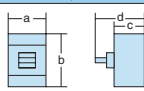


2

Ratings and Specifications

Earth Leakage Circuit Breakers

17 Earth Leakage Circuit Breakers for motor protection (Harmonics/surge with countermeasure)

Frame size (A)	30	30	50	50	100	100	225	
Type	ZE30-NM	ZS30-NM	ZE50-NM	ZS50-CM	ZE100-NM	ZS100-SM	ZS250-SM	
Number of poles	3	3	3	3	3	3	3	
Rated capacity of motor and rated current of circuit breaker	(A) (kW) 200V 415V	(A) (kW) 200V 415V	(A) (kW) 200V 415V	(A) (kW) 200V 415V	(A) (kW) 200V 415V	(A) (kW) 200V 415V	(A) (kW) 200V 415V	
Calibrated at 40°C	1.4 0.2 0.4 2.6 0.4 — 4 0.75 1.5 5 1 2.2 8 1.5 3.7 10 2.2 — 16 3.7 7.5 24 5.5 11 32 7.5 15	0.7 — 0.2 1.4 0.2 0.4 2 — 0.75 2.6 0.4 — 4 0.75 1.5 5 1 2.2 8 1.5 3.7 10 2.2 — 16 3.7 7.5 24 5.5 11 32 7.5 15	45 11 22	0.7 — 0.2 1.4 0.2 0.4 2 — 0.75 2.6 0.4 — 4 0.75 1.5 5 1 2.2 8 1.5 3.7	10 2.2 — 12 — 5.5 16 3.7 7.5 24 5.5 11 32 7.5 15 40 — 18.5 45 11 22	60 15 30 75 18.5 37 90 22 45	16 3.7 7.5 24 5.5 11 32 7.5 15 40 — 18.5 45 11 22 60 15 30 75 18.5 37 90 22 45 100 — 55	125 30 — 150 37 75 175 45 90 225 55 110
Remarks: Select according to the full load current of the motor.								
Rated impulse withstand voltage [U _{imp}] kV	6	6	6	6	6	8	8	
Rated operational voltage AC V	100-440 common 80~484	100-440 common 80~484	100-440 common 80~484	100-440 common 80~484	100-440 common 80~484	100-440 common 80~484	100-440 common 80~484	
Rated sensitivity current mA	30 100	30 100/200/500 selectable	30 100/200 selectable	30 100/200/500 selectable	30 100/200/500 selectable	30 100/200/500 selectable	30 100/200/500 selectable	
Max. operating time sec	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Rated breaking capacity, kA								
JIS C 8201-2-2 Ann.2 AC	440V 1.5	440V 2.5	440V 2.5	440V 7.5	440V 10	440V 25	440V 30	
I _{cu} (sym) 415V	1.5	2.5	2.5	7.5	10	30	40	
240V	2.5 ⑥	5 ⑥	5 ⑥	10 ⑥	25 ⑥	50	85	
100V	5	5	5	10	25	50	85	
External dimensions, mm								
	a 75	75	75	75	75	75	105	
b	100	100	100	100	100	130	165	
c	60	60	60	60	60	68	68	
d	84	84	84	84	84	95	95	
Weight (● marked standard type) kg	0.5	0.5	0.5	0.5	0.5	0.95	1.7	
Connections and Mountings								
Front-connected (FC) Terminal screws	● 45	● 45	● 45	● 45	●	● ④	●	
With extension bars	○ 53	○ 53	○ 53	○ 53	○ 53	○ 53	○ 53	
Rear-connected (RC) Flat bar studs	○	○	○	○	○	○	○	
Plug-in (PM) For switchboards High-performance (PMB) Standard (PMC)	—	—	—	—	—	—	—	
For distribution boards (PMC) (PMD)	—	—	—	—	—	—	—	
Flush-mounted (FP) With flat bar studs	○	○	○	○	○	○	○	
Draw-out type (DR)	—	—	—	—	—	—	—	
TempPlug70 (PG)	—	—	—	—	—	○	○	
DIN rail mount	●	●	●	●	●	○ ⑪	—	
Accessories (optional) Symbol								
Internally mounted								
Auxiliary switch	A X ●	●	●	●	●	●	●	
Alarm switch	A L ●	●	●	●	●	●	●	
Shunt trips	S H ● ⑥	● ⑥	● ⑥	● ⑥	● ⑥	—	—	
Undervoltage trips	U V ● ⑥	● ⑥	● ⑥	● ⑥	● ⑥	—	—	
Test lead	T L ●	●	●	●	●	●	●	
Megger test switch	M G ●	●	●	●	●	●	●	
Motor operator	M C —	—	—	—	—	—	●	
Externally mounted								
External operating handle	Breaker-mounted H B △	△	△	△	△	●	●	
Door-mounted (variable depth)	H P △	△	△	△	△	●	●	
Toggle extension	H A —	—	—	—	—	—	—	
Mechanical interlock	Slide type M S ●	●	●	●	●	●	●	
Rear-connected type	M B —	—	—	—	—	—	—	
Link type	M L —	—	—	—	—	—	—	
Wire type	M W —	—	—	—	—	—	—	
Toggle holder	H H —	—	—	—	—	●	●	
Toggle lock	H L ●	●	●	●	●	●	●	
Terminal cover	For front-connected C F ●	●	●	●	●	●	●	
For rear-connected and plug-in	C R ● ②	● ②	● ②	● ②	● ②	●	●	
Terminal block for lead	T F —	—	—	—	—	●	●	
Door flange	D F —	—	—	—	—	—	—	
CE marking	Non	Non	Non	Non	Non	Non	Non	
Earth leakage trip mechanism (Current operation type)	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	
Overcurrent trip mechanism	Hydraulic-magnetic type	Hydraulic-magnetic type	Hydraulic-magnetic type	Hydraulic-magnetic type	Hydraulic-magnetic type	Thermal-magnetic	Thermal-magnetic	
Earth leakage indication	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button	Mechanical button	
Colour of cover	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Grey Blue	Grey Blue	
Trip button (Colour)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	Yes (Red)	
Suitability for isolation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Reverse connection	Non	Non	Non	Non	Non	Yes ⑦	Yes	
Page of characteristics and outline dimensions	7-204	7-204	7-204	7-204	7-206	7-208	7-210	

Notes:

- : Standard. This configuration used unless otherwise specified. ○ : Optional standard. Specify when ordering. ● : "yes" or "available". — : "no" or "not available".
- △ : Custom-built product. Please contact us for details. ② : Supplied as standard. ④ : 50A or less is the M5 wire clamping terminal.
- ⑪ : Please order the DIN rail adapter separately. See page 6-156. ④ : A wire clamping terminal is provided. ⑤ : For the extension bars, please place the order separately in parts.
- ⑥ : It is mounted on the side of the circuit breaker. In the case of Flush-mounted type (FP), it cannot be installed. ⑥ : This is the value for 230V AC.
- ⑦ : There are some limitations. See page 5-23 for details.

Remarks: The rated sensitivity current is set to 100mA before delivery.