AC	Suppl / 2P Cct Brkr / C Curve / 40A	SU2C40AC
50	Suppl / 2P Cct Brkr / D Curve / 50A	SU2D50AC	Suppl / 2P Cct Brkr / C Curve / 50A	SU2C50AC
60	Suppl / 2P Cct Brkr / D Curve / 60A	SU2D60AC	Suppl / 2P Cct Brkr / C Curve / 60A	SU2C60AC



Triple Pole - D Curve

Triple Pole - C Curve

Current Ratings (amps)	Description	Part No.	Description	Part No.
1	Suppl / 3P Cct Brkr / D Curve / 1A	SU3D1AC	Suppl / 3P Cct Brkr / C Curve / 1A	SU3C1AC
2	Suppl / 3P Cct Brkr / D Curve / 2A	SU3D2AC	Suppl / 3P Cct Brkr / C Curve / 2A	SU3C2AC
5	Suppl / 3P Cct Brkr / D Curve / 5A	SU3D5AC	Suppl / 3P Cct Brkr / C Curve / 5A	SU3C5AC
10	Suppl / 3P Cct Brkr / D Curve / 10A	SU3D10AC	Suppl / 3P Cct Brkr / C Curve / 10A	SU3C10AC
15	Suppl / 3P Cct Brkr / D Curve / 15A	SU3D15AC	Suppl / 3P Cct Brkr / C Curve / 15A	SU3C15AC
20	Suppl / 3P Cct Brkr / D Curve / 20A	SU3D20AC	Suppl / 3P Cct Brkr / C Curve / 20A	SU3C20AC
25	Suppl / 3P Cct Brkr / D Curve / 25A	SU3D25AC	Suppl / 3P Cct Brkr / C Curve / 25A	SU3C25AC
30	Suppl / 3P Cct Brkr / D Curve / 30A	SU3D30AC	Suppl / 3P Cct Brkr / C Curve / 30A	SU3C30AC
40	Suppl / 3P Cct Brkr / D Curve / 40A	SU3D40AC	Suppl / 3P Cct Brkr / C Curve / 40A	SU3C40AC
50	Suppl / 3P Cct Brkr / D Curve / 50A	SU3D50AC	Suppl / 3P Cct Brkr / C Curve / 50A	SU3C50AC
60	Suppl / 3P Cct Brkr / D Curve / 60A	SU3D60AC	Suppl / 3P Cct Brkr / C Curve / 60A	SU3C60AC



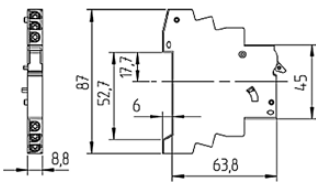
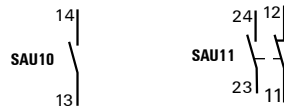
Note: Additional current ratings available. Contact your local Weidmüller representative.

Accessories for Supplementary Circuit Breakers



Auxiliary contact

Module	Type of Contact	Contacts	Weight g/ Each	Packing Unit	Part No.
1/2	1 auxiliary contact	1NO	35	10	SAU10
1/2	2 auxiliary contact	1NO + 1NC	40	10	SAU11



Standards Acc. to IEC 60947-5-1, DIN EN 60947-5-1, VDE 0660-200, UL508

Rated operating currents	10 A / 240 V AC 3 A / 110 V DC 1 A / 220 V DC
Minimum contact load	1 mA at 24 V DC
Conductor cross sections	
Type of conductor *)	min. max.
Single wire	1.0 mm <sup>2</sup> (AWG18) 2.5 mm <sup>2</sup> (AWG14)
Stranded wire	1.0 mm <sup>2</sup> (AWG18) 1.5 mm <sup>2</sup> (AWG16)
Stranded wire with ferrule	1.0 mm <sup>2</sup> (AWG18) 1.5 mm <sup>2</sup> (AWG16)
Torque	max. 0.8 Nm (7 lb.in)

\*) Stripped length 8 - 9 mm



Shunt trip

Module	Rated Operating Voltage	Max. Operating Current at Un (t < 10 ms)	Weight g/ Each	Packing Unit	Part No.
1	24 V UC	0.6 A	105	5	SST24V
1	110 - 240 V UC, 415 V AC	0.25 A at 110 V 0.5 A at 240 V 0.58 A at 277 V	105	5	SST110V



Switching Devices Supplementary Protector

Rated Current i <sub>n</sub> A	Rated Voltage Volt AC	Weight g/ Each	Packing Unit	Test Currents * Electromagnetic		Part No.
				Not Tripping I <sub>a</sub> A	Tripping I <sub>b</sub> A	
0.5 - 60	277/480	150	5	400	700	SNS63A

\* additional electromagnetic protection



Lock-off/Lock-on device

Packing Unit	Weight g/ Each	Part No.
10	2	LD10



Accessories for Supplementary Circuit Breakers

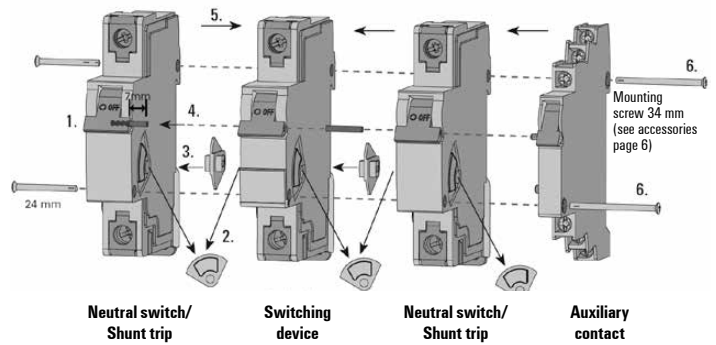
Mounting Instructions of Accessories

Applies to SNS63A and SAU...:

The accessory devices SNS63A and SAU... can be installed on the right or left. The auxiliary contact H...UM can only be installed on the right.

Mounting:

1. Flick the blue switches of all devices to the "OFF" position
2. Remove the grey cover from the switching device and attachment
3. Insert the drive plate between the switching device and SNS63A and SAU...
4. Insert the connecting pin into the switch (insertion depth approx. 7 mm)
5. Combine switching device and SNS63A and SAU...
6. Screw devices together (observe correct screw length)

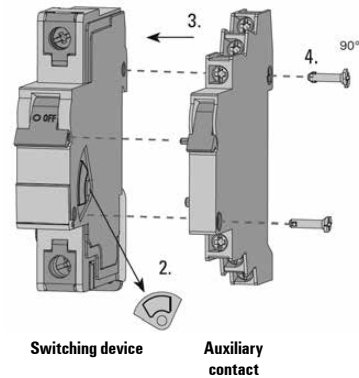


Applies to SAU...:

The auxiliary contact SAU... can only be installed on the right.

Installation:

1. Flick the blue switches of all devices to the "OFF" position
2. Remove the grey cover from the switching device
3. Combine switching device and SAU...
4. Insert connection screws and connect the two devices by turning the screws by 90°
5. After installation close and open to check operation

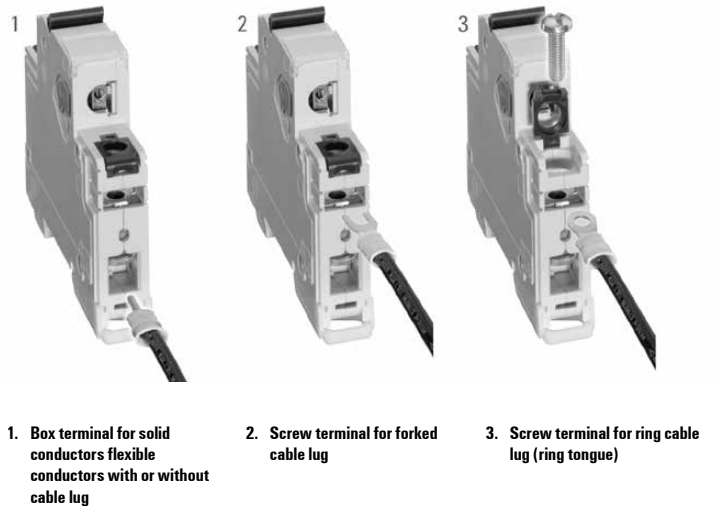


Applies to all switching devices

SAU..., SNS and SST...

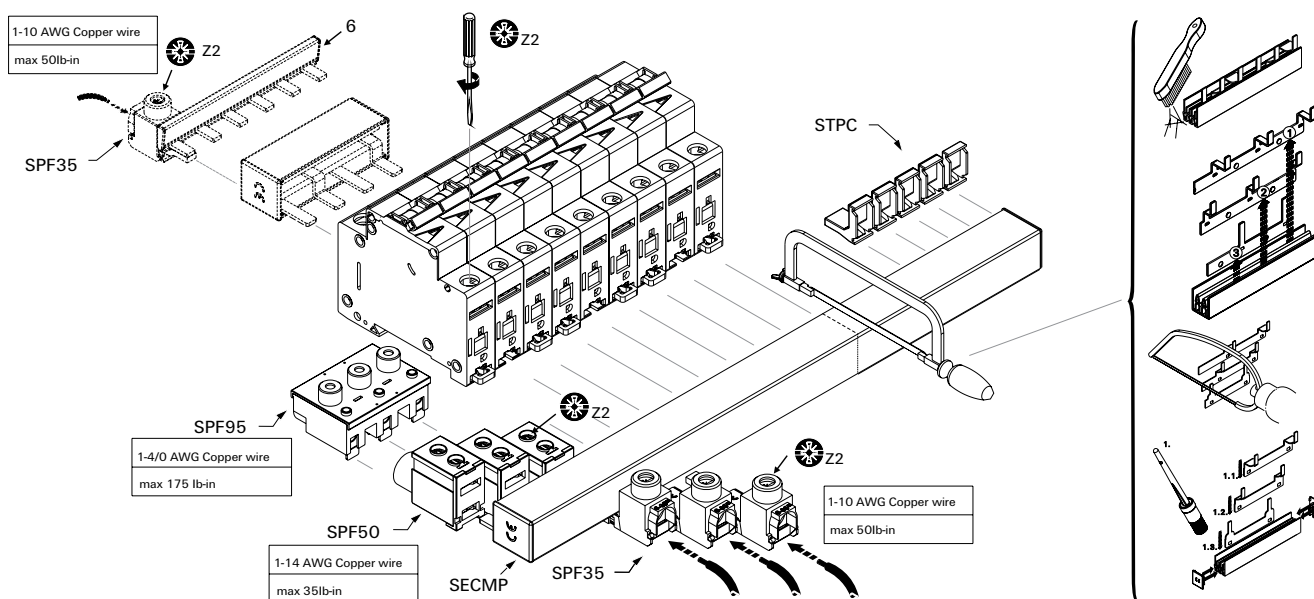
Design of the terminals

- Optical detection of screw position
- Increased breaking resistance if the screwdriver becomes jammed
- Universal connecting terminals, suitable for connecting all known cable lugs such as ring or forked cable lugs and pin terminals
- Ring cable lugs can be connected by opening the flap and removing the connecting screw
- Can also be used for applications that require ring cable lugs (e.g. nuclear power stations)
- DIN EN 50274, VDE 0660-514 compliant protection against contact with live parts is fully guaranteed





Busbar and Accessories for Supplementary Circuit Breakers (UL1077/CSA C22.2 No.235)



General Data

	SPF35
$U_e$	1000 V AC/DC
$f$	50/60 Hz
$U_{imp}$	-
$I_e$	115 A
	# 1-10 AWG 60°C Cu
	0.56 in
	All SB models
$U_e$	1P 600 V AC 1000V DC 2/3P 600V AC
$f$	50/60 Hz
$U_{imp}$	-
$I_e$	18mm <sup>2</sup> / 25mm <sup>2</sup>
Infeed at the start of the busbar	80A@40 °C / 100A@30°C
Infeed at the center of the busbar	160A@40°C / 200A@30°C

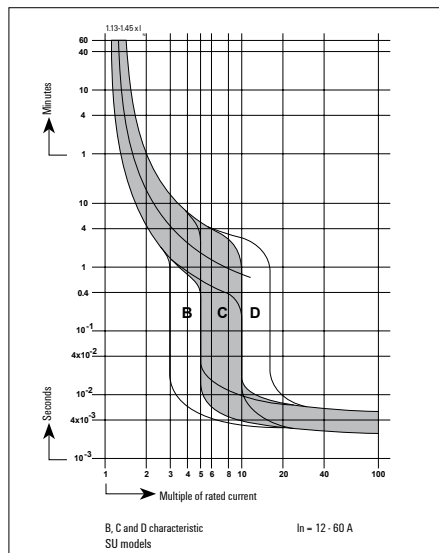
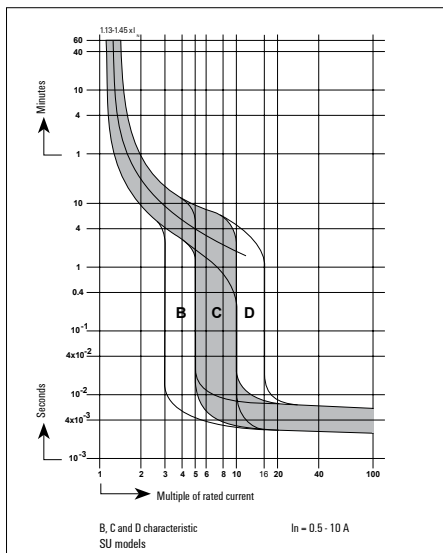
	SPF50
$U_e$	1000V AC/DC
$f$	50/60 Hz
$U_{imp}$	-
$I_e$	115 A
	# 1-14 AWG 75°C Cu
	0.56 in
	SPF95
$U_e$	600V AC/DC
$f$	50/60 Hz
$U_{imp}$	-
$I_e$	200 A
	# 1-4/0 AWG 75°C Cu
	1 in

Description	Part No.
Busbar/Supplementary Protection/1ph/6Poles	SB106
Busbar/Supplementary Protection/1ph/12Poles	SB112
Busbar/Supplementary Protection/Aux/1ph/37Poles	SB1A37
Busbar/Supplementary Protection/2ph/12Poles	SB212
Busbar/Supplementary Protection/2ph/18Poles	SB218
Busbar/Supplementary Protection/Aux/2ph/38Poles	SB2A38
Busbar/Supplementary Protection/3ph/12Poles	SB312
Busbar/Supplementary Protection/3ph/39Poles	SB339
Busbar/Supplementary Protection/Aux/3ph/48Poles	SB3A48P
PwrFeed Term - 35mm <sup>2</sup>	SPF35
PwrFeed Term - 50mm <sup>2</sup>	SPF50
PwrFeed Term - 95mm <sup>2</sup>	SPF95
Touch Protection 5Caps	STPC
Endcap/1P busbars	SEC1P
Endcap/multi-P busbars	SECMP

Technical Data for Supplementary Circuit Breakers

Characteristic		C	D
Application		Lighting, Control circuits Wiring protection, Business equipment Appliances	Control transformers Power supplies Reactive load
Number of poles		1 - 3; 1 + N; 3 + N	
Standards		UL1077 and CSA-22.2 No.235	
Interrupting capacity		see data sheet for use in the USA and Canada	
Current limiting class		3	
Max. back-up fuse		see data sheet for use in the USA and Canada	
Rated voltage AC		277 / 480 V	
Rated current range		0.5 - 60 A	0.5 - 60 A
Test currents	Thermal not tripping $I_1 (A) > 1 \text{ h}$	$1.13 \times I_n$	$1.13 \times I_n$
	Thermal tripping $I_2 (A) < 1 \text{ ha}$	$1.45 \times I_n$	$1.45 \times I_n$
	Electromagnetic not tripping $I_4 (A) > 0,1 \text{ s}$	$5 \times I_n$	$10 \times I_n$
	Electromagnetic tripping $I_5 (A) < 0,1 \text{ s}$	$10 \times I_n$	$16 \times I_n$
Reference calibration temperature of the thermal tripping		30° C + 5° C Influence of the ambient temperature on the thermal release: Decrease of the current values with higher ambient temperature and increase with lower temperatures of approximately 5% per 10°C difference in temperature	
Frequency range of the electromagnetic trip		16 <sup>2</sup> /3 to 60 Hz	
Ambient temperature		-25 °C to +55 °C	
Storage temperature		-40 °C to +70 °C	
Device depth according to DIN 43880		68 mm	
Mechanical live		10,000 cycles (ON / OFF)	
Protection cover		Finger safe and safe to back of hand according to DIN EN 50274/ VDE0660-514	
Insulation group acc. to DIN/VDE 0110		C at 250 V AC B at 400 V AC	
Degree of protection acc. to EN/IEC 60529		IP20	
Installation position		any	
Mounting		DIN-rail according to DIN EN 60715 35 mm	
Lockability		The handle can be secured against manual switching in the on and off position by a lead seal	
Climatic resistance		Humid heat constant according to DIN EN 60068-2-78 Humid heat cycle according to DIN EN 60068-2-30	
Vibration resistance		> 15 g according to DIN EN 60068-2-59 during a load with I <sub>1</sub>	
Resistance to mechanical shocks		25g 11ms	
Approvals - SU... items		cRUus marking, UL file E359481, ref standards UL1077 and CSA-C22.2 No. 235	
Approvals - SAU..., SNS..., SST... items		UL marking, UL file E362205, ref standards UL1077 and CSA-C22.2 No. 14	
Approvals - SB..., SPF..., STPC..., SEC... items		pending	

Curves for Supplementary Circuit Breakers



Technical Data for Supplementary Circuit Breakers

Conductor cross sections

Type of conductor *)	Box Terminal Bottom		Box Terminal Top	
	max.	min.	max.	min.
Single wire	35 mm <sup>2</sup> (AWG2)	1 mm <sup>2</sup> (AWG18)	25 mm <sup>2</sup> (AWG3)	1 mm <sup>2</sup> (AWG18)
Multiple wire	35 mm <sup>2</sup> (AWG2)	16 mm <sup>2</sup> (AWG6)	25 mm <sup>2</sup> (AWG3)	16 mm <sup>2</sup> (AWG6)
Stranded wire	25 mm <sup>2</sup> (AWG3)	1 mm <sup>2</sup> (AWG18)	16 mm <sup>2</sup> (AWG6)	1 mm <sup>2</sup> (AWG18)
Stranded wire with ferrule	16 mm <sup>2</sup> (AWG6)	1 mm <sup>2</sup> (AWG18)	16 mm <sup>2</sup> (AWG6)	1 mm <sup>2</sup> (AWG18)
<b>Busbar cable lug</b>	up to 3 mm thickness		up to 1.5 mm thickness	
<b>Torque</b>	max. 2.3 Nm (20 lb.in)			

\*) Stripped length: bottom 12 - 14 mm, top 10 - 12 mm

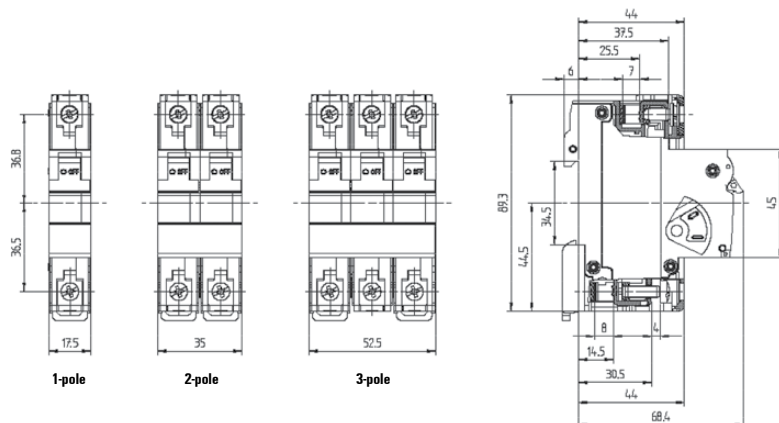
Interrupting capacity and maximum back-up fuse for use in the USA and Canada

Characteristic	C and D				
Standards	UL1077 and CSA-22.2 No.235				
	Number of poles	Maximum rated voltage [V]	Rated current [A]	Interrupting capacity [kA]	Maximum back-up fuse [A]
Interrupting capacity at rated voltage Ambient temperature 40 °C	1 / 1 + N	277	0.5 - 10	10	70 A
	1 / 1 + N	277	12 - 60	10	4 x I <sub>n</sub>
	2 / 3 / 3 + N	480	0.5 - 10	10	70 A
	2 / 3 / 3 + N	480	12 - 60	10	4 x I <sub>n</sub>

Internal resistance for Product Range SU

Rated Current [A]	Trip Characteristic	
	C [Ohm]	D [Ohm]
0.5	6.8540	6.0009
1.0	1.7000	1.7560
2.0	0.4190	0.4190
3.0	0.2020	0.2020
4.0	0.1090	0.1090
5.0	0.0654	0.0654
6.0	0.0528	0.0491
8.0	0.0278	0.0240
10	0.0216	0.0187
12/13	0.0084	0.0085
15/16	0.0085	0.0076
20	0.0067	0.0064
25	0.0050	0.0041
30/32	0.0032	0.0027
40	0.0025	0.0022
50	0.0019	0.0018
60	0.0018	0.0017

Dimension Diagrams in mm (in.)





9926 Series Supplementary Breakers with Contacts

**Circuit Breakers**  
**Auxiliary switch, Trip alarm,**  
**Combination of both**

- AC Voltages 277/480V
- Trip curve 2 for general purpose applications
- UL 1077 recognized
- VDE approved and CE marked
- Just 13 mm wide
- Mounts to 35 mm DIN-rail
- Factory fitted auxiliary or trip alarm
- Single, double and triple pole versions

Technical Data	
Voltage	120/240 VAC, 50/60Hz
Current minimum	0.5A
Current maximum	60A
Interrupting capacity	5 kA @ 277/480 V, 5 kA @ 120 V, 5 kA @ 240 V
Dielectric strength	1500 V, 50/60 Hz
Insulation resistance	100 MΩ
Operating Life	10000 mechanical operations
Operating temperature	-40...+65°C
Wire size*	
0.5-15A:	14AWG min., 10AWG max.
20-25A:	10AWG min.
Torque	20 in.-lb

Approval
†UL 1077 Recognized, VDE (EN 60947-2) Approved, cURus (CSA C22.2 No. 235), CE Marked

†UL 489 listed (5A, 250 VAC; 0.5A, 80 VDC Auxiliary; 0.5A, 125 VDC Trip Alarm)  
 IEC 60947-5-1 Approved (5A, 250 VAC; 0.5A, 110 VDC Auxiliary; 0.5A, 125 VDC Trip Alarm)

\*Wire sizes: gauges specified are the minimum allowable as per CSA and UL standards.

The 9926 circuit breakers do not have provisions for marking tags. A possible solution is to cut the adhesive SchS2 tag rail to length (approximately 20 mm on a single pole unit so the current rating remains visible or approximately 30 mm on a two pole unit). The SchS2 accepts DEK, WS and ESG 8/17 marking tags. The part number for adhesive SchS2 is 1720600000.

See Trip Curves 1, 2, 3, 9, OP - Page 26

**9926 Series**  
**Single Pole**  
**w/ Auxiliary Contact<sup>†</sup>**



Type: Single Pole Aux (up to 277 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-A-1-13-D-2-01	9926261501
2	QZ-A-1-13-D-2-02	9926261502
5	QZ-A-1-13-D-2-05	9926261505
10	QZ-A-1-13-D-2-10	9926261510
15	QZ-A-1-13-D-2-15	9926261515
20	QZ-A-1-13-D-2-20	9926261520
25	QZ-A-1-13-D-2-25	9926261525

**9926 Series**  
**Double Pole**  
**w/ Auxiliary Contact<sup>†</sup>**



Type: Double Pole Aux (up to 480 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-A-2-13-D-2-01	9926262501
2	QZ-A-2-13-D-2-02	9926262502
5	QZ-A-2-13-D-2-05	9926262505
10	QZ-A-2-13-D-2-10	9926262510
15	QZ-A-2-13-D-2-15	9926262515
20	QZ-A-2-13-D-2-20	9926262520
25	QZ-A-2-13-D-2-25	9926262525

**9926 Series**  
**Triple Pole**  
**w/ Auxiliary Contact<sup>†</sup>**



Type: Triple Pole Aux (up to 480 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-A-3-13-D-2-01	9926263501
2	QZ-A-3-13-D-2-02	9926263502
5	QZ-A-3-13-D-2-05	9926263505
10	QZ-A-3-13-D-2-10	9926263510
15	QZ-A-3-13-D-2-15	9926263515
20	QZ-A-3-13-D-2-20	9926263520
25	QZ-A-3-13-D-2-25	9926263525

**9926 Series**  
**Single Pole Trip**  
**(Alarm Contact)**



Type: Single Pole Trip (up to 277 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-T-1-13-D-2-01	9926271501
2	QZ-T-1-13-D-2-02	9926271502
5	QZ-T-1-13-D-2-05	9926271505
10	QZ-T-1-13-D-2-10	9926271510
15	QZ-T-1-13-D-2-15	9926271515
20	QZ-T-1-13-D-2-20	9926271520
25	QZ-T-1-13-D-2-25	9926271525

**9926 Series**  
**Double Pole Trip**  
**(Alarm Contact)**



Type: Double Pole Trip (up to 480 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-T-2-13-D-2-01	9926272501
2	QZ-T-2-13-D-2-02	9926272502
5	QZ-T-2-13-D-2-05	9926272505
10	QZ-T-2-13-D-2-10	9926272510
15	QZ-T-2-13-D-2-15	9926272515
20	QZ-T-2-13-D-2-20	9926272520
25	QZ-T-2-13-D-2-25	9926272525

**9926 Series**  
**Triple Pole Trip**  
**(Alarm Contact)**



Type: Triple Pole Trip (up to 480 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-T-3-13-D-2-01	9926273501
2	QZ-T-3-13-D-2-02	9926273502
5	QZ-T-3-13-D-2-05	9926273505
10	QZ-T-3-13-D-2-10	9926273510
15	QZ-T-3-13-D-2-15	9926273515
20	QZ-T-3-13-D-2-20	9926273520
25	QZ-T-3-13-D-2-25	9926273525

**9926 Series**  
**Single Pole Combination**  
**(Auxiliary & Alarm Contact)<sup>†</sup>**



Type: Single Pole Combo (up to 277 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-AT-1-13-D-2-01	9926281501
2	QZ-AT-1-13-D-2-02	9926281502
5	QZ-AT-1-13-D-2-05	9926281505
10	QZ-AT-1-13-D-2-10	9926281510
15	QZ-AT-1-13-D-2-15	9926281515
20	QZ-AT-1-13-D-2-20	9926281520
25	QZ-AT-1-13-D-2-25	9926281525

**9926 Series**  
**Double Pole Combination**  
**(Auxiliary & Alarm Contact)<sup>†</sup>**



Type: Double Pole Combo (up to 480 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-AT-2-13-D-2-01	9926282501
2	QZ-AT-2-13-D-2-02	9926282502
5	QZ-AT-2-13-D-2-05	9926282505
10	QZ-AT-2-13-D-2-10	9926282510
15	QZ-AT-2-13-D-2-15	9926282515
20	QZ-AT-2-13-D-2-20	9926282520
25	QZ-AT-2-13-D-2-25	9926282525

**9926 Series**  
**Triple Pole Combination**  
**(Auxiliary & Alarm Contact)<sup>†</sup>**



Type: Triple Pole Combo (up to 480 VAC)		
Current Ratings (amps)	Description	Part No.
1	QZ-AT-3-13-D-2-01	9926283501
2	QZ-AT-3-13-D-2-02	9926283502
5	QZ-AT-3-13-D-2-05	9926283505
10	QZ-AT-3-13-D-2-10	9926283510
15	QZ-AT-3-13-D-2-15	9926283515
20	QZ-AT-3-13-D-2-20	9926283520
25	QZ-AT-3-13-D-2-25	9926283525

Ground Fault Current Interrupt

- CE approved
- UL1077 and UL1053 recognized
- Small frame size (26mm wide)
- Single pole plus switched neutral ground leakage protection
- Trip point is unaffected by ambient temperature
- Current ratings up to 50A
- Trip indication (mid trip handle position)
- Trip curve 2 for general purpose applications

9926 Series GFCI



Ordering Data

Type: Triple Pole (up to 480 VAC)

9926 Series GFCI – dimensions in mm (in.)

Current Ratings (amps)	Description	Part No.
5	QF17A2505 - CB W/GFI	9926291105
10	QF17A2510 - CB W/GFI	9926291110
15	QF17A2515 - CB W/GFI	9926291115
20	QF17A2520 - CB W/GFI	9926291120
25	QF17A2525 - CB W/GFI	9926291125
30	QF17A2530 - CB W/GFI	9926291130
50	QF17A2550 - CB W/GFI	9926291150

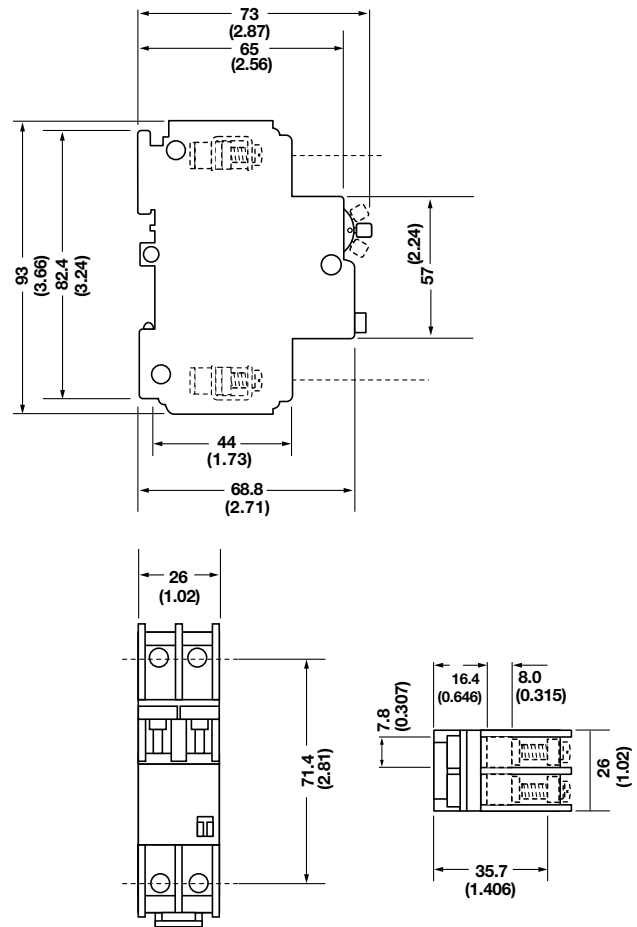
Technical Data

Standard Ampere Ratings (A)	5 to 50A
Sensitivity (mA)	30 (CE) / 22 (UL)
Number of Poles	1 + N
Equipment Type	Ground Leakage/GFCI @ 120 V, 5 kA @ 240 V
Rated Voltage (V)	230 (CE) / 240 (UL)
Rated Interrupting/Withstand Capacity (kA)	5kA
Weight (kg)	0.26
Trip Curve (standard)	2
Operating Temperature	-40 to +65°C

Approval

UL 1077 and UL 1053, CE

See Trip Curve 2 - Page 30

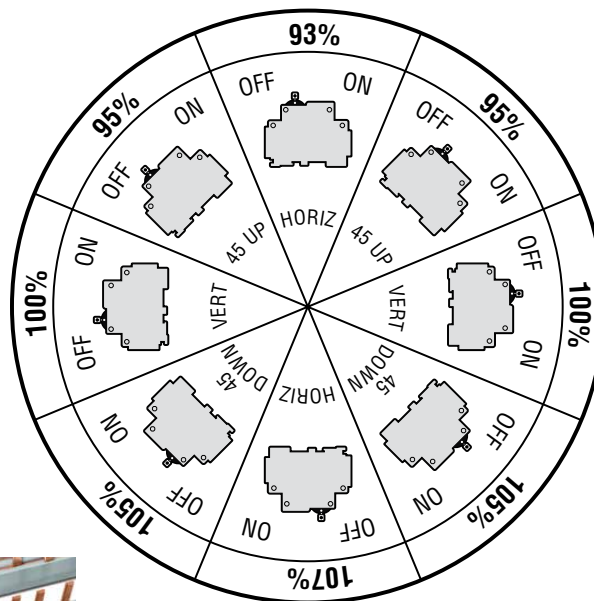


9926 Series Mounting Options and Accessories

Mounting Options

If the product is not vertically mounted in the normal DIN-rail mounting orientation, a rating factor must be applied. Figure 1 shows a diagram of the rating factor to apply. The published curves for these circuit breaker products are produced with the circuit breaker in the vertical mounting position. The rating factor only applies to the must hold and must trip points of the curve as the other parts (instantaneous trip point) stay largely unaffected.

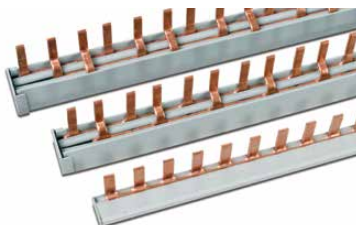
It is important to note that in environments that are exposed to a high degree of vibration, the cables that connect to the circuit breaker must be securely held in place, as the breaker is not designed to carry the weight of the cables. A maximum of 35N can be applied to the terminal area, in a direction perpendicular to the mounting axis.



Accessories

Technical Data	
Current Rating	80A max.
Voltage	500V max.
Short Circuit Strength	25kA

Type	Part No.
Bus-bar (1 pole, insulated, 1 m)	67101904
Bus-bar (2 pole, insulated, 1 m)	67101972
Bus-bar (3 pole, insulated, 1 m)	67101971



Part Number Table - Example

To order 9926 Series Single Pole Circuit Breaker  
Part No. 9926251100

- Current Rating of 1.0 amp
- Internal Resistance per Pole of 1.1 ohms
- Trip Curve – M1, Medium (Standard)

9 9 2 6 2 5 1 0 0 0

Amperage

- \*00\* - 0.5A
- \*01\* - 1A
- \*02\* - 2A
- /
- \*60\* - 60A

Trip Curves (Types 5-9)

- \*0\* - Branch AC KM (Standard)
- \*1\* - Branch AC OP (Instantaneous)
- \*2\* - Branch AC 1 (Fast)
- \*3\* - Supplemental 9 (Slow)
- \*4\* - Branch 80VDC 1 (Fast)
- \*5\* - Supplemental 2 (Standard)
- \*6\* - Branch 125VDC OP (Instantaneous)
- \*7\* - Branch 80VDC OP (Instantaneous)
- \*8\* - Branch 125VDC U2 (Standard)
- \*9\* - Branch 80VDC U2 (Standard)

Poles

- 1 Pole
- 2 Pole
- 3 Pole

Type

- \*5\* - Base Breaker
- \*6\* - With Auxiliary Contact
- \*7\* - With Trip Alarm Contact
- \*8\* - Combo Aux/Trip Contact
- \*9\* - GFCI

Technical Data	
Current Rating	85A max.
Wire Size	10 AWG min., 4 AWG max.
Dimensions	A: 6 mm B: 32 mm

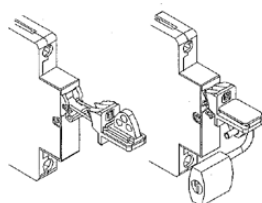
Type	Part No.
Bus bar end cap, 1 pole	67101973
Bus bar end cap, 2 pole or 3 pole	67101974



Type	Part No.
Power lug, straight (14 mm)	67101960
QF17A2505 - CB W/GFI	
Power lug, 90° (14 mm)	67101961
QF17A2510 - CB W/GFI	
Power lug, straight (32 mm)	67101980
QF17A2515 - CB W/GFI	



Type	Part No.
Lock-out handle	67101913
QF17A2505 - CB W/GFI	



9 9 2 6 2 4 1 0 0 0

Amperage

- \*00\* - 0.5A
- \*01\* - 1A
- \*02\* - 2A
- /
- \*60\* - 60A

Trip Curves (Type 4)

- \*0\* - Supplemental 1 (Slow)
- \*1\* - Supplemental 3 (Fast)
- \*3\* - Branch AC 9 (Slow)

Poles

- 1 Pole
- 2 Pole
- 3 Pole

Type

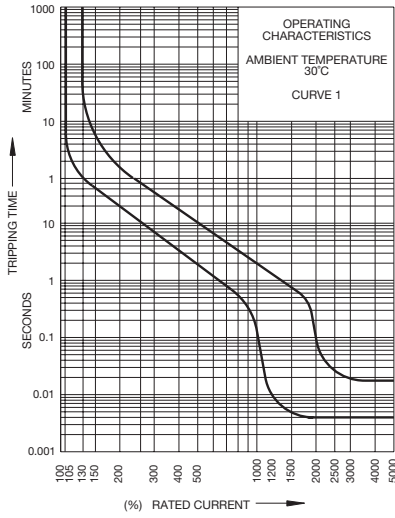
- \*4\* - Base Breaker



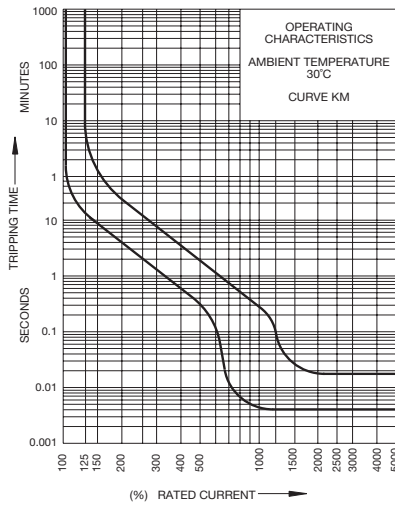
9926 Series Trip Curves

Trip Curves—Hydraulic Magnetic Type  
Typical time/current characteristics at 30°C

AC version



Trip Curve 1 applies to the following part numbers where "XX" is the current rating:  
Single Pole— 99262512XX  
Double Pole— 99262522XX



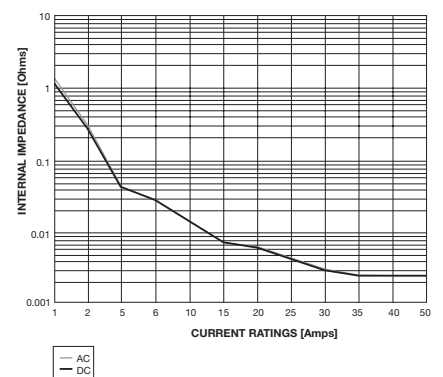
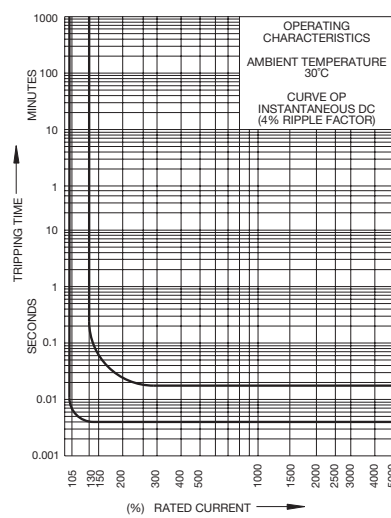
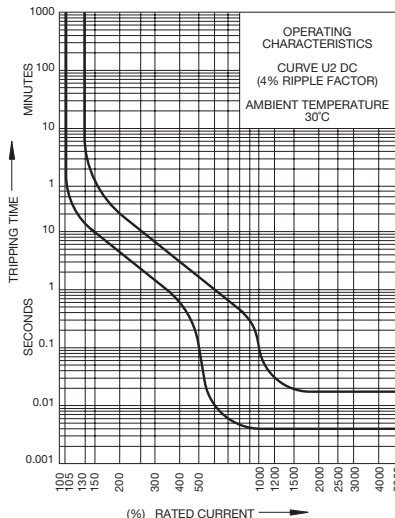
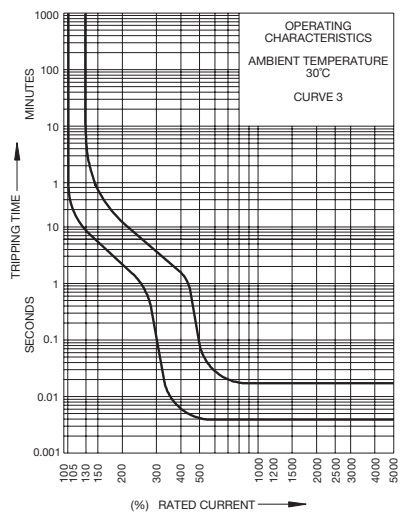
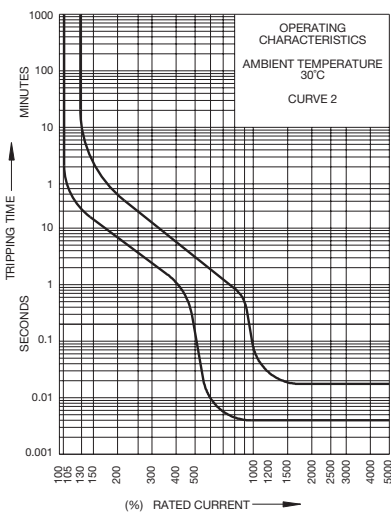
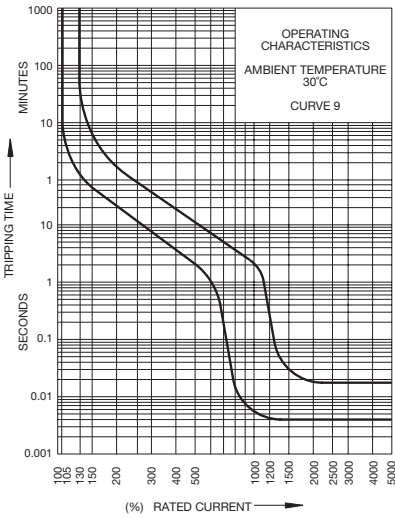
Sample trip characteristics - KM

	125%	150%	200%	400%	600%	800%	1000%
minimum (sec)	15	8	4	0.7	0.09	0.007	0.005
maximum (sec)	300	90	28	4	1.5	0.6	0.4

Although the 9926 series uses a magnetic only trip mechanism, CSA testing indicates a trip characteristic similar to thermal magnetic trip mechanisms. No de-rating is required at elevated temperatures.

Q-Frame Curve Equivalency Chart

CBI Curve	1	2	3	9	KM	U2	OP	Standard
Breaker Frame	QL	QL	QL	QL	QL	QL	QL	UL489
	QY	QY	QY	QY	QY	QY	QY	UL489A
	QZ	QZ	QZ	QZ	QZ	QZ	QZ	UL1077
Equivalent Curve	D	C	B	K	C	C	Instantaneous	



Additional trip curves and amp ratings are available upon request.