

NEW Fuse-switch disconnecter

Advantages of cylindrical fuse-switch disconnecter EFD

→ Compliance with IEC 60947-1, IEC 60947-3, UL 4248-1, UL 4248-4, UL 4248-8 and UL 486E



→ Mounting on standard DIN 35 mm rail (DIN EN60715). The sizes 22x58 can be also fixed with screws on a flat base

→ More space for finger to open fuse carrier



→ All contact surfaces are silver plated



→ Complete protection against touch according to IP20

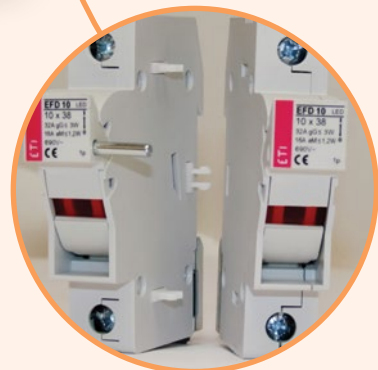
→ Changing of a fuse-link without danger of direct touch of parts under voltage



→ Possibility of sealing in ON or OFF positions



→ All plastic parts are made of material resistant to extremely high temperatures. Fuse carrier assures that a fuse link is not in touch with a housing



→ Modular design – it is possible to assemble multi-pole versions at the building site for EFD 8, EFD 10, EFD 14 and EFD 22

→ For all sizes a **version with electronic indicator** is available. There are two technical types of indicator:

- **L (LED)** with built-in LED diode which blinks after the fuse-link operates. The indicator is capable of operating in conditions of open circuit with minimum capacitance between connection cables. Operating voltage range from 50V to 690V.

- **I (NEON)** with neon lamp which is constantly lit after the fuse-link operates. The operational voltage range from 100V to 750V a.c.



Fuse-switch disconnectors for cylindrical fuse-links EFD

Technical data EFD

| | EFD 8 | | EFD 10 | | EFD CC | | EFD 14 | | EFD 22 | | EFD J30 | | | | |
|---|--|--|---------------------|------------------------------------|-----------------------------------|------------------------|---|------------------------------------|---|------------------------|---------------------------------------|------------------------------------|---|--|--|
| Fuse type | CH 8x32 | | CH 10x38 | | Class CC | | CH 14x51 | | CH 22x58 | | Class J, size J30 | | | | |
| | IEC | | IEC | | UL | | UL | | IEC | | UL | | | | |
| Versions | Without indicator/LED indicator/NEON indicator | | | | Without indicator / LED indicator | | | | | | | | | | |
| Number of poles | 1p, 1p+N, 2p, 3p, 3p+N | | | 1p, 2p, 3p | | 1p, 1p+N, 2p, 3p, 3p+N | | 1p, 2p, 3p | | 1p, 1p+N, 2p, 3p, 3p+N | | 1p, 2p, 3p | | | |
| Rated operational voltage Ue | 400V a.c. | | 690V a.c. | | 600V a.c./d.c. | | 600V a.c./d.c. | | 690V a.c. | | 600V a.c./d.c. | | 600V a.c./d.c. | | |
| Rated operational current Ie | 20A | | 32A | | 30A | | 30A | | 50A | | 50A | | 100A | | |
| Maximum rated current of fuselinks | 690V | | 10A gG | | | | | | 25A gG 25A aM | | | | 50A gG 50A aM | | |
| | 500V | | 25A gG 16A aM | | | | | | 50A gG | | | | 100A gG | | |
| | 400V | | 20A gG 10A aM | | 32A gG | | | | 50A aM | | | | 100A aM | | |
| Rated frequency | 50Hz | | 50Hz | | 60Hz | | 60Hz | | 50Hz | | 60Hz | | 50Hz | | |
| Rated short-time withstand current Icw | 240A | | 300A/1s | | | | | | 600A/1s | | 1200A/1s | | | | |
| Conventional free air thermal current Ith | | | | | | | | | 50A | | 100A | | | | |
| Rated conditional short-circuit current | 50kA | | 100kA/400V | | 100kA | | 200kA | | gG: 120kA/500V (50A gG) aM: 50kA/400V (50A aM) | | 100kA | | gG: 120kA/500V (100A gG) aM: 50kA/400V (100A aM) | | |
| Rated insulation voltage Ui | 400V | | 690V | | | | | | 690V | | 690V | | | | |
| Rated imp. withstand voltage Uimp | 8kV | | 8kV | | | | | | 8kV | | 8kV | | | | |
| Overtoltage category (according to Table H.1 in IEC 60947-1 and according to IEC 60099-1) | III | | III | | | | | | III | | III | | | | |
| Max power dissipation of the fuse-link (W) | gG: 2,5W aM: 0,9W | | gG: 3W aM: 1,2W | | 3W | | 3W | | gG: 5W aM: 3W | | gG: 9,5W aM: 7W | | 6W | | |
| LED indicator operating range | 50V-690V a.c. | | | 50V - 600V a.c. 80V - 600V d.c. | | 50V-690V a.c. | | 50V - 600V a.c. 80V - 600V d.c. | | 50V-690V a.c. | | 50V - 600V a.c. 80V - 600V d.c. | | | |
| NEON indicator operating range | 100V-750V a.c. | | 100V-750V a.c. | | | | | | | | | | | | |
| Utilization category | AC-22B | | AC-22B | | Do not operate under load | | AC-22B at 690V/50A | | Do not operate under load | | AC-21B at 690V/100A | | Do not operate under load | | |
| Operational performance (cycles with current) | 300 | | 300 | | | | 300 | | | | 300 | | | | |
| Operational performance (cycles without current) | 1700 | | 1700 | | | | 1700 | | | | 1700 | | | | |
| Humidity | | | | | | | | | | | | | | | |
| Operating ambient temperature | -5°C ... +40°C | | | | | | | | -5°C ... +40°C | | | | | | |
| Store ambient temperature | -25°C ... +55°C | | | | | | | | -25°C ... +55°C | | | | | | |
| Degree of protection (IEC 60529) | IP 20 | | IP 20 | | | | IP 20 | | | | IP 20 | | | | |
| Terminal capacity | 1-25mm ² | | 1-25mm ² | | AWG 18-8 solid&stranded Cu only | | 1,5-35mm ² rigid or flexible | | AWG 16-6 solid&stranded Cu only | | 4-50mm ² rigid or flexible | | AWG 12-2 solid&stranded Cu only | | |
| Screw | PZ M5 | | PZ M5 | | PZ M5 | | PZ M5 | | PZ M5 | | PZ M6 | | PZ M6 | | |
| Torque | 2Nm | | 2Nm | | 2Nm; 17,7 lb-in | | 2,5-3Nm | | 2Nm; 17,7 lb-in | | 3Nm | | 3Nm; 26,6 lb-in | | |
| Mounting on EN 60715 rail | 35mm rail | | | | | | | | | | | | | | |
| Sealing possibility | ON and OFF | | | | | | | | | | | | | | |
| Standards - fuse links | IEC/EN 60269-2 | | IEC/EN 60269-2 | | IEC/EN 60269-2 | | UL 248-4 IEC/EN 60269-2 | | IEC/EN 60269-2 | | IEC/EN 60269-2 | | IEC/EN 60269-2 | | |
| Standards - Fuse-switch disconnectors/fuse holders | IEC 60947-1 IEC 60947-3 | | | UL 4248-1 UL 4248-4 UL 486E | | | IEC 60947-1 IEC 60947-3 | | | UL 4248-1 UL 486E | | | IEC 60947-1 IEC 60947-3 | | |
| Test reports | CCA/CB | | CCA/CB | | UL | | UL | | CCA/CB | | UL | | CCA/CB | | |
| Certificates | | | | | UR _{US} | | UL _{US} | | | | UR _{US} | | UL _{US} | | |

Technical data

Technical data EFD

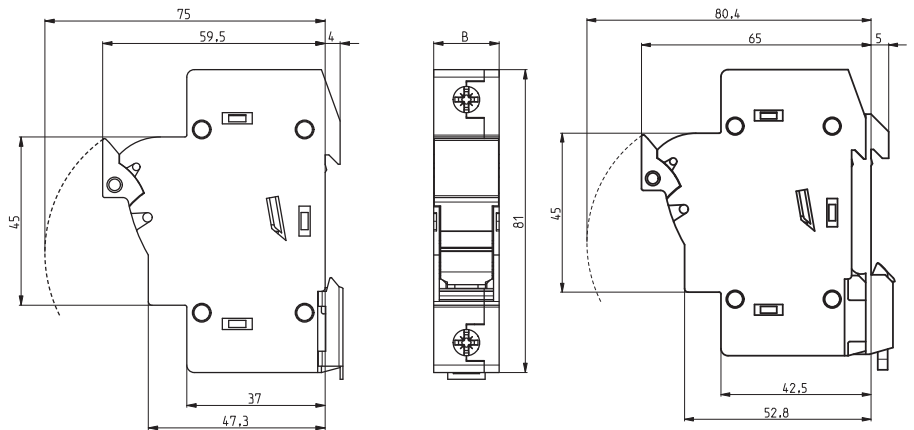
| | EFD 8 | EFD 10 | | EFD CC | EFD 14 | | EFD 22 | | EFD J30 |
|--|---------|----------|----|----------|----------|----|----------|----|-------------------|
| Fuse type | CH 8x32 | CH 10x38 | | Class CC | CH 14x51 | | CH 22x58 | | Class J, size J30 |
| | IEC | IEC | UL | UL | IEC | UL | IEC | UL | UL |
| Derating factor of current I_n for different ambient temperatures | 20° | 1 | | | | | | | |
| | 30° | 0,95 | | | | | | | |
| | 40° | 0,9 | | | | | | | |
| | 50° | 0,8 | | | | | | | |
| | 60° | 0,7 | | | | | | | |
| | 70° | 0,5 | | | | | | | |
| Derating factor of current I_n for side by side mounting fuse holders (nr. of poles) | 1-4 | 1 | | | | | | | |
| | 5-6 | 0,8 | | | | | | | |
| | 7-9 | 0,7 | | | | | | | |
| | ≥10 | 0,6 | | | | | | | |

Fuse-switch disconnecter EFD 8, EFD 10

| type | dimension B |
|----------------|-------------|
| EFD 8, 10 1p | 17,5 |
| EFD 8, 10 1p+N | 35 |
| EFD 8, 10 2p | 35 |
| EFD 8, 10 3p | 52,5 |
| EFD 8, 10 3p+N | 70 |

Fuse-switch disconnecter EFD CC

| type | dimension B |
|-----------|-------------|
| EFD CC 1p | 17,5 |
| EFD CC 2p | 35 |
| EFD CC 3p | 52,5 |



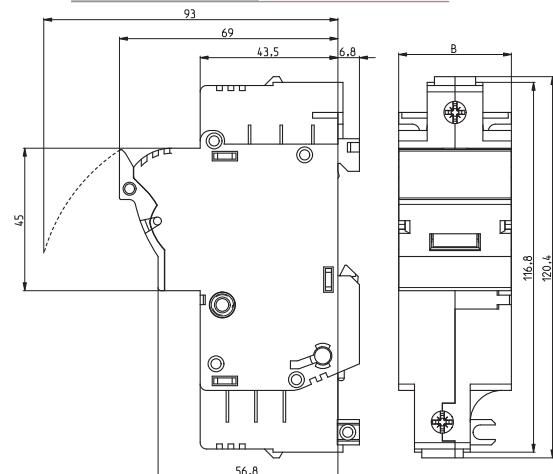
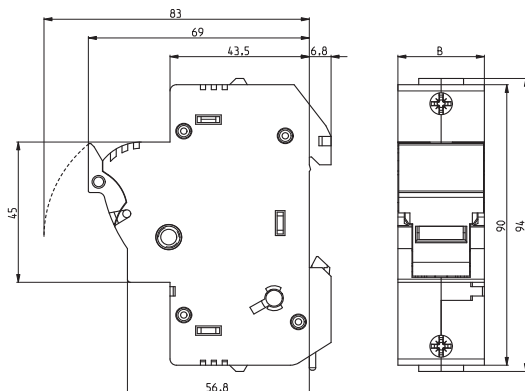
Version with adapter

Fuse-switch disconnecter EFD 14

| type | dimension B |
|-------------|-------------|
| EFD 14 1p | 27 |
| EFD 14 1p+N | 54 |
| EFD 14 2p | 54 |
| EFD 14 3p | 81 |
| EFD 14 3p+N | 108 |

Fuse-switch disconnecter EFD 22 & EFD J30

| type | dimension B |
|----------------|-------------|
| EFD 22, J30 1p | 35,6 |
| EFD 22 1p+N | 71,2 |
| EFD 22, J30 2p | 71,2 |
| EFD 22, J30 3p | 106,8 |
| EFD 22 3p+N | 142,4 |



Auxiliary switch EFD

