

Miniature Circuit Breaker

Catalogue >

Reliability in
Circuit Breaker

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DC Miniature Circuit Breaker

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DC Miniature Circuit Breaker

TX7-63Z

Photovoltaic Circuit Breaker



- Rated Operating Current (I_n): 1-63 A
- Instantaneous Tripping Pattern: C Type ($8-12 \times I_n$)
- Rated Impulse Withstand Voltage (U_{imp}): 4 kV
- Compliance: IEC/EN 60947-2
- RoHS Compliant

The TX7-63Z DC miniature circuit breaker provides reliable overload and short-circuit protection for circuits and equipment up to DC 1000 V / 63 A, making it ideal for photovoltaic (PV) systems. With high breaking capacity, it prevents hazards from DC

and AC feedback currents, ensuring safe operation. Key features include dual wiring terminals, fast energy-storage switching, clear contact indication, and a compact, eco-friendly modular Degree of Protection. Complies with IEC/EN 60947-2 Compliance.

Technical Data

TX7-63Z

Electrical Characteristic

Rated Operating Current	I_n	1-63 A
Rated Frequency		DC
Pole		1-4 Poles
Rated Operating Voltage	U_e	1P: 250 Vdc / 2P: 500 Vdc / 3P: 750 Vdc / 4P: 1000 Vdc
Rated Impulse Withstand Voltage	U_{imp}	4.0 kV
Rated Short-circuit Capacity	I_{cn}	S: 6 kA / H: 10 kA
Compliance		IEC/EN 60947-2
Service Life / Cycle Operations	Mechanical	20000
	Electrical	8000
Max Power Consumption Per Pole	1-10 A	2 W
	16-32 A	3.5 W
	40-63 A	5 W

Installation Environment

Ambient Temperature	-35 °C to +70 °C
Relative Humidity	≤ 95%
Pollution Level	Class 2
Altitude	< 2000 m
Terminal Tightening Torque	2.5 Nm



Current Correction Factor for Different Ambient Temperatures

The reference value is 1.0 at 30 °C, representing the mean value for all rated operating currents.

Temperature	-35 °C	-30 °C	-20 °C	-10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
Correction Factor	1.32	1.26	1.25	1.21	1.15	1.11	1.06	1	0.96	0.94	0.89	0.83

Current Correction Factor at Different Altitudes

Altitude	≤ 2000 m	2000-3000 m	≥ 3000 m
Correction Factor	1.0	0.9	0.8

TX7-63Z

Wiring Method

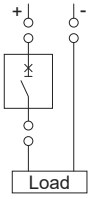


Diagram A - 1 Pole DC 250 V

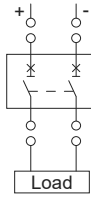


Diagram B - 2 Poles DC 500 V

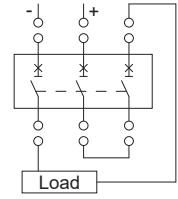


Diagram C - 3 Poles DC 750 V

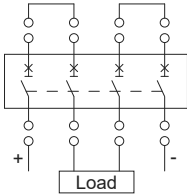


Diagram D - 4 Poles DC 1000 V

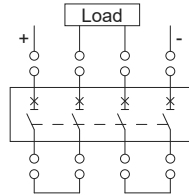


Diagram D - 4 Poles DC 1000 V

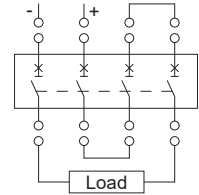
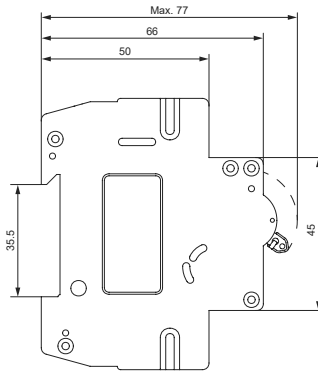
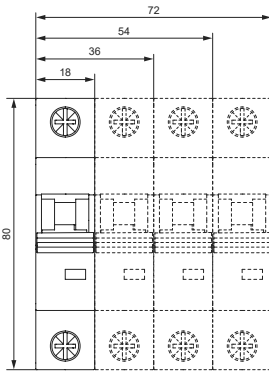


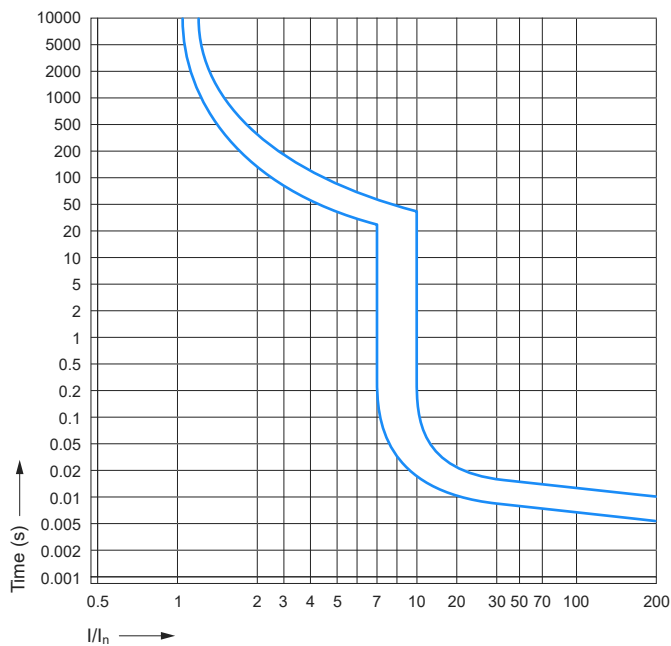
Diagram D - 4 Poles DC 1000 V

Dimensions

[mm]



Tripping Characteristic Curve



DC Miniature Circuit Breaker

LDCB-63

Photovoltaic Circuit Breaker



- Rated Operating Current (I_n): 16-63 A
- Instantaneous Tripping Pattern: B, C Type
- Rated Impulse Withstand Voltage (U_{imp}): 6 kV
- Compliance: IEC/EN 60947-2
- RoHS Compliant

LDCB-63 is a non-polarized DC miniature circuit breaker designed for overload and short-circuit protection in DC distribution systems. Manufactured using flame-retardant materials, it is suitable for photovoltaic systems, DC combiner boxes, energy storage systems, and other DC applications.

LDCB-63 features a rated operational voltage up to 1000 V DC, a rated current of 63 A, and a rated breaking capacity of 6 kA, and is in accordance with IEC 60947-2, meeting essential safety and reliability requirements for photovoltaic and other DC systems.

Technical Data

LDCB-63

Electrical Characteristic

Frame Current	I_{nm}	63 A
Rated Operating Current	I_n	16 A , 20 A , 25 A , 32 A , 40 A , 50 A , 63 A
Rated Frequency		DC
Pole		1-4 Poles
Rated Operating Voltage	U_e	1P: 250 Vdc / 2P: 500 Vdc / 3P: 750 Vdc / 4P: 1000 Vdc
Rated Insulation Voltage	U_i	1 kV
Rated Impulse Withstand Voltage	U_{imp}	6 kV
Rated Short-circuit Breaking Capacity	I_{cn}	6 kA
Rated Short-circuit Breaking Capacity (% I_{cn})	I_{cs}	75%
Compliance		IEC/EN 60947-2
Instantaneous Tripping Pattern		B, C
Trip Form		Thermal magnetic trip
Electrical and Mechanical Accessories		MX+OF, OF2 (auxiliary), SD2 (alarm), MX2 (shunt)
Electrical Life		1000
Mechanical Life		20000
Degree of Protection		IP20
Indicator Window		Contact status indication

Installation Environment

Ambient Temperature	-35 °C to +70 °C
Relative Humidity	≤ 95%
Pollution Level	Class 3
Altitude	≤ 2000 m
Terminals	Fixed with screw
Maximum Wiring Capacity	50 mm ²
Terminal Tightening Torque	2.5 Nm
Installation Category	Class II, III
Installation Method	35 mm standard rail
Incoming Method	Upper and lower



LDCB-63

Wiring Method

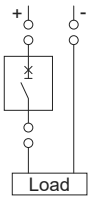


Diagram A - 1 Pole DC 250 V

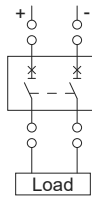


Diagram B - 2 Poles DC 500 V

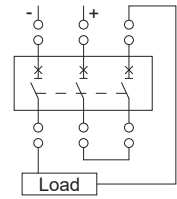


Diagram C - 3 Poles DC 750 V

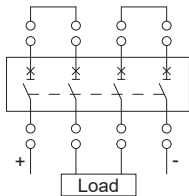


Diagram D - 4 Poles DC 1000 V

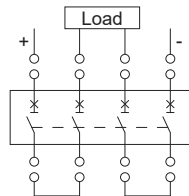


Diagram D - 4 Poles DC 1000 V

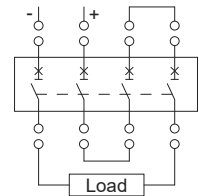
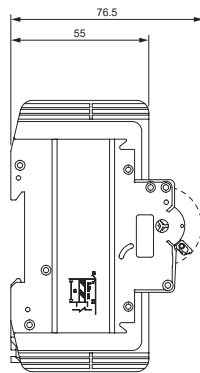
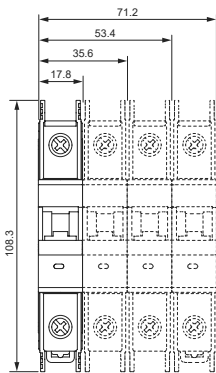


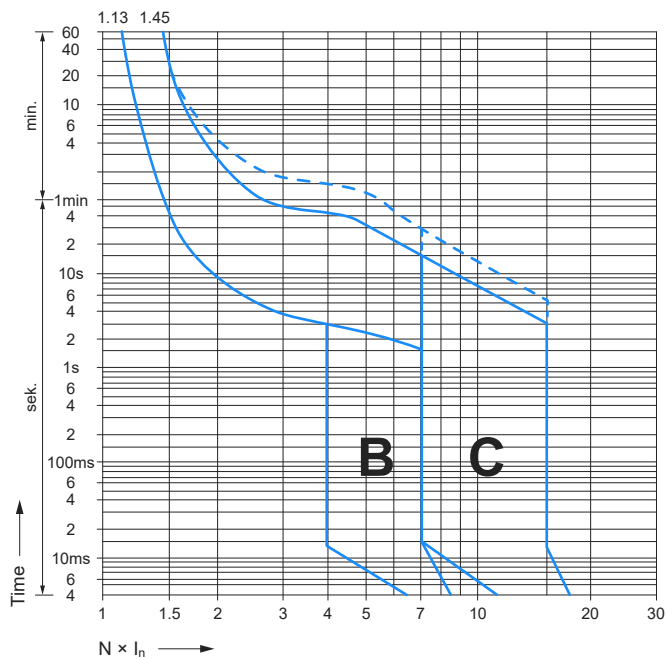
Diagram D - 4 Poles DC 1000 V

Dimensions

[mm]



Tripping Characteristic Curve



DC Miniature Circuit Breaker

LDCBH-63

Photovoltaic Circuit Breaker



- Rated Operating Current (I_n): 16-63 A
- Instantaneous Tripping Pattern: B, C Type
- Rated Impulse Withstand Voltage (U_{imp}): 6 kV
- Compliance: IEC/EN 60947-2
- RoHS Compliant

LDCBH-63 is a non-polarized DC miniature circuit breaker designed for overload and short-circuit protection in DC distribution systems. Manufactured using flame-retardant materials, it is suitable for photovoltaic systems, DC combiner boxes, energy storage systems, and other DC applications.

LDCBH-63 features a rated operational voltage up to 1500 V DC, a rated current of 63 A, and a rated breaking capacity of 6 kA, and is in accordance with IEC 60947-2, meeting essential safety and reliability requirements for photovoltaic and other DC systems.

Technical Data

LDCBH-63

Electrical Characteristic

Frame Current	I_{nm}	63 A
Rated Operating Current	I_n	16 A , 20 A , 25 A , 32 A , 40 A , 50 A , 63 A
Rated Frequency		DC
Pole		1-4 Poles
Rated Operating Voltage	U_e	1P: 375 Vdc / 2P: 750 Vdc / 3P: 1125 Vdc / 4P: 1500 Vdc
Rated Insulation Voltage	U_i	1.5 kV
Rated Impulse Withstand Voltage	U_{imp}	6 kV
Rated Short-circuit Breaking Capacity	I_{cn}	6 kA
Rated Short-circuit Breaking Capacity (% I_{cn})	I_{cs}	75%
Compliance		IEC/EN 60947-2
Instantaneous Tripping Pattern		B, C
Trip Form		Thermal magnetic trip
Electrical and Mechanical Accessories		MX+OF, OF2 (auxiliary), SD2 (alarm), MX2 (shunt)
Electrical Life		1500
Mechanical Life		20000
Degree of Protection		IP20
Indicator Window		Contact status indication

Installation Environment

Ambient Temperature	-35 °C to +70 °C
Relative Humidity	≤ 95%
Pollution Level	Class 3
Altitude	≤ 2000 m
Terminals	Fixed with screw
Maximum Wiring Capacity	50 mm ²
Terminal Tightening Torque	2.5 Nm
Installation Category	Class II, III
Installation Method	35 mm standard rail
Incoming Method	Upper and lower



LDCBH-63

Wiring Method

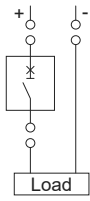


Diagram A - 1 Pole DC 375 V

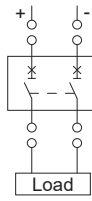


Diagram B - 2 Poles DC 750 V

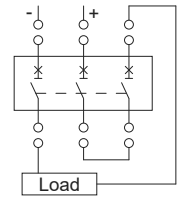


Diagram C - 3 Poles DC 1125 V

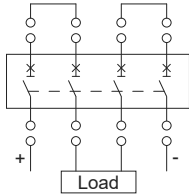


Diagram D - 4 Poles DC 1500 V

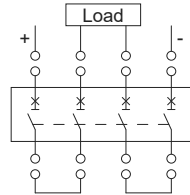


Diagram D - 4 Poles DC 1500 V

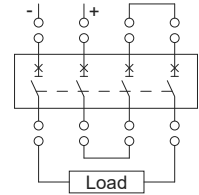
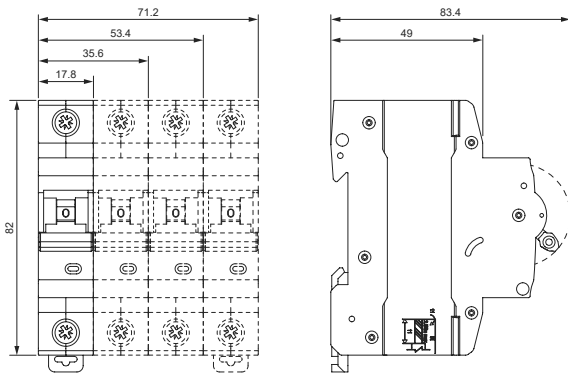


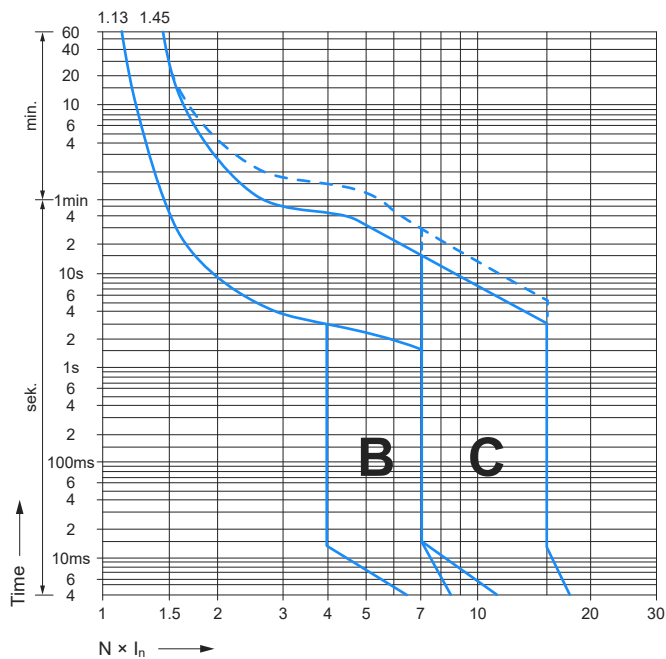
Diagram D - 4 Poles DC 1500 V

Dimensions

[mm]



Tripping Characteristic Curve



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