Superior Solutions

To Meet and Exceed The Unique and
Wide-ranging Requirements

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Powering Business Worldwide

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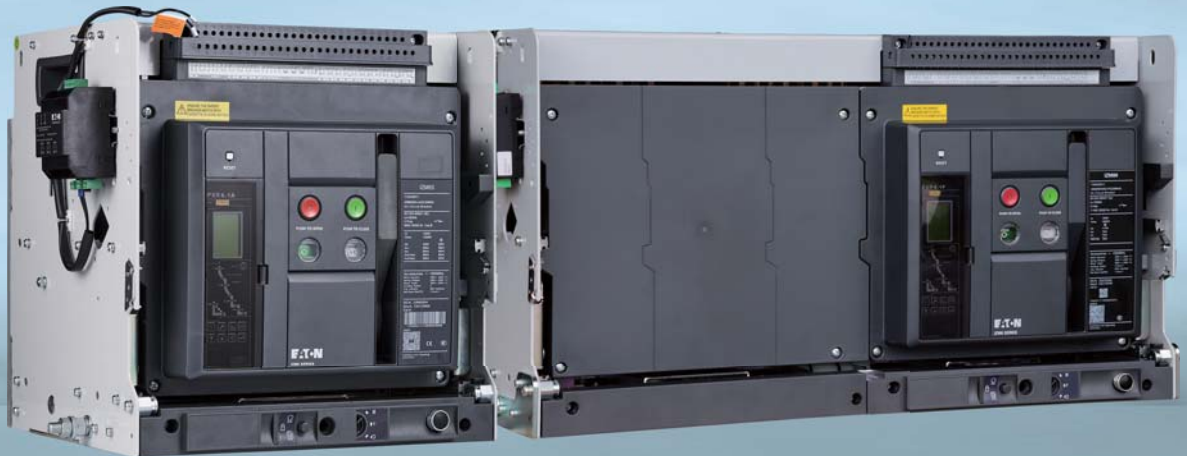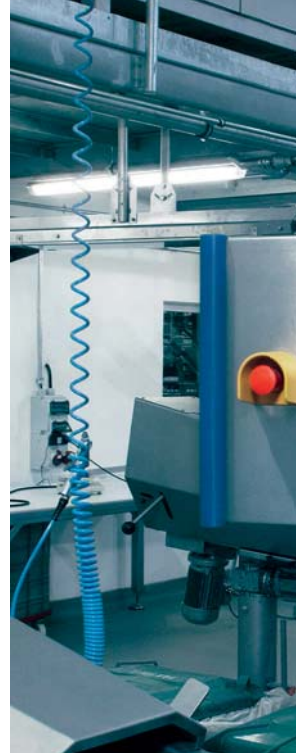
Powering electrical systems worldwide

Buildings

- Residential
- Healthcare
- Education
- Commercial offices
- Retail
- Public sector
- Airports

- Electrical distribution solutions for safe and efficient power delivery
- Power quality systems for uptime and reliability
- Power metering and monitoring to add intelligence and save costs
- Industrial control products for HVAC applications

Information Technology

- Data centers
- Telecommunication
- Networks
- Computer rooms

- World's most efficient line of UPSs to reduce footprint and save energy
- Reliable power systems with inherent redundancy to improve availability
- Power metering and monitoring to diagnose problems and lower costs
- Local service and support for quick response

Public and private sectors

Buildings, Information Technology, Industrial & Machinery, Energy & Utilities
We provide reliable, efficient and safe power management.

Industrial & Machinery

- Machine building:
  - Food and packaging machines
  - Woodworking and processing machines
- Agriculture
- Construction
- Mining and metals
- Paper industry
- Chemical and pharmaceutical industry
- Automotive industry
- Logistics centers

- Electrical distribution equipment to deliver power throughout the enterprise

- Control & automation and power quality equipment for process control

- Power metering and monitoring to manage energy costs and uptime

- Power and motion control products to optimize productivity, reliability, safety and operator comfort

Energy & Utilities

- Renewable energy:
  - Solar
  - Wind
  - Hydropower
- Traditional energy:
  - Oil
  - Gas
- Smart grid
- Water and waste water

- Electrical balance of system and turnkey services for residential, utility and commercial solar installations

- Power distribution equipment, control components and system installations services

- Network power grid technology for intelligent data, lower costs and crew / public safety

IZM6 Series Air Circuit Breakers

IZM6 Series Air Circuit Breakers

IZM6 Series Air Circuit Breakers

Product description

The IZM6 series circuit breakers are a new generation of high-performance air circuit breakers with sophisticated technology and comprehensive functions, offering safety and reliability.

The circuit breakers are suitable for use in electrical distribution networks with AC 50Hz/60Hz, rated operating voltage up to 1140V, and rated operating current of 6300A and below, to provide functions such as measurement, diagnosis, analysis and communication, precise selective protection and power monitoring.
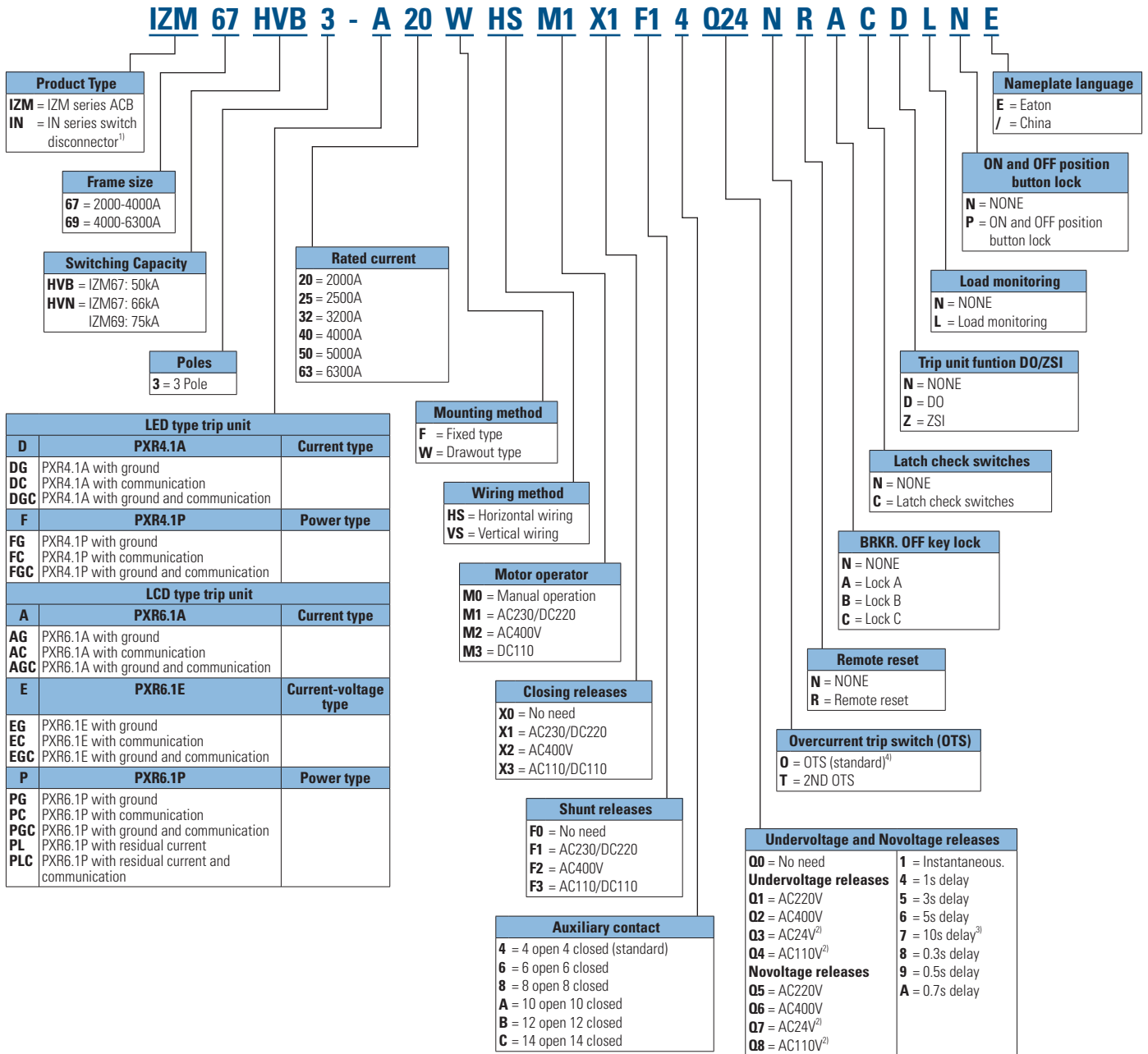
The circuit breaker complies with below standards:

IEC 60947-1 and GB14048.1	Low-voltage switchgear and control equipment: General
IEC 60947-2 and GB14048.2	Low-voltage switchgear and control equipment: Low voltage circuit breaker
IEC 60947-4-1 and GB14048.4	Low-voltage switchgear and control equipment: Contactor and motor starter
GB/T 14597	Climatic environmental conditions at different altitudes for electrical products
GB/T 2421.1	Environmental testing of electrical and electronic products: Overview and guidelines
GB/T 20626.1	Plateau electrical and electronic products for special environmental conditions Part 1: General technical requirements
GB/T 2423.1	Environmental testing of electrical and electronic products Part 2: Test method - Test A: Low temperature
GB/T 2423.2	Environmental testing of electrical and electronic products Part 2: Test method - Test B: High temperature
GB/T 2423.4	Environmental testing of electrical and electronic products Part 2: Test method - Test Db: Alternating damp heat test method
GB/T 2423. 17	Environmental testing of electrical and electronic products Part 2: Test method - Test Ka: Salt mist
GB/T 2423.18-2000	Environmental testing of electrical and electronic products Part 2: Test method - Test Kb: Salt mist, alternating (sodium chloride solution)

IZM6 Series Air Circuit Breakers
Model Description

IZM6 Air Circuit Breakers Catalog Number (Full configuration)

IZM 67 HVB 3 - A 20 W HS M1 X1 F1 4 Q24 N R A C D L N E

Product Type
IZM = IZM series ACB
IN = IN series switch disconnector[1]

Frame size
67 = 2000-4000A
69 = 4000-6300A

Switching Capacity
HVB = IZM67: 50kA
HVN = IZM67: 66kA
IZM69: 75kA

Poles
3 = 3 Pole

LED type trip unit		
D	**PXR4.1A**	**Current type**
DG	PXR4.1A with ground	
DC	PXR4.1A with communication	
DGC	PXR4.1A with ground and communication	
F	**PXR4.1P**	**Power type**
FG	PXR4.1P with ground	
FC	PXR4.1P with communication	
FGC	PXR4.1P with ground and communication	

LCD type trip unit		
A	**PXR6.1A**	**Current type**
AG	PXR6.1A with ground	
AC	PXR6.1A with communication	
AGC	PXR6.1A with ground and communication	
E	**PXR6.1E**	**Current-voltage type**
EG	PXR6.1E with ground	
EC	PXR6.1E with communication	
EGC	PXR6.1E with ground and communication	
P	**PXR6.1P**	**Power type**
PG	PXR6.1P with ground	
PC	PXR6.1P with communication	
PGC	PXR6.1P with ground and communication	
PL	PXR6.1P with residual current	
PLC	PXR6.1P with residual current and communication	

Rated current
20 = 2000A
25 = 2500A
32 = 3200A
40 = 4000A
50 = 5000A
63 = 6300A

Mounting method
F = Fixed type
W = Drawout type

Wiring method
HS = Horizontal wiring
VS = Vertical wiring

Motor operator
M0 = Manual operation
M1 = AC230/DC220
M2 = AC400V
M3 = DC110

Closing releases
X0 = No need
X1 = AC230/DC220
X2 = AC400V
X3 = AC110/DC110

Shunt releases
F0 = No need
F1 = AC230/DC220
F2 = AC400V
F3 = AC110/DC110

Auxiliary contact
4 = 4 open 4 closed (standard)
6 = 6 open 6 closed
8 = 8 open 8 closed
A = 10 open 10 closed
B = 12 open 12 closed
C = 14 open 14 closed

Undervoltage and Novoltage releases
Q0 = No need	**1** = Instantaneous.
Undervoltage releases	**4** = 1s delay
Q1 = AC220V	**5** = 3s delay
Q2 = AC400V	**6** = 5s delay
Q3 = AC24V[2]	**7** = 10s delay[3]
Q4 = AC110V[2]	**8** = 0.3s delay
Novoltage releases	**9** = 0.5s delay
Q5 = AC220V	**A** = 0.7s delay
Q6 = AC400V	
Q7 = AC24V[2]	
Q8 = AC110V[2]	

Overcurrent trip switch (OTS)
O = OTS (standard)[4]
T = 2ND OTS

Remote reset
N = NONE
R = Remote reset

BRKR. OFF key lock
N = NONE
A = Lock A
B = Lock B
C = Lock C

Latch check switches
N = NONE
C = Latch check switches

Trip unit funtion DO/ZSI
N = NONE
D = DO
Z = ZSI

Load monitoring
N = NONE
L = Load monitoring

ON and OFF position button lock
N = NONE
P = ON and OFF position button lock

Nameplate language
E = Eaton
/ = China

Notes: [1] The IN67/69 is an isolated circuit breaker that removes the IZM67/69 circuit breaker from the PXR series of trip unit in accordance with the requirements of Annex L of GB/T14048.2-2020/IEC 60947-2, and the remaining configurations are consistent with the standard circuit breakers.
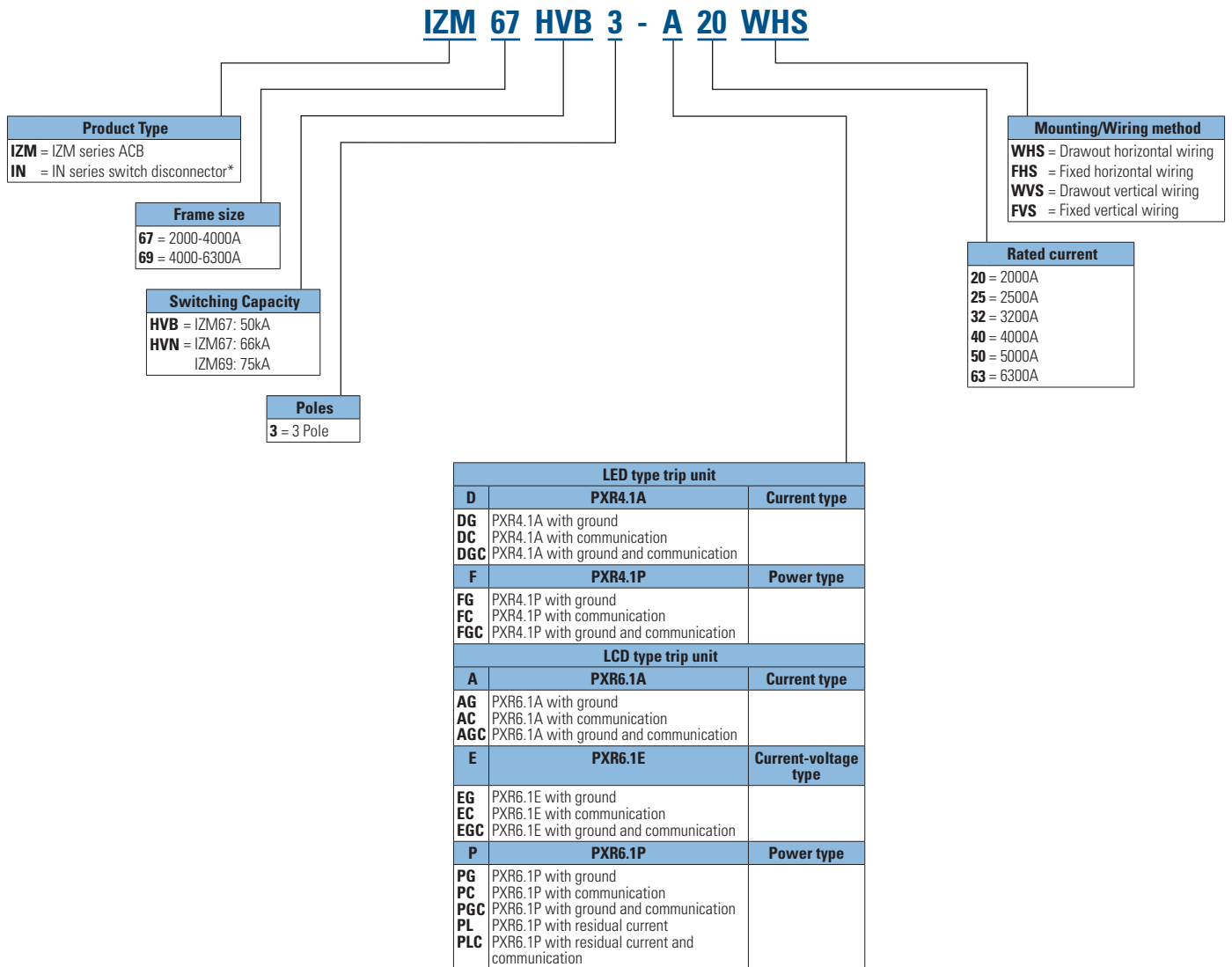[2] Not launch.
[3] Only undervoltage coils are supported.
[4] Default configuration.
The circuit breaker is equipped with a power supply module as standard.
Before purchasing the catalog number on this page, please contact EATON for the article number.

IZM6 Air Circuit Breakers Catalog Number (Standard configuration)

IZM 67 HVB 3 - A 20 WHS

Product Type	
IZM	= IZM series ACB
IN	= IN series switch disconnector*

Frame size	
67	= 2000-4000A
69	= 4000-6300A

Switching Capacity	
HVB	= IZM67: 50kA
HVN	= IZM67: 66kA
	IZM69: 75kA

Poles	
3	= 3 Pole

Mounting/Wiring method	
WHS	= Drawout horizontal wiring
FHS	= Fixed horizontal wiring
WVS	= Drawout vertical wiring
FVS	= Fixed vertical wiring

Rated current	
20	= 2000A
25	= 2500A
32	= 3200A
40	= 4000A
50	= 5000A
63	= 6300A

LED type trip unit		
D	**PXR4.1A**	**Current type**
DG	PXR4.1A with ground	
DC	PXR4.1A with communication	
DGC	PXR4.1A with ground and communication	
F	**PXR4.1P**	**Power type**
FG	PXR4.1P with ground	
FC	PXR4.1P with communication	
FGC	PXR4.1P with ground and communication	
LCD type trip unit		
A	**PXR6.1A**	**Current type**
AG	PXR6.1A with ground	
AC	PXR6.1A with communication	
AGC	PXR6.1A with ground and communication	
E	**PXR6.1E**	**Current-voltage type**
EG	PXR6.1E with ground	
EC	PXR6.1E with communication	
EGC	PXR6.1E with ground and communication	
P	**PXR6.1P**	**Power type**
PG	PXR6.1P with ground	
PC	PXR6.1P with communication	
PGC	PXR6.1P with ground and communication	
PL	PXR6.1P with residual current	
PLC	PXR6.1P with residual current and communication	

Drawout type
Devices are equipped as standard: Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4a4b), PXR series intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, terminal block, 220VAC/DC to DC24V power supply module, safety shutter, arc extinguishing cover, and handle.

Fixed type
Devices are equipped as standard: Fixed circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4a4b), PXR series intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, terminal block, 220VAC/DC to DC24V power supply module, arc extinguishing cover, and handle.

Notes: *The IN67/69 is an isolated circuit breaker that removes the IZM67/69 circuit breaker from the PXR series of trip unit in accordance with the requirements of Annex L of GB/T14048.2-2020/IEC 60947-2, and the remaining configurations are consistent with the standard circuit breakers.
For power supply input voltages, see IZM6 Operation Manual.
The circuit breaker is equipped with a power supply module as standard.

IZM6 Series Air Circuit Breakers
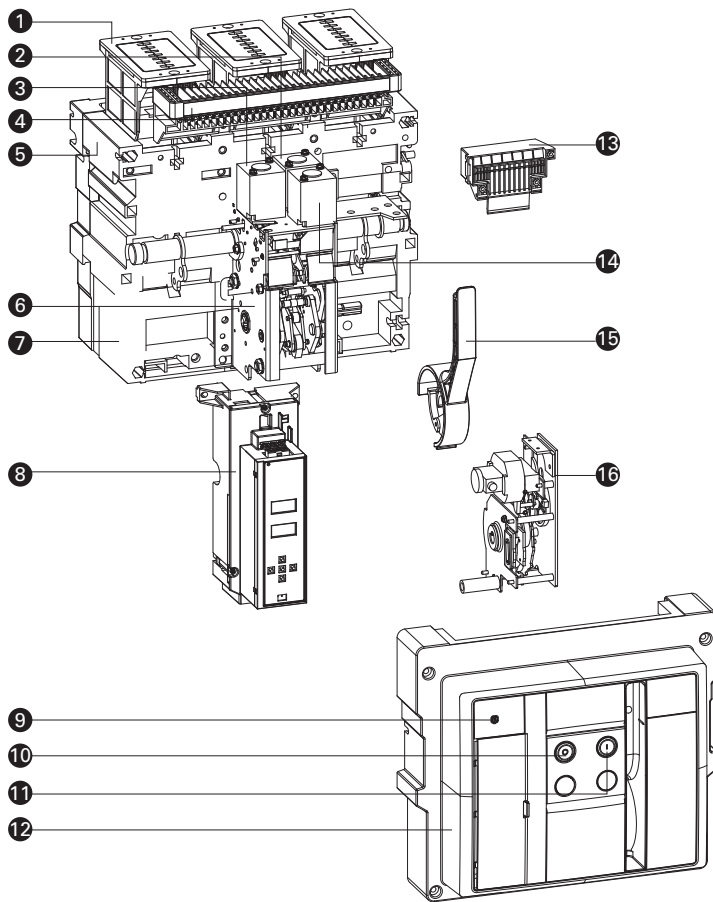External Structure

Drawout type
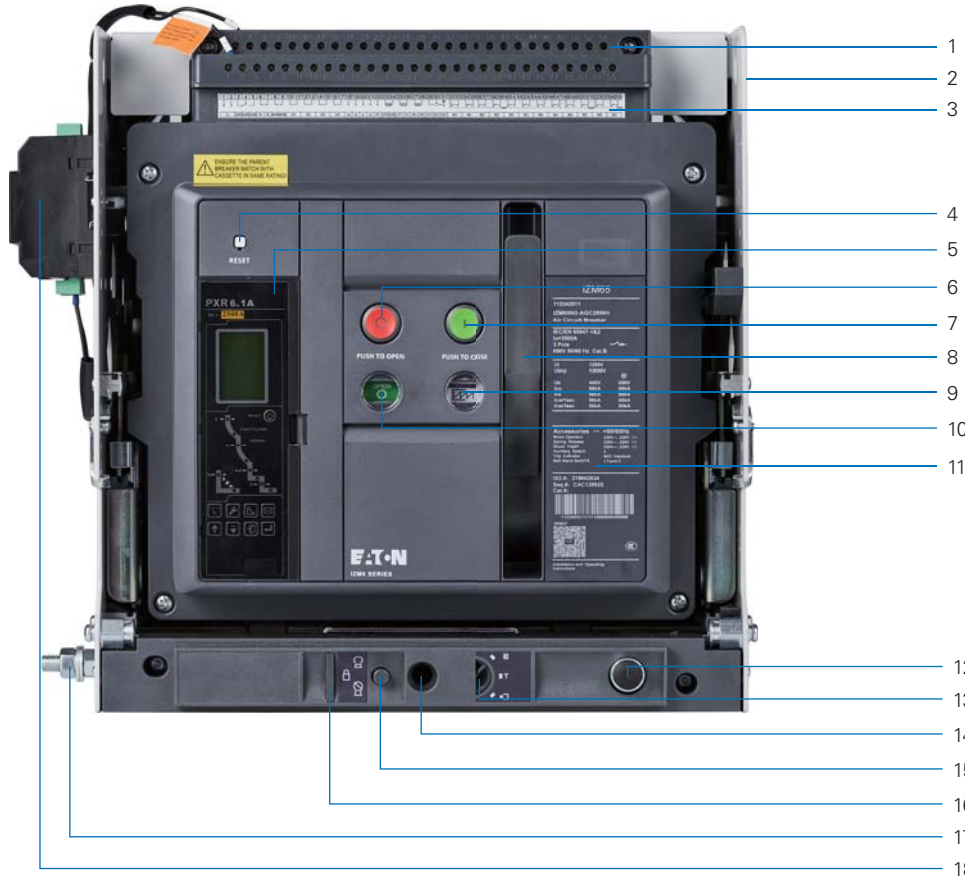
1. Secondary terminal
2. Cassette
3. Secondary terminal wiring nameplate
4. Fault trip indication / reset button
5. Intelligent controller
6. Open button
7. Closed button
8. Manual charging handle
9. "Release" / " Charging" indication
10. Open/Closed indication
11. Data nameplate
12. Lever storage position
13. 3-cell switch
14. Lever driving position
15. Unlock button
16. Disconnected position locking device
17. Ground bolt
18. Power supply module
19. Upper wiring terminal
20. Lower wiring terminal
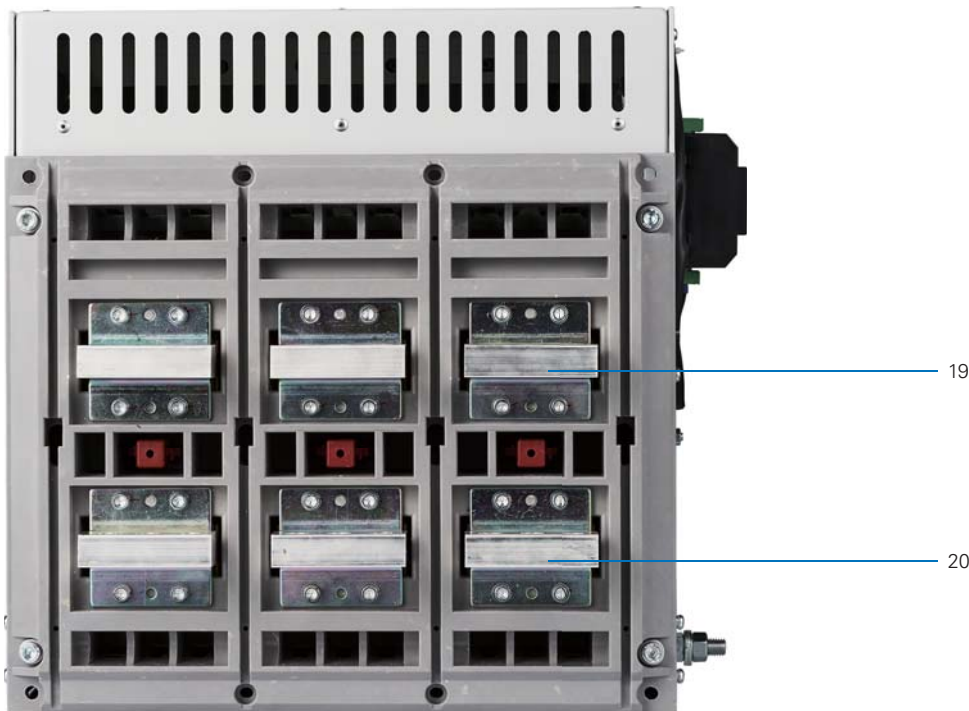
Internal structure

❶ Arc chamber

❷ Shunt coil

❸ Under voltage coil

❹ Secondary terminal

❺ Delivery handle

❻ Operating mechanism

❼ Basic device

❽ Intelligent controller

❾ Reset button

❿ Open button

⓫ Closed button

⓬ Cover

⓭ Auxiliary contact

⓮ Closing coil

⓯ Charging handle

⓰ Charging motor
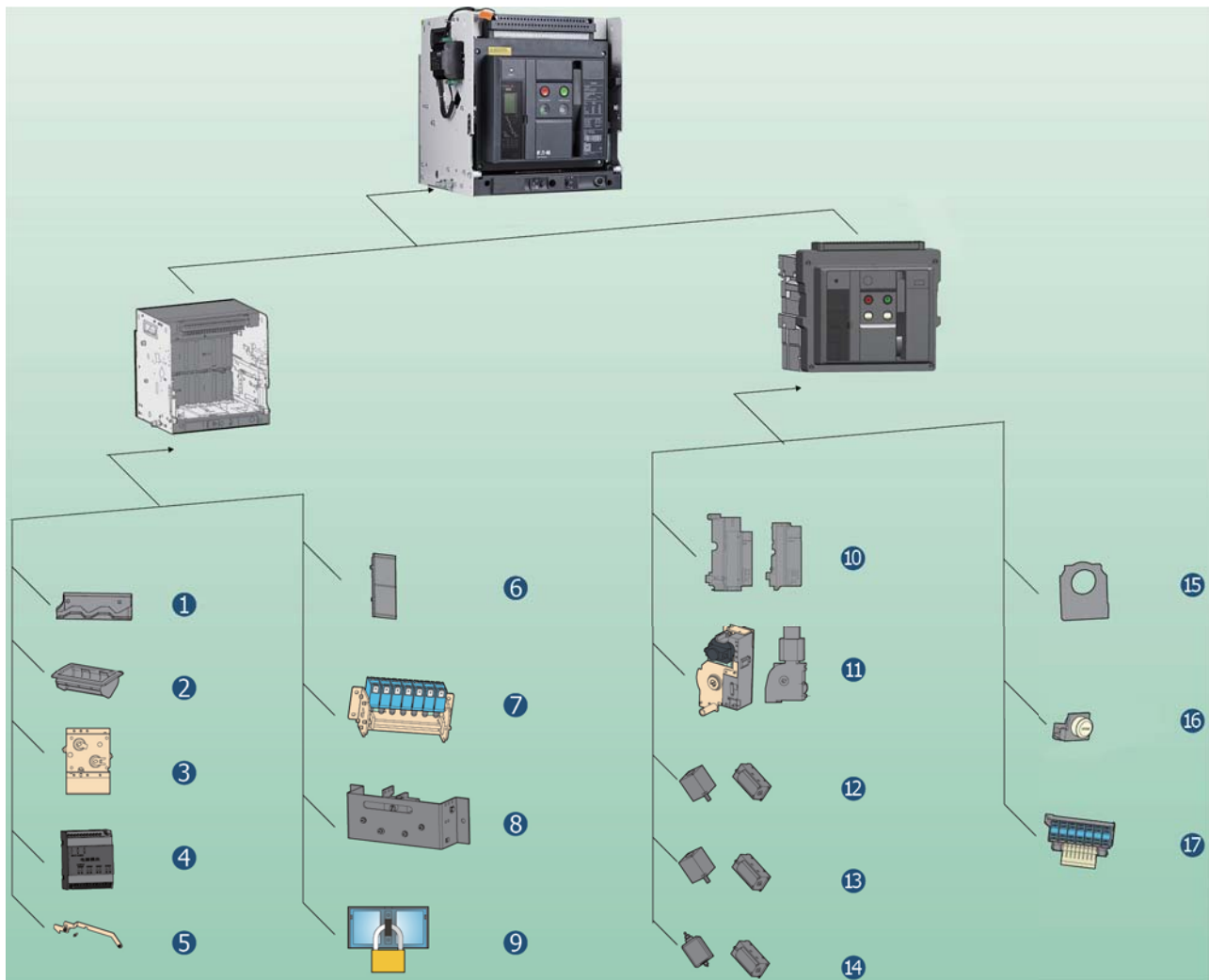
IZM6 series

1. Locator
2. Shroud
3. Mechanical interlocking
4. Power supply module
5. Door interlocking (Not launch)

6. Inter-phase partition
7. External auxiliary contact
8. Position indicator
9. Button lock
10. Intelligent controller

11. Charging motor
12. Shunt coil
13. Under (no) voltage trip unit
14. Closing coil
15. External transformer

16. OFF position lock
17. Auxiliary contact

Key Technical Data and Performance Indicators

		IZM67-4000		IZM69-6300
Standard		IEC/EN 60947		IEC/EN 60947
Certificate		CCC		CCC
RoHS		RoHS		RoHS
Rated peak withstand voltage (U_{imp})		12kV		18kV
Rated insulation voltage (U_i)		1250V		1800V
Rated voltage (U_e)		1140V		1140V
Ambient temperature	Storage	-40 - +85°C		-40 - +85°C
	Operation	-25 - +70°C		-25 - +70°C
Frequency		50/60Hz		50/60Hz
Application category		B		B
Protection level		IP20		IP20
Over voltage category		IV (main circuit)		IV (main circuit)
Pollution degree		III		III
Power supply incoming direction		Upper or lower incoming, subject to specific need (no derating for upper and lower wiring)		
Frame current		4000A		6300A
Rated current (I_n)		2000A, 2500A, 3200A, 4000A		4000A, 5000A, 6300A
Circuit breaker model		HVB	HVN	HVN
Rated ultimate short circuit breaking capacity (I_{cu}, kA)	1140V	50	66	75
Rated operational short circuit breaking capacity (I_{cs}, kA)	1140V	50	66	75
Rated short time withstand current (I_{cw}, kA)	1s	50	66	75
Rated short circuit making capacity (I_{cm}, kA)	1140V	105	145	165
Operating delays (ms)	Opening delay	25		25
	Closing delay	60		60
Durability and mounting characteristics				
Lifespan	Mechanical, w/o maintenance	10000		5000
	Mechanical, w/maintenance	20000		10000
	Electrical, w/o maintenance	5000		2000
Maximum operating frequency (Operations/h)		60		60
Dimensions (H x W x D, mm)	Fixed type, 3-pole	393 x 422 x 290		800 x 390 x 299
	Drawout type, 3-pole	430 x 407 x 395		853 x 390 x 299
Weight (kg)	Fixed type, 3-pole	85Kg		160Kg
	Drawout type, 3-pole	126Kg		240Kg

Notes: The IN67/69 is an isolated circuit breaker that removes the IZM67/69 circuit breaker from the PXR series of trip unit in accordance with the requirements of Annex L of GB/T14048.2-2020/IEC 60947-2, and the remaining configurations are consistent with the standard circuit breakers. The IN67/69 is used in conjunction with an external protection relay (maximum delay of 400ms) to achieve a breaking capability (at U_e) to the I_{cw} (1 second).

IZM6 Series Air Circuit Breakers

Intelligent Controller

Technical Features

Controller

The intelligent controller, a key element of the circuit breaker, offers basic protections such as overload, short circuit, and grounding. It can also protect against over voltage fault, under voltage fault, frequency fault, phase sequence fault, and current imbalance fault.

Controller type

Display type	LED display	LED display	LCD display	LCD display	LCD display
Ordering code	D	F	A	E	P
Mode	Ammeter mode	Power mode	Ammeter mode	Current-voltage mode	Power mode
Model	PXR4.1A	PXR4.1P	PXR6.1A	PXR6.1E	PXR6.1P
	• LED display • Current measurement • Overload long Delay time protection • Short circuit short delay time protection • Short circuit instantaneous protection • Ground fault protection (optional) • Current imbalance protection • Thermal memory • Contact wear indicator • Simulated trip function • Fault trip output • MCR • Self-diagnosis • Communication (optional)	• LED display • Current measurement • Overload long delay time protection • Short circuit short delay time protection • Short circuit instantaneous protection • Ground fault protection (optional) • Current imbalance protection • Thermal memory • Voltage protection • Power measurement • Frequency measurement • Contact wear indicator • Simulated trip function • Fault trip output • MCR • Self-diagnosis • Communication (optional)	• LCD display • Current measurement • Overload long delay time protection • Short circuit short delay time protection • Short circuit instantaneous protection • Ground fault protection (optional) • Current imbalance protection • Thermal memory • Contact wear indicator • Simulated trip function • Fault trip output • MCR • Self-diagnosis • Communication (optional)	• LCD display • Current and voltage measurement • Overload long delay time protection • Short circuit short delay time protection • Short circuit instantaneous protection • Ground fault protection (optional) • Current imbalance protection • Thermal memory • Voltage protection • Frequency measurement • Contact wear indicator • Simulated trip function • Fault trip output • MCR • Self-diagnosis • Communication (optional)	• LCD display • Current and voltage measurement • Overload long delay time protection • Short circuit short delay time protection • Short circuit instantaneous protection • Ground fault protection (optional) • Residual current protection (optional) • Current imbalance protection • Thermal memory • Voltage protection • Demand protection • Reverse power protection • Energy measurement • Power measurement • Frequency measurement • Contact wear indicator • Simulated trip function • Fault trip output • MCR • Self-diagnosis • Communication (optional)

Controller function

Trip unit model		PXR4.1A	PXR4.1P
Trip unite model selection code		**D**	**F**
Display interface	LED number and symbol display	√	√
Basic protections	Overload long delay time protection (multi-curve)	√	√
	Short circuit short delay time protection	√	√
	Short circuit instantaneous protection	√	√
	Ground protection	Optional	Optional
Other protections	Overload thermal memory	√	√
	Short delay thermal memory	√	√
	Neutral phase protection (4P)	√	√
	Current imbalance	√	√
	MCR	√	√
	Load monitoring	Optional	Optional
Advanced protections	Under/over voltage protection	–	√
	Phase sequence protection	–	√
	Under/over frequency protection	–	√
	Zone selective interlocking	–	–
Measurement	Current measurement (phase pole, N pole, ground)	√	√
	Voltage measurement (phase voltage, line voltage)	–	√
	Frequency measurement	–	√
	Power measurement (active power)	–	√
	Power factor measurement	–	√
	Energy measurement (active energy)	–	√
Maintenance	LED fault status indication	√	√
	Fault record and query (only the last time)	√	√
	Fault trip signal output	√	√
	Self-diagnosis function	√	√
	Simulated trip test function	√	√
	Contact wear equivalent (alarm)% query	√	√
	Number of operations query	√	√
	Clock function	√	√
Others	Signal unit 4DO (programmable)	Optional	Optional
	Communication (Modbus-RTU)	Optional	Optional

"√" = The function is available;   "–" = The function is not available;
For optional functions, please contact local Eaton sales representatives.

Controller function (continued)

Trip unit model		PXR6.1A	PXR6.1E	PXR6.1P
Trip unite model selection code		**A**	**E**	**P**
Display interface	LCD number and symbol display	√	√	√
Basic protections	Overload long delay time protection (multi-curve)	√	√	√
	Short circuit short time protection	√	√	√
	Short circuit instantaneous protection	√	√	√
	Ground protection	Optional	Optional	Optional
	Residual current protection	–	–	Optional
Other protections	Overload thermal memory	√	√	√
	Short delay thermal memory	√	√	√
	Neutral phase protection (4P)	√	√	√
	Current imbalance and phase loss protection	√	√	√
	MCR	√	√	√
	Load monitoring [1]	Optional	Optional	Optional
Advanced protections	Under/over voltage protection	–	√	√
	Voltage imbalance protection	–	√	√
	Phase sequence protection	–	√	√
	Under/over frequency protection	–	√	√
	Demand protection (current, power)	–	–	√
	Inverse power protection	–	–	√
	Zone selective interlocking [1]	Optional	Optional	Optional
Measurement	Current measurement (phase pole, N pole, ground)	√	√	√
	Voltage (phase voltage, line voltage, voltage imbalance)	–	√	√
	Phase sequence detection	–	√	√
	Frequency measurement	–	√	√
	Power measurement (active, reactive, apparent)	–	–	√
	Power factor measurement	–	–	√
	Energy measurement (active, reactive, apparent)	–	–	√
	Demand measurement (current, power)	–	√ (only current)	√
Maintenance	LED fault status indication	√	√	√
	Fault record (8) and query	√	√	√
	Historical peak current record	√	√	√
	Alarm history record query	√	√	√
	Displacement record	√	√	√
	Fault trip signal output	√	√	√
	Self-diagnosis function	√	√	√
	Simulation trip test function	√	√	√
	Contact wear equivalent (alarm)% query	√	√	√
	Number of operations query	√	√	√
	Clock function	√	√	√
	Signal unit 4DO (programmable) [1]	Optional	Optional	Optional
	Communication (Modbus-RTU)	Optional	Optional	Optional

"√" = The function is available;
"–" = The function is not available;
For optional functions, please contact local Eaton sales representatives.
[1] For ordering information, please contact local Eaton sales representative.

PXR4.1A/PXR4.1P Intelligent Trip Unit

4.1A Basic functions

- Overload long delay time, short circuit short delay time, short circuit instantaneous protection
- Ground protection (optional)
- Current measurement
- Functional test
- Fault memory
- Thermal memory
- Self-diagnosis
- Fault status indication and numerical display
- Signal contact output

- MCR
- Load monitoring (optional)
- Contact wear indication
- Communication function (optional)

4.1P Add-on functions

- Voltage measurement
- Power measurement
- Energy measurement
- Frequency measurement
- Voltage protection
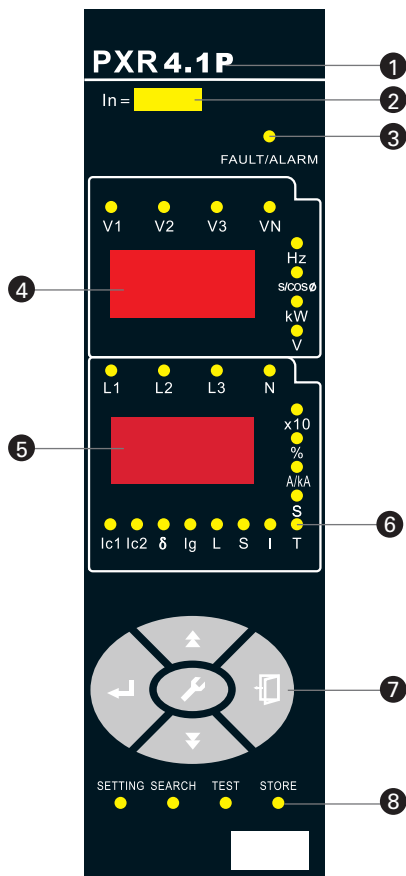
1 Controller model

2 Rated current

3 Fault / alarm indicator

4 Power meter window

5 Ammeter window

6 Current protection type indication

7 Setting keyboard

8 Status indication

IZM6 Series Air Circuit Breakers
Intelligent Controller

PXR4.1A/PXR4.1P
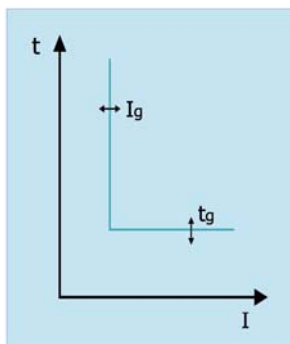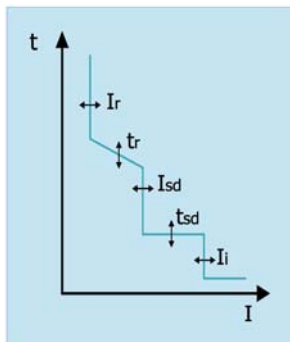
		PXR4.1A	PXR4.1P
Ordering code		D	F
Display type		LED	LED
Long delay protection (L)			
Long delay set point (Tolerance: 10%)	$(I_r) \times I_n$	0.4~1+OFF (Step is 1A or 2A)	
Curve type		I^2t curve	
Long delay time (Tolerance: 15%)	t_r ($6 \times I_r$)	0.5, 1, 1.9, 3.8, 7.5, 15, 22.5, 30, 37.5, 45, 52.5, 60	
Long delay time (Tolerance: 15%)	t_r ($1.5 \times I_r$)	8, 15, 30, 60, 120, 240, 360, 480, 600, 720, 840, 960	
Long delay time (Tolerance: 15%)	t_r ($7.2 \times I_r$)	0.35, 0.65, 1.3, 2.6, 5.21, 10.42, 15.63, 20.83, 26.04, 31.25, 36.46, 41.67	
Short delay protection (S)			
Short delay set point (Tolerance: 10%)	$I_{sd} \times I_r$	1.5~15+OFF (Step is 1A or 2A)	
Curve type		I^2t curve	
Short delay time (t_{sd}) (Tolerance: 15%)	Fixed time	0.1, 0.2, 0.3, 0.4+OFF	
Short delay time (t_{sd}) (Tolerance: 15%)	Inverse time $I^2t/10$ ($6 \times I_r$)	0.05, 0.1, 0.19, 0.38, 0.75, 1.5, 2.25, 3, 3.75, 4.5, 5.25, 6	
Short delay time (t_{sd}) (Tolerance: 15%)	Inverse time $I^2t/10$ ($1.5 \times I_r$)	0.8, 1.5, 3, 6, 12, 21, 36, 48, 60, 72, 84, 96	
Short delay time (t_{sd}) (Tolerance: 15%)	Inverse time $I^2t/10$ ($7.2 \times I_r$)	0.035, 0.065, 0.13, 0.26, 0.521, 1.042, 1.563, 2.083, 2.604, 3.125, 3.646, 4.167	
Instantaneous protection (I)			
Instantaneous protection set point (Tolerance: 15%)	$I_i \times I_n$	$1I_n$-$15I_n$+OFF (Step is 1A or 2A)	
Ground fault protection (G)			
Ground fault protection set point (A) (Tolerance: 10%)	$\times I_n$	0.2~1+OFF (Step is 1A or 2A)	
Ground fault protection set point (A) (Tolerance: 10%)	$I_g \times I_n$	0.2~1+OFF (Step is 1A or 2A)	
Ground fault delay time (t_g) (Tolerance: 10%) (Inherent tolerance: 40ms)	I_{tg}	0.1~0.5s (Step is 0.1s)	
Ground fault delay time (t_g) $t = I^2t@0.625$ (t_g) (Tolerance: 10%)		0.1~0.5s (Step is 0.1s)	
Under voltage protection [1]			
Under voltage protection set point (Tolerance: 10%)		N/A	$10\%U_n$~$70\%U_n$+OFF (Step is 1V)
Under voltage protection delay time (Tolerance: 10%) (Inherent tolerance: 40ms)		N/A	0.2~60s (Step is 0.1s or 1s)
Over voltage protection [1]			
Over voltage protection set point (Tolerance: 10%)		N/A	$110\%U_n$~$130\%U_n$+OFF (Step is 1V)
Over voltage protection delay time (Tolerance: 10%) (Inherent Tolerance: 40ms)		N/A	0.2~60s (Step is 0.1s or 1s)

[1] Voltage protection of Phase A, B, C and N is connected to terminals with the maximum voltage of 400V. If above 400V, a voltage module is needed.

PXR6.1A / PXR6.1E / PXR6.1P

6.1A Basic functions

- Overload long delay time, short circuit short delay time, short circuit instantaneous protection
- Ground protection (optional)
- Communication function (optional)

- Current measurement
- Functional test
- Fault memory
- Thermal memory
- Self-diagnosis
- Fault status indication and numerical display

- Signal contact output
- MCR
- Load monitoring (optional)
- Contact wear indication

6.1E Add-on functions

- Voltage measurement
- Over-under voltage protection
- Over frequency protection
- Under frequency protection
- Phase sequence protection
- Voltage measurement
- Voltage imbalance measurement
- Frequency measurement
- Demand measurement (current)
- Phase sequence measurement

6.1P Add-on functions

- Reverse power measurement
- Power measurement
- Energy measurement
- Power factor measurement
- Demand measurement (power)

PXR 6.1A

In =
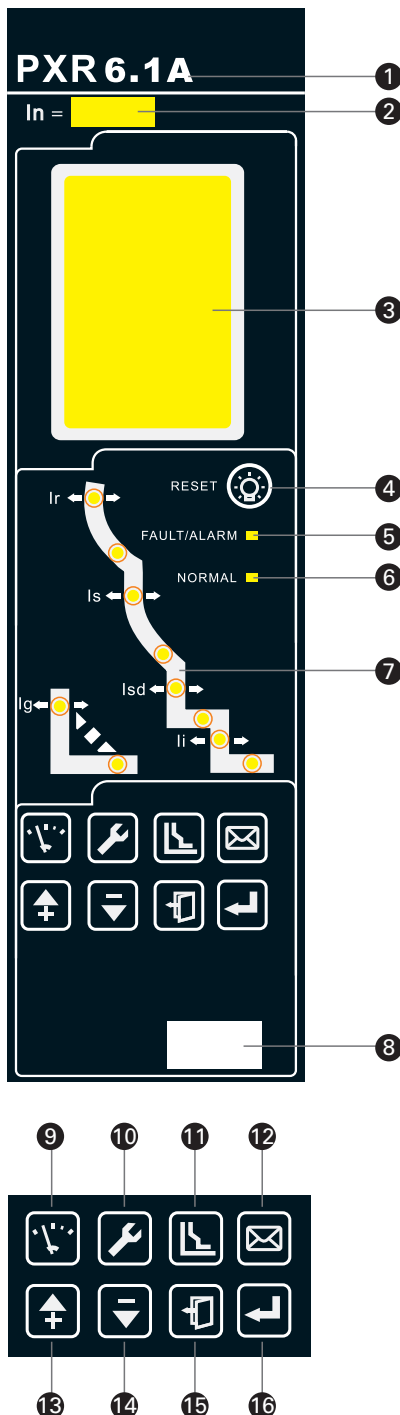
① Controller model

② Rated current

③ LCD interface display

④ Fault and alarm reset button

⑤ Fault / alarm indicator
The LED light is not lit on during normal operation; the red LED light flashes quickly during a fault trip, and remains lit on in the event of an alarm

⑥ Normal status indicator
The green LED light keeps flashing when the controller is powered on and in normal operating status

⑦ Protection curve
There is a red LED indicator hidden in the curve. During a fault tripping, the corresponding LED light flashes to indicate the fault type; during protection parameter setting up, the LED light is always on to indicate the item being set

⑧ Test port
A 10-pin testing portal is available at the bottom of the front panel. A plug-in portable power source box or a detection unit can be inserted

⑨ Measurement: Function Key 1, to switch to default main menu under Measurement (which is, the Left key in the password input interface)

⑩ Set up: Function Key 2, to switch to the main menu of parameter setting up (which is, the Right key in the password input interface)

⑪ Protection: Function Key 3, to switch to the main menu of protection parameter setting up

⑫ Information: Function Key 4, to switch to the main menu of history record and maintenance

⑬ Up: Move up the menu content from the current level, or change the selected parameter up

⑭ Down: Move down the menu content from the current level, or change the selected parameter down

⑮ Exit: Exit to the previous-level menu from the current level, or cancel the selection of the current parameter

⑯ Select: Enter the next-level menu from the current level, or select the current parameter to save the modified value

PXR6.1A / PXR6.1E / PXR6.1P
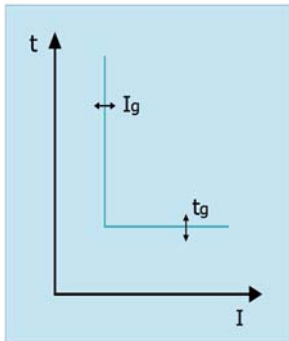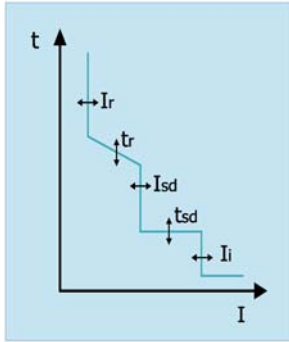
Overload long delay time

Acting current set point I_r	Current tolerance ±10%	$(0.4 \sim 1.0) \times I_n$ + OFF (Step is 1A or 2A)						
Acting time t_r Tolerance ±15%	Current	Action time						
	≤1.05I_r	No action within 2 hours						
	>1.20I_r	Action within 1 hour						
	Curve type (I^2r by default)	Setting time tr (Coefficient K in brackets)						
	Standard inverse time $t = K/(N^{0.02}-1)$	0.61 (0.005)	0.98 (1.0)	1.47 (0.012)	2.46 (0.02)	3.68 (0.03)	4.91 (0.04)	6.14 (0.05)	9.21 (0.075)
		11.1 (0.09)	17.2 (0.14)	24.6 (0.2)	36.8 (0.3)	49.1 (0.4)	61.4 (0.5)	73.7 (0.6)	86 (0.6)
	Fast inverse time $t = K/(N-1)$	2 (1)	3.2 (1.6)	4.8 (2.4)	8 (4)	12 (6)	16 (8)	20 (10)	27 (13.5)
		36 (18)	56 (28)	80 (40)	120 (60)	160 (80)	200 (100)	240 (120)	280 (140)
	Extremely fast inverse $t = K/(N^2-1)$	8 (10)	12.8 (16)	19.2 (24)	32 (40)	48 (60)	64 (80)	80 (100)	108 (135)
		144 (180)	224 (280)	320 (400)	480 (600)	640 (800)	800 (1000)	960 (1200)	1040 (1300)
	Extremely fast inverse $t = (K/1.15) \times \log_e [N^2/(N^2-1.15)]$	6.22 (10)	9.96 (16)	14.9 (24)	24.9 (40)	37.3 (60)	49.8 (80)	62.2 (100)	84 (135)
		112 (180)	174 (280)	249 (400)	373 (600)	498 (800)	622 (1000)	747 (1200)	809 (1300)
	HV fuse compatible $t = K/(N^4-1)$	2.46 (10)	3.94 (16)	5.9 (24)	9.85 (40)	14.8 (60)	19.7 (80)	24.6 (100)	33.2 (135)
		44.3 (180)	68.9 (280)	98.5 (400)	147 (600)	197 (800)	246 (1000)	295 (1200)	320 (1300)
	I^2T $t = (1.5/N)^2 \times K$	8 (8)	15 (15)	30 (30)	60 (60)	120 (120)	240 (240)	360 (360)	480 (480)
		600 (600)	720 (720)	840 (840)	960 (960)				

Notes: N = I/I_r (I is the actual fault current, I_r is the overload current set value). The above set time value is the action delay time when I = 1.5I_r. As the current increases, the delay time will be shortened accordingly and can be calculated to the curve formula.

Thermal memory protection	Instantaneous, 10m,20m,30m,45m,1h,2h,3h+OFF (can be eliminated upon power off)

Short circuit short delay time

Acting current set point I_{sd}	Current tolerance ±10%	$(1.5 \sim 15) \times I_r$+OFF (Step is 1A or 2A)
Acting time t_{sd} Tolerance ±15%	Fixed time delay set point	0.1~0.4s (Step is 0.1s)
	Inverse time delay	The curve is the same as the overload long delay curve; the curve speed is 10 times faster than the overload long delay's (the time calculated to the overload delay curve formula divided by 10 is the short delay inverse delay time)
Thermal memory protection		Subject to long delay settings

Notes: When the inverse time and fixed time protection are both enabled, the inverse time current set point must be less than the fixed time current set point. Otherwise, the inverse time function will automatically fail, and the actual delay time is not less than the fixed time's set time.

Short circuit instantaneous

Acting current set point I_i	Current tolerance ±10%	$(1 \sim 15) \times I_n$+OFF (Min. 1I_n)
Action characteristics		No action when ≤0.85I_i
		Action when >1.15I_i

Grounding protection

Acting current setting I_g	Current tolerance ±10%	$(0.2 \sim 1.0) \times I_n$+OFF (Min. 100A)
Action characteristics		No action when <0.8I_g
		Delay action when ≥1.0I_g
Action time t_g Tolerance ±15%	Fixed time	0.1~0.5s+OFF (Step is 0.1)
	Inverse time (ON)	Fixed time when I>0.625I_n Inverse time when I≤0.625I_n
	Inverse time formula	$t = (0.625I_n)^2 t_g /I^2$ t = delay time, T_g = set delay time, I_n = rated current

Action mode: Trip + OFF

Ground alarm (ground alarm is independent from ground protection; both functions have their own independent parameter settings and can co-exist at the same time)

Alarm action setting	Current	$(0.2 \sim 1.0) \times I_n$ (Min. 100A)
	Time	0.1~1s (Step is 0.1)
Alarm dismiss setting	Current	$(0.2 \sim 1.0) \times I_n$ (Min. 100A)
	Time	0.1~1s (Step is 0.1)

Neutral-pole protection

Acting current setting I_N	Current tolerance ±10%	$(0.5,1.0,1.6,2.0) \times I_n$ + OFF
Action time		Same as the overload long delay time

Current imbalance protection

Protection setting	10%~60% (Step is 1%)
Delay time	0.2s-60s (Step is 0.1s)
Protection return setting	10%~start value (Step is 1%)
Delay time	10s~200s (Step is 1s)
Action characteristics or alarm characteristics	No action when ≤0.9δ
	Delay action or alarm when>1.1δ

Action mode: Trip + alarm + OFF

Load monitoring

Method 1	Setting current I_{c1}, I_{c2}	$(0.2 \sim 1) \times I_r$ (min. 100A, Step is 1A)
	Inverse delay time t_{c1}, t_{c2}	$(20\% \sim 80\%) \times t_r$
Method 2	Setting current I_{c1} (unload value)	$(0.2 \sim 1) \times I_r$ (min. 100A)
	Setting current I_{c2} (return value)	$0.2 \times I_r \sim I_{c1}$
	Inverse delay time t_{c1}	$(20\% \sim 80\%) \times t_r$
	Fixed delay time t_{c2}	10s~600s

Other protection features of the intelligent controller

Voltage imbalance protection		
Action threshold	2%~30% (step is 1%)	
Action delay time (s)	0.2~60 (step is 0.1)	
Return threshold	2%~ start value (step is 1%)	The set point is available only when the execution mode is set as "Alarm", and return value must be less than or equal to start value
Return delay time (s)	0.2~60 (step is 0.1)	
Action or alarm characteristics (Delay tolerance ± 10%)	Actual voltage imbalance/set point ≥ 1.1	Fixed time action or alarm
	Actual voltage imbalance/set point<0.9	No action or alarm
Voltage imbalance alarm return characteristics (Delay tolerance ± 10%)	Actual voltage imbalance/set point≤ 0.9	Return
	Actual voltage imbalance/set point>1.1	No return
Alarm contact output	"Voltage imbalance alarm" contact output can be added when the execution mode is set as Alarm	
Under voltage protection [1]		
Action threshold (V)	100~return threshold (step is 1)	
Action delay time (s)	0.2~60 (step is 0.1)	
Return threshold (V)	Action threshold ~ 950 (step is 1)	The set point is available only when the execution mode is set as "Alarm", and return value must be less than or equal to start value
Action delay time (s)	0.2~60 (step is 0.1)	
Action or alarm characteristics (Delay tolerance ± 10%)	U_{max}/ action threshold < 0.9	Fixed time action or alarm
	U_{max}/ action threshold ≥ 1.1	No action or alarm
Under voltage alarm return characteristics (Delay tolerance ± 10%)	U_{min}/ action threshold > 1.1	Return
	U_{min}/ action threshold ≤ 0.9	No return
Alarm contact output	"Under voltage alarm" contact output can be added when the execution mode is set as Alarm	
Over voltage protection [1]		
Action threshold (V)	Return threshold ~ 950 (step is 1)	
Action delay time (s)	0.2~60 (step is 0.1)	
Return threshold (V)	220~action threshold (step is 1)	The set point is available only when the execution mode is set as "Alarm", and return value must be less than or equal to start value
Return delay time (s)	0.2~60 (step is 0.1)	
Action or alarm characteristics (Delay tolerance ± 10%)	U_{min} / action threshold ≥ 1.1	Fixed time action or alarm
	U_{min} / action threshold < 0.9	No action or alarm
Over voltage alarm return characteristics (Delay tolerance ± 10%)	U_{max} / action threshold ≤ 0.9	Return
	U_{max} / action threshold > 1.1	No return
Alarm contact output	"Over voltage alarm" contact output can be added when the execution mode is set as Alarm	
Demand protection		
Action threshold (V)	(0.2~1.0) x I_n (step is 2)	
Action delay time (s)	15~1500 (step is 0.1)	
Return threshold (V)	$0.2I_n$ ~ start value (step is 2)	The set point is available only when the execution mode is set as "Alarm", and return value must be less than or equal to start value
Return delay time (s)	15~3000 (step is 1)	
Action or alarm characteristics (Delay tolerance ± 10%)	I/ set point ≥ 1.1	Fixed time action or alarm
	I/ set point < 0.9	No action or alarm
Demand current protection alarm return characteristics (Delay tolerance ± 10%)	I/ set point < 0.9	Return
	I/ set point > 1.1	No return
Alarm contact output	"Demand current protection alarm" contact output can be added when the execution mode is set as Alarm	
Phase sequence protection		
Action phase sequence set range	△φ：A, B, C / △φ：A, C, B	
Alarm contact output	"Phase sequence fault alarm" contact output can be added when the execution mode is set as Alarm	
Protection execution mode	Alarm / Trip/ OFF	

| **Frequency protection**				
Parameter setting range	Action threshold	Under frequency	45~ Return value (step is 0.1Hz)	
		Over frequency	Return value ~65 (step is 0.1Hz)	
	Action delay time	0.2~5.0s (step is 0.1s)		
	Return threshold	Under frequency	Return value ~65Hz (step is 0.1Hz)	The set point is available only when the execution mode is set as "Alarm"
		Over frequency	45Hz~ Return value (step is 0.1Hz)	
	Return delay time	0.2~36.0s (step is 0.1s)		
Alarm contact output	"Under frequency alarm" and "Over frequency alarm" contact outputs can be added when the execution mode is set as Alarm			
Protection execution mode	Alarm / Trip/ OFF			

[1] Voltage protection of Phase A, B, C and N is connected to terminals with the maximum voltage of 400V. When above 400V, a voltage module must be equipped

Intelligent Controller's Protection Function Description
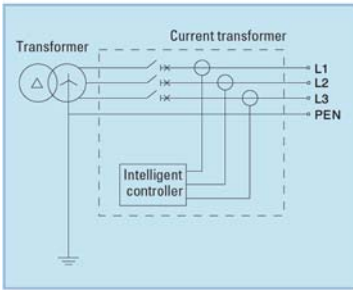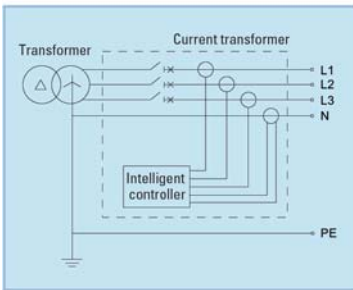
Ground fault protection characteristics
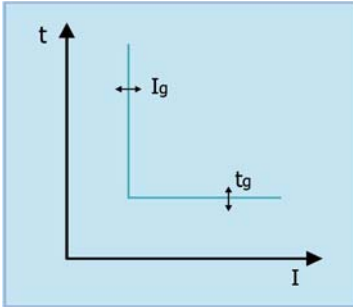
Method 1

Method 2

Ground fault protection

- Ground fault fixed time or inverse time protection, with adjustable setting current I_g
- Adjustable delay time t_g
- Only alarm and no breaking after switched off (OFF)
- Ground fault protection method:
  - Method 1
  - Method 2
  - Method 3

Method 1: TN-C and TN-C-S power distribution systems use three-pole circuit breakers with no neutral current transformer.

- The ground fault protection signal takes the vector sum of the three phase currents
- The protection characteristics is fixed time or inverse time protection
- Only applicable when the three-phase imbalanced current and harmonic current flowing through the PEN neutral protection line are very small

Method 2: TN-S power distribution system uses a three-pole circuit breaker with an current sensor for neutral conductor.

- The ground fault protection signal takes the vector sum of the three phase currents and the N-phase current
- The protection characteristics is fixed or inverse time protection

Notes: The length of the transformer conductor is not more than 2m

Under voltage protection acting principle
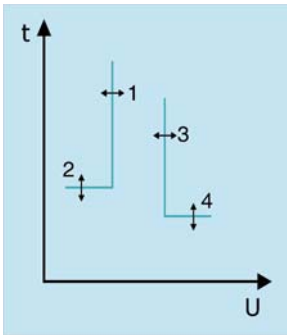
Over voltage protection acting principle
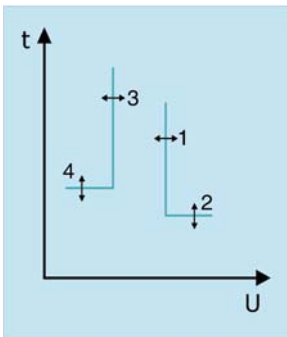
Voltage imbalance
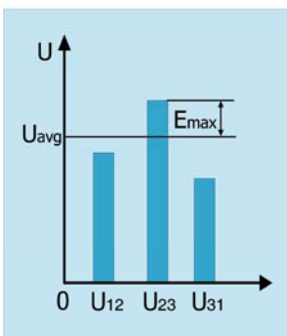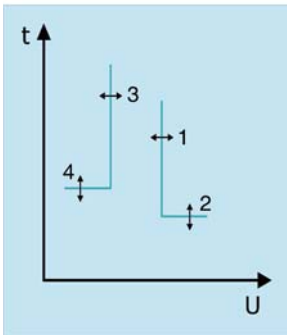
1. Action threshold
2. Action delay time
3. Return threshold
4. Return delay time

Voltage protection

Under voltage protection

The intelligent controller measures the RMS value of the primary circuit voltage. When the three line voltages are all less than the set point, that is, when the maximum value of the three line voltages is less than the under voltage protection threshold, the undervoltage protection will act; when the minimum value of the three line voltages are greater than the return value, the alarm action will return.

Action characteristics:

1. When the maximum voltage is less than the action threshold (1), the alarm or trip delay will be activated;

2. At the end of the action delay time (2), an alarm or trip signal will be issued, and the under voltage fault protection will act;

3. When the minimum voltage is greater than the return threshold (3), the return delay will be activated;

4. At the end of the return delay time (4), the alarm will be removed and the under voltage fault protection will return.

Over voltage protection

The intelligent controller measures the RMS value of the primary circuit voltage. When the three line voltages are all greater than the set value, that is, when the minimum value of the three line voltages is greater than the over voltage protection threshold, the over voltage protection will act; when the three line voltages are less than the return value, the alarm action will return.

Action characteristics:

1. When the minimum voltage is greater than the action threshold (1), the alarm or trip delay will be activated;

2. At the end of the action delay time (2), an alarm or trip signal will be issued, and the over voltage fault protection will act;

3. When the execution mode is set as alarm, after the alarm action, the return delay will be activated when the minimum voltage is less than the return threshold (3);

4. At the end of the return delay time (4), the alarm will be removed and the over voltage fault protection will return.

Voltage imbalance protection

Voltage imbalance protection enables protective actions based on the imbalance value between the three line voltages. The intelligent controller measures the voltage imbalance. When the voltage imbalance is greater than the action threshold, the protection will act; when the voltage imbalance is less than the return threshold, the alarm action will return.

Action characteristics:

1. When voltage imbalance is greater than the action threshold (1), an alarm or trip delay will be activated;

2. At the end of the action delay time (2), an alarm or trip signal will be issued, and voltage imbalance fault protection will act;

3. When the execution mode is set as alarm, after the alarm action, the return delay will be activated when the voltage imbalance is less than the return threshold (3);

4. At the end of the return delay time (4), the alarm will be removed and the voltage imbalance fault protection will return.

The voltage imbalance is calculated as below:

$$U_{unbal} = \frac{|E_{max}|}{U_{avg}} \times 100\%$$

$$U_{avg} = \frac{(U_{12}+U_{23}+U_{31})}{3}$$
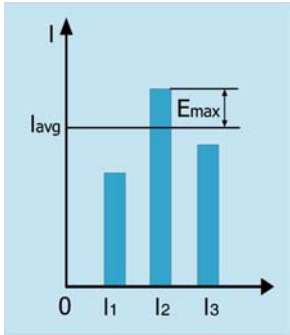
Emax: The maximum difference between each phase voltage and average value.

Uavg: The average value of the RMS sum of the three-phase line voltages.

Current imbalance

Current imbalance protection

The current imbalance protection performs against open phase, phase loss and 3-phase current imbalance based on the imbalance between three phase currents:

The current imbalance is calculated as follows:

$$I_{unbal} = \frac{|E_{max}|}{I_{avg}} \times 100\%$$

$$I_{avg} = \frac{(I_{12} + I_{23} + I_{31})}{3}$$

E_{max} = The maximum difference between each phase current and I_{avg}.

I_{avg} = The average value of the three-phase current RMS

Reverse power protection

It is used for generator protection. When the power is reversed, the generator may be damaged if it is running. If the power flows in a direction opposite to the set power's direction, and is greater than the action threshold set point, the circuit breaker will trip or send out an alarm signal after the action delay time (fixed time action). Then, if the reverse power in the circuit is less than the return threshold set point, the circuit breaker will remove the alarm signal after the return delay time (fixed time action). The reverse power protection function can be set to Enabled or Disabled. When enabled, it includes sending an alarm signal or tripping.

Current demand protection

It is mainly used for process controlling need. When the demand current of a certain phase is greater than the action threshold set point, the circuit breaker will trip or send out an alarm signal after the action delay time (fixed time action). Then, if the demand current of this phase is less than the return threshold set point, the circuit breaker will remove the alarm signal after the return delay time (fixed time action).

The current demand protection function can be set to Enabled or Disabled. When enabled, it includes sending an alarm signal or tripping.

Over frequency protection

It is used for generator protection. When the circuit frequency is greater than the action threshold set point, the circuit breaker will trip or send out an alarm signal after the action delay time (fixed time action). Then, if the circuit frequency is less than the return threshold set point, the circuit breaker will remove the alarm signal after the return delay time (fixed time action).

The over frequency protection function can be set to Enabled or Disabled. When enabled, it includes sending an alarm signal or tripping.

Under frequency protection

It is used for generator protection. When the circuit frequency is less than the action threshold set point, the circuit breaker will trip or send out an alarm signal after the action delay time (fixed time action). Then, if the circuit frequency is greater than the return threshold set point, the circuit breaker will remove the alarm signal after the return delay time (fixed time action).

The under frequency protection function can be set to Enabled or Disabled. When enabled, it includes sending an alarm signal or tripping.

Phase sequence protection

It is used in occasions where phase sequence is required. When it is detected that the phase sequence is the same as the action threshold, it will act instantaneously, and the circuit breaker will trip or send out an alarm signal. If one-phase or multi-phase voltage does not exist, this function will automatically exit.

The phase sequence protection function can be set to Enabled or Disabled. When enabled, it includes sending an alarm signal or tripping.

Contact wear indication

Current contact wear status can be displayed on the intelligent controller panel. The value displayed on the controller is 100% upon delivery from factory, indicating that the contact is not worn. When the value drops to 60%, an alarm signal will be issued to remind the user to take timely maintenance measures. After the contact is replaced, the initial wear value can be restored through setting up.

Self-diagnosis

The intelligent controller can diagnose its own faults, including ambient over temperature, E²PROM data error, A/D sampling error, and circuit breaker failure to act.

MCR

Making and breaking function (MCR): Switch off immediately due to short circuit fault during circuit breaker closing or controller initialization upon powering on.

Signal contact (DO) function (optional)

DO: Output function

The intelligent controller offers two to four sets of independent signal contact outputs.

Function setting	See DO Function Setting Table			
Execution mode	NO level	NC level	NO pulse	NC pulse
Pulse time	N/A		1~ 360s (step is 1s)	

Models to be purchased separately

DO function

Type	For use with	Part no. Article no.
4DO output	IZM67/69	**IZM6-DO** CAM-50047

Notes: Cannot be mounted separately and need to be purchased together with the basic device.

Ethernet communication module

Models to be purchased separately

	For use with	Part no. Article no.
Ethernet communication module	IZM67/69	**IZM6-ECAM** CAM-50059

Relay module

Models to be purchased separately

	For use with	Part no. Article no.
Relay module	IZM67/69	**IZM6-ST201** CAM-50062

DO function setting table

General purpose	Alarm	Fault trip	Self-diagnosis alarm	Instantaneous fault
Ground / residual current fault	Overload pre-alarming	Overload fault	Short delay fault	Under voltage fault
Over voltage fault	Ground alarm	Current imbalance fault	Neutral line fault	Demand fault
Reverse power fault	Voltage imbalance fault	Under frequency fault	Over frequency fault	Phase sequence fault
MCR fault	Short circuit interlocking	Closing	Opening	Demand out of limit
Phase A demand fault	Phase B demand fault	Phase C demand fault	Neutral-phase demand fault	

Notes: General purpose means that this input/output is not used in the controller itself and can be operated by the host computer in the Communication group.

Zone selective interlocking

In the same power circuit, zone selective interlocking can be achieved between two or more upstream and downstream circuit breakers. Zone selective interlocking includes short-circuit interlocking and ground interlocking.

1. Interlock function description

1) When a short circuit or ground fault occurs at the outgoing side of the downstream circuit breaker (#2~#4) - such as Position ②, the downstream circuit breaker will instantaneously trip and send a zone interlocking signal to the upstream circuit breaker; The upstream circuit breaker (#1) receives the zone interlocking trip signal and delays according to the short circuit or ground protection setting. If the fault current is eliminated during the delay time of the upstream circuit breaker, the protection will return and the upstream circuit breaker will not act; if the fault current is not eliminated after the tripping of the downstream circuit breaker, the upstream circuit breaker will act according to the short-circuit or ground protection setting to switch off the faulty line.

2) When a short circuit or ground fault occurs between the upstream circuit breaker (#1) and downstream circuit breaker (#2~#5) -such as Position ①, the upstream circuit breaker will not receive the zone interlocking signal and thus trip instantaneously to quickly cut off the faulty circuit.

2. To set up the I/O ports of the circuit breaker, follow below requirements:

1) At least one DI of the upstream circuit breaker is set as zone interlocking detection;

2) At least one DO of the downstream circuit breaker is set as zone interlocking signal output
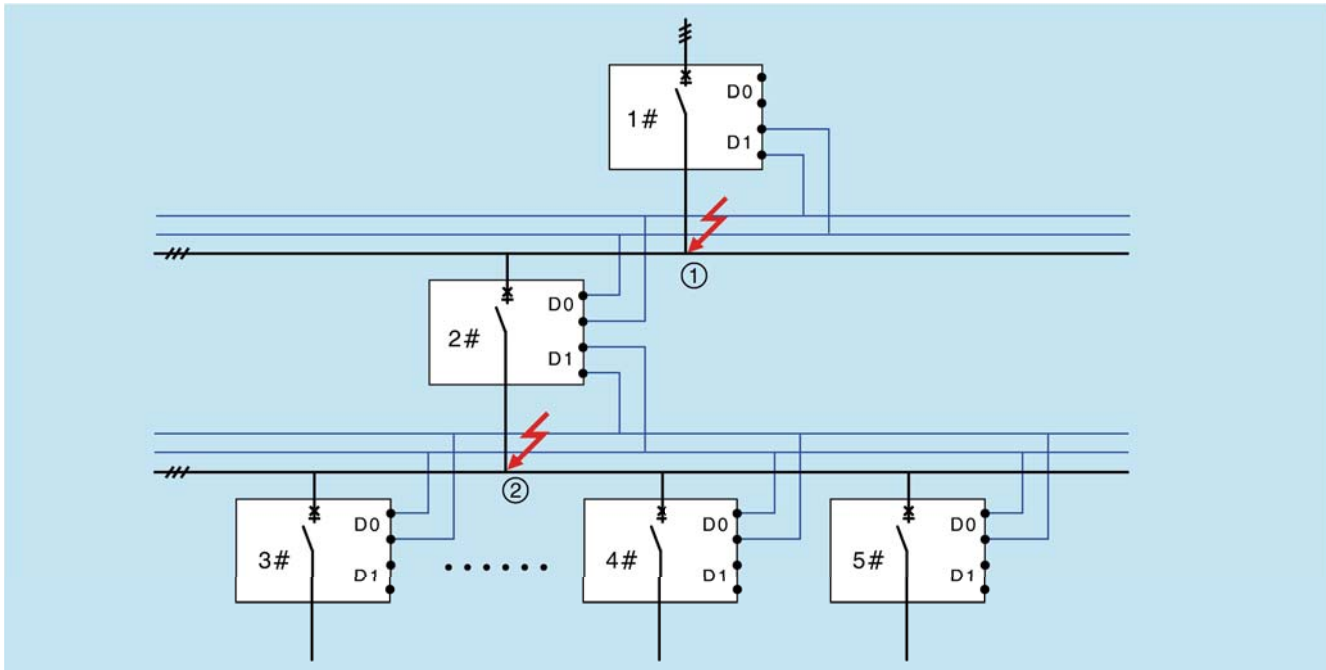
Models to be purchased separately

ZSI function

Type	For use with	Part no. Article no.
ZSI 3DO 1DI	IZM67/69	**IZM6-ZSI** CAM-50048

Notes: Cannot be mounted separately and need to be purchased together with the basic device.

Optional ZSI function relay output default settings

|	Contact 1	Contact 2	Contact 3	Contact 4
ZSI	Overload fault output	Overload trip output	ZSI OUT	ZSI IN

Residual current protection (this function can be extended to PXR6.1P only)

Suitable for protection against residual current faults due to equipment insulation damage or caused by human contact with exposed conductive parts. The residual current action value (If) is not subject to the rated current of the circuit breaker. Its signal is taken from an leakage current sensor, with high sampling accuracy and good sensitivity, suitable for small ground current protection.
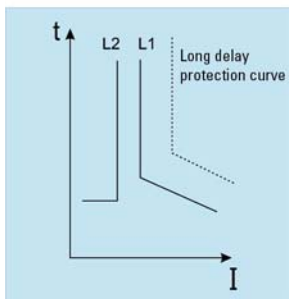
Setting current $I_\triangle$(A)	0.5-30A+OFF (step is 0.1A)
Action time $T_\triangle$(s)	Instantaneous, 0.06, 0.08, 0.17, 0.25, 0.33, 0.42, 0.5, 0.58, 0.67, 0.75, 0.83
Time accuracy	± 10%; inherence: 40ms
Execution mode	Trip / OFF

Notes: The residual current protection cannot be performed together with ground protection function

Current mode action characteristics
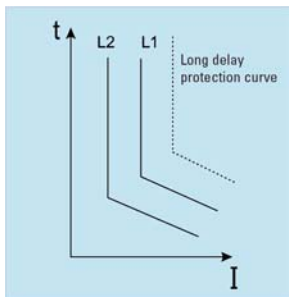
Method 1

Method 2

Current mode action characteristics
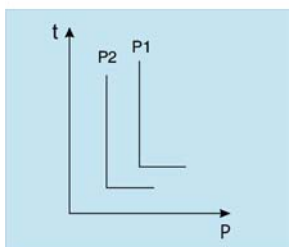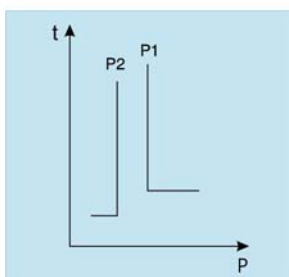
Method 1

Method 2

Load monitoring (optional function) [1]

1. Execution mode

It is used to monitor less important downstream loads to ensure power supply to the main system. Load monitoring can be used for pre-alarming and controlling branch loads. Two methods are available for action, based on power or current:

Method 1: Independent controlling of two-way loads. When the operating parameter exceeds the set point, the corresponding load monitoring DO delay will act (relevant DO function needs to be set) to control and break the two branch loads, to ensure the power supply to the main system.

Method 2: Generally used to control the loads in the same branch. When the operating parameter exceeds the start value, the Load Monitoring 1 DO delay time will act (pulse mode or level mode for action type) to cut off the branch load; if the operating parameter is lower than the return value after breaking, and at the end of the set delay time, the Load Monitoring 1 DO will return and the Load Monitoring 2 DO will act (by level mode or pulse mode), to switch on the disconnected load and restore the power supply to the system.

2. Current-mode action characteristics:

Two methods are available using current as the operating parameter, with action characteristics shown in the figure below. The action inverse time characteristics, overload, curve speed and action values are independently set. In the case of Current Mode 2, the start value L1 must not be less than L2, and the load recovery delay time is fixed time.

3. Active power mode action characteristics

Two methods are available using the system active power as the operating parameter, with action characteristics shown in the figure below. The action and return delay time are both fixed values. In the case of Power Mode 2, the start value L1 must not be less than L2.

Parameter		Setting range	Setting step	Notes
Load monitoring method		1. Current mode 1	-	I_r = Overload long delay action set point; T_r = Overload long delay action time
Unload I action set point	Current mode 1/2	0.2-1.0I_r	IA	
	Power mode 1/2	200-1000kW	1kW	
Unload I action delay time	Current mode 1/2	20-80% T_r	1%	
	Power mode 1/2	10-3600s	1s	
Unload II action set point	Current mode 1	0.2-1.0 I_r	IA	
	Current mode 2	0.2I_r -Unload 1	2A	
	Power mode 1	200-1000kW	1kW	
	Power mode 2	200-Unload I	1kW	
Unload II action set point	Current mode 1	20-80% T_r	1%	
	Current mode 2	10-600s	1s	
	Power mode 1/2	10-3600s	1s	
Protection alarm DO output		Set one DO of the signal unit to Load Monitoring 1 and one to Load Monitoring 2		

Models to be purchase separately

Type	For use with	Part no. Article no.
Load monitoring	IZM67/69	**IZM6-LMT** CAM-50049

Notes: Cannot be mounted separately and need to be purchased together with the basic device.

Notes: [1] The 4DO output module function must be added if the load monitoring function is purchased. See Page 23.

Communication

Four remote functions – including remote measurement, remote signaling, remote adjustment and remote control – can be achieved through a communication-type intelligent controller, to enable real-time monitoring of circuit breaker operations. Take the Communication Network Diagram as an example, through which on-site monitoring and ultra-remote monitoring can be implemented, to get real-time picture of the circuit breaker's operating status and to control it accordingly.

The specific system configuration requirements and communication interface parameters are shown in the following table:

Applicable controller		Controller with optional communication function
Communication method		RS485 (optical isolation)
Communication medium		Shielded twisted pair
Communication distance		1200 m
Communication protocol	Supplied as standard	Modbus-RTU
Communication convention		PXR Series Intelligent Controller Modbus Communication Protocol V3.0
Transmission speed (bit/s)		PXR 4.1: 9.6K, 19.2K PXR 6.1: 9.6K, 19.2K, 38.4K, 115.2K
Communication		1~255 (configurable)

Motor operator

The circuit breaker offers motor charging and automatic recharging functions (manual charging is also available for the circuit breaker).
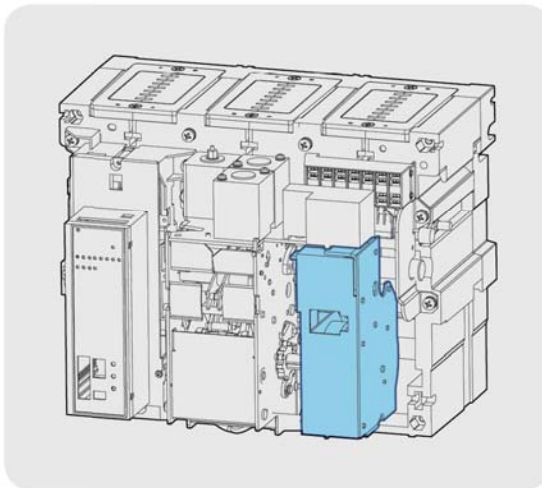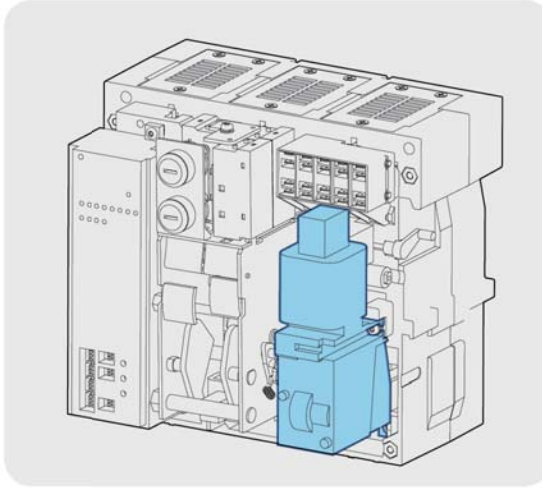
Rated control voltage U_s (V)		AC230	AC400	DC110	DC220
Model code		M1	M2	M3	M4
Actuating voltage		$(0.85{\sim}1.1)\,U_s$	$(0.85{\sim}1.1)\,U_s$	$(0.85{\sim}1.1)\,U_s$	$(0.85{\sim}1.1)\,U_s$
Power loss	2500A frame	150VA	150VA	150W	150W
	4000A frame	150VA	150VA	150W	150W
	6300A frame	180VA	180VA	180W	180W
Charging time (s)		5s	5s	5s	5s

Models to be purchased separately

Rated control voltage U_s (V)	For use with	Part no. / Article no.	For use with	Part no. / Article no.
AC230/DC220	IZM67	**IZM6-M-230AC/220DC** CAM-50001	IZM69	**IZM6-M-220AC/220DC-2** CAM-50164
400VAC	IZM67	**IZM6-M-400AC** CAM-50002	IZM69	**IZM6-M-380AC-2** CAM-50165
DC110	IZM67	**IZM6-M-110AC/110DC*** CAM-50003	IZM69	**IZM6-M-110AC/110DC-2** CAM-50163

Notes: *Upgraded in May 2022 can also be applied to the AC110V.

IZM6 Series Air Circuit Breakers

Accessories

Closing releases

After charging, the closing coil enables the energy stored in the operating mechanism to release instantaneously, allowing the circuit breaker to close quickly.
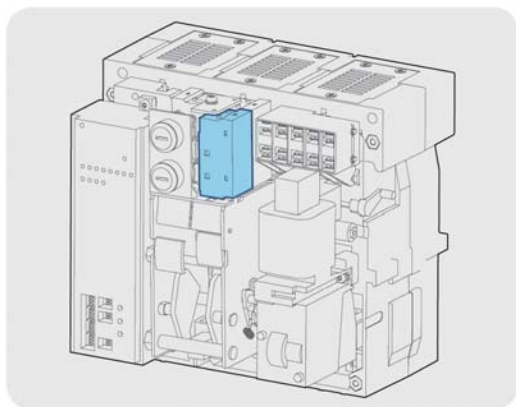
Models to be purchased separately

Rated control voltage U_s (V)	For use with	Part no. Article no.
AC230/DC220	IZM67/69	**IZM6-SR-230AC/220DC** CAM-50005
400VAC	IZM67/69	**IZM6-SR-400AC** CAM-50006
AC110/DC110	IZM67/69	**IZM6-SR-110AC/110DC** CAM-50007

Power loss table of the closing releases

Insulation voltage (U_i)	Rated control voltage U_s (V)	Actuating voltage	Pickup transient current	Pickup transient power
400V	AC230	$(0.85{\sim}1.1)\,U_s$	2.8A	575VA
	AC400	$(0.85{\sim}1.1)\,U_s$	2.1A	780VA
	AC110	$(0.85{\sim}1.1)\,U_s$	5.1A	495VA
	DC110	$(0.85{\sim}1.1)\,U_s$	5.2A	550W
	DC220	$(0.85{\sim}1.1)\,U_s$	2.9A	630W

Shunt releases

Enables the circuit breaker to open remotely.
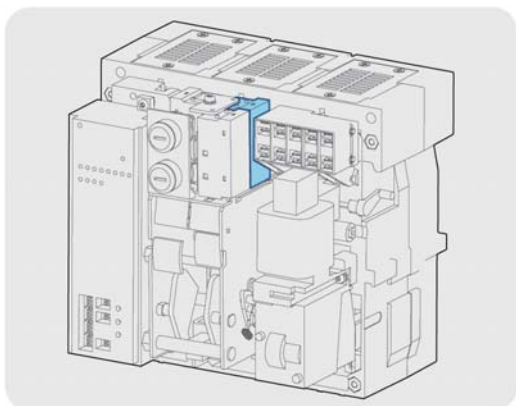
Models to be purchased separately

Rated control voltage U_s (V)	For use with	Part no. Article no.
AC230/DC220	IZM67/69	**IZM6-ST-230AC/220DC** CAM-50050
400VAC	IZM67/69	**IZM6-ST-400AC** CAM-50051
AC110/DC110	IZM67/69	**IZM6-ST-110AC/110DC** CAM-50052

Power loss table of the shunt releases

Insulation voltage (U_i)	Rated control voltage U_s (V)	Actuating voltage	Pickup transient current	Pickup transient power
400V	AC230	$(0.7{\sim}1.1)\,U_s$	2.8A	575VA
	AC400	$(0.7{\sim}1.1)\,U_s$	2.1A	780VA
	AC110	$(0.7{\sim}1.1)\,U_s$	5.1A	495VA
	DC110	$(0.7{\sim}1.1)\,U_s$	5.2A	550W
	DC220	$(0.7{\sim}1.1)\,U_s$	2.9A	630W

Auxiliary contacts

Internal auxiliary contact
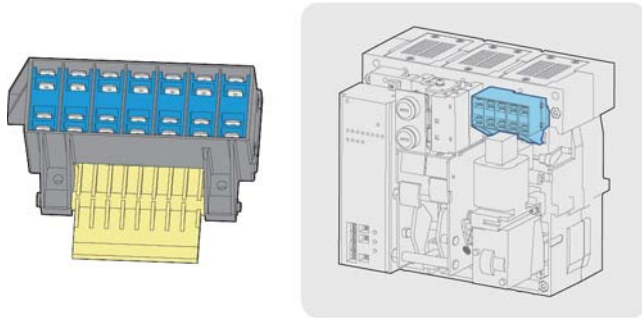
External auxiliary contact
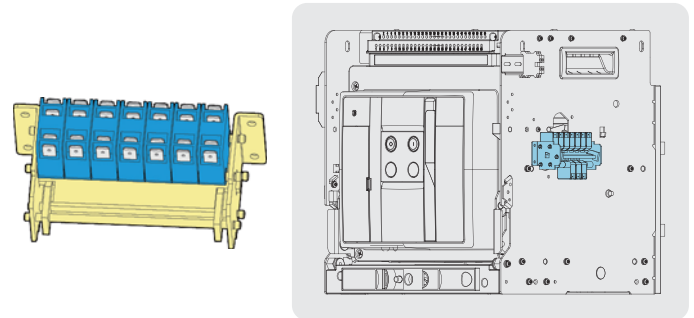
The internal auxiliary contacts supplied as standard in ABC is 4 ONs and 4 OFFs; when more than 4 ONs 4 OFFs, external auxiliary contacts will be needed, with the maximum number of 10 ONs and 10 OFFs

	Rated operational voltage U_e (V)	Rated control compacity	Conventional thermal current I_{th} (A)
Auxiliary contact	AC400	800VA	16
	AC230		
	DC220	300W	
	DC110		

Type	Code
4 NO / NC	4
6 NO / NC	6
8 NO / NC	8
10 NO / NC	A
12 NO / NC	B
14 NO / NC	C

Notes: Auxiliary contact range for IZM67/69 series air circuit breaker: 4 NO / NC to 14 NO / NC contacts

Overcurrent trip switches (OTS)

Models to be purchased separately

	For use with	Part no. Article no.
Overcurrent trip switches (OTS)	IZM67/69	**IZM6-OTS** CAM-50058

Notes: Can't be equipped together with remote reset. The OTS cannot be installed separately, and should be purchased with the basic device.

Latch check switch (LCS) contact

Models to be purchased separately

	For use with	Part no. Article no.
LCS contact	IZM67/69	**IZM6-LCS** CAM-50068

Notes: Cannot be installed separately, and should be purchased with the basic device.

Models to be purchased separately

Withdrawable type:

	For use with	Part no. Article no.	Wiring code
External 2 NO / NC	IZM67/69	**IZM6-AS22** CAM-50010	See Wiring diagram
External 4 NO / NC	IZM67/69	**IZM6-AS44** CAM-50054	See Wiring diagram
External 6 NO / NC	IZM67/69	**IZM6-AS66** CAM-50055	See Wiring diagram
External 8 NO / NC	IZM67/69	**IZM6-AS88** CAM-50056	See Wiring diagram
External 10 NO / NC	IZM67/69	**IZM6-AS1010** CAM-50057	See Wiring diagram

**Notes:** External auxiliary contacts cannot be equipped together with mechanical interlocking.

Fixed type:

	For use with	Part no. Article no.	Wiring code
External 2 NO / NC	IZM67/69	**IZM6-AS22-F** CAM-50122	See Wiring diagram
External 4 NO / NC	IZM67/69	**IZM6-AS44-F** CAM-50123	See Wiring diagram
External 6 NO / NC	IZM67/69	**IZM6-AS66-F** CAM-50124	See Wiring diagram
External 8 NO / NC	IZM67/69	**IZM6-AS88-F** CAM-50125	See Wiring diagram
External 10 NO / NC	IZM67/69	**IZM6-AS1010-F** CAM-50126	See Wiring diagram

Notes: External auxiliary contacts cannot be equipped together with mechanical interlocking.

IZM6 Series Air Circuit Breakers
Accessories

Undervoltage and Novoltage releases
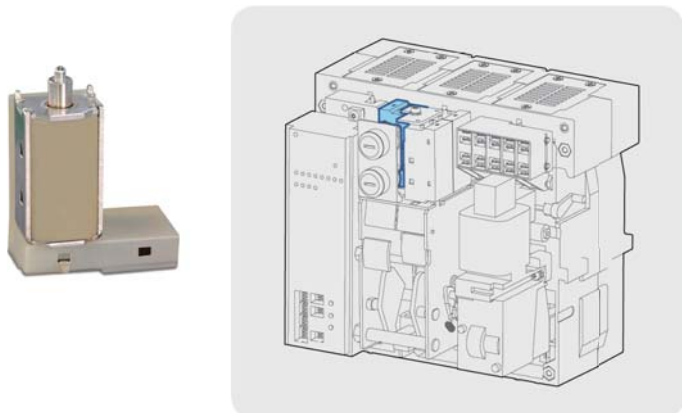
Undervoltage releases

Rated operational voltage U_e (V)			AC230/DC220	AC400
Action type	Type	Code		
	Instantaneous		Q11	Q21
	Delay time 1s		Q14	Q24
	Delay time 3s		Q15	Q25
	Delay time 5s		Q16	Q26
	Delay time 10s		Q17	Q27
Actuating voltage (V)			(0.35-0.7) U_e	
Reliable closing voltage (V)			(0.85-1.1) U_e	
Reliable no-closing voltage (V)			$\leqslant$ 0.35 U_e	
Power loss			15VA	

Models to be purchased separately

Under voltage instantaneous

Rated control voltage U_s (V)	For use with	Part no. Article no.
230VAC/220DC	IZM67/69	**IZM6-UVR-230AC*** CAM-50015
400VAC	IZM67/69	**IZM6-UVR-400AC** CAM-50016

Under voltage with time delay function

Rated control voltage U_s (V)	For use with	Delay time	Part no. Article no.
230VAC/220DC	IZM67/69	1s	**IZM6-UVR-TD1-230AC*** CAM-50017
		3s	**IZM6-UVR-TD3-230AC*** CAM-50018
		5s	**IZM6-UVR-TD5-230AC*** CAM-50019
		10s	**IZM6-UVR-TD10-230AC*** CAM-50020
400VAC	IZM67/69	1s	**IZM6-UVR-TD1-400AC** CAM-50021
		3s	**IZM6-UVR-TD3-400AC** CAM-50022
		5s	**IZM6-UVR-TD5-400AC** CAM-50023
		10s	**IZM6-UVR-TD10-400AC** CAM-50024

Notes: * Application range: AC230V, DC220V. Undervoltagerelease, Novoltage release, and Operation counter cannot be assembled at the same time.

Novoltage releases

Rated operational voltage U_e (V)			AC230/DC220	AC400
Action type	Type	Code		
	Instantaneous		Q51	Q61
	Delay time 0.3s		Q58	Q68
	Delay time 0.5s		Q59	Q69
	Delay time 0.7s		Q5A	Q6A
	Delay time 1s		Q54	Q64
	Delay time 3s		Q55	Q65
	Delay time 5s		Q56	Q66
Actuating voltage (V)			(0.1-0.35) U_e	
Reliable closing voltage (V)			(0.85-1.1) U_e	
Reliable no-closing voltage (V)			$\leqslant$ 0.35 U_e	
Power loss			3.24VA	6.36VA

Models to be purchased separately

Rated control voltage U_s (V)	For use with	Part no. Article no.
230VAC/220DC	IZM67/69	**IZM6-NVR-230AC*** CAM-50111
400VAC	IZM67/69	**IZM6-NVR-400AC** CAM-50092

No voltage with time delay function

Rated control voltage U_s (V)	For use with	Delay time	Part no. Article no.
230VAC/220DC	IZM67/69	0.3s	**IZM6-NVR-TD03-230AC*** CAM-50112
		0.5s	**IZM6-NVR-TD05-230AC*** CAM-50113
		0.7s	**IZM6-NVR-TD07-230AC*** CAM-50114
		1s	**IZM6-NVR-TD1-230AC*** CAM-50093
		3s	**IZM6-NVR-TD3-230AC*** CAM-50094
		5s	**IZM6-NVR-TD5-230AC*** CAM-50095
400VAC	IZM67/69	0.3s	**IZM6-NVR-TD03-400AC** CAM-50115
		0.5s	**IZM6-NVR-TD05-400AC** CAM-50116
		0.7s	**IZM6-NVR-TD07-400AC** CAM-50117
		1s	**IZM6-NVR-TD1-400AC** CAM-50097
		3s	**IZM6-NVR-TD3-400AC** CAM-50098
		5s	**IZM6-NVR-TD5-400AC** CAM-50099

**Notes:** * Application range: AC230V, DC220V

Lock

OFF position safety lock

The OFF position safety lock can secure the opening button of the circuit breaker in the depressed position.

One lock and one key (K1): A circuit breaker is equipped with one lock and one key. The circuit breaker is not allowed to close in the locked state.

Two locks and one key (K2): Two circuit breakers are equipped with two identical locks and one key, and only one circuit breaker is allowed to close.

Three locks and two keys (K3): Three circuit breakers are equipped with three identical locks and two keys, and only two circuit breakers are allowed to close.
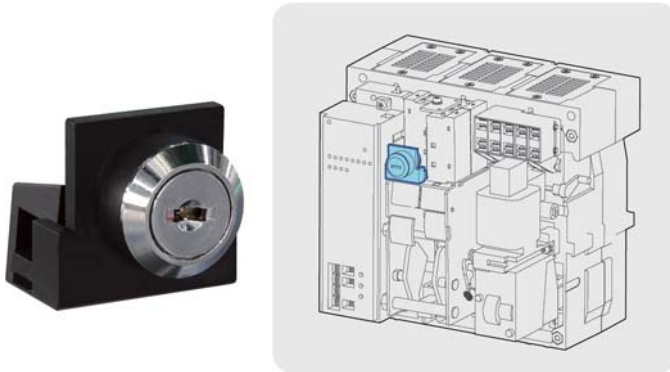
ON and OFF position button lock
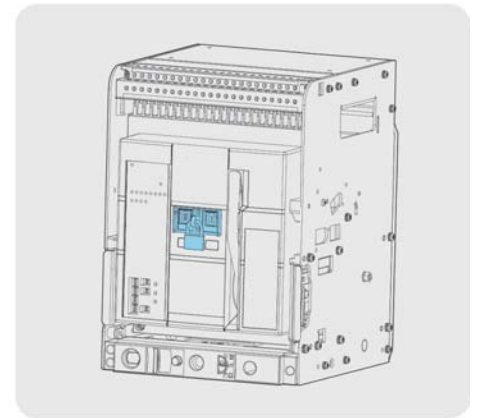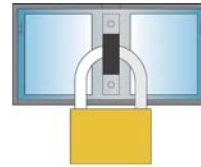
Models to be purchased separately

	For use with	Part no. Article no.
ON and OFF position button lock	IZM67/69	**IZM6-PLPC** CAM-50028

Notes: Factory mounting is recommended (free of charge). Please specify in the order on which model's basic device the lock is mounted. Eaton's on-site installation service requires additional charge. Please contact Eaton's sales representative for details prior to ordering.

Models to be purchased separately

Lock type	For use with	Part no. Article no.
One lock / one key	IZM67/69	**IZM6-1L1K-A** CAM-50069
	IZM67/69	**IZM6-1L1K-B** CAM-50064
	IZM67/69	**IZM6-1L1K-C** CAM-50065
Three locks / two keys	IZM67/69	**IZM6-3L2K-A** CAM-50070
	IZM67/69	**IZM6-3L2K-B** CAM-50066
	IZM67/69	**IZM6-3L2K-C** CAM-50067

Notes: Factory mounting is recommended (free of charge). Please specify in the order on which model's basic device the lock is mounted. Eaton's on-site installation service requires additional charge. Please contact Eaton's sales representative for details prior to ordering.

Remote reset

Models to be purchased separately

	For use with	Part no. Article no.
Remote reset	IZM67/69	**IZM6-RR230AC** CAM-50060

Notes: Remote reset cannot be equipped together with auxiliary contact for trip signal. It cannot be installed separately and needs to be purchased together with the basic device.

Accessories

Mechanical Interlock

		For use with	Part no. Article no.
Mechanical interlock, fixed mounting	Type 2, for 2 Circuit Breakers: A normal power supply (A) and an emergency network supply (B). 1 kit of cables also required in addition.	IZM67,69...F IN67,69...F	**IZM6-MIL2C-F** CAM-50041
	Type 31, for 3 Circuit Breakers: Two normal power supplies (A, C) and an emergency network supply (B). When B in Off, A and C can be switched on. B can be switched on only when A and C are in Off. Two kits of cables required in addition.	IZM67,69...F IN67,69...F	**IZM6-MIL31C-F** CAM-50042
	Type 32, for 3 Circuit Breakers: Two normal incoming units (A, C) and one coupling (B). Any one or two circuitbreakers can be closed at the same time. Three kits of cables are required in addition.	IZM67,69...F IN67,69...F	**IZM6-MIL32C-F** CAM-50043
Mechanical interlock, drawout mounting	Type 2, for 2 Circuit Breakers: A normal power supply (A) and an emergency network supply (B). 1 kit of cables also required in addition.	IZM67,69...W IN67,69...W	**IZM6-MIL2C-W** CAM-50044
	Type 31, for 3 Circuit Breakers: Two normal power supplies (A, C) and an emergency network supply (B). When B in Off, A and C can be switched on. B can be switched on only when A and C are in Off. Two kits of cables required in addition.	IZM67,69...W IN67,69...W	**IZM6-MIL31C-W** CAM-50045
	Type 32, for 3 Circuit Breakers: Two normal incoming units (A, C) and one coupling (B). Any one or two circuitbreakers can be closed at the same time. Three kits of cables are required in addition.	IZM67,69...W IN67,69...W	**IZM6-MIL32C-W** CAM-50046

Notes: Cable length: 2000mm. External auxiliary contacts and mechanical interlock cannot be equipped at the same time.

2-line interlocking logic

A	B
0	0
1	0
0	1

31 type interlocking logic

A	B	C
0	0	0
1	0	0
1	0	1
0	0	1
0	1	0

32 type interlocking logic

A	B	C
0	0	0
1	0	0
0	1	0
0	0	1
1	1	0
0	1	1
1	0	1

Inter-phase partition

The inter-phase partition is mounted vertically between the wiring boards in the fixed section of the drawout circuit breaker, to increase the insulation strength of the busbar connection and prevent the arc from spreading to the inside of the circuit breaker.
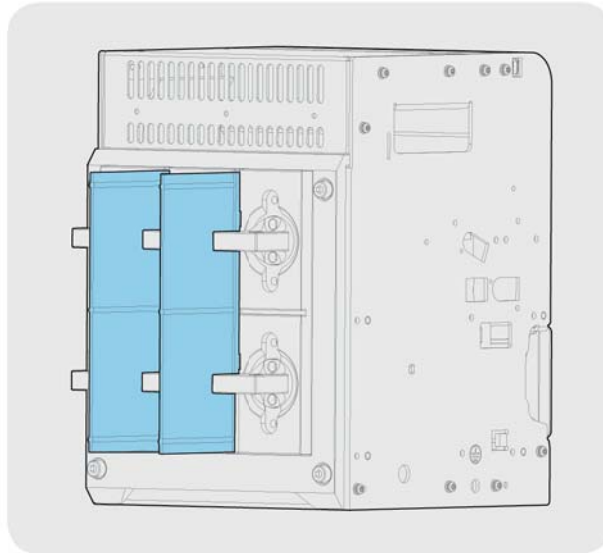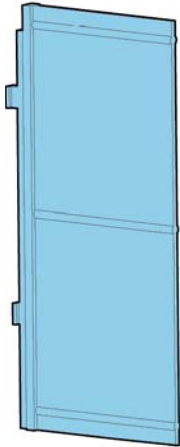
Models to be purchased separately

Withdrawable type:

	For use with	Part no. Article no.
Interphase partition – 3-pole	IZM67/69	**IZM6-IB-3** CAM-50029

Fixed type:

	For use with	Part no. Article no.
Interphase partition – 3-pole	IZM67/69	**IZM6-IB-3-F** CAM-50118

Tester

Models to be purchased separately

	For use with	Part no. Article no.
Tester	IZM67/69	**IZM6-TEST-KIT** CAM-50102

Operation counter

Models to be purchased separately

	For use with	Part no. Article no.
Operation counter	IZM67/69	**IZM6-OC** CAM-50061

Notes: Cannot be mounted separately and need to be purchased together with the basic device. Undervoltagerelease, Novoltage release, and Operation counter cannot be assembled at the same time.

Collapsible hand lever

Models to be purchased separately

	For use with	Part no. Article no.
Collapsible hand lever	IZM67/69	**IZM6-LT** CAM-50101

Notes: Hand lever is included in D/O breaker.

IZM6 Series Air Circuit Breakers
Accessories

Door escutcheon

The door escutcheon is mounted on the door, and features a protection level up to IP40. The circuit breaker offers an IP20 protection level when mounted separately. Corresponding door escutcheons is available for both fixed and drawout circuit breakers.
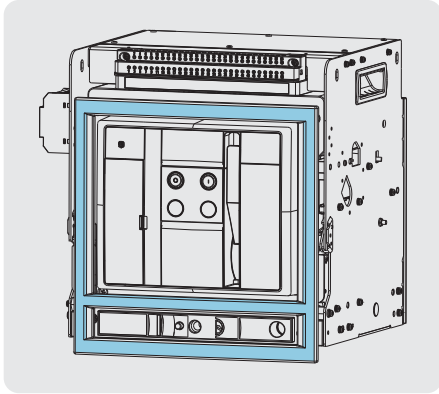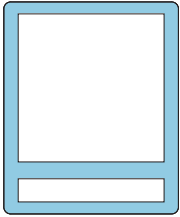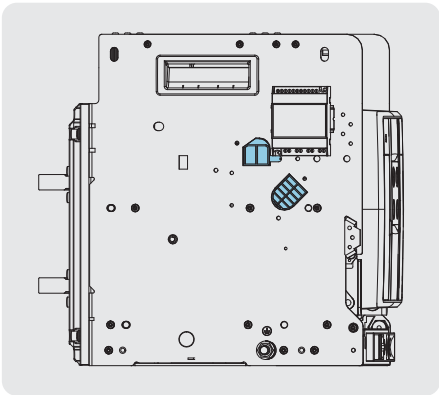
Models to be purchased separately

	For use with	Part no. Article no.
Door escutcheon for drawout circuit breaker	IZM67/69	**IZM6-DEG-W** CAM-50031
Door escutcheon for fixed circuit breaker	IZM67/69	**IZM6-DEG-F** CAM-50032

Cell switch

Three sets of contacts are available to indicate the current position of the circuit breaker (Connected, Test, Disconnected). When the circuit breaker is in a certain position, the corresponding contact will be switched on.
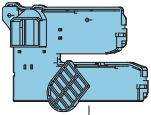
Cell switch mounted inside the switch

Models to be purchased separately

	For use with	Part no. Article no.
Cell switch	IZM67/69	**IZM6-CS** CAM-50033

Power Module

Input power: 65-500V AC or 80-700V DC

An auxiliary power supply must be equipped when the ground protection, communication, or thermal memory function is used or when the circuit breaker is required to maintain input/output signals in the Open state.
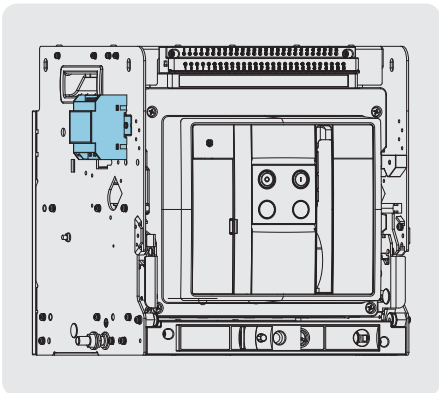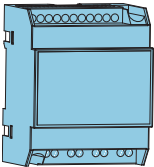
Models to be purchased separately

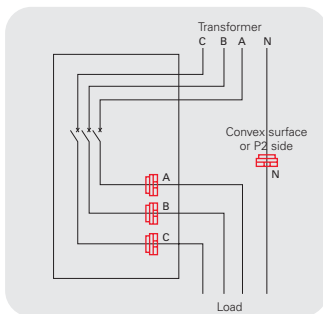|	For use with	Part no. Article no.
External power supply adapter	IZM67/69	**IZM6-EASY400** CAM-50034

Current sensor for neutral conductor
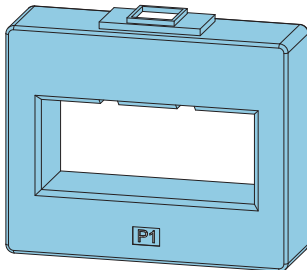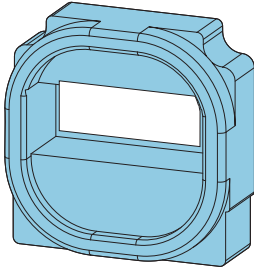
The TN-S power distribution system uses a three-pole circuit breaker, which requires an current sensor for neutral conductor to be equipped with.

The ground-current N-phase transformer only measures the N-phase current for ground protection judgement, with its N-phase transformer mounting direction not subject to the wiring method.

During mounting, be cautious of the following:

1. Twisted-pair wires are available on the current sensor for neutral conductor, with Code No. 23 and 24 on them to connect corresponding secondary terminals. Simply follow the code numbers on the conductors to connect to the secondary terminals.

2. The mounting direction of the current sensor for neutral conductor is subject to the wiring method of the circuit breaker:
   For the circuit breaker with upper incoming line, the convex surface of the current sensor for neutral conductor faces the transformer side;
   For the circuit breaker with lower incoming line, the plane surface of the current sensor for neutral conductor faces the transformer side;
   When the Type IV current sensor for neutral conductor is used:
   For the circuit breaker with upper incoming line, the P2 side of the current sensor for neutral conductor faces the transformer side;
   For the circuit breaker with lower incoming line, the P1 side of the current sensor for neutral conductor faces the transformer side;

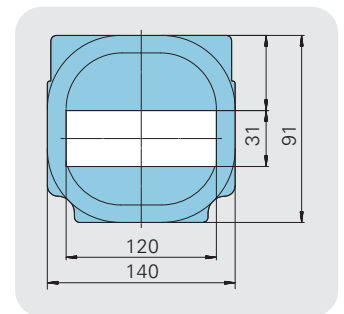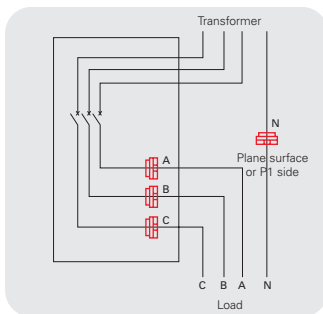3. Select the transformer model based on the width of N-phase busbar
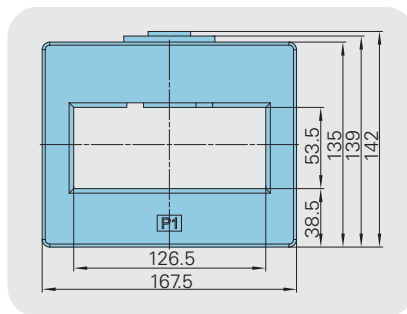
Upper entry line
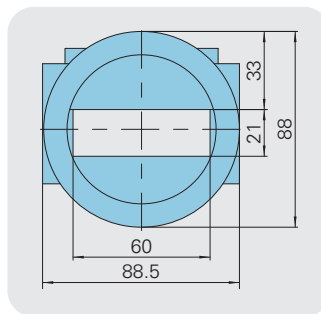
Type I
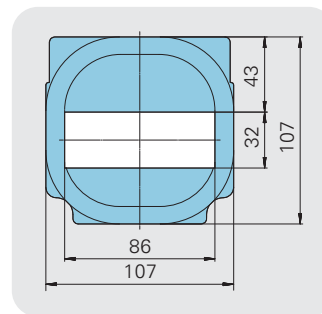
Type II

Type III

lower entry line

Type IV

Models to be purchased separately

	For use with	Part no. Article no.
Current sensor for neutral conductor	IZM67/69	**IZM6-CT-I** CAM-50035
	IZM67/69	**IZM6-CT-II** CAM-50036
	IZM67/69	**IZM6-CT-III** CAM-50037
	IZM67/69	**IZM6-CT-IV** CAM-50063

Notes: On-site installation, but can not be ordered separately, need to be ordered together with the circuit-breaker.

IZM6 Series Air Circuit Breakers
## Accessories

Leakage current sensor

An Leakage current sensor is needed when residual current protection is selected, and the controller does not have the ground protection function.

Twisted-pair wires are available on the transformer, with Code No. 6 and 7 to connect corresponding secondary terminals. Simply follow the code numbers on the conductors to connect the secondary terminals.

See below diagram for residual current protection principle.
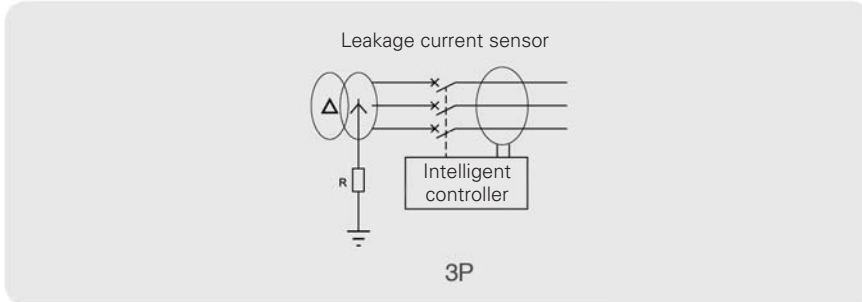
Dimensions (mm)
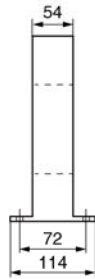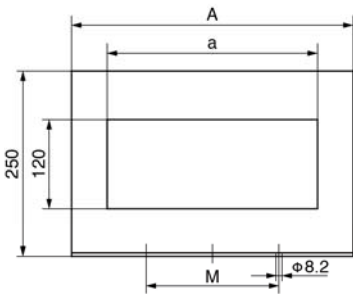
	A	M	a
Type I	380	250	285
Type II	465	250	370
Type III	595	350	500

Models to be purchased separately

	For use with	Part no. Article no.
Residual current transformer	Type P trip unit	**IZM6-CL-I** CAM-50038
	Type P trip unit	**IZM6-CL-II** CAM-50039
	Type P trip unit	**IZM6-CL-III** CAM-50040

Notes: On-site installation, but can not be ordered separately, need to be ordered together with the circuit-breaker.

Voltage module

Models to be purchased separately

	For use with	Part no. Article no.
Voltage module	IZM67/69	**IZM6-PTM** CAM-50071

Power Loss (with ambient temperature of +40°C)

Power loss is the total power consumption measured when the frame rating current I_n passes through the circuit breaker.

Model	Power loss (W)	
	Fixed type	Drawout type
IZM67 4000A frame	486.7	856.8
IZM69 6300A frame	787	1145

Temperature Derating

When the working ambient temperature is higher than +40°C, the continuous current carrying capacity can be corrected with reference to the following table:

Model	Rated current (A)	+40°C	+45°C	+50°C	+55°C	+60°C	+65°C	+70°C
IZM67 4000A frame	2000-2500	1	1	1	1	1	1	1
	3200	1	1	1	0.95	0.92	0.89	0.85
	4000	1	0.95	0.92	0.89	0.85	0.82	0.8
IZM69 6300A frame	4000-5000	1	1	1	1	1	0.95	0.9
	6300	1	1	0.98	0.93	0.89	0.85	0.82

When the altitude is greater than or equal to 2000m, the electrical performance of the circuit breaker can be corrected with reference to the following table:

Altitude (m)		2000	3000	4000	4500	5000
Power frequency withstand voltage (V) 5s		5000	4500	4000	3500	3150
Insulation voltage (V)		1250	1250	1250	1250	1250
Max. operating voltage (V)	IZM67	690	690	690	690	690
		1140	1140	1140	1140	1140
Breaking capacity correction		1	0.83	0.77	0.7	0.63
Operating current correction	IZM67 4000A frame	1	0.93	0.88	0.85	0.82
	IZM69 6300A frame	1	0.98	0.93	0.9	0.87

The derating correction factor is only for the maximum current in the frame

Recommended copper bar specification

Rated current (frame level) I_{nm} (A)	Rated current I_n (A)	Recommended copper bar specification		
		Number		Dimensions (mm × mm)
		Horizontal outgoing	Vertical outgoing	
IZM67 4000A frame	2000	3	2	100 × 5
	2500	2	2	100 × 10
	3200	3	3	100 × 10
	4000	5	4	100 × 10
IZM69 6300A frame	4000	4	/	100 × 10
	5000	6	/	100 × 10
	6300	10	/	100 × 10

The copper bar specifications used in the table are when the circuit breaker is at the ambient temperature of up to 40 °C and installed in an open area, in accordance with the conventional thermal conditions in GB14048.2.

Power Loss, Temperature Derating and Copper Bar Specification

The intelligent controller is set as follows, if without special requirements from users

Overload long delay time protection	I_r	I_n
	t_r	60s
Short circuit short delay time protection	I_{sd}	$3I_r$
		0.1s
Short circuit instantaneous protection	I_i	$5 I_n$
Ground fault protection	I_g	$0.8 I_n$ or 1200A (take the minimum value)
Current imbalance protection	OFF	
Neutral-pole protection	100% I_r	
Voltage imbalance protection	OFF	
Under voltage protection	OFF	
Over voltage protection	OFF	
Demand protection	OFF	
Phase sequence protection	OFF	
Frequency protection	OFF	
MCR peak	IZM67 4000A frame	90kA

Relay output default settings (optional)

	Contact 1	Contact 2	Contact 3	Contact 4
PXR Trip Unit	Over load fault output	Fault trip output	Remote control opening	Remote control closing

Terminal numbers are described as follows:
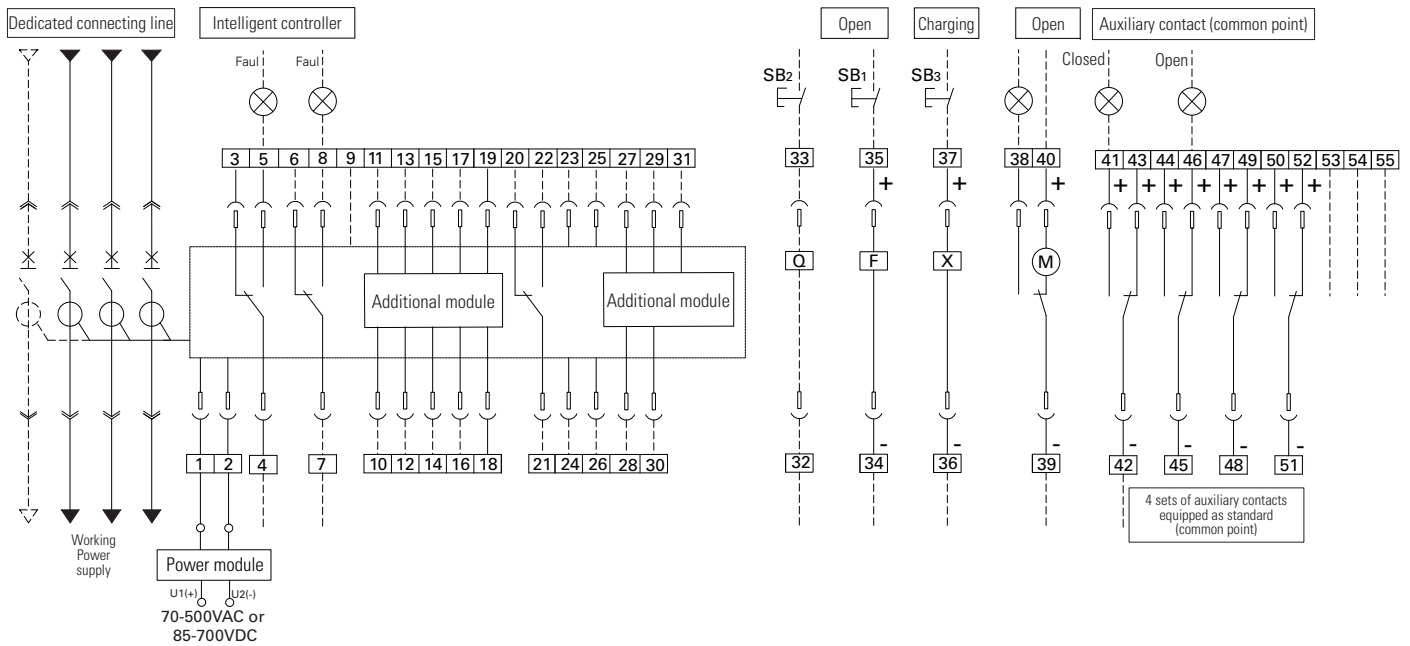
1# 2#	24VDC working power supply input
3# 4# 5#	Overcurrent trip switches (OTS) output
6# 7# 8#	Overcurrent trip switches 2 (OTS) output (added function)
9#	Reserved
10# 11#	First contact output wiring terminal (added function)
12# 13#	Second contact output wiring terminal (added function)
14# 15#	Third contact output wiring terminal (added function)
16# 17#	Forth contact output wiring terminal (added function)
18# 19#	Remote reset wiring terminal (added function)
20# 21# 22#	LCS wiring terminal (added function)
23# 24#	External transformer terminal (added function)
25# 26#	Communication wiring terminal (added function)

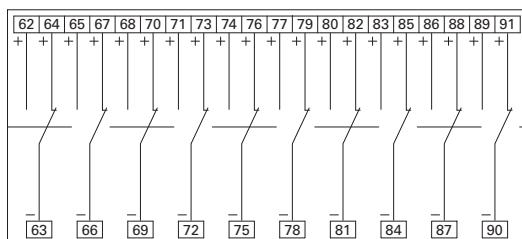|	
27#	Phase A wiring terminal (input voltage ≤ 230V) (added function)
28#	Phase B wiring terminal (input voltage ≤ 230V) (added function)
29#	Phase C wiring terminal (input voltage ≤ 230V) (added function)
30#	N-phase wiring terminal (added function)
31#	PE-phase wiring terminal
32# 33#	Under voltage coil wiring terminal (added function)
34# 35#	Shunt coil wiring terminal (added function)
36# 37#	Closing coil
38# 39# 40#	Motor operator mechanism wiring terminal
41#~52#	Auxiliary contact wiring terminal
53# 54# 55#	Reserved

Notes:

(1) Position contact terminal #56-#61 do not pass through the secondary terminal

(2) Buttons and indicator lights are provided by users themselves

(3) The secondary wiring of the power supply module is shown in the diagram - the external power supply is input from U1 (+) and U2 (-), and the two output terminals of the power supply module are connected separately to corresponding secondary wiring terminals #1 (+) and #2 (-)

(4) The contact output functions are optional. The output functions can be selected with reference to "DO Function Setting Table" on Page 24; for default settings, refer to "Contact Default Setting" on Page 38.

(5) The above circuit diagrams are the ones when the circuit breaker is in the open position.

(6) Voltage protection of Phase A, B, C and N is connected to terminals with the maximum voltage of 400V; if above 400V, a voltage module is required

(7) This wiring diagram includes all the functions. Optional functions are available only after selected and equipped by users
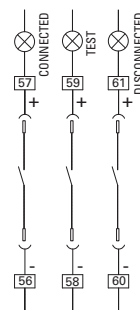
IZM67, IZM69 electrical wiring diagram

External auxiliary contact terminal number

Cell Switch electrical wiring diagram

IZM6 Series Air Circuit Breakers
Wiring Diagram

Terminal numbers are described as follows:

|			
1# 2#	24VDC working power supply input	27#	Phase A wiring terminal (input voltage ≤ 230V) (added function)
3# 4# 5#	Overcurrent trip switches (OTS) output	28#	Phase B wiring terminal (input voltage ≤ 230V) (added function)
6# 7# 8#	Overcurrent trip switches 2 (OTS) output (added function)	29#	Phase C wiring terminal (input voltage ≤ 230V) (added function)
9#	Reserved	30#	N-phase wiring terminal (added function)
10# 11#	First contact output wiring terminal (added function)	31#	PE-phase wiring terminal
12# 13#	Second contact output wiring terminal (added function)	32# 33#	Under voltage coil wiring terminal (added function)
14# 15#	Third contact output wiring terminal (added function)	34# 35#	Shunt coil wiring terminal (added function)
16# 17#	Forth contact output wiring terminal (added function)	36# 37#	Closing coil
18# 19#	Remote reset wiring terminal (added function)	38# 39# 40#	Motor operator mechanism wiring terminal
20# 21# 22#	LCS wiring terminal (added function)	41#~52#	Auxiliary contact wiring terminal
23# 24#	External transformer terminal (added function)	53# 54# 55#	Reserved
25# 26#	Communication wiring terminal (added function)		

Notes:

(1) Position contact terminal #56-#61 do not pass through the secondary terminal

(2) Buttons and indicator lights are provided by users themselves

(3) The secondary wiring of the power supply module is shown in the diagram - the external power supply is input from U1 (+) and U2 (-), and the two output terminals of the power supply module are connected separately to corresponding secondary wiring terminals #1 (+) and #2 (-)

(4) The contact output functions are optional. The output functions can be selected with reference to "DO Function Setting Table" on Page 24; for default settings, refer to "Contact Default Setting" on Page 38.

(5) The above circuit diagrams are the ones when the circuit breaker is in the open position.

(6) Voltage protection of Phase A, B, C and N is connected to terminals with the maximum voltage of 400V; if above 400V, a voltage module is required

(7) This wiring diagram includes all the functions. Optional functions are available only after selected and equipped by users

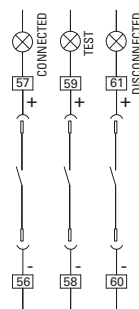### IZM67,IZM69 electrical wiring diagram (with communication function)
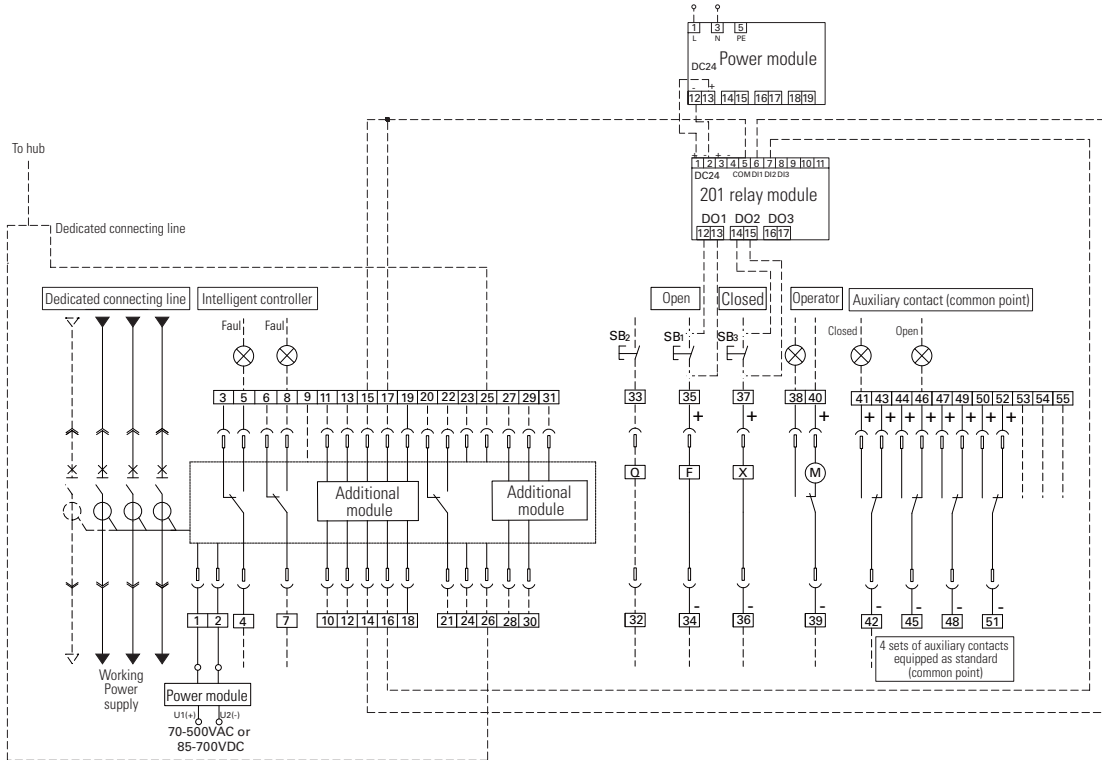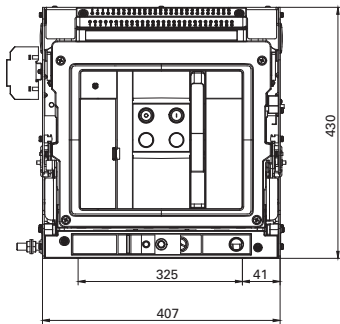

External auxiliary contact terminal number
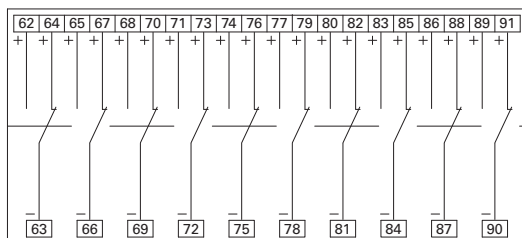
Cell Switch electrical wiring diagram

Drawout type (IZM67 2000-3200A)

Front view

Vertical wiring

Standard type

IZM6 Series Air Circuit Breakers

Outline Dimensions

Drawout type (IZM67 2000-3200A)

Horizontal wiring
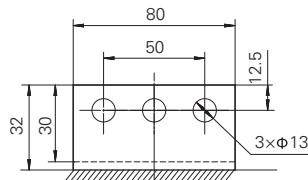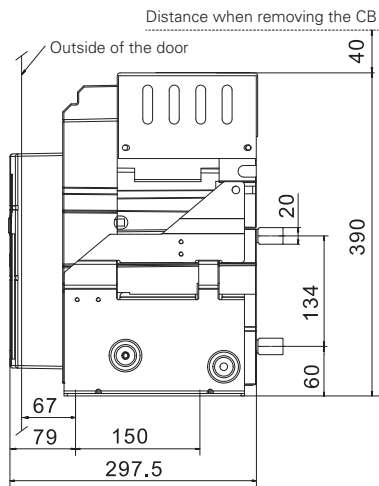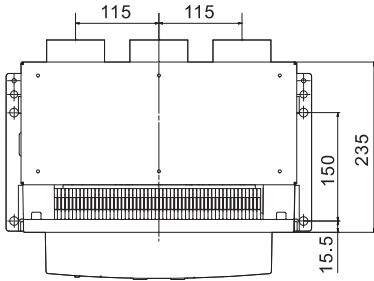
Standard type

The shaded part is the lap
surface of the busbar

Door escutcheon cutout

3P

Drawout type (IZM67 4000A)

Front view

Vertical wiring

Disconnected position

Outside of the door

The shaded part is the lap surface of the busbar

IZM6 Series Air Circuit Breakers
Outline Dimensions

Drawout type (IZM67 4000A)

Horizontal wiring

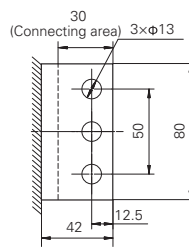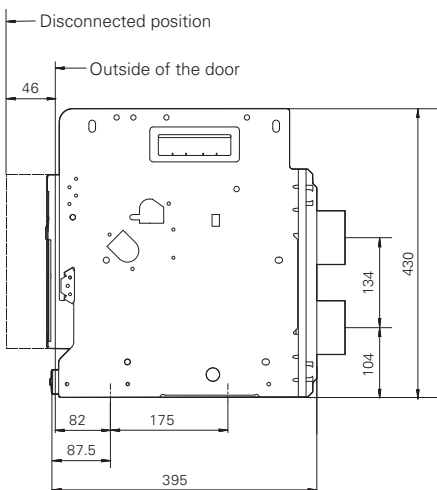Door escutcheon cutout
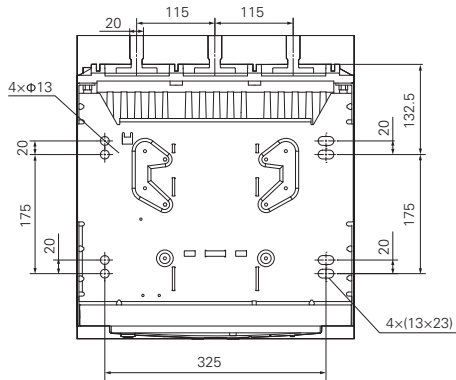

3P

The shaded part is the lap surface of the busbar
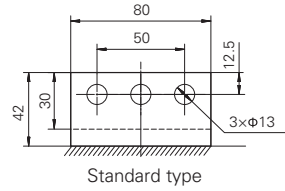
Fixed type (IZM67 2000-3200A)

Front view

Vertical wiring

Distance when removing the CB

Outside of the door

Standard type

The shaded part is the lap surface of the busbar

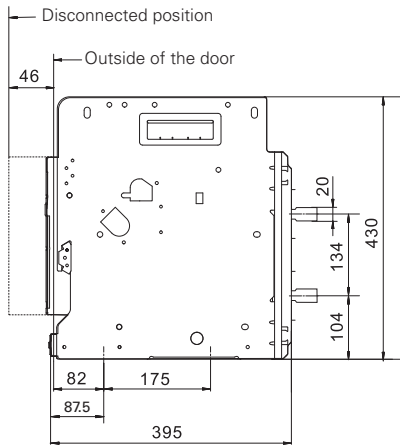# IZM6 Series Air Circuit Breakers
Outline Dimensions

Fixed type (IZM67 2000-3200A)

Horizontal wiring

Distance when removing the CB

Outside of the door

80
50
12.5
32
30
3×Φ13

Standard type

The shaded part is the lap
surface of the busbar

115 115
235
150
15.5
40
20
390
134
60
67
79
150
297.5

Door escutcheon cutout

327.2
16.5
153
273
153
9
CB bottom
8×Φ5
CB center
185.2   185.2

3P

Fixed type (IZM67 4000A)

Front view

381

390

400

422

Vertical wiring

115 115

20

235

150

15.5

Distance when removing the CB

Outside of the door

40

40 20

390

134

60

67

79 150 82

297.5

82

4×Φ13

50 100

40 20

78 (Connecting area)

The shaded part is the lap surface of the busbar
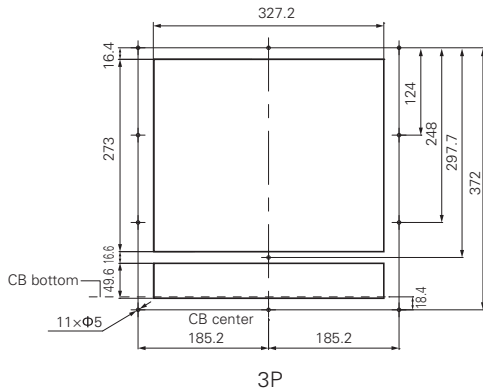
IZM6 Series Air Circuit Breakers

Outline Dimensions

Fixed type (IZM67 4000A)

Horizontal wiring

Door escutcheon cutout

3P

Drawout type (IZM69 4000-5000A)
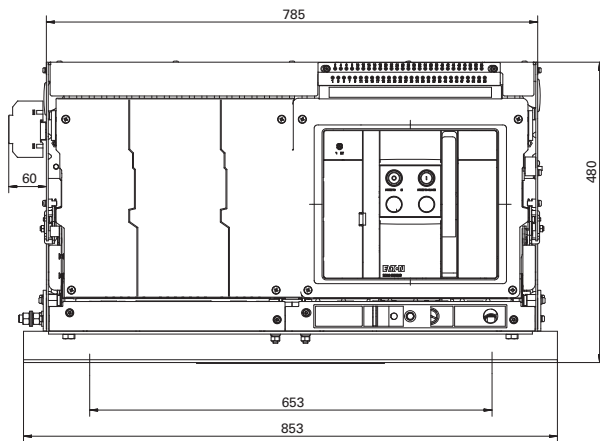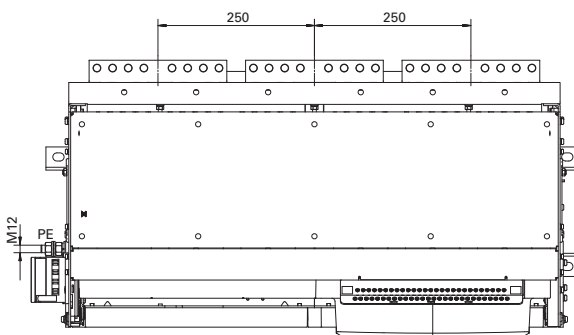
Front view

785

480

60

653

853

Horizontal wiring

250 250

M12 PE

Door escutcheon cutout

327.2

189

16.4

124

273

248

297.7

372

49.6 16.6

CB bottom

11×Φ5

CB center | Door cut out

185.2 | 185.2

31.6

Disconnected position

Outside of the door

46

20

134

154

102 6X13X18

107 175

395 42

40

30 8 x Ø13

25

25

25

45 220

25

25

25

12.5
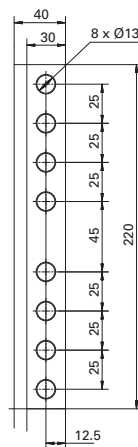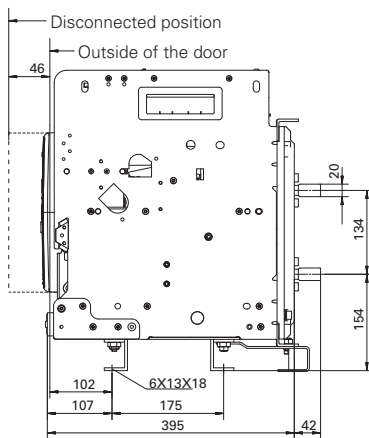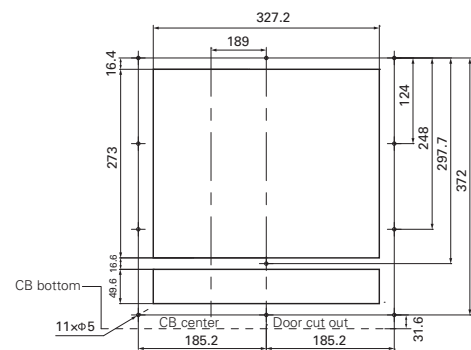
IZM6 Series Air Circuit Breakers

Outline Dimensions

Drawout type (IZM69 6300A)

Front view
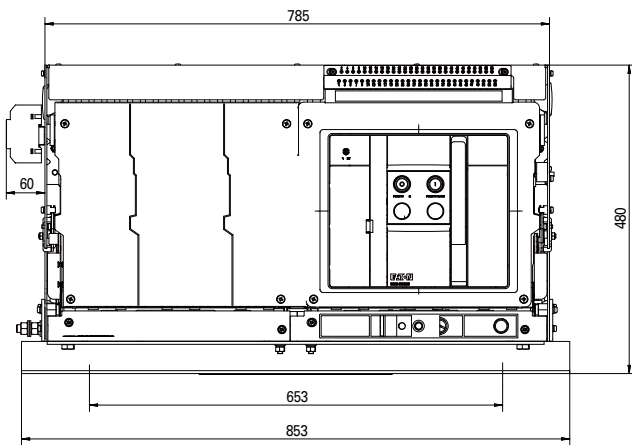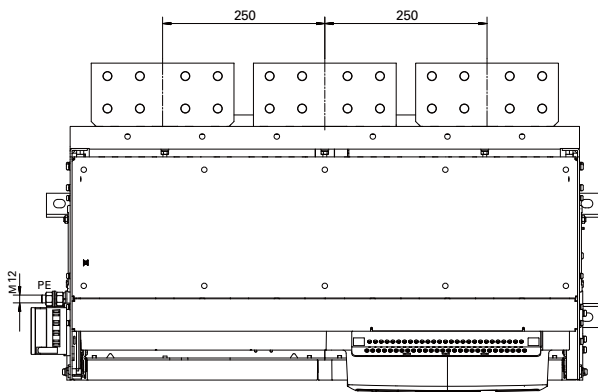
Horizontal wiring

Door escutcheon cutout
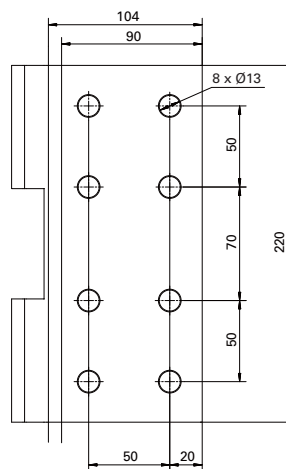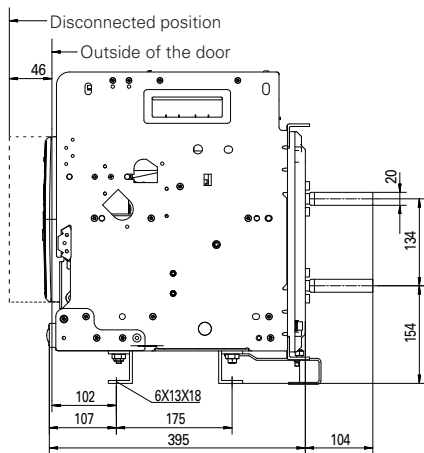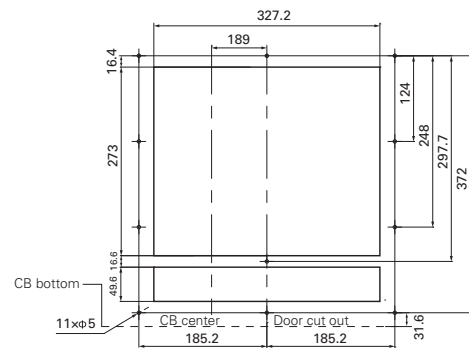
Fixed type (IZM69 4000-5000A)
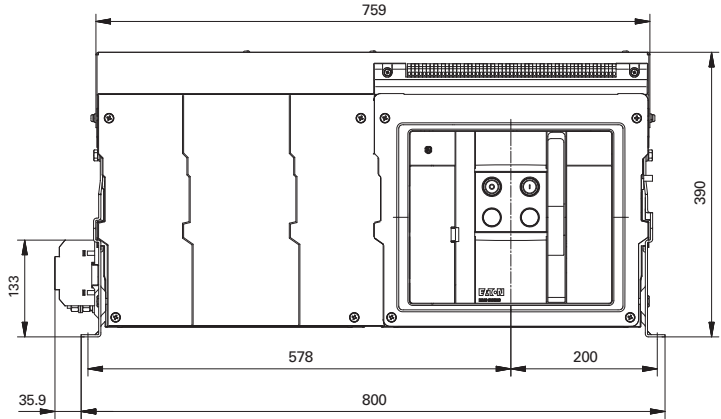
Front view

Horizontal wiring
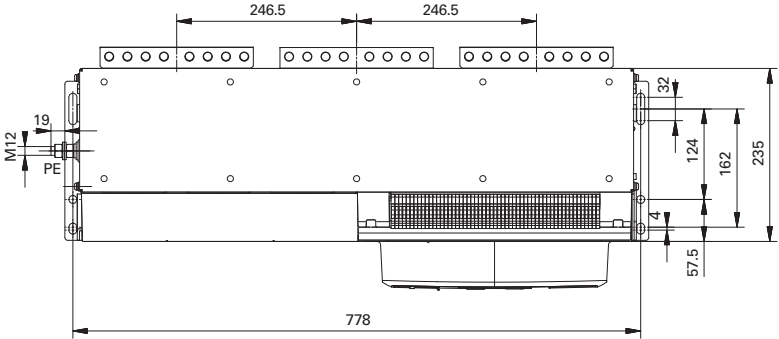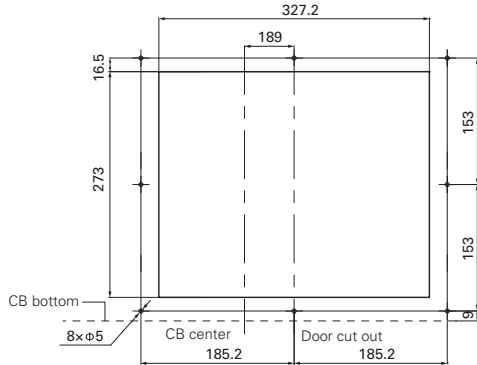
Door escutcheon cutout

Distance when removing the CB

Outside of the door
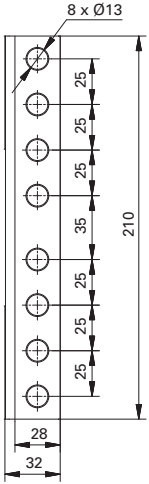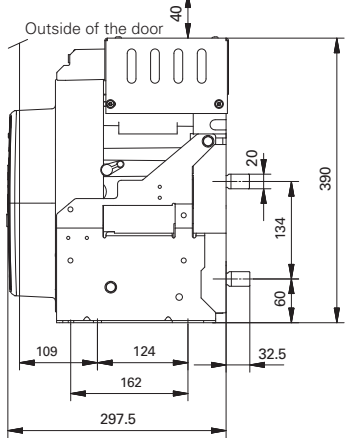
IZM6 Series Air Circuit Breakers

Outline Dimensions

Fixed type (IZM69 6300A)

Front view
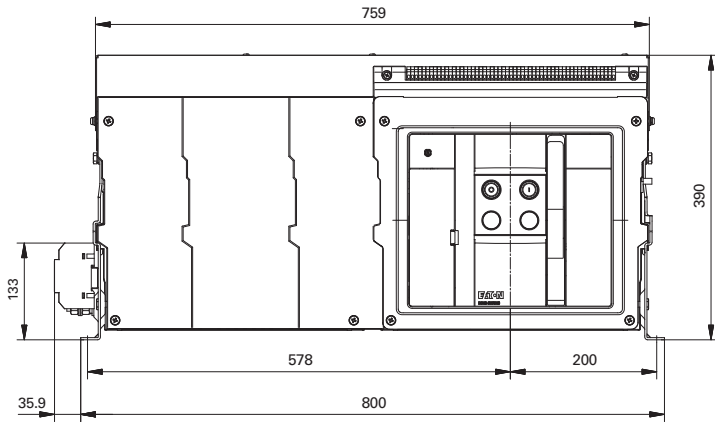
Horizontal wiring
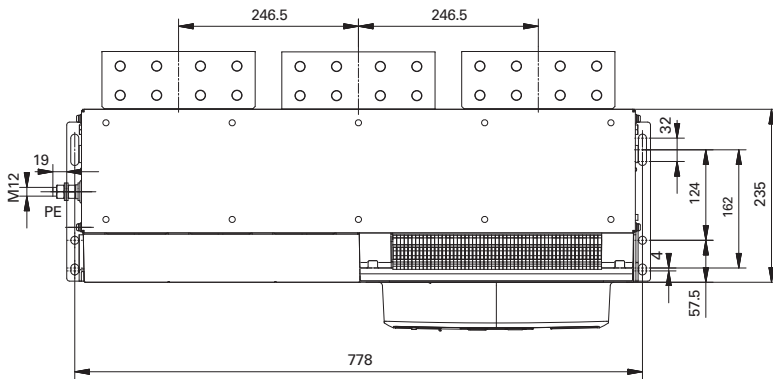
Door escutcheon cutout

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR6.1A trip unit supplied as standard – Current mode (LCD), drawout type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	**IZM67HVB3-A20WHS**	CAM-92196
	2500	50	**IZM67HVB3-A25WHS**	CAM-92197
	3200	50	**IZM67HVB3-A32WHS**	CAM-92198
	4000	50	**IZM67HVB3-A40WHS**	CAM-92199
Current mode LSI + ground				
IZM67	2000	50	**IZM67HVB3-AG20WHS**	CAM-92200
	2500	50	**IZM67HVB3-AG25WHS**	CAM-92201
	3200	50	**IZM67HVB3-AG32WHS**	CAM-92202
	4000	50	**IZM67HVB3-AG40WHS**	CAM-92203
Current mode LSI + communication				
IZM67	2000	50	**IZM67HVB3-AC20WHS**	CAM-92204
	2500	50	**IZM67HVB3-AC25WHS**	CAM-92205
	3200	50	**IZM67HVB3-AC32WHS**	CAM-92206
	4000	50	**IZM67HVB3-AC40WHS**	CAM-92207
Current mode LSI + ground + communication				
IZM67	2000	50	**IZM67HVB3-AGC20WHS**	CAM-92208
	2500	50	**IZM67HVB3-AGC25WHS**	CAM-92209
	3200	50	**IZM67HVB3-AGC32WHS**	CAM-92210
	4000	50	**IZM67HVB3-AGC40WHS**	CAM-92211

PXR6.1A trip unit supplied as standard – Current mode (LCD), drawout type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	**IZM67HVN3-A20WHS**	CAM-92164
	2500	66	**IZM67HVN3-A25WHS**	CAM-92165
	3200	66	**IZM67HVN3-A32WHS**	CAM-92166
	4000	66	**IZM67HVN3-A40WHS**	CAM-92167
Current mode LSI + ground				
IZM67	2000	66	**IZM67HVN3-AG20WHS**	CAM-92168
	2500	66	**IZM67HVN3-AG25WHS**	CAM-92169
	3200	66	**IZM67HVN3-AG32WHS**	CAM-92170
	4000	66	**IZM67HVN3-AG40WHS**	CAM-92171
Current mode LSI + communication				
IZM67	2000	66	**IZM67HVN3-AC20WHS**	CAM-92172
	2500	66	**IZM67HVN3-AC25WHS**	CAM-92173
	3200	66	**IZM67HVN3-AC32WHS**	CAM-92174
	4000	66	**IZM67HVN3-AC40WHS**	CAM-92175
Current mode LSI + ground + communication				
IZM67	2000	66	**IZM67HVN3-AGC20WHS**	CAM-92176
	2500	66	**IZM67HVN3-AGC25WHS**	CAM-92177
	3200	66	**IZM67HVN3-AGC32WHS**	CAM-92178
	4000	66	**IZM67HVN3-AGC40WHS**	CAM-92179

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR6.1E trip unit supplied as standard – Current-voltage mode (LCD), drawout type

Current-voltage mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-E20WHS	CAM-92260
	2500	50	IZM67HVB3-E25WHS	CAM-92261
	3200	50	IZM67HVB3-E32WHS	CAM-92262
	4000	50	IZM67HVB3-E40WHS	CAM-92263
Current-voltage mode LSI + ground				
IZM67	2000	50	IZM67HVB3-EG20WHS	CAM-92264
	2500	50	IZM67HVB3-EG25WHS	CAM-92265
	3200	50	IZM67HVB3-EG32WHS	CAM-92266
	4000	50	IZM67HVB3-EG40WHS	CAM-92267
Current-voltage mode LSI + communication				
IZM67	2000	50	IZM67HVB3-EC20WHS	CAM-92268
	2500	50	IZM67HVB3-EC25WHS	CAM-92269
	3200	50	IZM67HVB3-EC32WHS	CAM-92270
	4000	50	IZM67HVB3-EC40WHS	CAM-92271
Current-voltage mode LSI + ground + communication				
IZM67	2000	50	IZM67HVB3-EGC20WHS	CAM-92272
	2500	50	IZM67HVB3-EGC25WHS	CAM-92273
	3200	50	IZM67HVB3-EGC32WHS	CAM-92274
	4000	50	IZM67HVB3-EGC40WHS	CAM-92275

PXR6.1E trip unit supplied as standard – Current-voltage mode (LCD), drawout type

Current-voltage mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	IZM67HVN3-E20WHS	CAM-92228
	2500	66	IZM67HVN3-E25WHS	CAM-92229
	3200	66	IZM67HVN3-E32WHS	CAM-92230
	4000	66	IZM67HVN3-E40WHS	CAM-92231
Current-voltage mode LSI + ground				
IZM67	2000	66	IZM67HVN3-EG20WHS	CAM-92232
	2500	66	IZM67HVN3-EG25WHS	CAM-92233
	3200	66	IZM67HVN3-EG32WHS	CAM-92234
	4000	66	IZM67HVN3-EG40WHS	CAM-92235
Current-voltage mode LSI + communication				
IZM67	2000	66	IZM67HVN3-EC20WHS	CAM-92236
	2500	66	IZM67HVN3-EC25WHS	CAM-92237
	3200	66	IZM67HVN3-EC32WHS	CAM-92238
	4000	66	IZM67HVN3-EC40WHS	CAM-92239
Current-voltage mode LSI + ground + communication				
IZM67	2000	66	IZM67HVN3-EGC20WHS	CAM-92240
	2500	66	IZM67HVN3-EGC25WHS	CAM-92241
	3200	66	IZM67HVN3-EGC32WHS	CAM-92242
	4000	66	IZM67HVN3-EGC40WHS	CAM-92243

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR6.1P trip unit supplied as standard – Power mode (LCD), drawout type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-P20WHS	CAM-92324
	2500	50	IZM67HVB3-P25WHS	CAM-92325
	3200	50	IZM67HVB3-P32WHS	CAM-92326
	4000	50	IZM67HVB3-P40WHS	CAM-92327
Power mode LSI + ground				
IZM67	2000	50	IZM67HVB3-PG20WHS	CAM-92328
	2500	50	IZM67HVB3-PG25WHS	CAM-92329
	3200	50	IZM67HVB3-PG32WHS	CAM-92330
	4000	50	IZM67HVB3-PG40WHS	CAM-92331
Power mode LSI+ communication				
IZM67	2000	50	IZM67HVB3-PC20WHS	CAM-92332
	2500	50	IZM67HVB3-PC25WHS	CAM-92333
	3200	50	IZM67HVB3-PC32WHS	CAM-92334
	4000	50	IZM67HVB3-PC40WHS	CAM-92335
Power mode LSI+ ground + communication				
IZM67	2000	50	IZM67HVB3-PGC20WHS	CAM-92336
	2500	50	IZM67HVB3-PGC25WHS	CAM-92337
	3200	50	IZM67HVB3-PGC32WHS	CAM-92338
	4000	50	IZM67HVB3-PGC40WHS	CAM-92339
Power mode LSI+ residual current				
IZM67	2000	50	IZM67HVB3-PL20WHS	CAM-92364
	2500	50	IZM67HVB3-PL25WHS	CAM-92365
	3200	50	IZM67HVB3-PL32WHS	CAM-92366
	4000	50	IZM67HVB3-PL40WHS	CAM-92367
Power mode LSI+ residual current + communication				
IZM67	2000	50	IZM67HVB3-PLC20WHS	CAM-92368
	2500	50	IZM67HVB3-PLC25WHS	CAM-92369
	3200	50	IZM67HVB3-PLC32WHS	CAM-92370
	4000	50	IZM67HVB3-PLC40WHS	CAM-92371

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR6.1P trip unit supplied as standard – Power mode (LCD), drawout type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	**IZM67HVN3-P20WHS**	CAM-92292
	2500	66	**IZM67HVN3-P25WHS**	CAM-92293
	3200	66	**IZM67HVN3-P32WHS**	CAM-92294
	4000	66	**IZM67HVN3-P40WHS**	CAM-92295
Power mode LSI + ground				
IZM67	2000	66	**IZM67HVN3-PG20WHS**	CAM-92296
	2500	66	**IZM67HVN3-PG25WHS**	CAM-92297
	3200	66	**IZM67HVN3-PG32WHS**	CAM-92298
	4000	66	**IZM67HVN3-PG40WHS**	CAM-92299
Power mode LSI+ communication				
IZM67	2000	66	**IZM67HVN3-PC20WHS**	CAM-92300
	2500	66	**IZM67HVN3-PC25WHS**	CAM-92301
	3200	66	**IZM67HVN3-PC32WHS**	CAM-92302
	4000	66	**IZM67HVN3-PC40WHS**	CAM-92303
Power mode LSI+ ground + communication				
IZM67	2000	66	**IZM67HVN3-PGC20WHS**	CAM-92304
	2500	66	**IZM67HVN3-PGC25WHS**	CAM-92305
	3200	66	**IZM67HVN3-PGC32WHS**	CAM-92306
	4000	66	**IZM67HVN3-PGC40WHS**	CAM-92307
Power mode LSI+ residual current				
IZM67	2000	66	**IZM67HVN3-PL20WHS**	CAM-92356
	2500	66	**IZM67HVN3-PL25WHS**	CAM-92357
	3200	66	**IZM67HVN3-PL32WHS**	CAM-92358
	4000	66	**IZM67HVN3-PL40WHS**	CAM-92359
Power mode LSI+ residual current + communication				
IZM67	2000	66	**IZM67HVN3-PLC20WHS**	CAM-92360
	2500	66	**IZM67HVN3-PLC25WHS**	CAM-92361
	3200	66	**IZM67HVN3-PLC32WHS**	CAM-92362
	4000	66	**IZM67HVN3-PLC40WHS**	CAM-92363

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR6.1A trip unit supplied as standard – Current mode (LCD), drawout type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-A40WHS**	CAM-92893
	5000	75	**IZM69HVN3-A50WHS**	CAM-92894
	6300	75	**IZM69HVN3-A63WHS**	CAM-92895
Current mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-AG40WHS**	CAM-92896
	5000	75	**IZM69HVN3-AG50WHS**	CAM-92897
	6300	75	**IZM69HVN3-AG63WHS**	CAM-92898
Current mode LSI + communication				
IZM69	4000	75	**IZM69HVN3-AC40WHS**	CAM-92899
	5000	75	**IZM69HVN3-AC50WHS**	CAM-92900
	6300	75	**IZM69HVN3-AC63WHS**	CAM-92901
Current mode LSI + ground + communication				
IZM69	4000	75	**IZM69HVN3-AGC40WHS**	CAM-92902
	5000	75	**IZM69HVN3-AGC50WHS**	CAM-92903
	6300	75	**IZM69HVN3-AGC63WHS**	CAM-92904

PXR6.1E trip unit supplied as standard – Current-voltage mode (LCD), drawout type

Current-voltage mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-E40WHS**	CAM-92917
	5000	75	**IZM69HVN3-E50WHS**	CAM-92918
	6300	75	**IZM69HVN3-E63WHS**	CAM-92919
Current-voltage mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-EG40WHS**	CAM-92920
	5000	75	**IZM69HVN3-EG50WHS**	CAM-92921
	6300	75	**IZM69HVN3-EG63WHS**	CAM-92922
Current-voltage mode LSI + communication				
IZM69	4000	75	**IZM69HVN3-EC40WHS**	CAM-92923
	5000	75	**IZM69HVN3-EC50WHS**	CAM-92924
	6300	75	**IZM69HVN3-EC63WHS**	CAM-92925
Current-voltage mode LSI + ground + communication				
IZM69	4000	75	**IZM69HVN3-EGC40WHS**	CAM-92926
	5000	75	**IZM69HVN3-EGC50WHS**	CAM-92927
	6300	75	**IZM69HVN3-EGC63WHS**	CAM-92928

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR6.1P trip unit supplied as standard – Power mode (LCD), drawout type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	IZM69HVN3-P40WHS	CAM-92941
	5000	75	IZM69HVN3-P50WHS	CAM-92942
	6300	75	IZM69HVN3-P63WHS	CAM-92943
Power mode LSI + ground				
IZM69	4000	75	IZM69HVN3-PG40WHS	CAM-92944
	5000	75	IZM69HVN3-PG50WHS	CAM-92945
	6300	75	IZM69HVN3-PG63WHS	CAM-92946
Power mode LSI+ communication				
IZM69	4000	75	IZM69HVN3-PC40WHS	CAM-92947
	5000	75	IZM69HVN3-PC50WHS	CAM-92948
	6300	75	IZM69HVN3-PC63WHS	CAM-92949
Power mode LSI+ ground + communication				
IZM69	4000	75	IZM69HVN3-PGC40WHS	CAM-92950
	5000	75	IZM69HVN3-PGC50WHS	CAM-92951
	6300	75	IZM69HVN3-PGC63WHS	CAM-92952
Power mode LSI+ residual current				
IZM69	4000	75	IZM69HVN3-PL40WHS	CAM-92965
	5000	75	IZM69HVN3-PL50WHS	CAM-92966
	6300	75	IZM69HVN3-PL63WHS	CAM-92967
Power mode LSI+ residual current + communication				
IZM69	4000	75	IZM69HVN3-PLC40WHS	CAM-92968
	5000	75	IZM69HVN3-PLC50WHS	CAM-92969
	6300	75	IZM69HVN3-PLC63WHS	CAM-92970

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR6.1A trip unit supplied as standard – Current mode (LCD), fixed type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-A20FHS	CAM-92212
	2500	50	IZM67HVB3-A25FHS	CAM-92213
	3200	50	IZM67HVB3-A32FHS	CAM-92214
	4000	50	IZM67HVB3-A40FHS	CAM-92215
Current mode LSI + ground				
IZM67	2000	50	IZM67HVB3-AG20FHS	CAM-92216
	2500	50	IZM67HVB3-AG25FHS	CAM-92217
	3200	50	IZM67HVB3-AG32FHS	CAM-92218
	4000	50	IZM67HVB3-AG40FHS	CAM-92219
Current mode LSI + communication				
IZM67	2000	50	IZM67HVB3-AC20FHS	CAM-92220
	2500	50	IZM67HVB3-AC25FHS	CAM-92221
	3200	50	IZM67HVB3-AC32FHS	CAM-92222
	4000	50	IZM67HVB3-AC40FHS	CAM-92223
Current mode LSI + ground + communication				
IZM67	2000	50	IZM67HVB3-AGC20FHS	CAM-92224
	2500	50	IZM67HVB3-AGC25FHS	CAM-92225
	3200	50	IZM67HVB3-AGC32FHS	CAM-92226
	4000	50	IZM67HVB3-AGC40FHS	CAM-92227

PXR6.1A trip unit supplied as standard – Current mode (LCD), fixed type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	IZM67HVN3-A20FHS	CAM-92180
	2500	66	IZM67HVN3-A25FHS	CAM-92181
	3200	66	IZM67HVN3-A32FHS	CAM-92182
	4000	66	IZM67HVN3-A40FHS	CAM-92183
Current mode LSI + ground				
IZM67	2000	66	IZM67HVN3-AG20FHS	CAM-92184
	2500	66	IZM67HVN3-AG25FHS	CAM-92185
	3200	66	IZM67HVN3-AG32FHS	CAM-92186
	4000	66	IZM67HVN3-AG40FHS	CAM-92187
Current mode LSI + communication				
IZM67	2000	66	IZM67HVN3-AC20FHS	CAM-92188
	2500	66	IZM67HVN3-AC25FHS	CAM-92189
	3200	66	IZM67HVN3-AC32FHS	CAM-92190
	4000	66	IZM67HVN3-AC40FHS	CAM-92191
Current mode LSI + ground + communication				
IZM67	2000	66	IZM67HVN3-AGC20FHS	CAM-92192
	2500	66	IZM67HVN3-AGC25FHS	CAM-92193
	3200	66	IZM67HVN3-AGC32FHS	CAM-92194
	4000	66	IZM67HVN3-AGC40FHS	CAM-92195

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR6.1E trip unit supplied as standard – Current-voltage mode (LCD), fixed type

Current-voltage mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-E20FHS	CAM-92276
	2500	50	IZM67HVB3-E25FHS	CAM-92277
	3200	50	IZM67HVB3-E32FHS	CAM-92278
	4000	50	IZM67HVB3-E40FHS	CAM-92279
Current-voltage mode LSI + ground				
IZM67	2000	50	IZM67HVB3-EG20FHS	CAM-92280
	2500	50	IZM67HVB3-EG25FHS	CAM-92281
	3200	50	IZM67HVB3-EG32FHS	CAM-92282
	4000	50	IZM67HVB3-EG40FHS	CAM-92283
Current-voltage mode LSI + communication				
IZM67	2000	50	IZM67HVB3-EC20FHS	CAM-92284
	2500	50	IZM67HVB3-EC25FHS	CAM-92285
	3200	50	IZM67HVB3-EC32FHS	CAM-92286
	4000	50	IZM67HVB3-EC40FHS	CAM-92287
Current-voltage mode LSI + ground + communication				
IZM67	2000	50	IZM67HVB3-EGC20FHS	CAM-92288
	2500	50	IZM67HVB3-EGC25FHS	CAM-92289
	3200	50	IZM67HVB3-EGC32FHS	CAM-92290
	4000	50	IZM67HVB3-EGC40FHS	CAM-92291

PXR6.1E trip unit supplied as standard – Current-voltage mode (LCD), fixed type

Current-voltage mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	IZM67HVN3-E20FHS	CAM-92244
	2500	66	IZM67HVN3-E25FHS	CAM-92245
	3200	66	IZM67HVN3-E32FHS	CAM-92246
	4000	66	IZM67HVN3-E40FHS	CAM-92247
Current-voltage mode LSI + ground				
IZM67	2000	66	IZM67HVN3-EG20FHS	CAM-92248
	2500	66	IZM67HVN3-EG25FHS	CAM-92249
	3200	66	IZM67HVN3-EG32FHS	CAM-92250
	4000	66	IZM67HVN3-EG40FHS	CAM-92251
Current-voltage mode LSI + communication				
IZM67	2000	66	IZM67HVN3-EC20FHS	CAM-92252
	2500	66	IZM67HVN3-EC25FHS	CAM-92253
	3200	66	IZM67HVN3-EC32FHS	CAM-92254
	4000	66	IZM67HVN3-EC40FHS	CAM-92255
Current-voltage mode LSI + ground + communication				
IZM67	2000	66	IZM67HVN3-EGC20FHS	CAM-92256
	2500	66	IZM67HVN3-EGC25FHS	CAM-92257
	3200	66	IZM67HVN3-EGC32FHS	CAM-92258
	4000	66	IZM67HVN3-EGC40FHS	CAM-92259

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR6.1P trip unit supplied as standard – Power mode (LCD), fixed type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-P20FHS	CAM-92340
	2500	50	IZM67HVB3-P25FHS	CAM-92341
	3200	50	IZM67HVB3-P32FHS	CAM-92342
	4000	50	IZM67HVB3-P40FHS	CAM-92343
Power mode LSI + ground				
IZM67	2000	50	IZM67HVB3-PG20FHS	CAM-92344
	2500	50	IZM67HVB3-PG25FHS	CAM-92345
	3200	50	IZM67HVB3-PG32FHS	CAM-92346
	4000	50	IZM67HVB3-PG40FHS	CAM-92347
Power mode LSI+ communication				
IZM67	2000	50	IZM67HVB3-PC20FHS	CAM-92348
	2500	50	IZM67HVB3-PC25FHS	CAM-92349
	3200	50	IZM67HVB3-PC32FHS	CAM-92350
	4000	50	IZM67HVB3-PC40FHS	CAM-92351
Power mode LSI+ ground + communication				
IZM67	2000	50	IZM67HVB3-PGC20FHS	CAM-92352
	2500	50	IZM67HVB3-PGC25FHS	CAM-92353
	3200	50	IZM67HVB3-PGC32FHS	CAM-92354
	4000	50	IZM67HVB3-PGC40FHS	CAM-92355
Power mode LSI+ residual current				
IZM67	2000	50	IZM67HVB3-PL20FHS	CAM-92380
	2500	50	IZM67HVB3-PL25FHS	CAM-92381
	3200	50	IZM67HVB3-PL32FHS	CAM-92382
	4000	50	IZM67HVB3-PL40FHS	CAM-92383
Power mode LSI+ residual current + communication				
IZM67	2000	50	IZM67HVB3-PLC20FHS	CAM-92384
	2500	50	IZM67HVB3-PLC25FHS	CAM-92385
	3200	50	IZM67HVB3-PLC32FHS	CAM-92386
	4000	50	IZM67HVB3-PLC40FHS	CAM-92387

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR6.1P trip unit supplied as standard – Power mode (LCD), fixed type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	IZM67HVN3-P20FHS	CAM-92308
	2500	66	IZM67HVN3-P25FHS	CAM-92309
	3200	66	IZM67HVN3-P32FHS	CAM-92310
	4000	66	IZM67HVN3-P40FHS	CAM-92311
Power mode LSI + ground				
IZM67	2000	66	IZM67HVN3-PG20FHS	CAM-92312
	2500	66	IZM67HVN3-PG25FHS	CAM-92313
	3200	66	IZM67HVN3-PG32FHS	CAM-92314
	4000	66	IZM67HVN3-PG40FHS	CAM-92315
Power mode LSI+ communication				
IZM67	2000	66	IZM67HVN3-PC20FHS	CAM-92316
	2500	66	IZM67HVN3-PC25FHS	CAM-92317
	3200	66	IZM67HVN3-PC32FHS	CAM-92318
	4000	66	IZM67HVN3-PC40FHS	CAM-92319
Power mode LSI+ ground + communication				
IZM67	2000	66	IZM67HVN3-PGC20FHS	CAM-92320
	2500	66	IZM67HVN3-PGC25FHS	CAM-92321
	3200	66	IZM67HVN3-PGC32FHS	CAM-92322
	4000	66	IZM67HVN3-PGC40FHS	CAM-92323
Power mode LSI+ residual current				
IZM67	2000	66	IZM67HVN3-PL20FHS	CAM-92372
	2500	66	IZM67HVN3-PL25FHS	CAM-92373
	3200	66	IZM67HVN3-PL32FHS	CAM-92374
	4000	66	IZM67HVN3-PL40FHS	CAM-92375
Power mode LSI+ residual current + communication				
IZM67	2000	66	IZM67HVN3-PLC20FHS	CAM-92376
	2500	66	IZM67HVN3-PLC25FHS	CAM-92377
	3200	66	IZM67HVN3-PLC32FHS	CAM-92378
	4000	66	IZM67HVN3-PLC40FHS	CAM-92379

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR6.1A trip unit supplied as standard – Current mode (LCD), fixed type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-A40FHS**	CAM-92905
	5000	75	**IZM69HVN3-A50FHS**	CAM-92906
	6300	75	**IZM69HVN3-A63FHS**	CAM-92907
Current mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-AG40FHS**	CAM-92908
	5000	75	**IZM69HVN3-AG50FHS**	CAM-92909
	6300	75	**IZM69HVN3-AG63FHS**	CAM-92910
Current mode LSI + communication				
IZM69	4000	75	**IZM69HVN3-AC40FHS**	CAM-92911
	5000	75	**IZM69HVN3-AC50FHS**	CAM-92912
	6300	75	**IZM69HVN3-AC63FHS**	CAM-92913
Current mode LSI + ground + communication				
IZM69	4000	75	**IZM69HVN3-AGC40FHS**	CAM-92914
	5000	75	**IZM69HVN3-AGC50FHS**	CAM-92915
	6300	75	**IZM69HVN3-AGC63FHS**	CAM-92916

PXR6.1E trip unit supplied as standard – Current-voltage mode (LCD), fixed type

Current-voltage mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-E40FHS**	CAM-92929
	5000	75	**IZM69HVN3-E50FHS**	CAM-92930
	6300	75	**IZM69HVN3-E63FHS**	CAM-92931
Current-voltage mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-EG40FHS**	CAM-92932
	5000	75	**IZM69HVN3-EG50FHS**	CAM-92933
	6300	75	**IZM69HVN3-EG63FHS**	CAM-92934
Current-voltage mode LSI + communication				
IZM69	4000	75	**IZM69HVN3-EC40FHS**	CAM-92935
	5000	75	**IZM69HVN3-EC50FHS**	CAM-92936
	6300	75	**IZM69HVN3-EC63FHS**	CAM-92937
Current-voltage mode LSI + ground + communication				
IZM69	4000	75	**IZM69HVN3-EGC40FHS**	CAM-92938
	5000	75	**IZM69HVN3-EGC50FHS**	CAM-92939
	6300	75	**IZM69HVN3-EGC63FHS**	CAM-92940

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR6.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR6.1P trip unit supplied as standard – Power mode (LCD), fixed type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	IZM69HVN3-P40FHS	CAM-92953
	5000	75	IZM69HVN3-P50FHS	CAM-92954
	6300	75	IZM69HVN3-P63FHS	CAM-92955
Power mode LSI + ground				
IZM69	4000	75	IZM69HVN3-PG40FHS	CAM-92956
	5000	75	IZM69HVN3-PG50FHS	CAM-92957
	6300	75	IZM69HVN3-PG63FHS	CAM-92958
Power mode LSI+ communication				
IZM69	4000	75	IZM69HVN3-PC40FHS	CAM-92959
	5000	75	IZM69HVN3-PC50FHS	CAM-92960
	6300	75	IZM69HVN3-PC63FHS	CAM-92961
Power mode LSI+ ground + communication				
IZM69	4000	75	IZM69HVN3-PGC40FHS	CAM-92962
	5000	75	IZM69HVN3-PGC50FHS	CAM-92963
	6300	75	IZM69HVN3-PGC63FHS	CAM-92964
Power mode LSI+ residual current				
IZM69	4000	75	IZM69HVN3-PL40FHS	CAM-92971
	5000	75	IZM69HVN3-PL50FHS	CAM-92972
	6300	75	IZM69HVN3-PL63FHS	CAM-92973
Power mode LSI+ residual current + communication				
IZM69	4000	75	IZM69HVN3-PLC40FHS	CAM-92974
	5000	75	IZM69HVN3-PLC50FHS	CAM-92975
	6300	75	IZM69HVN3-PLC63FHS	CAM-92976

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR4.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR4.1A trip unit supplied as standard – Current mode (LED), drawout type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	**IZM67HVB3-D20WHS**	CAM-92484
	2500	50	**IZM67HVB3-D25WHS**	CAM-92485
	3200	50	**IZM67HVB3-D32WHS**	CAM-92486
	4000	50	**IZM67HVB3-D40WHS**	CAM-92487
Current mode LSI + ground				
IZM67	2000	50	**IZM67HVB3-DG20WHS**	CAM-92488
	2500	50	**IZM67HVB3-DG25WHS**	CAM-92489
	3200	50	**IZM67HVB3-DG32WHS**	CAM-92490
	4000	50	**IZM67HVB3-DG40WHS**	CAM-92491
Current mode LSI+ communication				
IZM67	2000	50	**IZM67HVB3-DC20WHS**	CAM-92492
	2500	50	**IZM67HVB3-DC25WHS**	CAM-92493
	3200	50	**IZM67HVB3-DC32WHS**	CAM-92494
	4000	50	**IZM67HVB3-DC40WHS**	CAM-92495
Current mode LSI+ ground + communication				
IZM67	2000	50	**IZM67HVB3-DGC20WHS**	CAM-92496
	2500	50	**IZM67HVB3-DGC25WHS**	CAM-92497
	3200	50	**IZM67HVB3-DGC32WHS**	CAM-92498
	4000	50	**IZM67HVB3-DGC40WHS**	CAM-92499

PXR4.1A trip unit supplied as standard – Current mode (LED), drawout type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	**IZM67HVN3-D20WHS**	CAM-92452
	2500	66	**IZM67HVN3-D25WHS**	CAM-92453
	3200	66	**IZM67HVN3-D32WHS**	CAM-92454
	4000	66	**IZM67HVN3-D40WHS**	CAM-92455
Current mode LSI + ground				
IZM67	2000	66	**IZM67HVN3-DG20WHS**	CAM-92456
	2500	66	**IZM67HVN3-DG25WHS**	CAM-92457
	3200	66	**IZM67HVN3-DG32WHS**	CAM-92458
	4000	66	**IZM67HVN3-DG40WHS**	CAM-92459
Current mode LSI+ communication				
IZM67	2000	66	**IZM67HVN3-DC20WHS**	CAM-92460
	2500	66	**IZM67HVN3-DC25WHS**	CAM-92461
	3200	66	**IZM67HVN3-DC32WHS**	CAM-92462
	4000	66	**IZM67HVN3-DC40WHS**	CAM-92463
Current mode LSI+ ground + communication				
IZM67	2000	66	**IZM67HVN3-DGC20WHS**	CAM-92464
	2500	66	**IZM67HVN3-DGC25WHS**	CAM-92465
	3200	66	**IZM67HVN3-DGC32WHS**	CAM-92466
	4000	66	**IZM67HVN3-DGC40WHS**	CAM-92467

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR4.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR4.1P trip unit supplied as standard – Power mode (LED), drawout type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-F20WHS	CAM-92420
	2500	50	IZM67HVB3-F25WHS	CAM-92421
	3200	50	IZM67HVB3-F32WHS	CAM-92422
	4000	50	IZM67HVB3-F40WHS	CAM-92423
Power mode LSI + ground				
IZM67	2000	50	IZM67HVB3-FG20WHS	CAM-92424
	2500	50	IZM67HVB3-FG25WHS	CAM-92425
	3200	50	IZM67HVB3-FG32WHS	CAM-92426
	4000	50	IZM67HVB3-FG40WHS	CAM-92427
Power mode LSI+ communication				
IZM67	2000	50	IZM67HVB3-FC20WHS	CAM-92428
	2500	50	IZM67HVB3-FC25WHS	CAM-92429
	3200	50	IZM67HVB3-FC32WHS	CAM-92430
	4000	50	IZM67HVB3-FC40WHS	CAM-92431
Power mode LSI+ ground + communication				
IZM67	2000	50	IZM67HVB3-FGC20WHS	CAM-92432
	2500	50	IZM67HVB3-FGC25WHS	CAM-92433
	3200	50	IZM67HVB3-FGC32WHS	CAM-92434
	4000	50	IZM67HVB3-FGC40WHS	CAM-92435

PXR4.1P trip unit supplied as standard – Power mode (LED), drawout type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	IZM67HVN3-F20WHS	CAM-92388
	2500	66	IZM67HVN3-F25WHS	CAM-92389
	3200	66	IZM67HVN3-F32WHS	CAM-92390
	4000	66	IZM67HVN3-F40WHS	CAM-92391
Power mode LSI + ground				
IZM67	2000	66	IZM67HVN3-FG20WHS	CAM-92392
	2500	66	IZM67HVN3-FG25WHS	CAM-92393
	3200	66	IZM67HVN3-FG32WHS	CAM-92394
	4000	66	IZM67HVN3-FG40WHS	CAM-92395
Power mode LSI+ communication				
IZM67	2000	66	IZM67HVN3-FC20WHS	CAM-92396
	2500	66	IZM67HVN3-FC25WHS	CAM-92397
	3200	66	IZM67HVN3-FC32WHS	CAM-92398
	4000	66	IZM67HVN3-FC40WHS	CAM-92399
Power mode LSI+ ground + communication				
IZM67	2000	66	IZM67HVN3-FGC20WHS	CAM-92400
	2500	66	IZM67HVN3-FGC25WHS	CAM-92401
	3200	66	IZM67HVN3-FGC32WHS	CAM-92402
	4000	66	IZM67HVN3-FGC40WHS	CAM-92403

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR4.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, safety shutter, arc distinguishing cover, and handle.

PXR4.1A trip unit supplied as standard – Current mode (LED), drawout type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-D40WHS**	CAM-93001
	5000	75	**IZM69HVN3-D50WHS**	CAM-93002
	6300	75	**IZM69HVN3-D63WHS**	CAM-93003
Current mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-DG40WHS**	CAM-93004
	5000	75	**IZM69HVN3-DG50WHS**	CAM-93005
	6300	75	**IZM69HVN3-DG63WHS**	CAM-93006
Current mode LSI+ communication				
IZM69	4000	75	**IZM69HVN3-DC40WHS**	CAM-93007
	5000	75	**IZM69HVN3-DC50WHS**	CAM-93008
	6300	75	**IZM69HVN3-DC63WHS**	CAM-93009
Current mode LSI+ ground + communication				
IZM69	4000	75	**IZM69HVN3-DGC40WHS**	CAM-93010
	5000	75	**IZM69HVN3-DGC50WHS**	CAM-93011
	6300	75	**IZM69HVN3-DGC63WHS**	CAM-93012

PXR4.1P trip unit supplied as standard – Power mode (LED), drawout type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-F40WHS**	CAM-92977
	5000	75	**IZM69HVN3-F50WHS**	CAM-92978
	6300	75	**IZM69HVN3-F63WHS**	CAM-92979
Power mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-FG40WHS**	CAM-92980
	5000	75	**IZM69HVN3-FG50WHS**	CAM-92981
	6300	75	**IZM69HVN3-FG63WHS**	CAM-92982
Power mode LSI+ communication				
IZM69	4000	75	**IZM69HVN3-FC40WHS**	CAM-92983
	5000	75	**IZM69HVN3-FC50WHS**	CAM-92984
	6300	75	**IZM69HVN3-FC63WHS**	CAM-92985
Power mode LSI+ ground + communication				
IZM69	4000	75	**IZM69HVN3-FGC40WHS**	CAM-92986
	5000	75	**IZM69HVN3-FGC50WHS**	CAM-92987
	6300	75	**IZM69HVN3-FGC63WHS**	CAM-92988

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR4.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR4.1A trip unit supplied as standard – Current mode (LED), fixed type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	**IZM67HVB3-D20FHS**	CAM-92500
	2500	50	**IZM67HVB3-D25FHS**	CAM-92501
	3200	50	**IZM67HVB3-D32FHS**	CAM-92502
	4000	50	**IZM67HVB3-D40FHS**	CAM-92503
Current mode LSI + ground				
IZM67	2000	50	**IZM67HVB3-DG20FHS**	CAM-92504
	2500	50	**IZM67HVB3-DG25FHS**	CAM-92505
	3200	50	**IZM67HVB3-DG32FHS**	CAM-92506
	4000	50	**IZM67HVB3-DG40FHS**	CAM-92507
Current mode LSI+ communication				
IZM67	2000	50	**IZM67HVB3-DC20FHS**	CAM-92508
	2500	50	**IZM67HVB3-DC25FHS**	CAM-92509
	3200	50	**IZM67HVB3-DC32FHS**	CAM-92510
	4000	50	**IZM67HVB3-DC40FHS**	CAM-92511
Current mode LSI+ ground + communication				
IZM67	2000	50	**IZM67HVB3-DGC20FHS**	CAM-92512
	2500	50	**IZM67HVB3-DGC25FHS**	CAM-92513
	3200	50	**IZM67HVB3-DGC32FHS**	CAM-92514
	4000	50	**IZM67HVB3-DGC40FHS**	CAM-92515

PXR4.1A trip unit supplied as standard – Current mode (LED), fixed type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	**IZM67HVN3-D20FHS**	CAM-92468
	2500	66	**IZM67HVN3-D25FHS**	CAM-92469
	3200	66	**IZM67HVN3-D32FHS**	CAM-92470
	4000	66	**IZM67HVN3-D40FHS**	CAM-92471
Current mode LSI + ground				
IZM67	2000	66	**IZM67HVN3-DG20FHS**	CAM-92472
	2500	66	**IZM67HVN3-DG25FHS**	CAM-92473
	3200	66	**IZM67HVN3-DG32FHS**	CAM-92474
	4000	66	**IZM67HVN3-DG40FHS**	CAM-92475
Current mode LSI+ communication				
IZM67	2000	66	**IZM67HVN3-DC20FHS**	CAM-92476
	2500	66	**IZM67HVN3-DC25FHS**	CAM-92477
	3200	66	**IZM67HVN3-DC32FHS**	CAM-92478
	4000	66	**IZM67HVN3-DC40FHS**	CAM-92479
Current mode LSI+ ground + communication				
IZM67	2000	66	**IZM67HVN3-DGC20FHS**	CAM-92480
	2500	66	**IZM67HVN3-DGC25FHS**	CAM-92481
	3200	66	**IZM67HVN3-DGC32FHS**	CAM-92482
	4000	66	**IZM67HVN3-DGC40FHS**	CAM-92483

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR4.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR4.1P trip unit supplied as standard – Power mode (LED), fixed type

| Power mode LSI | | | 3P | |
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	50	IZM67HVB3-F20FHS	CAM-92436
	2500	50	IZM67HVB3-F25FHS	CAM-92437
	3200	50	IZM67HVB3-F32FHS	CAM-92438
	4000	50	IZM67HVB3-F40FHS	CAM-92439
Power mode LSI + ground				
IZM67	2000	50	IZM67HVB3-FG20FHS	CAM-92440
	2500	50	IZM67HVB3-FG25FHS	CAM-92441
	3200	50	IZM67HVB3-FG32FHS	CAM-92442
	4000	50	IZM67HVB3-FG40FHS	CAM-92443
Power mode LSI+ communication				
IZM67	2000	50	IZM67HVB3-FC20FHS	CAM-92444
	2500	50	IZM67HVB3-FC25FHS	CAM-92445
	3200	50	IZM67HVB3-FC32FHS	CAM-92446
	4000	50	IZM67HVB3-FC40FHS	CAM-92447
Power mode LSI+ ground + communication				
IZM67	2000	50	IZM67HVB3-FGC20FHS	CAM-92448
	2500	50	IZM67HVB3-FGC25FHS	CAM-92449
	3200	50	IZM67HVB3-FGC32FHS	CAM-92450
	4000	50	IZM67HVB3-FGC40FHS	CAM-92451

PXR4.1P trip unit supplied as standard – Power mode (LED), fixed type

| Power mode LSI | | | 3P | |
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM67	2000	66	IZM67HVN3-F20FHS	CAM-92404
	2500	66	IZM67HVN3-F25FHS	CAM-92405
	3200	66	IZM67HVN3-F32FHS	CAM-92406
	4000	66	IZM67HVN3-F40FHS	CAM-92407
Power mode LSI + ground				
IZM67	2000	66	IZM67HVN3-FG20FHS	CAM-92408
	2500	66	IZM67HVN3-FG25FHS	CAM-92409
	3200	66	IZM67HVN3-FG32FHS	CAM-92410
	4000	66	IZM67HVN3-FG40FHS	CAM-92411
Power mode LSI+ communication				
IZM67	2000	66	IZM67HVN3-FC20FHS	CAM-92412
	2500	66	IZM67HVN3-FC25FHS	CAM-92413
	3200	66	IZM67HVN3-FC32FHS	CAM-92414
	4000	66	IZM67HVN3-FC40FHS	CAM-92415
Power mode LSI+ ground + communication				
IZM67	2000	66	IZM67HVN3-FGC20FHS	CAM-92416
	2500	66	IZM67HVN3-FGC25FHS	CAM-92417
	3200	66	IZM67HVN3-FGC32FHS	CAM-92418
	4000	66	IZM67HVN3-FGC40FHS	CAM-92419

IZM6 Series Air Circuit Breakers
Ordering Description

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), PXR4.1 intelligent trip unit, Overcurrent trip switches OTS (1CO), door escutcheon, wiring terminal, 220V AC to DC24V power module, arc distinguishing cover, and handle.

PXR4.1A trip unit supplied as standard – Current mode (LED), fixed type

Current mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-D40FHS**	CAM-93013
	5000	75	**IZM69HVN3-D50FHS**	CAM-93014
	6300	75	**IZM69HVN3-D63FHS**	CAM-93015
Current mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-DG40FHS**	CAM-93016
	5000	75	**IZM69HVN3-DG50FHS**	CAM-93017
	6300	75	**IZM69HVN3-DG63FHS**	CAM-93018
Current mode LSI+ communication				
IZM69	4000	75	**IZM69HVN3-DC40FHS**	CAM-93019
	5000	75	**IZM69HVN3-DC50FHS**	CAM-93020
	6300	75	**IZM69HVN3-DC63FHS**	CAM-93021
Current mode LSI+ ground + communication				
IZM69	4000	75	**IZM69HVN3-DGC40FHS**	CAM-93022
	5000	75	**IZM69HVN3-DGC50FHS**	CAM-93023
	6300	75	**IZM69HVN3-DGC63FHS**	CAM-93024

PXR4.1P trip unit supplied as standard – Power mode (LED), fixed type

Power mode LSI			3P	
Frame	Rated current I_n (A)	Switching Capacity I_{cu} (kA @1140V AC)	Part no.	Article no.
IZM69	4000	75	**IZM69HVN3-F40FHS**	CAM-92989
	5000	75	**IZM69HVN3-F50FHS**	CAM-92990
	6300	75	**IZM69HVN3-F63FHS**	CAM-92991
Power mode LSI + ground				
IZM69	4000	75	**IZM69HVN3-FG40FHS**	CAM-92992
	5000	75	**IZM69HVN3-FG50FHS**	CAM-92993
	6300	75	**IZM69HVN3-FG63FHS**	CAM-92994
Power mode LSI+ communication				
IZM69	4000	75	**IZM69HVN3-FC40FHS**	CAM-92995
	5000	75	**IZM69HVN3-FC50FHS**	CAM-92996
	6300	75	**IZM69HVN3-FC63FHS**	CAM-92997
Power mode LSI+ ground + communication				
IZM69	4000	75	**IZM69HVN3-FGC40FHS**	CAM-92998
	5000	75	**IZM69HVN3-FGC50FHS**	CAM-92999
	6300	75	**IZM69HVN3-FGC63FHS**	CAM-93000

Devices supplied as standard:

Drawout circuit breaker's basic device, cassette, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), door escutcheon, wiring terminal, safety shutter, arc distinguishing cover, and handle.

Switch disconnector devices supplied as standard, drawout type

Frame	Rated current I_n (A)	Switching Capacity I_{cw}(1s)	3P	
			Part no.	Article no.
IZM67	2000	50	IN67HVB3-20WHS	CAM-93105
	2500	50	IN67HVB3-25WHS	CAM-93106
	3200	50	IN67HVB3-32WHS	CAM-93107
	4000	50	IN67HVB3-40WHS	CAM-93108
	2000	66	IN67HVN3-20WHS	CAM-93096
	2500	66	IN67HVN3-25WHS	CAM-93097
	3200	66	IN67HVN3-32WHS	CAM-93098
	4000	66	IN67HVN3-40WHS	CAM-93099
IZM69	4000	75	IN69HVN3-40WHS	CAM-93025
	5000	75	IN69HVN3-50WHS	CAM-93026
	6300	75	IN69HVN3-63WHS	CAM-93027

Devices supplied as standard:

Fixed circuit breaker's basic device, shunt coil (220V AC), closing coil (220V AC), motor operator (220V AC), auxiliary contact (4NO4NC), door escutcheon, wiring terminal, arc distinguishing cover, and handle.

Switch disconnector devices supplied as standard, fixed type

Frame	Rated current I_n (A)	Switching Capacity I_{cw}(1s)	3P	
			Part no.	Article no.
IZM67	2000	50	IN67HVB3-20FHS	CAM-93109
	2500	50	IN67HVB3-25FHS	CAM-93110
	3200	50	IN67HVB3-32FHS	CAM-93111
	4000	50	IN67HVB3-40FHS	CAM-93112
	2000	66	IN67HVN3-20FHS	CAM-93100
	2500	66	IN67HVN3-25FHS	CAM-93101
	3200	66	IN67HVN3-32FHS	CAM-93102
	4000	66	IN67HVN3-40FHS	CAM-93103
IZM69	4000	75	IN69HVN3-40FHS	CAM-93028
	5000	75	IN69HVN3-50FHS	CAM-93029
	6300	75	IN69HVN3-63FHS	CAM-93030

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Eaton was founded in 1911 and has been listed on the New York Stock Exchange since 1923. We reported revenues of $20.8 billion in 2022 and serve customers in more than 170 countries. Eaton entered the Chinese market in 1993 and has grown significantly since then. In 2004, Eaton moved its Asia-Pacific headquarters from Hong Kong to Shanghai. Today, Eaton has nearly 9,000 employees and 20 manufacturing facilities in China. Eaton is marking its 100th anniversary of being listed on the New York Stock Exchange, and its 30th anniversary of being in Chinese market.

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