

Switch Disconnecter and Air Circuit Breaker

... with Power Xpert Releases
PXR

Product Catalogue



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Powering Business Worldwide



Energizing a world that demands more.

We deliver:

- **Electrical solutions** that use less energy, improve power reliability and make the places we live and work safer and more comfortable
- **Hydraulic and electrical solutions** that enable machines to deliver more productivity without wasting power
- **Aerospace solutions** that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently
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With 2015 sales \$20.9 billion, Eaton has approximately 97,000 employees around the world and sells products in more than 175 countries.

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Eaton air circuit breakers - for cost-effective, optimized solutions.



The **IZMX16** is the smallest air circuit-breaker in his class worldwide:

With a volume of only 24 dm³ and a front surface of only 0.092 m² it is just slightly bigger than the size of a DIN A4 sheet of paper! And all this without any loss in terms of performance.

Because of its compact size it allows the user to create innovative concepts, like to install **two circuit** breakers side by side in withdrawable design, **in a 600 mm wide section**. This fact provides for a more cost-effective setup of the section and, in addition, it helps to save operating space. And where remote switching is required, this volume can even accommodate a motor for pre-tightening the stored-energy spring mechanism and some magnetic coils for the on/off command.

More performance in less space is simply impossible.



The **IZMX40** is a circuit breaker for up to 4000 A in a volume of a 3200 A circuit breaker, without the need to install any additional "busbar extensions" in the connection area.

Tests to integrate it into Eaton switchgear systems, such as Modan, xEnergy, PowerXpert, Capitol 20 and Capitol 40 confirm its outstanding technical performance and optimal compatibility thanks to the flexible connection system.

The modular structure, integrated detail solutions as well as a complete range of accessories and additional functions make it easy to adapt the circuit breaker to any of the required applications. Optionally it can be adapted right at the factory – without any extra cost or additional installation work at the circuit breaker.



Horizontal Terminal



Vertical Terminal

Safety - individual solutions combined with IZMX.

Adding individual solutions to IZMX circuit breakers provides both more protection for systems and more safety for personnel in case there is a failure. And it also reduces the risk of unintended interruptions of operation.

These solutions include:

- ARMS™
- ARCON®
- Zone selectivity
- Remote switching
- Testing and documenting with PXP



ARMS™ (Arcflash Reduction Maintenance System)

Eaton's patented Arcflash Reduction Maintenance System (ARMS) technology provides maintenance staff improved safety of downstream maintenance locations using a simple and reliable method to reduce fault clearing times and energy in an arc flash event (radiation, sound, pressure, temperature).

Arcflash Reduction Maintenance System uses a separate analog trip circuit providing faster signal processing and interruption times than the standard (digital) "instantaneous" protection.

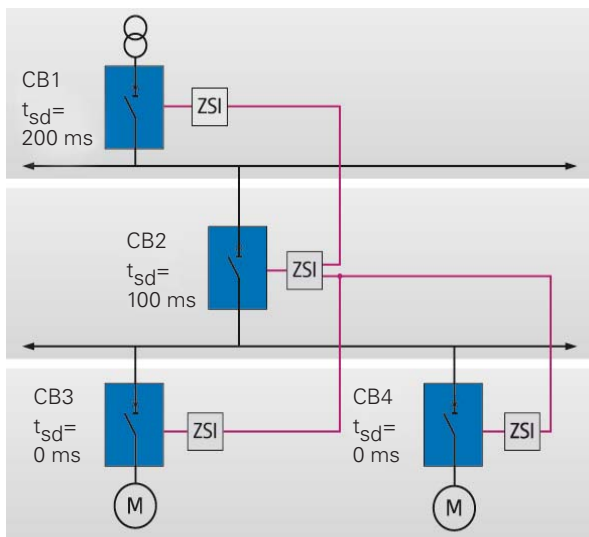
The Arcflash Reduction Maintenance System function is activated either directly on the circuit breaker through a local switch or remotely through communications or a contact input.

Arcflash Reduction Maintenance System is optional on both PXR20 and PXR25 trip units.



ARCON®

IZMX breakers, combined with ARCON®, help users to avoid damage and to protect people against arc faults as they can effectively be brought under control within 2 ms. They also protect against arc flashes that – due to their impedance - would not even cause a protective device to react.



Zone selectivity ZSI

Now always on board an can be enabled.

Circuit breakers are directly connected to a signal line, without any additional modules. So, in case of short circuits, they ensure that only the circuit breaker immediately upstream the point of failure will break a short-circuit without delay.

The advantage of the zone selectivity feature – compared to ordinary time selectivity - is the significantly reduced delay time until tripping.

This reduces the thermal and dynamical load that protect the system in addition. In cases of a signal wire damage the back-up time selectivity ensures the selectivity of the system.

For additional safety of maintenance staff we recommend a combination with ARMS® to reduce the released amount of energy even further.



Remote switching

Remote switching requires two magnetic coils (shunt trip and closing release).

These coils will activate the mechanism of the ON and OFF buttons. After two switching actions have been carried out, a stored-energy spring mechanism needs to be retightened manually. With an additional motor drive, the retightening action can be automated.

Safety: If the second switching action was an ON action, a third action for switch-off or tripping through the energy of the spring will be ensured.

Safety: OFF commands will always be given priority. A permanent command for the operating-current trip enables the user to lock the circuit breaker in the OFF position.

Thanks to the powerful stored-energy spring, the circuit breaker will carry out the switch command sent to the magnetic coil in less than 35 ms. So the IZMX series circuit breakers are suitable for synchronisation tasks.



Easy inspection and maintenance

Inspection and maintenance can be conveniently performed on the draw-out breaker as the primary finger clusters (blue) and levering mechanism are part of the breaker instead of the cassette.

Eaton also offers many field installable accessories and parts, extending the life of the breaker.

Breaker rear side (Drawout breaker)

The next generation trip unit platform: Power Xpert Release (PXR)

The higher resolution dot matrix display has been enhanced to be always active, constantly displaying the status of

zone selectivity (ZSI), battery condition and rated current In. All data can be transferred via Modbus, Profibus or Ethernet

communication function and for security, a password can be added to avoid unauthorised changes. In addition, a QR

code has been added for easier identification and to access additional information.

Power Xpert Release (PXR) with multiple new features



- Modbus on board for PXR25 (optional for PXR20)
- Large LCD combined with cursor operation for more function and information
- Battery status, ZSI und In visible anytime
- ZSI – the better selective protection is always on board
- Password protection
- Rating plug programmable
- LSI protection can be changed to LI (without time selectivity) or LS (without Instantaneous = 100% selective)
- 3 free alarm contacts available
- USB port for testing and additional function setup via PC and software PXPMP

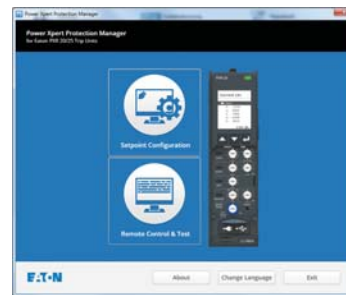


- QR code for easier identification and further information



- Improved Diagnostics with breaker health (graph), events and run time

„Free download“ Software Power Xpert Protection Manager (PXPMP) for interaction with PXR



- Dis-/enable functions
- Reading/Changing settings (not basic protection settings)
- Waveform capture
- Multiple test procedures with final test protocol print including date/time stamp
- Print settings and curves

Using the software is easy and self explaining. The cursor above a select able function opens a window with its explanation. Depending on the selection next logical selection opens.

Testers no longer require specialized test tools thanks to the much better software solution in combination with the integrated secondary injection test hardware. An this free of charge.



The Power Xpert Release trip unit platform enables engineers to configure and test circuit breakers from a PC via a USB port. As a result, it is easier for users to interact with the trip unit and store or print test data so they can improve their control and maintenance regimes.

USB Commercial cable



Load your settings and record them.

If any values are changed a “final setting adjustments” screen shows the original and revised settings, highlighting any that were modified. The sheet can be saved or printed.

Final Setting Adjustments		
Below is a chart of the Parameters and settings. The 'As Found' settings that were captured before settings began are listed for your convenience. Please make any necessary changes to the settings. When the Next button is selected these settings will be captured. These settings will be located in the test report as the 'As Left' settings.		
Parameter	As Found	As Left
Rating (In)	2500 A	2500 A
Maintenance Mode	OFF	OFF
Maintenance Mode Remote Control	Disable	Disable
Maintenance Mode Trip Level	2.5 x In	2.5 x In
Line Frequency	60 Hz	60 Hz
Reserve Feed Breaker	Forward	Forward
Long Delay Thermal Memory	OFF	OFF
Zone Selective Interlocking	OFF	OFF
Long Delay Slope	In	In
Long Delay Pickup (In)	1.00 x In	0.70 x In
Long Delay Time	0.5 s	2 s
High Load Alarm Level	0.5 In	0.5 In
Short Delay Slope	Flat	Flat
Short Delay Pickup Level	3.0 x In	3.0 x In
Short Delay Time	0.25 s	0.25 s
Instantaneous Pickup	7 x In	5 x In
Ground Sensing Type	Source/Zero Sens	Source/Zero Sens
Local Ground Fault Protection Type Setting	Alarm	Alarm
Ground Fault Slope	In	In
Ground Fault Pickup	1.0	1.0
Ground Fault Trip Time	0.5 s	0.5 s
Neutral Protection Ratio	100%	100%

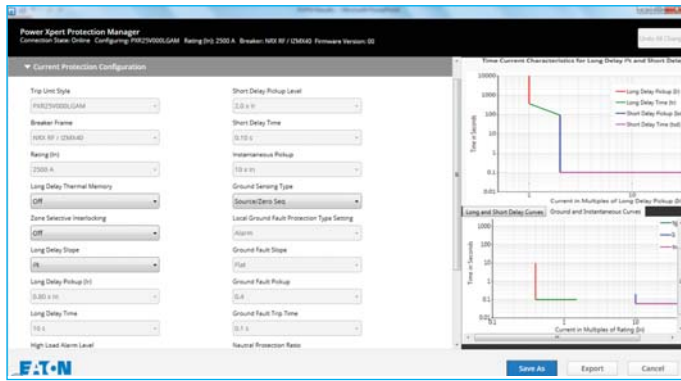
highlighted values indicate a difference between the 'As Found' setting and the setting 'As Left' setting.

High current circuit breakers, for example those used in high power distribution systems in industry, are configured and periodically tested by end users

to ensure they continue to work reliably in case of over-currents, and therefore prevent expensive downtime. This new unit allows technicians to simulate or

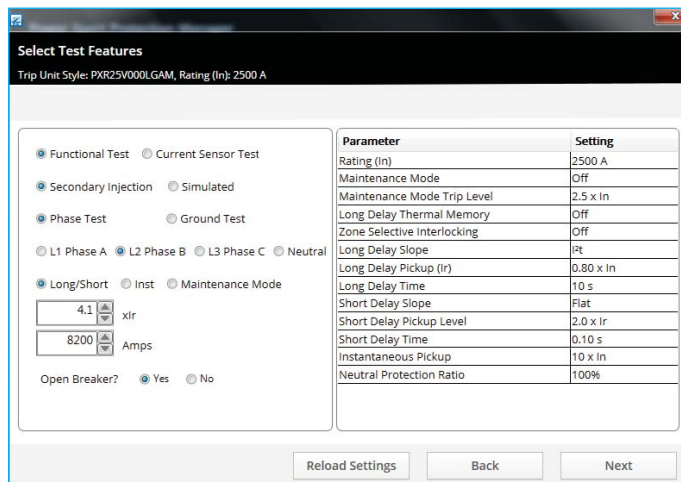
inject overloads, short circuits, ground faults, do internal current transformer test including its wiring, test with or without tripping and much more using

the Software Power Xpert Protection Manager (PXPM).



Dis-/Enable or change settings, enlarge tripping curves and print curves for documentation.

Utilizing the easy-to-use dashboard, Control Mode can be selected allowing diagnostic and meter data to be reset. In Test Mode individual phases can be tested against values entered as current value or as a multiplier of individual settings.

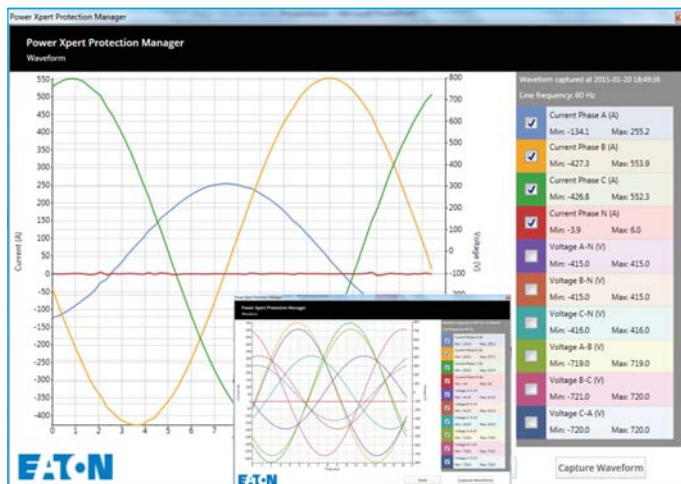


Select the function you want to test and choose the test current as value or multiplier of setting.

The unit has been developed in response to user demand for an easy-to-use system. Previously test data had to be written down, but with the upgraded software a three page professional test report with date/time stamp, customized information, individual settings/ tripping curves and secondary injection test result, can be generated and stored electronically in a pdf format. This enables technicians to significantly reduce the time it takes for testing, makes it much easier for them to carry out their maintenance, and receive a test report for documentation.

Prior to printing the test report, the customer name, location, environment and equipment condition can be entered.

Report professional all your test results within one document after installation in your system or report your yearly inspection that might be requested in your company.



Get additional information by capturing the waveform and select which curves shall be visible or be printed.

New features include the ability to capture current and optional voltage waveforms along with minimum and maximum values for the phase and neutral conductors. In addition, the waveform can give an indication of the overall quality caused by harmonics, and metering accuracy is now one per cent "of reading".



IZMX circuit-breakers, INX switch-disconnectors, up to 4000 A^{*)}

Eaton's series IZMX is an innovative line of circuit-breakers up to 4000 A. Engineering and mounting requirements are reduced thanks to only two compact sizes, the modular design and standard accessories. The highlight of the series IZMX: The trip unit family PXR trip electronics. It covers a huge amount of applications. And in conjunction with an optional communication on board ensures that operation can be monitored from all round the globe. The innovative IZMX16 enables two circuit-breakers with a width of only 600 mm to be mounted in a switch cabinet.

Series IZMX in standard offer up to 690 V

Rated operational current from 630 to 4000 A, switching capacity Icu = Ics from 42 to 105 kA/440 V AC, 3 or 4 pole, fixed mounted or withdrawable, electronic releases for multiple protection requirements and several additional options.

Extensive mounting accessories for fixed mounting and withdrawable units

Motor operator IZMX...M... +++ Shunt release IZMX...ST... +++ Closing release IZMX...SR... +++ Undervoltage release IZMX...UV... +++ Auxiliary contact ON-OFF IZMX...AS... +++ Latch check switch IZMX...LCS... +++ Overload trip switch IZMX...OTS +++ Mechanical interlocks and much more.

Brand new control unit family

The new PXR control unit is released in 2016. This new development is the answer on the latest market request of doing individual tests in the field and document it. Therefore Eaton provides an USB link in the trip unit front to be able to correspondent with PC in conjunction with a free download able Power Xpert Protection Manager software.

Further more the PXR control unit offers an extensive range of functions. Protection, measuring, analysis, diagnostics and event memory functions that can be shown on an LCD display or transferred remotely via an integrated communication system, displayed on a web page or sent worldwide by email. PXR can be integrated in different data networks together with Eaton's plug & play communication solution: MODBUS, PROFIBUS or Ethernet. Circuit breakers can then be monitored directly via the Internet.

Worldwide novelty ARMS™ – greater safety for maintenance personnel

In the event of an arc fault the patented ARMS™ (Arcflash Reduction Maintenance System) trips faster than a short-circuit release. In conjunction with the series IZMX, additional components of the ARCON™ arc fault protection system offer additional arc fault protection.

^{*)} Above 4000A please see IZM63

**Circuit Breakers IZMX16, switch-disconnectors INX16
Circuit Breakers IZMX40, switch-disconnectors INX40
up to 4000 A**

System overview

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Ordering

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Technical data

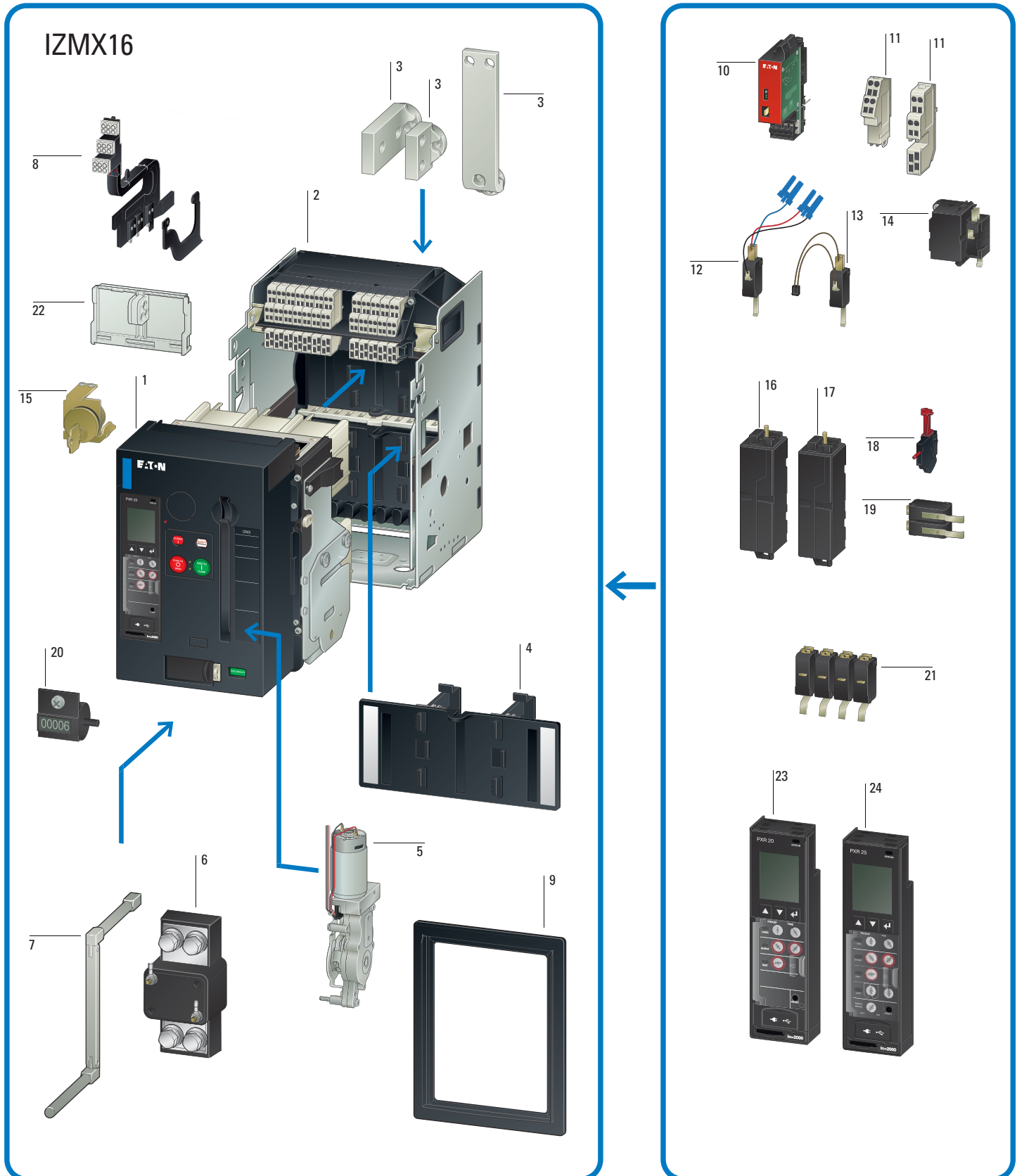
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Dimensions

Circuit Breaker IZMX16, switch-disconnector INX16	
Fixed mounted	69
Withdrawable units	73
Circuit Breaker IZMX40, switch-disconnector INX40	
Fixed mounted	77
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IZMX16, INX16, IZMX40, INX40



1 IZMX Circuit-breaker
IZMX16: 630 - 1600 A
IZMX40: 2000 - 4000 A

2 Cassette for withdrawable units
Shutters 3- and 4-pole
With and without control circuit terminals

3 Main terminal kits
Universal terminals, 3- and 4-pole
horizontal/vertical/front

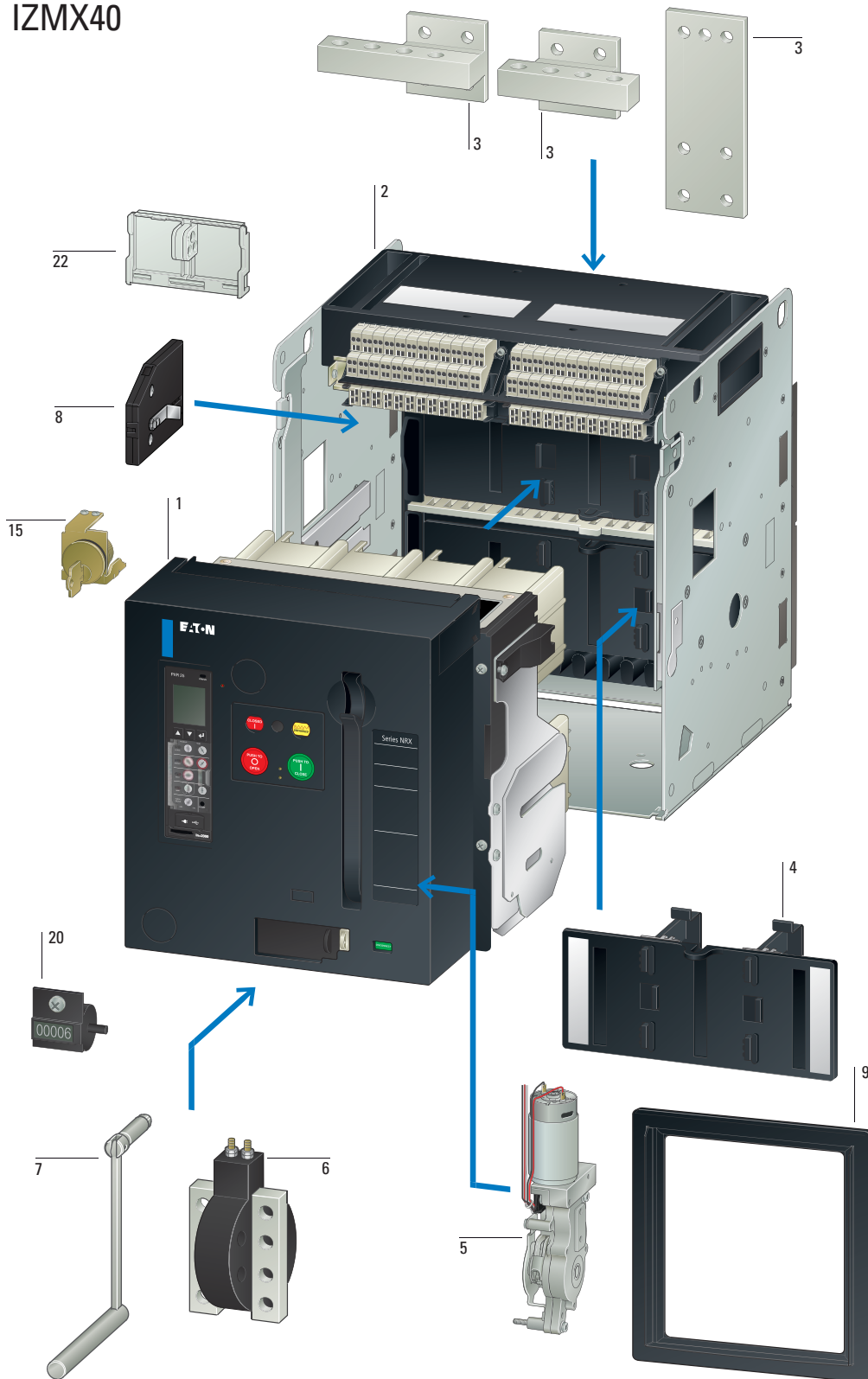
4 Shutter
Shutter for 3- and 4-pole

5 Motor operator
Automatic charging of the spring force storage for remote or local operations

6 Current sensor for neutral conductor
Current sensor for sensing the neutral-conductor-current.

7 Levering tool
Convenient collapsible lev-in tool for lev-in and out operation of the Breaker in and out of the Cassette. The lev-in tool is stored inside the breaker.

IZMX40



- 12 Latch check switch**
For external application usage.

- 13 Latch check switch**
For use with closing release.

- 14 Closing releases**
Closes the breaker by an electrical signal.

- 15 Key locking**
Locking of the breaker by a keylock.

- 16 Shunt releases**
Opens the breaker by an electrical signal.

- 17 Undervoltage releases**
Opens the breaker by a voltage-drop in the control-circuit.

- 18 Red-pop trip indicator**
Red-pop trip indicator signals a trip by the trip unit.

- 19 Trip indicator switches**
Overcurrent trip switch (OTS) signals a trip by the trip unit for remove signalisation.

- 20 Switching operations counters**
Counts the number of operations.

- 21 Auxiliary contacts**
Signalling switch ON-OFF

- 22 Locking facilities**
Plastic or metal

- 23 Trip unit - V**
PXR20 LI, LSI, (G)
+ options

- 24 Trip unit - P**
PXR25 LI, LSI, (G)
Modbus onboard + options

8 Position cell switches
Cell switch signals the position of the breaker inside of the cassette. Connect, Test and Disconnect Position.

9 Door escutcheon
Closes the gap between Breaker and Switchgear-door. IP31. An IP55 protective cover is available as well

10 Communication modules
Profibus DP, Modbus, Ethernet and Modbus onboard

11 Control circuit terminal units
Either 2 or 12 units

IZMX16, INX16, IZMX40, INX40

IZMX Circuit Breaker 1	Communication modules 10	Switching operations counters 20
IZMX16: 630 – 1600 A	Profibus DP, Ethernet	Counts the number of operations.
IZMX40: 800 – 4000 A	→ page 24	→ page 32
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Cassette for withdrawable units 2	Control circuit terminal units 11	Auxiliary contacts 21
With and without control circuit terminals	Either 2, 12 units	Signalling switch ON-OFF
→ page 25	→ page 25, 27	→ page 30
Main terminal sets 3	Latch check switch 12	Locking facilities 22
Universal terminals, 3- and 4-pole horizontal/vertical	For use with closing release.	Padlockable plastic or metal front covers for ON-OFF pushbuttons.
→ page 27	→ page 31	→ page 22
Cassette safety shutters 4	Latch check switch 13	Spare trip unit 23
Shutter for 3- and 4-pole	For external application usage.	PXR20, V-Type
→ page 26	→ page 31	→ page 22
Motor operator 5	Closing releases 14	Spare trip unit 24
Automatic charging of the spring force storage for remote or local operations	Closes the breaker by an electrical signal.	PXR25, P-Type
→ page 28	→ page 31	→ page 22
Current sensor for neutral conductor 6	Key locking 15	
Current sensor for sensing the neutral-conductor-current.	Locking of the breaker by a keylock	
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Levering tool 7	Shunt releases 16	
Convenient collapsible lev-in tool for lev-in and out operation of the Breaker in and out of the Cassette.	Opens the breaker by an electrical signal.	
The lev-in tool is stored inside the breaker.	→ page 29	
→ page 26	Undervoltage releases 17	
Position cell switches 8	Opens the breaker by a voltage-drop in the control-circuit.	
Cell switch signals the position of the breaker inside of the cassette. Connect, Test and Disconnect Position.	→ page 30	
→ page 26	Red-pop trip indicator 18	
Door escutcheon 9	Red-pop trip indicator signals a trip of the breaker by the trip unit.	
Closes the gap between Breaker and Switchgear-door. IP41.	→ page 23	
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IZMX16, IZMX40



IZMX16

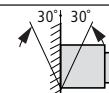


IZMX40

General

Standards			IEC/EN 60947	IEC/EN 60947
Ambient temperature	Storage	°C	-20 - +70	-20 - +70
	Operating (open)	°C	-20 - +70	-20 - +70

Mounting position



Utilization category			B	B
Protection type	IP31, IP55 device with protective cover			
Direction of incoming supply			as required	as required

Switching capacity

Rated Current (I_n)	630A, 800A, 1000A, 1250A, 1600A			800A, 1000A, 1250A, 1600A, 2000A, 2500A, 3200A, 4000A		
Type of circuit breaker	B	N	H	B	N	H
Rated impulse withstand voltage (U_{imp} , VAC)	12000	12000	12000	12000	12000	12000
Rated insulation voltage (U_i , VAC)	1000	1000	1000	1000	1000	1000
Rated operational voltage (U_e , VAC)	690	690	690	690	690	690
Ultimate breaking capacity (I_{cu} , kA)	240V 50/60Hz	42	85	85	66	85
	440V 50/60Hz	42	50	66	66	85
	690V 50/60Hz	42	42	42	66	75
Rated service breaking capacity (I_{cs} , kA)	240V 50/60Hz	42	50	66	66	85
	440V 50/60Hz	42	50	50	66	85
	690V 50/60Hz	42	42	42	66	75
Rated short-time withstand current (I_{cw} , kA)	1s/3s	42/-	42/-	42/-	66/53	85/66
Rated short-circuit making capacity (I_{cm} , kA)	440V 50/60Hz	88	105	145	145	187
	690V 50/60Hz	88	88	88	145	166
Operating delays (ms)	Closing delay	25		30		
	Closing delay electrical (via SR)	30		35		
	Opening delay electrical (via ST)	25		22		
	Opening delay electrical (via UVR)	50		37		
Maximum operating frequency (Operations/h)			60	60		

Durability and installation characteristics

Lifespan		630A-1600A	800A-1600A	2000A	2500A-4000A
	Mechanical, w/o maintenance	10000	10000	10000	10000
	Mechanical, w maintenance	20000	20000	20000	20000
	Electrical 440V, w/o maintenance	10000	10000	8000	5000
Dimensions (H × W × D, mm)	Fixed 3P	338 × 210 × 184		398 × 376 × 298	
	Fixed 4P	338 × 279 × 184		398 × 492 × 298	
	Withdrawable 3P	360 × 254 × 289		456 × 426 × 393	
	Withdrawable 4P	360 × 324 × 289		456 × 541 × 393	
Weight (kg)	Fixed 3P/4P	15/20		45/56	
	Withdrawable 3P/4P	39/47		69/86	
	Cassette	18/21		29/35	

Standard plus
Selective Protection

V Type (PXR20)
IZMX-PXRV
IZMX16/40...V...

Power/Energy
Protection

P Type (PXR25)
IZMX-PXRP
IZMX16/40...P...

Protection functions	LI, LSI; LSIG/LSIA (Optional)	LI, LSI; LSIG/LSIA (Optional)
Overload protection (L)		
Slopes	$I^{0.5}t, I_t, I^2t, I^4t, IEC A, B, C$	$I^{0.5}t, I_t, I^2t, I^4t, IEC A, B, C$
Overload trip (I_r), $\times I_n$	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 0.98, 1.0	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 0.98, 1.0
Long delay time t_r ($6 \times I_r$)	0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24 s	0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24 s
Short-time delayed short-circuit protection (S)		
Short delayed pickup (I_{sd}), $\times I_r$	1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10	1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10
Short delay time, flat characteristic curve (t_{sd})	0.0, 0.1, 0.2, 0.3, 0.4, 0.5 s ¹⁾	0.0, 0.1, 0.2, 0.3, 0.4, 0.5 s ¹⁾
Short delay time at $8 \times I_r, I^2t$ curve (t_{sd})	0.1, 0.3, 0.4, 0.5 s	0.1, 0.3, 0.4, 0.5 s
Non-delayed short-circuit protection (I)		
Non-delayed pickup (I_l), $\times I_n$	OFF, 2, 4, 5, 6, 7, 8, 10, 12, 15	OFF, 2, 4, 5, 6, 7, 8, 10, 12, 15
Optional ground fault protection (G)		
Ground/Earth fault alarm (A), $\times I_n$	0.2, 0.4, 0.6, 1.0	0.2, 0.4, 0.6, 1.0
Ground/Earth pickup (I_g), $\times I_n$	OFF, 0.2, 0.4, 0.6, 0.8, 1.0	OFF, 0.2, 0.4, 0.6, 0.8, 1.0
Short delay time, flat characteristic curve (t_g)	0.1, 0.2, 0.3, 0.4, 0.5 s	0.1, 0.2, 0.3, 0.4, 0.5 s
Short delay time at $0.625 \times I_n, I^2t$ curve (t_g)	0.1, 0.2, 0.3, 0.4, 0.5 s	0.1, 0.2, 0.3, 0.4, 0.5 s
Over-temperature trip	●	●
Thermal memory	●	●
Zone selectivity ZSI (see next page)	●	●
Making current release (MCR)	●	●
Further functions		
System diagnostic		
Status/Overload LED	●	●
Cause of trip LEDs	●	●
Current at trip point (display indication)	●	●
High load or ground fault alarm contact	●	●
System monitor		
LCD display	● ²⁾	● ²⁾
Current metering accuracy $\pm 1\%$ of Reading	$\pm 1\%$ of Reading	$\pm 1\%$ of Reading
Voltage (%) L to L	–	$\pm 1\%$ of Reading ³⁾
Power and energy (%)	–	$\pm 2\%$ of Reading ³⁾
Apparent power kVA and demand	–	● ³⁾
Reactive power kVAR	–	● ³⁾
Power factor	–	● ³⁾
Communications		
Onboard (ModBus)	○	●
External (CAM Module)	○	○
Power supply requirement	+24 V DC, optional	+24 V DC, optional
Additional functions		
Test Capability	Integral, PC+Power Xpert (free Download)	Integral, PC+Power Xpert (free Download)
Maintenance Mode ARMS (Arc Flash Reduction Maintenance System™)	○	○
Trip log	●	●
Electronic operations counter	●	●
Waveform capture	●	●
Breaker health monitor	●	●

Notes

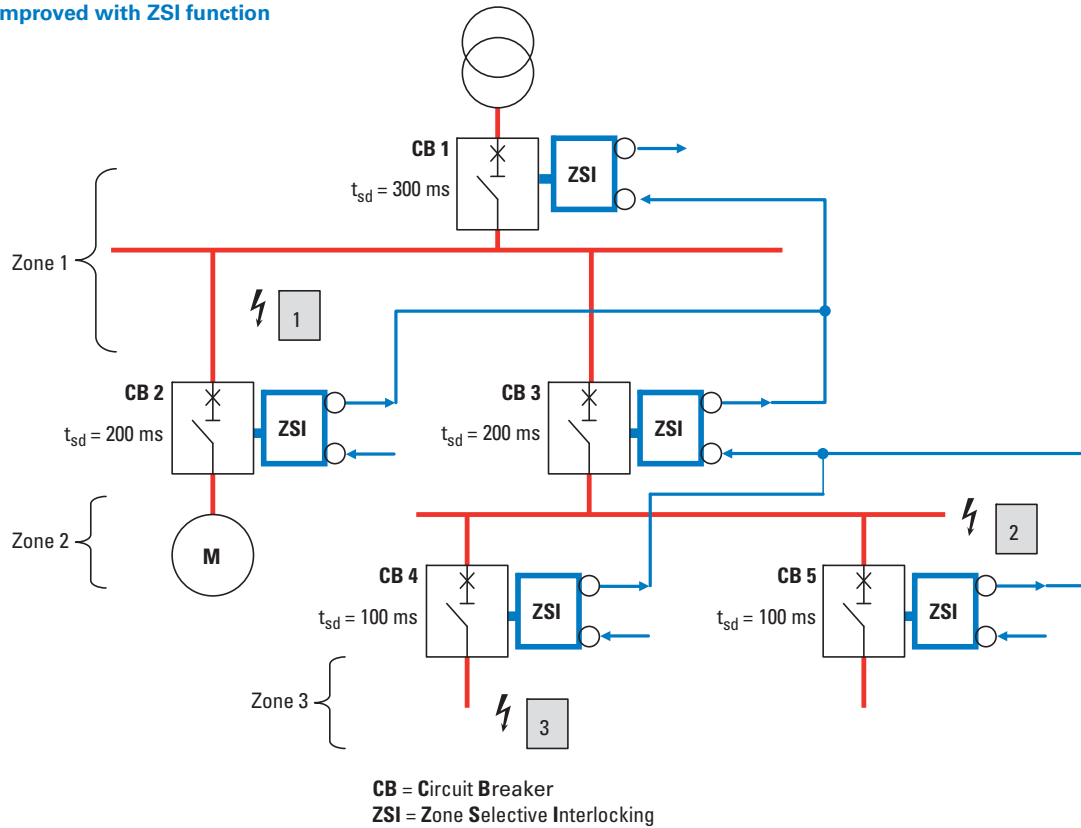
¹⁾ 0.1s: trip time is 0.06s to 0.1s; 0s: nominal clear time is 60ms with auxiliary power and 120ms without

²⁾ Requires external 24VDC control voltage supply when continuous current below 20% of I_n

³⁾ Requires external PT module(IZMX-PXR-PTM-1) for voltage sensing input to trip unit

● Standard ○ Optional – not available

Selectivity-improved with ZSI function



Zone Selective Interlocking (ZSI)

- Zone Selective Interlocking is described in the standard IEC 61912-2 Low voltage switchgear and controlgear.
- The term zone selective interlocking is used to describe a method of controlling circuit breakers to provide selectivity with very short interruption times for the breaker closest to the fault.
- There are different levels (zones) of protection that isolate the fault in the distribution system.
- ZSI may be applied for faults between phases or earth-faults or both.
- ZSI is applied to the short time faults where time selectivity can be achieved with the breakers between the zones.
- Because ZSI does not require auxiliary power or additional modules to operate set up time is minimal and application is easy.

Zone Selective Interlocking (ZSI) Example

Example A – Short-circuit at position 3

- Circuit Breakers CB1, CB3, CB4 all see the short circuit current and register a short delay pick-up.
- Circuit breaker CB4 sends a ZSI out-put blocking signal to CB3 ZSI input. CB3 sends a ZSI output blocking signal to CB1 ZSI input. CB1 sends a ZSI output signal that is not wired. This signal could be wired to a MV relay on the other side of the transformer with a compatible ZSI circuitry.
- CB1 registers the ZSI input signal and starts its timer for 300ms. CB3 registers the ZSI input signal and starts its timer for 200ms. CB4 gets no input from any lower zone circuit breaker. This breaker will then trip immediately without any time delay. CB4 interrupts the fault and CB1 and CB3 stop short delay timing because the fault current is gone.
- If for some reason CB4 does not open and interrupt the fault then at the end of its short delay time CB3 will open and interrupt the fault.

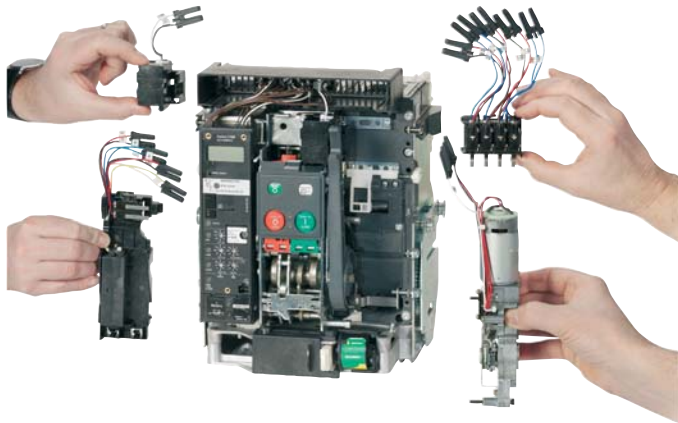
Example B – Short-circuit at position 2

- Circuit Breakers CB1, CB3, see the short circuit current and register a short delay pick-up. CB4 and CB5 do not see the fault current and do not send a ZSI output.
- Circuit breaker CB3 sends a ZSI out-put blocking signal to CB1 ZSI input. CB1 sends a ZSI output signal. In this example that signal is not wired.
- CB1 registers the ZSI input signal and starts a timer for 300ms. CB3 gets no input from any lower zone circuit breaker. This breaker will then trip immediately without any time delay. CB3 interrupts the fault and CB1 stops short delay timing because the fault current is gone. The clearance time is reduced by approximately 150ms.

Example C – Short-circuit at position 1

- Only Circuit breaker CB1 sees the short circuit current and registers a short delay pick-up. CB2, CB3, CB4 and CB5 do not see the fault current and do not send ZSI outputs.
- CB1 sends a ZSI output signal. In this example that signal is not wired.
- CB1 gets no input from any lower zone circuit breaker. This breaker will then trip immediately without any time delay. CB1 interrupts the fault and the clearance time is reduced by approximately 250ms.

Space-saving Circuit Breakers with useful accessories



Breaker rear side (withdrawable breaker)

Eaton Introduces IZMX Series

The IZMX Series from Eaton is a new series of air Circuit Breakers with an extensive range of accessories. The new range provides users with two compact frame sizes up to 4000A, modular design, common accessories, easy to integrate communications. The new trip unit family PXR with LCD display and USB connector is ready for the future. A linked PC with the free download software Power Xpert allows a comfortable use in reading testing and printing for documentation purposes. The innovative concept of the **IZMX16** makes it possible to install two withdrawable circuitbreakers in a 600 mm wide section. This enables more economical section design and also saves operating space. The compact modular design of the **IZMX40** offers customers a full range of high performance ratings in a single frame size simplifying the integration process into panel boards and switch boards. **IZMX** is a new generation and new standard in circuit protection.

Applications

The circuit breakers can be used in four main application areas depending on the type of equipment to be protected:

- System protection
- Motor protection
- Transformer protection
- Generator protection

These key applications make different demands on the switches, which are met with a range of control units.

Switches with closing release

They are particularly suitable for synchronization tasks.

Coupler switches

In addition to the Circuit Breakers, switch-disconnectors are also available. These are used, for example, as coupler switches between different power supplies. The switch-disconnectors are used as coupler switches for different sections of a network in conjunction with our automatic network switching device.

Modular Design, Common Accessories

The retrofitting of accessories is made considerably easy thanks to the efficient "plug & work" technology. Accessory drawers and snap-fit mechanisms make it possible to fit the latest accessories with virtually no tools. This flexibility allows you to respond easily to changing requirements within your system. Most accessories for IZMX are common to both the compact and standard frame sizes. All accessory kits are complete and ready for use.

Standard scope of delivery

- With the new IZMX range, you select a basic device that is already fitted with an electronic release.
- The standard mounting for both frames is on a horizontal mounting plate or on horizontal traverses in the switching cabinet. The IZMX16 can also be fastened to vertical mounting plates.
- With four-pole devices, the neutral conductor is arranged on the left (operators view).
- The neutral conductor is equipped with internal current transformer and can be loaded 100% like the phase conductors.
- The Circuit Breakers are provided with a standard mechanical reclosing lock-out. After an overload trip, the fault is usually examined first. After the fault is identified and rectified, the mechanical reclosing lock-out is reset by pressing the red mechanical trip indicator on the front of the Circuit Breaker.
- A "remote-reset" feature and an "automatic reset" are offered as additional ordering options. The remote reset enables resetting the breaker after an over current trip via a control voltage. The automatic reset option enables the circuit breaker to be restored to normal operation immediately after an over current trip (i.e. there is no mechanical reclosing lockout). In these applications compulsory fault analysis is intentionally avoided.

- The number of secondary control cable terminals depends on the accessories fitted.
- If a cassette is ordered without the basic device, this can be already fitted with the maximum number of control cable terminals. For greater economy in large plants, the cassette is also offered without control circuit terminals so that fitting can be carried out later at the installation or when accessories are required at a later time.
- The withdrawable basic device includes the primary finger clusters and levering-in mechanism. NOTE: Some manufacturers mount the primary finger clusters inside the cassette cell, which requiring shutdown of the panel board for inspection and maintenance.
- 2 changeover contacts are provided as standard for ON/OFF status indication.
- The door escutcheon is always included in the scope of delivery. With withdrawable designs this is supplied with the cassette (withdrawable unit).
- On withdrawable units the circuit breaker can be pulled out to inspect the arc chutes and the blue cluster condition (see above picture). With fixed units, it is recommended that sufficient space is provided above the circuit breaker to enable inspection. An additional cover is not required.
- All basic devices that are provided with selective protection (PXR20), feature a LCD display, and all devices provided with power measurement protection PXR25 feature several additional functions.
- On each Circuit Breaker the integrated PXR electronic release is factory fitted with a sealable protective cover.
- If a motor operator is ordered, the "Spring-operated stored energy mechanism tensioned" indicator switch is automatically provided.

Additional benefits Series IZMX

- The "universal" design of the main terminal offers maximum flexibility. The horizontal terminal can be rotated simply at the installation so that it can also be used as a vertical connection. With withdrawable units, additional terminal pieces can even be dispensed with. Both the IZMX breaker and the cassette offer an integrated flange terminal to which the system busbars can be connected directly.
- For this reason, the main terminals are not part of the standard scope of delivery. Do not forget to order terminal adaptations if required.
- Thanks to the separate mounting position, a switching operations counter can now be used also independently of a motor operator.
- Withdrawable unit operation: The unit is actuated with a hand crank supplied as a standard feature and has a secure position in the basic device.
- A coding mechanism between the basic device and the cassette prevents impermissible combinations ("Rejection Interlock").

External 24 V supply

- The standard protection functions of IZMX Series operate independently of an external control voltage supply. The power supply of the electronics unit, for example for overload and short-circuit protection, is implemented via the current transformers integrated in the Circuit Breaker.
- The selective PXR20(V) and power measurement release PXR25(P) with display can be fed with a 24 V DC supply so that the display function can be used without a load. An external 24 V DC power supply is needed if communication functions are required.

CurveSelect characteristics program

Inserting the settings of all protective devices in the system into the free download software confirms the selectivity of the system. All tripping curves can be printed into one diagram for documentation purposes.

ARMS™ ARC flash energy reduction technology optimize safety for maintenance personnel

Personnel safety is of paramount importance in today's work environment. Of recent concern is the potential for serious injury due to exposure to electrical arcs. Eaton's IZMX Series trip units offer the patented ARMS system (Arcflash Reduction Maintenance System™), which offers a non-delayed immediate disconnection in the event of an arc fault. This disconnection is even faster than that of a non-delayed short-circuit release. This function can be activated directly on the Circuit Breaker or via an external switch, such as when maintenance personnel enter a hazardous area.

Major Benefits of ARMS:

- Increased personnel safety – by limiting the available arc flash energy
- Simple to operate
- Enabled with circuit breaker door closed by a door mounted lockable switch
- Enabled only for the time required to perform the desired maintenance work
- Preserves overcurrent coordination under normal conditions
- Reduction in incident energy levels may permit reduced levels of Personal Protective Equipment (PPE), therefore improving worker comfort and mobility

Other components of the ARCON arc fault protection system, in conjunction with Series IZMX, enable an expansion of arc fault protection in stages.

Selection criteria for Circuit Breakers

Fundamental criteria for the selection of Circuit Breakers:

- **Max short-circuit current I_k max** at the Circuit Breaker' point of installation: this value determines the short-circuit breaking capacity or the short-circuit current carrying capacity of the Circuit Breaker. It is compared with the I_{cu} , I_{cs} and I_{cw} values of the switch and essentially determines its size (see technical data).
 - **Rated operational current I_n** which should flow through the respective branch circuit: This value must not be greater than the maximum switch rated operational current of the Circuit Breaker. The rated operational current can be adjusted down using additional rated operational current modules.
 - **Ambient temperature of the circuit breaker:** This is generally the internal temperature in the control panel. Observe the derating values with increased ambient temperature (see Technical data).
 - **Circuit Breaker type:** fixed mounted or withdrawable units, 3 or 4 pole.
- Minimum short-circuit current, which flows through the switching device: The release must recognize this value as a short-circuit and may react with a trip.
- **Protection functions of the circuit breaker:** This is determined by the selection of the respective overcurrent release.

For additional resources and tools for selecting Eaton Air Circuit Breakers please visit us as www.eaton.com/seriesnrx.

Communication Options for IZMX Series

With the respective communication module - PCAM, MCAM or ECAM (Profibus-DP / Modbus/ Ethernet Communications Adapter Module) - every circuit breaker of the NRX series is equipped for modern communication and is fit for the future. The databus not only allows to transmit information, but also to receive commands/settings. Onboard Modbus communication is standard on the PXR25 (P type) trip unit and optional on the PXR20(V type) trip unit upon order. Additional PCAM, MCAM or ECAM module can be installed externally for PXR25 to expand the communication capability. (No more than one external CAM module can be installed).

PROFIBUS-DP configuration

Communications module IZMX-PCAM has a 9-pin D-Sub socket for connection to PROFIBUS. The module works as a slave on PROFIBUS-DP; the data is defined through a standardized device master data file, which permits smooth integration of IZMX in a DP line.

- On the PROFIBUS-DP side the module supports automatic baud rate detection; the PROFIBUS-DP bus address is set through the trip unit's display.
- The maximum cable length is 2.4 km.
- To operate the IZMX-PCAM, a supply voltage of 24 V DC is required.
- The data connection to the Circuit Breaker is implemented internally through a serial highspeed data connection.

Data access via PROFIBUS-DP

The data on PROFIBUS-DP are offered according to the profile for low-voltage switchgear (LVSG) of PROFIBUS International (PROFIBUS and PROFINET User Group). Five different data structures with varying numbers of parameters are available through the device master data file. This allows a data filter to be easily implemented, which simplifies integration of the IZMX data into the control system.

Modbus configuration

The new PXR has an on board Modbus RTU controller. The device operates as a Modbus slave.

- Baud rate, data format and address (max. 247) for Modbus are set with the input keys of the trip unit. The maximum cable length is 1.2 km.
- The Modbus must be terminated with a 120 Ω terminating resistor.
- To operate the onboard Modbus, a supply voltage of 24 V DC is required.
- The data connection to the Circuit Breaker is implemented internally through a serial highspeed data connection.

Data access via Modbus

The data is contained in comprehensive data tables. Each data point is available as floating-point (IEEE) or fixed-point value. This variance allows the integration of the IZMX to be adapted to the Modbus architecture. This enables a simple means of implementing a data filter, which facilitates the integration of IZMX data in the control system.

Ethernet configuration

Communications module IZMX-ECAM has standard RJ45 socket for connection to Ethernet.

- IP address and related parameters are set through the trip unit's display.
- The data connection to the Circuit Breaker is implemented internally through a serial high speed data connection.
- To operate the IZMX-ECAM, a supply voltage of 24 V DC is required.

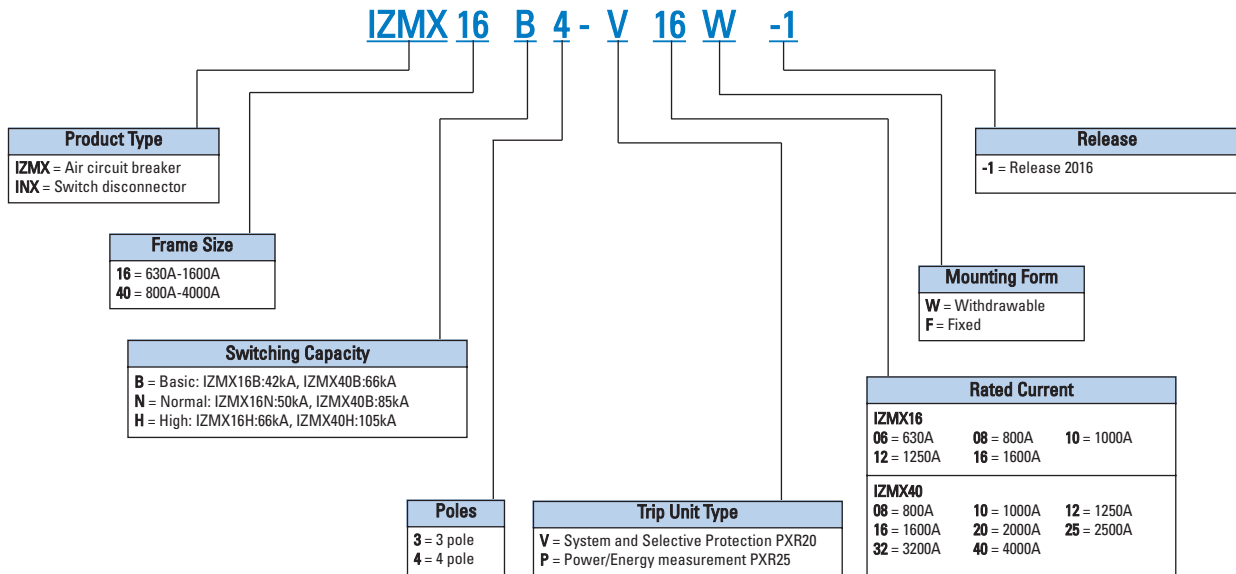
Data access via Ethernet

The data is contained in different web pages structured according to the topics „Data View“, „Alarms“, „Logs“ and „Configuration“. This variance allows the integration of the IZMX to be adapted to all Ethernet networks supporting http protocol. An „around the world access“ to the breaker becomes reality and using the SNMP protocol alarm messages can be transported everywhere.

Configuration



IZMX Air Circuit Breakers Catalog Number



Selection Examples

IZMX40 fixed 230VAC electrically operated example (item 3-5 for remote operation):

- ① IZMX40B3-V16F-1 Fixed breaker, including 2a2b Aux contact
- ② IZMX-THV403-3200-1 Main terminal adapter – horizontal/vertical (3200A and below)
- ③ +IZMX-M40-230AD-1 220-240 VAC/DC Charging motor
- ④ +IZMX-ST230AD-1 220-240 VAC/DC Shunt trip
- ⑤ +IZMX-SR230AD-1 220-240 VAC/DC Closing (spring) release
- ⑥ +IZMX-AS22-1 Additional 2a2b Aux contact (4a4b total)
- ⑦ +IZMX-OTS-1 Over current trip switch(OTS) 2CO

IZMX40 withdrawable 230VAC electrically operated example (item 5-7 for remote operation):

- ① IZMX40B3-V16W-1 Withdrawable breaker, including 2a2b Aux contact
- ② +IZMX-CAS403-2000-1 Cassette(2000A and below)
- ③ +IZMX-SH403-1 Safety shutters
- ④ IZMX-THV403-3200-1 Main terminal adapter – horizontal/vertical (3200A and below)
- ⑤ +IZMX-M40-230AD-1 220-240 VAC/DC Charging motor
- ⑥ +IZMX-ST230AD-1 220-240 VAC/DC Shunt trip
- ⑦ +IZMX-SR230AD-1 220-240 VAC/DC Closing (spring) release
- ⑧ +IZMX-AS22-1 Additional 2a2b Aux contact (4a4b total)
- ⑨ +IZMX-OTS-1 Over current trip switch(OTS) 2CO

Notes

All „+“ articles are factory installed accessories and ready for use.
All accessory articles without „+“ are complete „field kits“.

THE KITS CONTAIN ALL REQUIRED PARTS, INSTALLATION INSTRUCTION IL AND IN CASE OF ELECTRICAL ACCESSORY THE CONTROL TERMINALS.

IZMX16...V..., 3pole




Switching capacity $I_{cu}=I_{cs}$ kA/kA	Rated current $I_n = I_U$ A	Setting range Overload releases I_r A	Short-circuit releases		Fixed Part no. Article no.	Price see price list	Withdrawable Cassettes need to be ordered separately. Part no. Article no.	Price see price list	Std. pack
			Delayed $I_{sd} = I_r \times \dots$	Non-delayed $I_i = I_n \times \dots$					
Circuit Breaker for system and selective protection									
With flange terminals. Other termination see page 27.									
3 pole									
42/42	630	252 - 630	1.5 - 10	2 - 15, OFF	IZMX16B3-V06F-1 183395		IZMX16B3-V06W-1 183341		1
	800	320 - 800			IZMX16B3-V08F-1 183396		IZMX16B3-V08W-1 183342		1
	1000	400 - 1000			IZMX16B3-V10F-1 183328		IZMX16B3-V10W-1 183343		1
	1250	500 - 1250			IZMX16B3-V12F-1 183329		IZMX16B3-V12W-1 183344		1
	1600	640 - 1600			IZMX16B3-V16F-1 183330		IZMX16B3-V16W-1 183345		1
50/50	630	252 - 630			IZMX16N3-V06F-1 183331		IZMX16N3-V06W-1 183346		1
	800	320 - 800			IZMX16N3-V08F-1 183332		IZMX16N3-V08W-1 183347		1
	1000	400 - 1000			IZMX16N3-V10F-1 183333		IZMX16N3-V10W-1 183348		1
	1250	500 - 1250			IZMX16N3-V12F-1 183334		IZMX16N3-V12W-1 183349		1
	1600	640 - 1600			IZMX16N3-V16F-1 183335		IZMX16N3-V16W-1 183350		1
66/50	630	252 - 630			IZMX16H3-V06F-1 183336		IZMX16H3-V06W-1 183351		1
	800	320 - 800			IZMX16H3-V08F-1 183337		IZMX16H3-V08W-1 183352		1
	1000	400 - 1000			IZMX16H3-V10F-1 183338		IZMX16H3-V10W-1 183353		1
	1250	500 - 1250			IZMX16H3-V12F-1 183339		IZMX16H3-V12W-1 183354		1
	1600	640 - 1600			IZMX16H3-V16F-1 183340		IZMX16H3-V16W-1 183355		1

Basic devices

IZMX16...P..., 3pole

Switching capacity	Rated current	Setting range Overload releases	Short-circuit releases		Fixed		Withdrawable		Std. pack
			Delayed	Non-delayed	Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	
$I_{cu}=I_{cs}$ kA/kA	$I_n = I_U$ A	I_r A	$I_{sd} = I_r \times \dots$	Non-delayed $I_i = I_n \times \dots$					
<p>Circuit Breaker with power and energy metering. Only one voltage transformer PTM for 1-16 breakers required. With flange terminals. Other termination see page 27.</p>									
3 pole									
42/42	630	252 - 630	1.5 - 10	2 - 15, OFF	IZMX16B3-P06F-1 183356		IZMX16B3-P06W-1 183469		1
	800	320 - 800			IZMX16B3-P08F-1 183357		IZMX16B3-P08W-1 183470		1
	1000	400 - 1000			IZMX16B3-P10F-1 183358		IZMX16B3-P10W-1 183471		1
	1250	500 - 1250			IZMX16B3-P12F-1 183359		IZMX16B3-P12W-1 183472		1
	1600	640 - 1600			IZMX16B3-P16F-1 183360		IZMX16B3-P16W-1 183473		1
50/50	630	252 - 630			IZMX16N3-P06F-1 183361		IZMX16N3-P06W-1 183474		1
	800	320 - 800			IZMX16N3-P08F-1 183362		IZMX16N3-P08W-1 183475		1
	1000	400 - 1000			IZMX16N3-P10F-1 183363		IZMX16N3-P10W-1 183476		1
	1250	500 - 1250			IZMX16N3-P12F-1 183364		IZMX16N3-P12W-1 183477		1
	1600	640 - 1600			IZMX16N3-P16F-1 183463		IZMX16N3-P16W-1 183478		1
66/50	630	252 - 630			IZMX16H3-P06F-1 183464		IZMX16H3-P06W-1 183479		1
	800	320 - 800			IZMX16H3-P08F-1 183465		IZMX16H3-P08W-1 183480		1
	1000	400 - 1000			IZMX16H3-P10F-1 183466		IZMX16H3-P10W-1 183481		1
	1250	500 - 1250			IZMX16H3-P12F-1 183467		IZMX16H3-P12W-1 183482		1
	1600	640 - 1600			IZMX16H3-P16F-1 183468		IZMX16H3-P16W-1 183483		1

IZMX16...V..., 4pole

Switching capacity	Rated current	Setting range Overload releases	Short-circuit releases		Fixed	Price see price list	Withdrawable Cassettes need to be ordered separately.	Price see price list	Std. pack
			Delayed	Non-delayed					
$I_{cu}=I_{cs}$	$I_n = I_U$	I_r	$I_{sd} = I_r \times \dots$	$I_i = I_n \times \dots$	Part no. Article no.		Part no. Article no.		
kA/kA	A	A							
									

Circuit Breaker for system and selective protection




With flange terminals. Other termination see page 27.

4 pole

Switching capacity	Rated current	Setting range	Short-circuit releases	Part no. Article no.	Price	Part no. Article no.	Price	Std. pack
42/42	630	252 - 630	1.5 - 10	2 - 15, OFF	IZMX16B4-V06F-1 183544		IZMX16B4-V06W-1 183559	1
	800	320 - 800			IZMX16B4-V08F-1 183545		IZMX16B4-V08W-1 183560	1
	1000	400 - 1000			IZMX16B4-V10F-1 183546		IZMX16B4-V10W-1 183561	1
	1250	500 - 1250			IZMX16B4-V12F-1 183547		IZMX16B4-V12W-1 183562	1
	1600	640 - 1600			IZMX16B4-V16F-1 183548		IZMX16B4-V16W-1 183563	1
50/50	630	252 - 630		IZMX16N4-V06F-1 183549		IZMX16N4-V06W-1 183564	1	
	800	320 - 800		IZMX16N4-V08F-1 183550		IZMX16N4-V08W-1 183565	1	
	1000	400 - 1000		IZMX16N4-V10F-1 183551		IZMX16N4-V10W-1 183566	1	
	1250	500 - 1250		IZMX16N4-V12F-1 183552		IZMX16N4-V12W-1 183567	1	
	1600	640 - 1600		IZMX16N4-V16F-1 183553		IZMX16N4-V16W-1 183568	1	
66/50	630	252 - 630		IZMX16H4-V06F-1 183554		IZMX16H4-V06W-1 183569	1	
	800	320 - 800		IZMX16H4-V08F-1 183555		IZMX16H4-V08W-1 183570	1	
	1000	400 - 1000		IZMX16H4-V10F-1 183556		IZMX16H4-V10W-1 183571	1	
	1250	500 - 1250		IZMX16H4-V12F-1 183557		IZMX16H4-V12W-1 183572	1	
	1600	640 - 1600		IZMX16H4-V16F-1 183558		IZMX16H4-V16W-1 183397	1	

Basic devices

IZMX16...P..., 4pole

Switching capacity	Rated current	Setting range Overload releases	Short-circuit releases		Fixed		Withdrawable		Std. pack
			Delayed	Non-delayed	Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	
$I_{cu}=I_{cs}$ kA/kA	$I_n = I_U$ A	I_r A	$I_{sd} = I_r \times \dots$	$I_i = I_n \times \dots$					
									
Circuit Breaker with power and energy metering.									
Only one voltage transformer PTM for 1-16 breakers required.									
With flange terminals. Other termination see page 27.									
4 pole									
42/42	630	252 - 630	1.5 - 10	2 - 15, OFF	IZMX16B4-P06F-1 183398		IZMX16B4-P06W-1 183457		1
	800	320 - 800			IZMX16B4-P08F-1 183399		IZMX16B4-P08W-1 183458		1
	1000	400 - 1000			IZMX16B4-P10F-1 183400		IZMX16B4-P10W-1 183459		1
	1250	500 - 1250			IZMX16B4-P12F-1 183401		IZMX16B4-P12W-1 183460		1
	1600	640 - 1600			IZMX16B4-P16F-1 183402		IZMX16B4-P16W-1 183461		1
50/50	630	252 - 630			IZMX16N4-P06F-1 183403		IZMX16N4-P06W-1 183462		1
	800	320 - 800			IZMX16N4-P08F-1 183404		IZMX16N4-P08W-1 183408		1
	1000	400 - 1000			IZMX16N4-P10F-1 183405		IZMX16N4-P10W-1 183409		1
	1250	500 - 1250			IZMX16N4-P12F-1 183406		IZMX16N4-P12W-1 183410		1
	1600	640 - 1600			IZMX16N4-P16F-1 183407		IZMX16N4-P16W-1 183411		1
66/50	630	252 - 630			IZMX16H4-P06F-1 183452		IZMX16H4-P06W-1 183412		1
	800	320 - 800			IZMX16H4-P08F-1 183453		IZMX16H4-P08W-1 183413		1
	1000	400 - 1000			IZMX16H4-P10F-1 183454		IZMX16H4-P10W-1 183414		1
	1250	500 - 1250			IZMX16H4-P12F-1 183455		IZMX16H4-P12W-1 183415		1
	1600	640 - 1600			IZMX16H4-P16F-1 183456		IZMX16H4-P16W-1 183416		1

Basic devices

INX16..., 3/4pole

Rated short-circuit making capacity up to 440 V 50/60 Hz I_{cm}	Rated current = rated uninterrupted current $I_n = I_U$ A	Rated short time -withstand current 50/60 Hz $t = 1$ s I_{cw}	Fixed		Withdrawable Cassettes need to be ordered separately.		Std. pack
			Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	
kA		kA					
Switch disconnectors INX16							
With flange terminals. Other termination see page 27.							
3 pole							
88	630	42	INX16B3-06F-1 183447		INX16B3-06W-1 183639		1
	800		INX16B3-08F-1 183448		INX16B3-08W-1 183640		1
	1000		INX16B3-10F-1 183449		INX16B3-10W-1 183641		1
	1250		INX16B3-12F-1 183450		INX16B3-12W-1 183642		1
	1600		INX16B3-16F-1 183451		INX16B3-16W-1 183643		1
4 pole							
88	630	42	INX16B4-06F-1 183644		INX16B4-06W-1 183649		1
	800		INX16B4-08F-1 183645		INX16B4-08W-1 183650		1
	1000		INX16B4-10F-1 183646		INX16B4-10W-1 183651		1
	1250		INX16B4-12F-1 183647		INX16B4-12W-1 183652		1
	1600		INX16B4-16F-1 183648		INX16B4-16W-1 183653		1

Basic devices

IZMX40...V..., 3pole

Switching capacity	Rated current	Setting range Overload releases	Short-circuit releases		Fixed	Price see price list	Withdrawable Cassettes need to be ordered separately.	Std. pack
			Delayed	Non-delayed				
$I_{cu}=I_{cs}$ kA/kA	$I_n = I_U$ A	I_r A	$I_{sd} = I_r \times \dots$	$I_i = I_n \times \dots$				
Circuit Breaker for system and selective protection								
With flange terminals. Other termination see page 27.								
3 pole								
66/66	800	320 - 800	1.5 - 10	2 - 15, OFF	IZMX40B3-V08F-1 183702		IZMX40B3-V08W-1 183726	1
	1000	400 - 1000			IZMX40B3-V10F-1 183703		IZMX40B3-V10W-1 183727	1
	1250	500 - 1250			IZMX40B3-V12F-1 183704		IZMX40B3-V12W-1 183728	1
	1600	640 - 1600			IZMX40B3-V16F-1 183705		IZMX40B3-V16W-1 183729	1
	2000	800 - 2000			IZMX40B3-V20F-1 183706		IZMX40B3-V20W-1 183730	1
	2500	1000 - 2500			IZMX40B3-V25F-1 183707		IZMX40B3-V25W-1 183731	1
	3200	1280 - 3200			IZMX40B3-V32F-1 183708		IZMX40B3-V32W-1 183732	1
	4000	1600 - 4000			IZMX40B3-V40F-1 183709		IZMX40B3-V40W-1 183733	1
85/85	800	320 - 800			IZMX40N3-V08F-1 183710		IZMX40N3-V08W-1 183734	1
	1000	400 - 1000			IZMX40N3-V10F-1 183711		IZMX40N3-V10W-1 183735	1
	1250	500 - 1250			IZMX40N3-V12F-1 183712		IZMX40N3-V12W-1 183736	1
	1600	640 - 1600			IZMX40N3-V16F-1 183713		IZMX40N3-V16W-1 183737	1
	2000	800 - 2000			IZMX40N3-V20F-1 183714		IZMX40N3-V20W-1 183738	1
	2500	1000 - 2500			IZMX40N3-V25F-1 183715		IZMX40N3-V25W-1 183739	1
	3200	1280 - 3200			IZMX40N3-V32F-1 183716		IZMX40N3-V32W-1 183740	1
	4000	1600 - 4000			IZMX40N3-V40F-1 183717		IZMX40N3-V40W-1 183741	1
105/105	800	320 - 800			IZMX40H3-V08F-1 183718		IZMX40H3-V08W-1 183742	1
	1000	400 - 1000			IZMX40H3-V10F-1 183719		IZMX40H3-V10W-1 183743	1
	1250	500 - 1250			IZMX40H3-V12F-1 183720		IZMX40H3-V12W-1 183744	1
	1600	640 - 1600			IZMX40H3-V16F-1 183721		IZMX40H3-V16W-1 183745	1
	2000	800 - 2000			IZMX40H3-V20F-1 183722		IZMX40H3-V20W-1 183746	1
	2500	1000 - 2500			IZMX40H3-V25F-1 183723		IZMX40H3-V25W-1 183747	1
	3200	1280 - 3200			IZMX40H3-V32F-1 183724		IZMX40H3-V32W-1 183748	1
	4000	1600 - 4000			IZMX40H3-V40F-1 183725		IZMX40H3-V40W-1 183573	1

IZMX40...P..., 3pole

Switching capacity $I_{cu}=I_{cs}$ kA/kA	Rated current $I_n = I_U$ A	Setting range Overload releases I_r A	Short-circuit releases		Fixed Part no. Article no.	Price see price list	Withdrawable Cassettes need to be ordered separately. Part no. Article no.	Price see price list	Std. pack
			Delayed $I_{sd} = I_r \times \dots$	Non-delayed $I_i = I_n \times \dots$					
Circuit Breaker with power and energy metering. Only one voltage transformer PTM for 1-16 breakers required. With flange terminals. Other termination see page 27.									
3 pole									
66/66	800	320 - 800	1.5 - 10	2 - 15, OFF	IZMX40B3-P08F-1 183574		IZMX40B3-P08W-1 183587		1
	1000	400 - 1000			IZMX40B3-P10F-1 183575		IZMX40B3-P10W-1 183588		1
	1250	500 - 1250			IZMX40B3-P12F-1 183576		IZMX40B3-P12W-1 183589		1
	1600	640 - 1600			IZMX40B3-P16F-1 183577		IZMX40B3-P16W-1 183590		1
	2000	800 - 2000			IZMX40B3-P20F-1 183578		IZMX40B3-P20W-1 183591		1
	2500	1000 - 2500			IZMX40B3-P25F-1 183579		IZMX40B3-P25W-1 183592		1
	3200	1280 - 3200			IZMX40B3-P32F-1 183580		IZMX40B3-P32W-1 183593		1
	4000	1600 - 4000			IZMX40B3-P40F-1 183581		IZMX40B3-P40W-1 183594		1
	85/85	800			320 - 800	1.5 - 10	2 - 15, OFF	IZMX40N3-P08F-1 183582	
1000		400 - 1000	IZMX40N3-P10F-1 183583		IZMX40N3-P10W-1 183596				1
1250		500 - 1250	IZMX40N3-P12F-1 183628		IZMX40N3-P12W-1 183597				1
1600		640 - 1600	IZMX40N3-P16F-1 183629		IZMX40N3-P16W-1 183598				1
2000		800 - 2000	IZMX40N3-P20F-1 183630		IZMX40N3-P20W-1 183599				1
2500		1000 - 2500	IZMX40N3-P25F-1 183631		IZMX40N3-P25W-1 183600				1
3200		1280 - 3200	IZMX40N3-P32F-1 183632		IZMX40N3-P32W-1 183601				1
4000		1600 - 4000	IZMX40N3-P40F-1 183633		IZMX40N3-P40W-1 183602				1
105/105		800	320 - 800	1.5 - 10	2 - 15, OFF			IZMX40H3-P08F-1 183634	
	1000	400 - 1000	IZMX40H3-P10F-1 183635				IZMX40H3-P10W-1 183604		1
	1250	500 - 1250	IZMX40H3-P12F-1 183636				IZMX40H3-P12W-1 183605		1
	1600	640 - 1600	IZMX40H3-P16F-1 183637				IZMX40H3-P16W-1 183606		1
	2000	800 - 2000	IZMX40H3-P20F-1 183638				IZMX40H3-P20W-1 183607		1
	2500	1000 - 2500	IZMX40H3-P25F-1 183584				IZMX40H3-P25W-1 183608		1
	3200	1280 - 3200	IZMX40H3-P32F-1 183585				IZMX40H3-P32W-1 183609		1
	4000	1600 - 4000	IZMX40H3-P40F-1 183586				IZMX40H3-P40W-1 183610		1

Basic devices

IZMX40...V..., 4pole

Switching capacity	Rated current	Setting range Overload releases	Short-circuit releases		Fixed		Withdrawable		Std. pack
			Delayed	Non-delayed	Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	
$I_{cu}=I_{cs}$ kA/kA	$I_n = I_U$ A	I_r A	$I_{sd} = I_r \times \dots$	Non-delayed $I_i = I_n \times \dots$					
<p>Circuit Breaker for system and selective protection With flange terminals. Other termination see page 27.</p>									
4 pole									
66/66	800	320 - 800	1.5 - 10	2 - 15, OFF	IZMX40B4-V08F-1 183894			IZMX40B4-V08W-1 183918	1
	1000	400 - 1000			IZMX40B4-V10F-1 183895			IZMX40B4-V10W-1 183919	1
	1250	500 - 1250			IZMX40B4-V12F-1 183896			IZMX40B4-V12W-1 183920	1
	1600	640 - 1600			IZMX40B4-V16F-1 183897			IZMX40B4-V16W-1 183921	1
	2000	800 - 2000			IZMX40B4-V20F-1 183898			IZMX40B4-V20W-1 183922	1
	2500	1000 - 2500			IZMX40B4-V25F-1 183899			IZMX40B4-V25W-1 183923	1
	3200	1280 - 3200			IZMX40B4-V32F-1 183900			IZMX40B4-V32W-1 183924	1
	4000	1600 - 4000			IZMX40B4-V40F-1 183901			IZMX40B4-V40W-1 183749	1
85/85	800	320 - 800			IZMX40N4-V08F-1 183902			IZMX40N4-V08W-1 183750	1
	1000	400 - 1000			IZMX40N4-V10F-1 183903			IZMX40N4-V10W-1 183751	1
	1250	500 - 1250			IZMX40N4-V12F-1 183904			IZMX40N4-V12W-1 183752	1
	1600	640 - 1600			IZMX40N4-V16F-1 183905			IZMX40N4-V16W-1 183753	1
	2000	800 - 2000			IZMX40N4-V20F-1 183906			IZMX40N4-V20W-1 183754	1
	2500	1000 - 2500			IZMX40N4-V25F-1 183907			IZMX40N4-V25W-1 183755	1
	3200	1280 - 3200			IZMX40N4-V32F-1 183908			IZMX40N4-V32W-1 183756	1
	4000	1600 - 4000			IZMX40N4-V40F-1 183909			IZMX40N4-V40W-1 183757	1
105/105	800	320 - 800			IZMX40H4-V08F-1 183910			IZMX40H4-V08W-1 183758	1
	1000	400 - 1000			IZMX40H4-V10F-1 183911			IZMX40H4-V10W-1 183759	1
	1250	500 - 1250			IZMX40H4-V12F-1 183912			IZMX40H4-V12W-1 183804	1
	1600	640 - 1600			IZMX40H4-V16F-1 183913			IZMX40H4-V16W-1 183805	1
	2000	800 - 2000			IZMX40H4-V20F-1 183914			IZMX40H4-V20W-1 183806	1
	2500	1000 - 2500			IZMX40H4-V25F-1 183915			IZMX40H4-V25W-1 183807	1
	3200	1280 - 3200			IZMX40H4-V32F-1 183916			IZMX40H4-V32W-1 183808	1
	4000	1600 - 4000			IZMX40H4-V40F-1 183917			IZMX40H4-V40W-1 183809	1

IZMX40...P..., 4pole

Switching capacity $I_{cu}=I_{cs}$ kA/kA	Rated current $I_n = I_U$ A	Setting range Overload releases I_r A	Short-circuit releases		Fixed Part no. Article no.	Price see price list	Withdrawable Cassettes need to be ordered separately. Part no. Article no.	Price see price list	Std. pack
			Delayed $I_{sd} = I_r \times \dots$	Non-delayed $I_i = I_n \times \dots$					
Circuit Breaker with power and energy metering. Only one voltage transformer PTM for 1-16 breakers required. With flange terminals. Other termination see page 27.									
4 pole									
66/66	800	320 - 800	1.5 - 10	2 - 15, OFF	IZMX40B4-P08F-1 183810		IZMX40B4-P08W-1 183779		1
	1000	400 - 1000			IZMX40B4-P10F-1 183811		IZMX40B4-P10W-1 183780		1
	1250	500 - 1250			IZMX40B4-P12F-1 183812		IZMX40B4-P12W-1 183781		1
	1600	640 - 1600			IZMX40B4-P16F-1 183813		IZMX40B4-P16W-1 183782		1
	2000	800 - 2000			IZMX40B4-P20F-1 183814		IZMX40B4-P20W-1 183783		1
	2500	1000 - 2500			IZMX40B4-P25F-1 183760		IZMX40B4-P25W-1 183784		1
	3200	1280 - 3200			IZMX40B4-P32F-1 183761		IZMX40B4-P32W-1 183785		1
	4000	1600 - 4000			IZMX40B4-P40F-1 183762		IZMX40B4-P40W-1 183786		1
	85/85	800			320 - 800	1.5 - 10	2 - 15, OFF	IZMX40N4-P08F-1 183763	
1000		400 - 1000	IZMX40N4-P10F-1 183764		IZMX40N4-P10W-1 183788				1
1250		500 - 1250	IZMX40N4-P12F-1 183765		IZMX40N4-P12W-1 183789				1
1600		640 - 1600	IZMX40N4-P16F-1 183766		IZMX40N4-P16W-1 183790				1
2000		800 - 2000	IZMX40N4-P20F-1 183767		IZMX40N4-P20W-1 183791				1
2500		1000 - 2500	IZMX40N4-P25F-1 183768		IZMX40N4-P25W-1 183792				1
3200		1280 - 3200	IZMX40N4-P32F-1 183769		IZMX40N4-P32W-1 183793				1
4000		1600 - 4000	IZMX40N4-P40F-1 183770		IZMX40N4-P40W-1 183794				1
105/105		800	320 - 800	1.5 - 10	2 - 15, OFF			IZMX40H4-P08F-1 183771	
	1000	400 - 1000	IZMX40H4-P10F-1 183772				IZMX40H4-P10W-1 183796		1
	1250	500 - 1250	IZMX40H4-P12F-1 183773				IZMX40H4-P12W-1 183797		1
	1600	640 - 1600	IZMX40H4-P16F-1 183774				IZMX40H4-P16W-1 183798		1
	2000	800 - 2000	IZMX40H4-P20F-1 183775				IZMX40H4-P20W-1 183799		1
	2500	1000 - 2500	IZMX40H4-P25F-1 183776				IZMX40H4-P25W-1 183800		1
	3200	1280 - 3200	IZMX40H4-P32F-1 183777				IZMX40H4-P32W-1 183801		1
	4000	1600 - 4000	IZMX40H4-P40F-1 183778				IZMX40H4-P40W-1 183802		1

Basic devices

INX40..., 3pole

Rated short making capacity up to 440 V 50/60 Hz I_{cm}	Rated current = rated uninterrupted current $I_n = I_U$ A	Rated short-time withstand current 50/60 Hz $t = 1$ s I_{cw}	Fixed Part no. Article no.	Price see price list	Withdrawable Cassettes need to be ordered separately. Part no. Article no.	Price see price list	Std. pack
kA		kA					
Switch disconnectors INX40							
With flange terminals. Other termination see page 27.							
3 pole							
144	800	66	INX40B3-08F-1 184040		INX40B3-08W-1 184056		1
	1000		INX40B3-10F-1 184041		INX40B3-10W-1 184057		1
	1250		INX40B3-12F-1 184042		INX40B3-12W-1 184058		1
	1600		INX40B3-16F-1 184043		INX40B3-16W-1 184059		1
	2000		INX40B3-20F-1 184044		INX40B3-20W-1 184060		1
	2500		INX40B3-25F-1 184045		INX40B3-25W-1 184061		1
	3200		INX40B3-32F-1 184046		INX40B3-32W-1 184062		1
	4000		INX40B3-40F-1 184047		INX40B3-40W-1 184063		1
166	800	85	INX40N3-08F-1 184048		INX40N3-08W-1 184064		1
	1000		INX40N3-10F-1 184049		INX40N3-10W-1 184065		1
	1250		INX40N3-12F-1 184050		INX40N3-12W-1 184066		1
	1600		INX40N3-16F-1 184051		INX40N3-16W-1 184067		1
	2000		INX40N3-20F-1 184052		INX40N3-20W-1 184068		1
	2500		INX40N3-25F-1 184053		INX40N3-25W-1 184069		1
	3200		INX40N3-32F-1 184054		INX40N3-32W-1 184070		1
	4000		INX40N3-40F-1 184055		INX40N3-40W-1 184071		1




Basic devices

INX40..., 4pole

Rated short making capacity up to 440 V 50/60 Hz I_{cm}	Rated current = rated uninterrupted current $I_n = I_U$ A	Rated short-time withstand current 50/60 Hz $t = 1$ s I_{cw}	Fixed		Withdrawable Cassettes need to be ordered separately.		Std. pack
			Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	
kA		kA					
Switch disconnectors INX40							
With flange terminals. Other termination see page 27.							
4 pole							
144	800	66	INX40B4-08F-1 184072		INX40B4-08W-1 184088		1
	1000		INX40B4-10F-1 184073		INX40B4-10W-1 184089		1
	1250		INX40B4-12F-1 184074		INX40B4-12W-1 184090		1
	1600		INX40B4-16F-1 184075		INX40B4-16W-1 184091		1
	2000		INX40B4-20F-1 184076		INX40B4-20W-1 184092		1
	2500		INX40B4-25F-1 184077		INX40B4-25W-1 184093		1
	3200		INX40B4-32F-1 184078		INX40B4-32W-1 184094		1
	4000		INX40B4-40F-1 184079		INX40B4-40W-1 184095		1
166	800	85	INX40N4-08F-1 184080		INX40N4-08W-1 184096		1
	1000		INX40N4-10F-1 184081		INX40N4-10W-1 184097		1
	1250		INX40N4-12F-1 184082		INX40N4-12W-1 184098		1
	1600		INX40N4-16F-1 184083		INX40N4-16W-1 184099		1
	2000		INX40N4-20F-1 184084		INX40N4-20W-1 184100		1
	2500		INX40N4-25F-1 184085		INX40N4-25W-1 184101		1
	3200		INX40N4-32F-1 184086		INX40N4-32W-1 184102		1
	4000		INX40N4-40F-1 184087		INX40N4-40W-1 183925		1

Electronic releases

IZMX-PXRV..., IZMX-PXRP...

Type	For use with	Ground Fault Protection ¹⁾ (T)	ARMS (A)	Onboard ModBUS Communication (M)	Part no. Article no.	Price see price list	Std. pack
Additional function for Circuit Breaker with V trip unit (with LSI protection function, current metering and zone selective protection function ZSI)							
Ground Fault Protection is programable and can be set to alarm or protection ZSI included.							
	Add ground-fault protection	IZMX...-V...	●	–	–	+IZMX-PXRV-T-1 183926	1
	Add ARMS	IZMX...-V...	–	●	–	+IZMX-PXRV-A-1 184948	1
	Add onboard Modbus	IZMX...-V...	–	–	●	+IZMX-PXRV-M-1 183930	1
	Add ground-fault protection and ARMS	IZMX...-V...	●	●	–	+IZMX-PXRV-TA-1 183932	1
	Add ground-fault protection and onboard Modbus	IZMX...-V...	●	–	●	+IZMX-PXRV-TM-1 183931	1
	Add ARMS and onboard Modbus	IZMX...-V...	–	●	●	+IZMX-PXRV-AM-1 184949	1
	Add ground-fault protection and ARMS and onboard Modbus	IZMX...-V...	●	●	●	+IZMX-PXRV-TAM-1 183933	1
Additional function for Circuit Breaker with P trip unit (with LSI protection function, power metering²⁾, zone selective protection function and onboard Modbus)							
	Add ground-fault protection	IZMX...-P...	●	–	●	+IZMX-PXRP-T-1 183927	1
	Add ARMS	IZMX...-P...	–	●	●	+IZMX-PXRP-A-1 183928	1
	Add ground-fault protection and ARMS	IZMX...-P...	●	●	●	+IZMX-PXRP-TA-1 183929	1
Spare trip unit type V (with LSI protection function, zone selective protection function and onboard Modbus)							
	–	IZMX...-V...	–	–	–	IZMX-PXRV-1 183935	1
	Ground-fault protection	IZMX...-V...	●	–	–	IZMX-PXRV-T-1 183982	1
	ARMS	IZMX...-V...	–	●	–	IZMX-PXRV-A-1 184950	1
	Onboard Modbus	IZMX...-V...	–	–	●	IZMX-PXRV-M-1 183986	1
	Ground-fault protection and ARMS	IZMX...-V...	●	●	–	IZMX-PXRV-TA-1 183988	1
	Ground-fault protection and onboard Modbus	IZMX...-V...	●	–	●	IZMX-PXRV-TM-1 183987	1
	ARMS and onboard Modbus	IZMX...-V...	–	●	●	IZMX-PXRV-AM-1 184951	1
	Ground-fault protection and ARMS and onboard Modbus	IZMX...-V...	●	●	●	IZMX-PXRV-TAM-1 183989	1
Spare trip unit type P (with LSI protection function, power metering²⁾, zone selective protection function and onboard Modbus)							
	–	IZMX...-P...	–	–	●	IZMX-PXRP-1 183936	1
	Ground-fault protection	IZMX...-P...	●	–	●	IZMX-PXRP-T-1 183983	1
	ARMS	IZMX...-P...	–	●	●	IZMX-PXRP-A-1 183984	1
	Ground-fault protection and ARMS	IZMX...-P...	●	●	●	IZMX-PXRP-TA-1 183985	1

Notes

¹⁾ 3pole breaker need an external wired N-conductor current transformer.²⁾ Power metering requires one external voltage transformer module ...PTM for 1-16 trip units.

General: Articles without „+“ are complete field kits for spare/upgrading purposes.

Articles with „+“ add further factory installed function into the configuration.

Accessories for electronic releases-trip switch, trip indicator

IZMX-OTS..., IZMX-TI..., IZMX-RA..., IZMX-RR...

Rated control-voltage U_s V	For use with	Part no. Article no.	Price see price list	Std. pack
Overcurrent trip switches				
For signalling of all breaker trip to open commands occurred by the trip unit				
	IZMX16..., IZMX40...	+IZMX-OTS-1 184116		1
	IZMX16...	IZMX-OTS16-1 184117		1
	IZMX40...	IZMX-OTS40-1 184118		1
Interlocked Trip Indicators (spare part)				
Is supplied as a standard safety feature and interlocks the breaker in OPEN position after trip until it is pushed manually to reset				
	–	IZMX16...	IZMX-TI16-1 184134	1
	–	IZMX40...	IZMX-TI40-1 184135	1
Automatic reset of trip indicator				
Cannot be combined with remote reset				
	–	IZMX16... IZMX40...	+IZMX-RA-1 184119	1
	–	IZMX16...	IZMX-RA16-1 184120	1
	–	IZMX40...,	IZMX-RA40-1 184121	1
Trip indicator remote reset				
The remote reset allows resetting the trip indicator remotely by an electrical signal				
	24 V DC	IZMX40...	+IZMX-RR24DC-40-1 184122	1
	110 - 125 V AC/DC	IZMX40...	+IZMX-RR110AD-40-1 184123	1
	220 - 240 V AC/DC	IZMX40...	+IZMX-RR230AD-40-1 184124	1
	24 V DC	IZMX40...	IZMX-RR24DC-40-1 184125	1
	110 - 125 V AC/DC	IZMX40...,	IZMX-RR110AD-40-1 184126	1
	220 - 240 V AC	IZMX40...,	IZMX-RR230AD-40-1 184127	1

	Description	For use with-	Part no. Article no.	Price see price list	Std. pack
Voltage transformer 	Externally mounted voltage transformer to provide voltage sensing input to 1-16 P-Type trip units. Maximum distance = 75m.	IZMX16... IZMX40...	IZMX-PXR-PTM-1 184142		1
Power supply 	Optional for the trip unit in case of breaker is not in operation and - display information is requested or - test simulation with trip	IZMX16... IZMX40...	IZMX-DT-PS-1 183969		1
I_n rating programmable 	If a protection setting I_T below $0.4 \times I_n$ is required the I_n needs to be re-programmed on an individual value lower than I_n . The Operator needs to connect his computer with the trip units mini USB plug..	IZMX16... IZMX40...	IZM-RP-PXR-1 183992		1
Current sensor for neutral conductor on 3-pole Circuit Breakers with earth-/ground fault protection 	for IZMX16 Externally mounted neutral sensor for residual ground.	IZMX16...	IZMX-CT16-N-1 183990		1
	for IZMX40 Externally mounted neutral sensor for residual ground.	IZMX40...	IZMX-CT40-N-1 183991		1
Zero Sequence Sensor or Ground source 	Zero sequence sensor for IZMX16 with cable termination Ground Source - detecting currents of earthed star point. For IZMX16 and IZMX40	IZMX16... IZMX40...	IZMX-CT-NGS-1 183937		1
Communication adapter modules External modules are equipped with wire harness. 	Profibus		IZMX-PCAM-1 186875		1
	Ethernet		IZMX-ECAM-1 186874		1
	Modbus		IZMX-MCAM-1 186876		1
	Spare wire harness		IZMX-CAM-CAB-1 186877		1



Withdrawable units

IZMX-CAS..., 3/4pole







	For use with	Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	Std. pack
		3pole		4pole		
Cassettes						
Equiped with arc hood						
Cassette in combination with ordered breaker  	INX16...W IZMX16...W up to 1600 A	+IZMX-CAS163-1600-1 183939		+IZMX-CAS164-1600-1 183954		1
	INX40...W IZMX40...W up to 2000 A	+IZMX-CAS403-2000-1 183942		+IZMX-CAS404-2000-1 183957		1
	INX40...W IZMX40...W 2500 A	+IZMX-CAS403-2500-1 183945		+IZMX-CAS404-2500-1 183960		1
	INX40...W IZMX40...W 3200 A	+IZMX-CAS403-3200-1 183948		+IZMX-CAS404-3200-1 183963		1
	INX40...W IZMX40...W 4000 A	+IZMX-CAS403-4000-1 183951		+IZMX-CAS404-4000-1 183966		1
Separate Cassettes						
Equiped with secondary terminal blocks fully populated						
Cassette in combination with ordered breaker 	INX16...W IZMX16...W up to 1600 A	IZMX-CAS163-1600-SEC-1 183941		IZMX-CAS164-1600-SEC-1 183956		1
	INX40...W IZMX40...W up to 2000 A	IZMX-CAS403-2000-SEC-1 183944		IZMX-CAS404-2000-SEC-1 183959		1
	INX40...W IZMX40...W 2500 A	IZMX-CAS403-2500-SEC-1 183947		IZMX-CAS404-2500-SEC-1 183962		1
	INX40...W IZMX40...W 3200 A	IZMX-CAS403-3200-SEC-1 183950		IZMX-CAS404-3200-SEC-1 183965		1
	INX40...W IZMX40...W 4000 A	IZMX-CAS403-4000-SEC-1 183953		IZMX-CAS404-4000-SEC-1 183968		1
Separate cassettes without any secondary terminal block						
Select control terminal block demand according to wiring diagram page?						
	INX16...W IZMX16...W up to 1600 A	IZMX-CAS163-1600-1 183940		IZMX-CAS164-1600-1 183955		1
	INX40...W IZMX40...W up to 2000 A	IZMX-CAS403-2000-1 183943		IZMX-CAS404-2000-1 183958		1
	INX40...W IZMX40...W 2500 A	IZMX-CAS403-2500-1 183946		IZMX-CAS404-2500-1 183961		1
	INX40...W IZMX40...W 3200 A	IZMX-CAS403-3200-1 183949		IZMX-CAS404-3200-1 183964		1
	INX40...W IZMX40...W 4000 A	IZMX-CAS403-4000-1 183952		IZMX-CAS404-4000-1 183967		1
Secondary 4point terminal block kit						
Max. population on ...CAS16... = 14 units, ...CAS40... = 24 units						
	Secondary terminal 2 units	IZMX-CAS...	IZMX-SEC-TB2-W-1 184242			1
	Secondary terminal 12 units	IZMX-CAS...	IZMX-SEC-TB12-W-1 184243			1

Accessories for withdrawable units

IZMX-SH..., IZMX-CS...

	Pole-	For use with	Part no. Article no.	Price see price list	Std. pack		
Cassette safety shutters							
<p>When the breaker is withdrawn from its connected position, the shutters automatically cover the cassette's live main terminals. With 2.5 mm holes for voltage test. IP20</p> 	3pole	(+)IZMX CAS163	+IZMX-SH163-1 184186		1		
		(+)IZMX CAS163	IZMX-SH163-1 184187		1		
		(+)IZMX CAS403	+IZMX-SH403-1 184188		1		
		(+)IZMX CAS403	IZMX-SH403-1 184189		1		
	4pole	(+)IZMX CAS164	+IZMX-SH164-1 184190		1		
		(+)IZMX CAS164	IZMX-SH164-1 184191		1		
		(+)IZMX CAS404	+IZMX-SH404-1 184192		1		
		(+)IZMX CAS404	IZMX-SH404-1 184193		1		
		Cell switches					
		One changeover contact for each position: Disconnected, Test, Connected.					
	Installation on left side in the cassette	(+)IZMX CAS16...	+IZMX-CS16-1 184194		1		
		(+)IZMX CAS16...	IZMX-CS16-1 108251		1		
	Installation on left side in the cassette	(+)IZMX CAS40...	+IZMX-CS40-1 184195		1		
		Installation on left and/or right side in the cassette	(+)IZMX CAS40...	IZMX-CS40-1 184196		1	
Disconnected lock mechanism for cylinder locks							
Secures the breaker in the Disconnect position Δ „safe OFF“							
	Kit for Ronis lock	(+)IZMX CAS40...	IZMX-KLPC-RONIS-40-1 184200		1		
	Kit for CES lock	(+)IZMX CAS40...	IZMX-KLPC-CES-40-1 184198		1		
	Kit for Castell lock	(+)IZMX CAS40...	IZMX-KLPC-CASTELL-40-1 184201		1		
	Kit for Kirk lock	(+)IZMX CAS40...	IZMX-KLPC-KIRK-40-1 184199		1		
Replacement hand lever							
	This is a spare part. The hand lever is supplied as standard with withdrawable	IZMX16...W INX16...W	IZMX-LT16-1 184140		1		
		IZMX40...W INX40...W	IZMX-LT40-1 184141		1		
Secondary terminal							
Replacement kit for cassettes before Sept. 2016 (see label without „-1“ ending) Allows updating the cassette to receive new breaker with „-1“ ending.							
		(+) IZMX CAS16... old	IZMX-SEC-KIT-W16-1 184241		1		
		(+) IZMX CAS40... old	IZMX-SEC-KIT-W40-1 184244		1		
Notes							
Lock cylinder and key are required for installation. Ronis lock: #1351-10B CES lock: Cylinder #5256-LAG; Key #90134 Castell lock: Cylinder #CL1019, Modified to 90° + „letter“; Key #FKV4-NI, + „letter“ Kirk lock: #KC40							

IZMX-T(H)(F)(V)..., IZMX-SEC...

Termination	Rated current I_n A	Pole	For use with	Part no. Article no.	Price see price list	Std. pack
Main terminal adapter kit						
Basic breakers and cassettes are delivered with flange terminals as standard. Following adapters are optional and for INX16, IZMX16 fixed version required. Each set contains the adapter for top and bottom. 3 pole = 6 off; 4 pole = 8 off						
	Universal adapter horizontal, vertical	630 - 1600	3	IZMX16... , IZMX-CAS163... INX16...	IZMX-THV163-1 183970	1
		630 - 1600	4	IZMX16... , IZMX-CAS164.. INX16...	IZMX-THV164-1 183971	1
	Universal adapter horizontal, vertical, long	630 - 1600	3	IZMX16... , IZMX-CAS163.. INX16...	IZMX-THVL163-1 183972	1
		630 - 1600	4	IZMX16... , IZMX-CAS164.. INX16...	IZMX-THVL164-1 183973	1
	Universal adapter horizontal, vertical	800 - 3200	3	IZMX40... , IZMX-CAS403.. INX40...	IZMX-THV403-1 183974	1
		800 - 3200	4	IZMX40... , IZMX-CAS404.. INX40...	IZMX-THV404-1 183975	1
	Adapter horizontal	4000	3	IZMX40... , IZMX-CAS403.. INX40...	IZMX-TH403-4000-1 183976	1
		4000	4	IZMX40... , IZMX-CAS404.. INX40...	IZMX-TH404-4000-1 183977	1
	Adapter vertical	4000	3	IZMX40... , IZMX-CAS403.. INX40...	IZMX-TV403-4000-1 183978	1
		4000	4	IZMX40... , IZMX-CAS404.. INX40...	IZMX-TV404-4000-1 183979	1
	Adapter front at fixed breaker or cassette	630 - 1600	3	IZMX16... , IZMX-CAS163 INX16...	IZMX-TF163-1600-1 183980	1
		630 - 1600	4	IZMX16... , IZMX-CAS164 INX16...	IZMX-TF164-1600-1 184173	1
	Adapter front at fixed breaker	800 - 1600	3	IZMX40...F INX40...F	IZMX-TF403-1600F-1 184174	1
		2000 - 2500	3	IZMX40...F INX40...F	IZMX-TF403-2500F-1 184175	1
		3200	3	IZMX40...F INX40...F	IZMX-TF403-3200F-1 184176	1
		800 - 1600	4	IZMX40...F INX40...F	IZMX-TF404-1600F-1 184180	1
		2000 - 2500	4	IZMX40...F INX40...F	IZMX-TF404-2500F-1 184181	1
		3200	4	IZMX40...F INX40...F	IZMX-TF404-3200F-1 184182	1
	Adapter front at cassette	800 - 1600	3	IZMX-CAS403..	IZMX-TF403-1600W-1 184177	1
		2000 - 2500	3	IZMX-CAS403..	IZMX-TF403-2500W-1 184178	1
		3200	3	IZMX-CAS403..	IZMX-TF403-3200W-1 184179	1
		800 - 1600	4	IZMX-CAS404..	IZMX-TF404-1600W-1 184183	1
	2000 - 2500	4	IZMX-CAS404..	IZMX-TF404-2500W-1 184184	1	
	3200	4	IZMX-CAS404..	IZMX-TF404-3200W-1 184185	1	
Spare secondary 4point terminal block kit for fixed breakers						
Max. population on X16 = 14units, X40 = 24 units						
	Control circuit terminals, 2 units	-	-	IZMX16...F, INX16...F IZMX40...F, INX40...F	IZMX-SEC-TB2-F-1 184239	1
	Control circuit terminals, 12 units	-	-	IZMX16...F, INX16...F IZMX40...F, INX40...F	IZMX-SEC-TB12-F-1 184240	1


Electrical accessories - Motor operator


IZMX-M...

	Rated control voltage	For use with	Part no. Article no.	Price see price list	Std. pack
	U_s V				
Motor operator					
The motor automatically tensions the spring force storage mechanism for remote or local quick open/close operation. A signaling switch for the „Spring force storage charged” message is included as standard					
for IZMX16	24 V DC	IZMX16... INX16...	+IZMX-M16-24DC-1 184245		1
	24 V DC	IZMX16... INX16...	IZMX-M16-24DC-1 184246		1
	48 V DC	IZMX16... INX16...	+IZMX-M16-48DC-1 184247		1
	48 V DC	IZMX16... INX16...	IZMX-M16-48DC-1 184248		1
	60 V DC	IZMX16... INX16...	+IZMX-M16-60DC-1 184249		1
	60 V DC	IZMX16... INX16...	IZMX-M16-60DC-1 184250		1
	110 - 127 V AC 50/60 Hz 110 - 125 V DC	IZMX16... INX16...	+IZMX-M16-110AD-1 184251		1
	110 - 127 V AC 50/60 Hz 110 - 125 V DC	IZMX16... INX16...	IZMX-M16-110AD-1 184252		1
	220 - 240 V AC 50/60 Hz 110 - 125 V DC	IZMX16... INX16...	+IZMX-M16-230AD-1 184253		1
	220 - 240 V AC 50/60 Hz 110 - 125 V DC	IZMX16... INX16...	IZMX-M16-230AD-1 184254		1
	for IZMX40	24 V DC	IZMX40... INX40...	+IZMX-M40-24DC-1 184255	
	24 V DC	IZMX40... INX40...	IZMX-M40-24DC-1 184256		1
	48 V DC	IZMX40... INX40...	+IZMX-M40-48DC-1 184257		1
	48 V DC	IZMX40... INX40...	IZMX-M40-48DC-1 184258		1
	60 V DC	IZMX40... INX40...	+IZMX-M40-60DC-1 184259		1
	60 V DC	INX40... IZMX40...	IZMX-M40-60DC-1 184260		
	110 - 127 V AC 50/60 Hz 110 - 125 V DC	IZMX40... INX40...	+IZMX-M40-110AD-1 184261		1
	110 - 127 V AC 50/60 Hz 110 - 125 V DC	IZMX40... INX40...	IZMX-M40-110AD-1 184262		1
	220 - 240 V AC 50/60 Hz 110 - 125 V DC	IZMX40... INX40...	+IZMX-M40-230AD-1 184263		1
	220 - 240 V AC 50/60 Hz 110 - 125 V DC	IZMX40... INX40...	IZMX-M40-230AD-1 184264		1

Electrical accessories - Releases


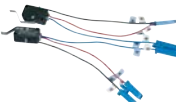
IZMX-ST..., IZMX-STs...

Rated control-voltage U_s V	For use with	Part no. Article no.	Price see price list	Std. pack
Shunt releases				
100% duty For remote OPEN or interlocking in OPEN Can be combined with an undervoltage release or a second shunt release.				
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-ST24DC-1 184265	1
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-ST24DC-1 184266	1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-ST48DC-1 184267	1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-ST48DC-1 184268	1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-ST60DC-1 184269	1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-ST60DC-1 184270	1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-ST110AD-1 184271	1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-ST110AD-1 184272	1
	220 - 240 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-ST230AD-1 184273	1
	220 - 240 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-ST230AD-1 184274	1




Second shunt release				
100% duty For remote OPEN or interlocking in OPEN Cannot be combined with an undervoltage release.				
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-STs24DC-1 184275	1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-STs48DC-1 184276	1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-STs60DC-1 184277	1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-STs110AD-1 184278	1
	220 - 240 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-STs230AD-1 184279	1

Electrical accessories

IZMX-UVR(-TD)..., IZMX-AS...





	Rated control-voltage U_s V	For use with	Part no. Article no.	Price see price list	Std. pack
Undervoltage releases					
100% duty For remote OPEN or interlocking in OPEN Cannot be combined with a second shunt release (STS).					
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-UVR24DC-1 184107		1
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-UVR24DC-1 184108		1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-UVR48DC-1 184109		1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-UVR48DC-1 184110		1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-UVR60DC-1 184111		1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-UVR60DC-1 184112		1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-UVR110AD-1 184113		1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-UVR110AD-1 184114		1
	208 - 240 V AC 208 - 250 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-UVR230AD-1 184161		1
	208 - 240 V AC 208 - 250 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-UVR230AD-1 184162		1
Time delay modules					
For combination with an undervoltage release. Delay times: 0.1 s, 0.5 s, 1.0 s, 2.0 s.					
Only in combination with undervoltage release IZMX-UVR110AD.	120 V AC	IZMX16..., IZMX40... INX16..., INX40...	IZM-UVR-TD-120AC-1 184165		1
Only in combination with undervoltage release IZMX-UVR230AD.	230 V AC	IZMX16..., IZMX40... INX16..., INX40...	IZM-UVR-TD-230AC-1 184166		1
Auxiliary contacts					
Signals breaker open/close. The basic device already contains two changeover contacts. AS22 IZMX16: Two additional changeover contacts possible. IZMX40: up to 10 additional changeover contacts possible.					
	Additionally 2 NO / NC contacts	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-AS22-1 184167		1
	Additionally 4 NO / NC contacts	IZMX40... INX40...	+IZMX-AS44-1 184168		1
	Additionally 6 NO / NC contacts	IZMX40... INX40...	+IZMX-AS66-1 184169		1
	Additionally 8 NO / NC contacts	IZMX40... INX40...	+IZMX-AS88-1 184170		1
	Additionally 10 NO / NC contacts	IZMX40... INX40...	+IZMX-AS1010-1 184171		1
	Kits 2 NO / NC contacts	IZMX16... INX16...	IZMX-AS22-16-1 184172		1
	Kits 2 NO / NC contacts	IZMX40... INX40...	IZMX-AS22-40-1 184115		1

IZMX-SR..., IZMX-LCS...





Rated control-voltage U_s V	For use with	Part no. Article no.	Price see price list	Std. pack
Closing releases				
100% duty For remote CLOSE				
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-SR24DC-1 184280	1
	24 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-SR24DC-1 184281	1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-SR48DC-1 184282	1
	48 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-SR48DC-1 184283	1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-SR60DC-1 184284	1
	60 V DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-SR60DC-1 184285	1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-SR110AD-1 184286	1
	110 - 125 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-SR110AD-1 184287	1
	220 - 240 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-SR230AD-1 184288	1
	220 - 240 V AC/DC	IZMX16..., IZMX40... INX16..., INX40...	IZMX-SR230AD-1 184289	1
Latch check switches				
1 changeover ready to close contact Only in combination with closing release Wired to control terminals for external application				
	—	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-LCS-1 184103	1
	—	IZMX16..., IZMX40... INX16..., INX40...	IZMX-LCS-1 184104	1
Wired direct to the closing release for automatic breaker closing after readiness for operation				
	—	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-LCS-SR-1 184105	1
	—	IZMX16..., IZMX40... INX16..., INX40...	IZMX-LCS-SR-1 184106	1

Mechanical accessories - counter, interlock

IZMX-OC..., IZMX-PLPC..., IZMX-KLP-SO...




	For use with	Part no. Article no.	Price see price list	Std. pack
Operation counters				
Counts the number of ON-OFF operations. Can be installed without motor operator.				
	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-OC-1 184128		1
	IZMX16... INX16...	IZMX-OC16-1 184129		1
	IZMX40... INX40...	IZMX-OC40-1 184130		1
Locking ON/OFF buttons				
Padlockable front cover for ON-OFF pushbutton.				
	P = Insulated material	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-PLPC-P-1 184222	1
		IZMX16... INX16...	IZMX-PLPC16-P-1 184223	1
		IZMX40... INX40...	IZMX-PLPC40-P-1 184224	1
	M = Metal	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-PLPC-M-1 184225	1
		IZMX16... INX16...	IZMX-PLPC16-M-1 184226	1
		IZMX40... INX40...	IZMX-PLPC40-M-1 184227	1
	OFF = Safe OFF; then it is also impossible to switch ON via the closing release	IZMX16..., IZMX40... INX16..., INX40...	+IZMX-PLPC-M-OFF-1 184228	1
	IZMX16... INX16...	IZMX-PLPC16-M-OFF-1 184229	1	
	IZMX40... INX40...	IZMX-PLPC40-M-OFF-1 184230	1	
Safe OFF lock mechanism for cylinder locks				
The "Safe OFF" interlock prevents switching on. Neither remote nor local switching on is possible. Lockcylinder and key are required for installation.				
	Ronis installation kit without lock cylinder and key.	IZMX16..., IZMX40... INX16..., INX40...	IZMX-KLP-SO-RONIS-1 184233	1
	CES installation kit without lock cylinder and key.	IZMX16..., IZMX40... INX16..., INX40...	IZMX-KLP-SO-CES-1 184231	1
	Castell installation kit without lock cylinder and key.	IZMX16..., IZMX40... INX16..., INX40...	IZMX-KLP-SO-CASTELL-1 184234	1
	Kirk installation kit without lock cylinder and key.	IZMX16..., IZMX40... INX16..., INX40...	IZMX-KLP-SO-KIRK-1 184232	1
Notes	Lock cylinder and key are required for installation. Ronis lock: #1351-10B CES lock: Cylinder #5256-LAG; Key #90134 Castell lock: Cylinder #CL1019, Modified to 90° + „letter“; Key #FKV4-NI, + „letter“ Kirk lock: #KC40			

IZMX-DI..., IZMX-IB..., IZMX-DC..., IZMX-DEG...

Connection	For use with	Part no. Article no.	Price see price list	Std. pack
Door Interlock for breaker in cassette				
Door is interlocked when breaker is closed or Breaker is interlocked in open when door is open. -R = door is interlocked on operators right hand side	IZMX16...W INX16...W	IZMX-DI160N-RW-1 184202		1
	IZMX16...W INX16...W	IZMX-DI160N-LW-1 185710		1
	IZMX40...W INX40...W	IZMX-DI400N-RW-1 184203		1
	IZMX40...W INX40...W	IZMX-DI400N-LW-1 185711		1
 Door is interlocked until breaker is in disconnect position	IZMX-CAS40	IZMX-DI40-W-1 184205		1
Rejection kit				
 The user-defined coding ensures that a cassette can only accommodate the Circuit Breaker assigned to it.	IZMX16...W INX16...W IZMX40...W INX40...W	IZMX-CRB-1 184197		1
Door gasket (spare part)				
Replacement door escutcheon with gasket IP31 in combination with INX... or IZMX...				
 Supplied with every breaker	IZMX16...F INX16...F	IZMX-DEG16-F-1 184136		1
	IZMX40...F INX40...F	IZMX-DEG40-F-1 184137		1
Supplied with every cassette	IZMX-CAS16...	IZMX-DEG16-W-1 184138		1
	IZMX-CAS40...	IZMX-DEG40-W-1 184139		1
Door cover, IP55, transparent				
 Assembling independent from door cover. Center left or right	IZMX16...F INX16...F	IZMX-DC16-F-1 184235		1
	IZMX40...F INX40...F	IZMX-DC40-F-1 184236		1
	IZMX-CAS16...	IZMX-DC16-W-1 184237		1
	IZMX-CAS40...	IZMX-DC40-W-1 184238		1
Phase barrier kit				
 For installation between main terminals for better insulation	3pole	IZMX163...F, ...W INX163...F, ...W	IZMX-IB163-1 184131	1
	4pole	IZMX164...F INX164...F	IZMX-IB164-1 184952	1
	3pole	IZMX403...F*) INX403...F	IZMX-IB403-F-1 184953	1
	4pole	IZMX404...F*) INX404...F	IZMX-IB404-F-1 184954	1
	3pole	IZMX403...W*) INX403...W	IZMX-IB403-W-1 184132	1
	4pole	IZMX404...W*) INX404...W	IZMX-IB404-W-1 184955	1
Notes	*) Not in combination with terminal adapter 4000A, horizontal IZMX-TH40...			

Mechanical accessories

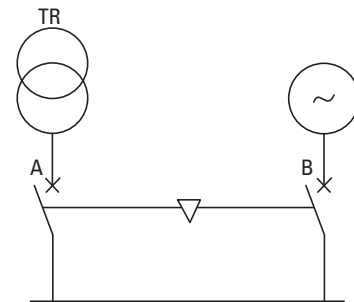
IZMX-MIL..., IZMX-MIL-CAB...

	For use with	Part no. Article no.	Price see price list	Std. pack	
Mechanical interlock					
Mechanical interlock allows interlocking between identical or different frame size 16, 40, 63. Select one kit per frame Find further information on next page.					
Mechanical interlock for fixed mounting breakers					
	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.	IZMX16..., INX16...	IZMX-MIL2C-F16-1 184206	1	
		IZMX40..., INX40...	IZMX-MIL2C-F40-1 184209	1	
	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.	IZMX16..., INX16...	IZMX-MIL3133C-F16-1 184207	1	
	or Type 33, for 3 Circuit Breakers: Three incoming units (A, B, C), normal or emergency network. Only one of the three Circuit Breakers can be switched on at any one time. Three kits of cables are required in addition.	IZMX40..., INX40...	IZMX-MIL3133C-F40-1 184210	1	
	Type 32, for 3 Circuit Breakers: Two normal incoming units (A, C) and one coupling (B). Any one or two circuit-breakers can be closed at the same time. Three kits of cables are required in addition.	IZMX16..., INX16...	IZMX-MIL32C-F16-1 184208	1	
		IZMX40..., INX40...	IZMX-MIL32C-F40-1 184211	1	
	Mechanical interlock for breakers in cassette				
		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.	IZMX-CAS16...	IZMX-MIL2C-W16-1 184212	1
		IZMX-CAS40...	IZMX-MIL2C-W40-1 184215	1	
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.		IZMX-CAS16...	IZMX-MIL3133C-W16-1 184213	1	
or Type 33, for 3 Circuit Breakers: Three incoming units (A, B, C), normal or emergency network. Only one of the three Circuit Breakers can be switched on at any one time. Three kits of cables are required in addition.		IZMX-CAS40...	IZMX-MIL3133C-W40-1 184216	1	
Type 32, for 3 Circuit Breakers: Two normal incoming units (A, C) and one coupling (B). Any one or two circuit-breakers can be closed at the same time. Three kits of cables are required in addition.		IZMX-CAS16...	IZMX-MIL32C-W16-1 184214	1	
		IZMX-CAS40...	IZMX-MIL32C-W40-1 184217	1	
Cable kits for mechanical interlock					
Depending on the type of interlock, a particular number of cable connectors is required. With the flexible cable connectors, various different switch arrangements can be implemented. One set contains two cables.					
	1520 mm	IZMX-MIL...C-F... IZMX-MIL...C-W...	IZMX-MIL-CAB1520-1 184218	1	
	1830 mm	IZMX-MIL...C-F... IZMX-MIL...C-W...	IZMX-MIL-CAB1830-1 184219	1	
	2440 mm	IZMX-MIL...C-F... IZMX-MIL...C-W...	IZMX-MIL-CAB2440-1 184220	1	
	3050 mm	IZMX-MIL...C-F... IZMX-MIL...C-W...	IZMX-MIL-CAB3050-1 184221	1	

Mechanical Interlock configurations

Type 2

Across Two Circuit Breakers
One normal power supply and one emergency power supply.



Interlock: A against B

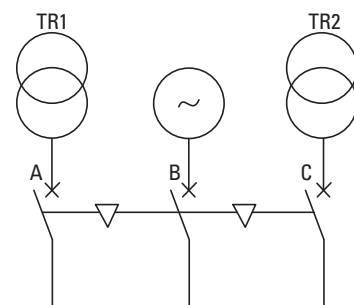
Circuit breaker A can only be closed if B is open and vice versa.,

A = Normal power supply
B = Emergency power supply.

A	B
0	0
1	0
0	1

Type 31

Across Three Circuit Breakers
Two normal power supplies and one emergency power supply.



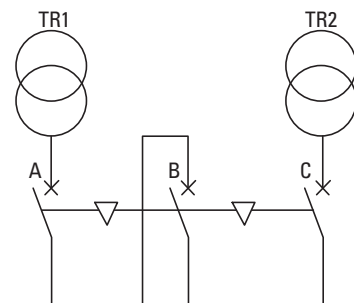
Interlock: A, C against B

Circuit breaker A and C can only be closed if B is open. B can only be closed when A and C are open.

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

Type 32

Across Three Circuit Breakers
The two half-bus bars can be powered by a single transformer (bustie closed) or by both at the same time (bus-tie open).



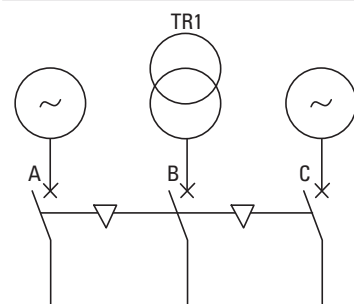
Interlock: 2 against 1 or max. 2 of 3

One of two circuit breakers out of three can be closed at the same time.

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

Type 33

Across Three Circuit Breakers
Three power supplies (generators or transformers) on the same bus bar, making operation in parallel impossible.



Interlock: 1 against 2 or max. 1 of 3

Only one of three circuit breakers can be closed.

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

IZMX16 Control Circuit Terminal Assignment

1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	
+	+																											
ST1	UV1	OT1C	OT1B	ACCY2	N1	ALMC	ALM2	G1	+24V	ZIN	ZCOM	CMM1	CMM3	PTVA	PTVC	MODBA	MODBG	ACCY5	ACCY7	E01	SR1	C1	B1	C2	C3	B3	C4	
-	-																											
ST2	UV2	OT2M	ACCY1	ACCY3	N2	ALM1	ALM3	G2	AGND	ARMSIN	ZOUT	CMM2	CMM4	PTVB	PTVN	MODBB	ACCY4	ACCY6	SC	E02	SR2	A1	B2	A2	A3	B4	A4	
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	

- 1, 2 Shunt trip
- 3, 4 UVR/2nd shunt trip
- 5~7 Overload trip switch 1 (OTS) (5-COM, 6-N.O, 7-N.C.)
- 8~10 Overload trip switch 2 (OTS) / Remote reset (8-N.C., 9-COM, 10-N.O./9-RR1, 10-RR2)
- 11, 12 External neutral sensor
- 13~16 Alarm
- 17, 18 Ground fault source sensor
- 19, 20 Control voltage supply 24VDC
- 21, 23, 24 Zone selectivity ZSI
- 20, 22 ARMs25-28 - External CAM module
- 29~32 PT module
- 33~35 Onboard ModBus
- 36 ACCY4 (Reserved)
- 37~39 Latch check switch (37-COM, 38-N.O, 39-N.C.)
- 40 Message: Spring energy store tensioned
- 41, 42 Motor operator
- 43, 44 Spring closing release
- 45~56 Auxiliary contact On/off, C-COM, A-N.O., B-N.C.

IZMX40 Control Circuit Terminal Assignment

1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	
+	+																							
ST1	UV1	OT1C	OT1B	OT2C	N1	ALMC	ALM2	G1	+24V	ZIN	ZCOM	CMM1	CMM3	PTVA	PTVC	MODBA	MODBG	2CMM3	2CMM1	ARCON2	RR1			
-	-																							
ST2	UV2	OT2M	OT2B	OT2M	N2	ALM1	ALM3	G2	AGND	ARMSIN	ZOUT	CMM2	CMM4	PTVB	PTVN	MODBB	2CMM2	2CMM4	ARCON1	ARCON3	RR2			
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	

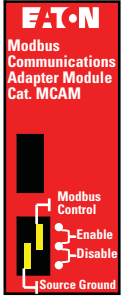
- 1, 2 Shunt trip
- 3, 4 UVR/2nd shunt trip
- 5~7 Overload trip switch 1 (OTS) (5-COM, 6-N.O, 7-N.C.)
- 8~10 Overload trip switch 2 (OTS) (8-N.C., 9-COM, 10-N.O.)
- 11, 12 External neutral sensor
- 13~16 Alarm
- 17, 18 Ground fault source sensor
- 19, 20 Control voltage supply 24VDC
- 21, 23, 24 Zone selectivity ZSI
- 20, 22 ARMs
- 25-28 External CAM module
- 29~32 PT module
- 33~35 Onboard ModBus
- 36~39 External CAM module (future)
- 40~42 ARCON
- 43, 44 Remote reset
- 45~48 Reserved

49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95
LCC	LCB	E01	SR1	C1	B1	C2	C3	B3	C4	C5	B5	C6	C7	B7	C8	C9	B9	C10	C11	B11	C12		
+																							
LCM	SC	E02	SR2	A1	B2	A2	A3	B4	A4	A5	B6	A6	A7	B8	A8	A9	B10	A10	A11	B12	A12		
50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96

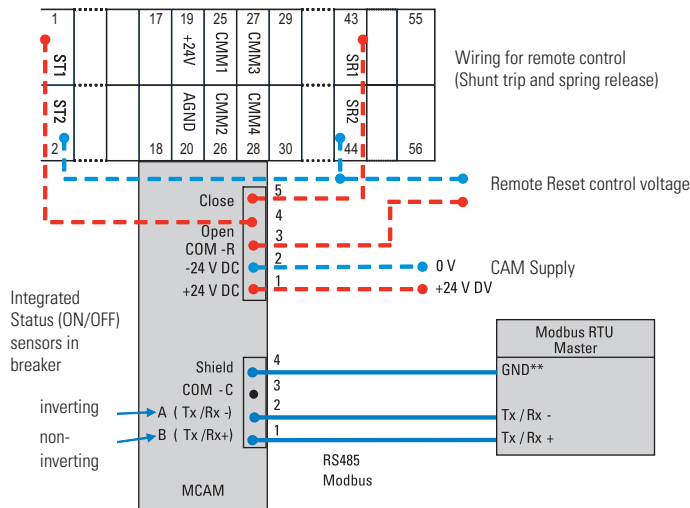
- 49~51 Latch check switch (49-COM, 50-N.O., 51-N.C.)
- 52 Message: Spring energy store tensioned
- 53, 54 Motor operator
- 55~56 Spring closing release
- 57~92 Auxiliary contact On/off, C-COM, A-N.O., B-N.C.

IZMX16, INX16, IZMX40, INX40

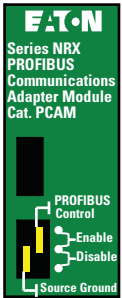
Front View of MCAM



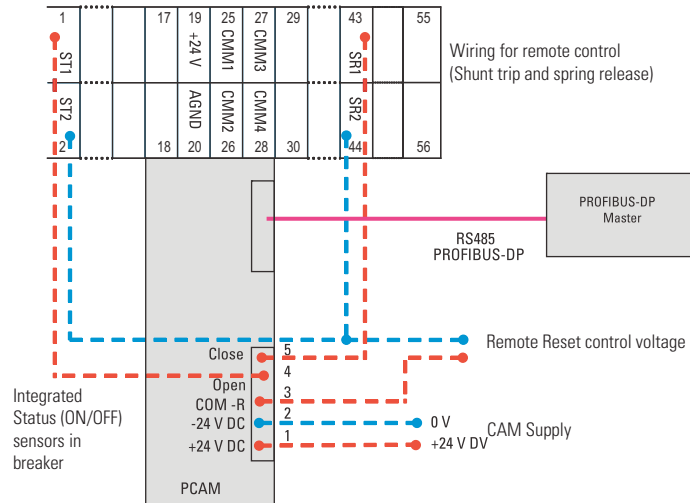
Top View of a mounted MCAM on IZMX



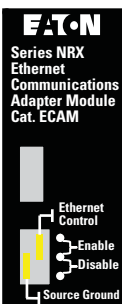
Front View of PCAM



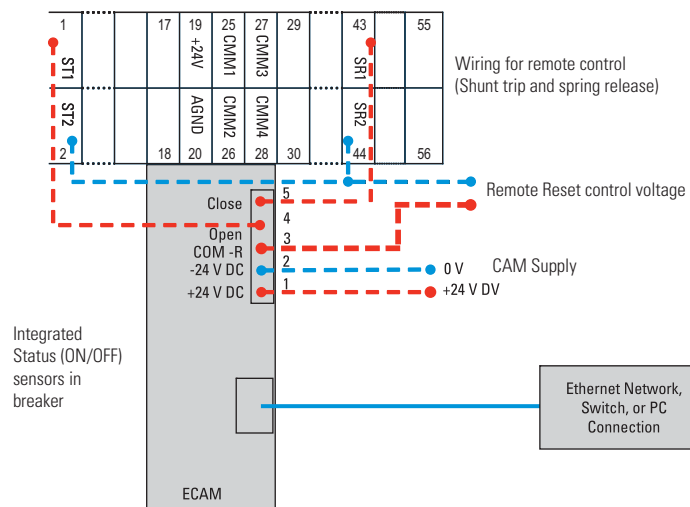
Top View of a mounted PCAM on IZMX



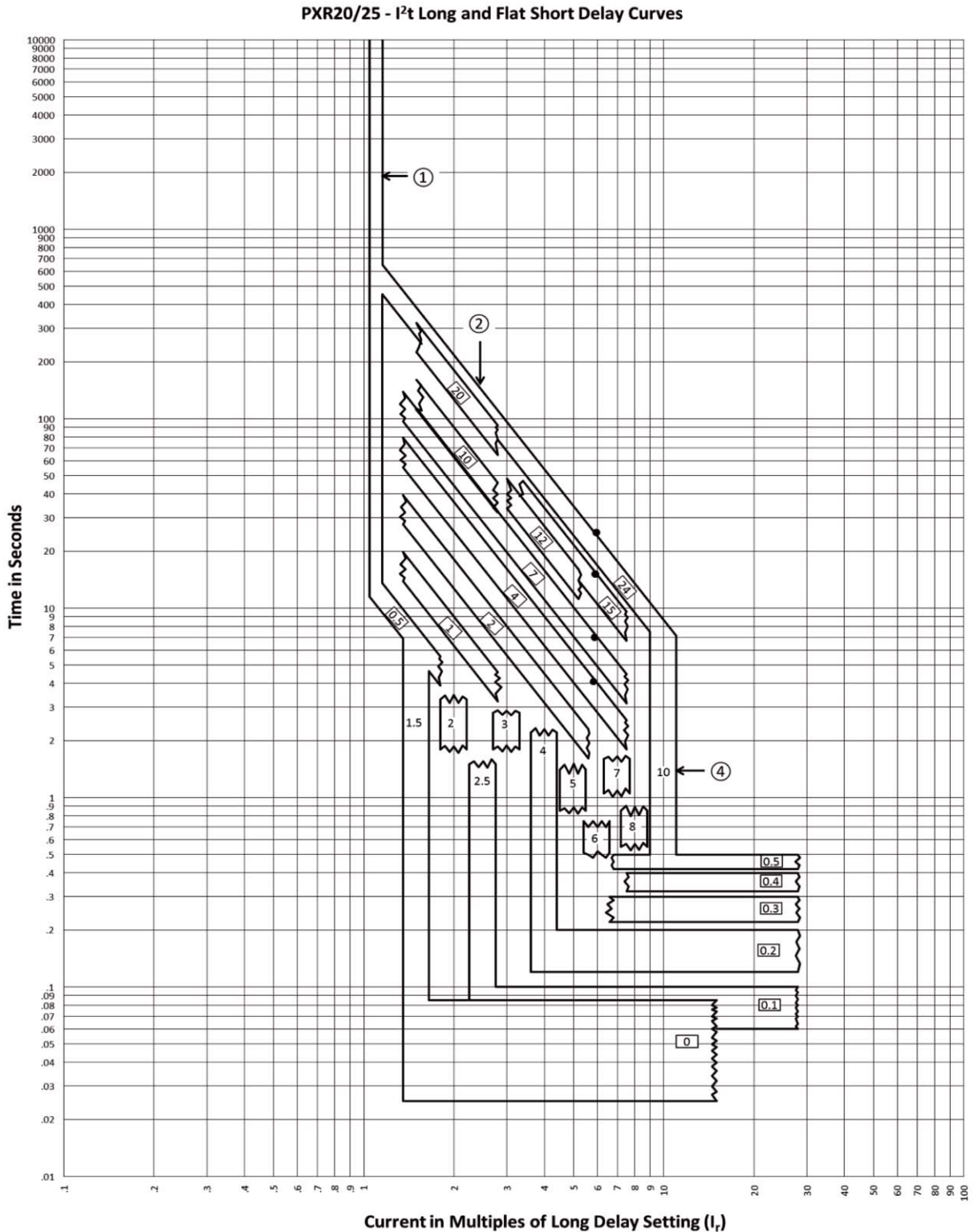
Front View of ECAM



Top View of a mounted ECAM on IZMX

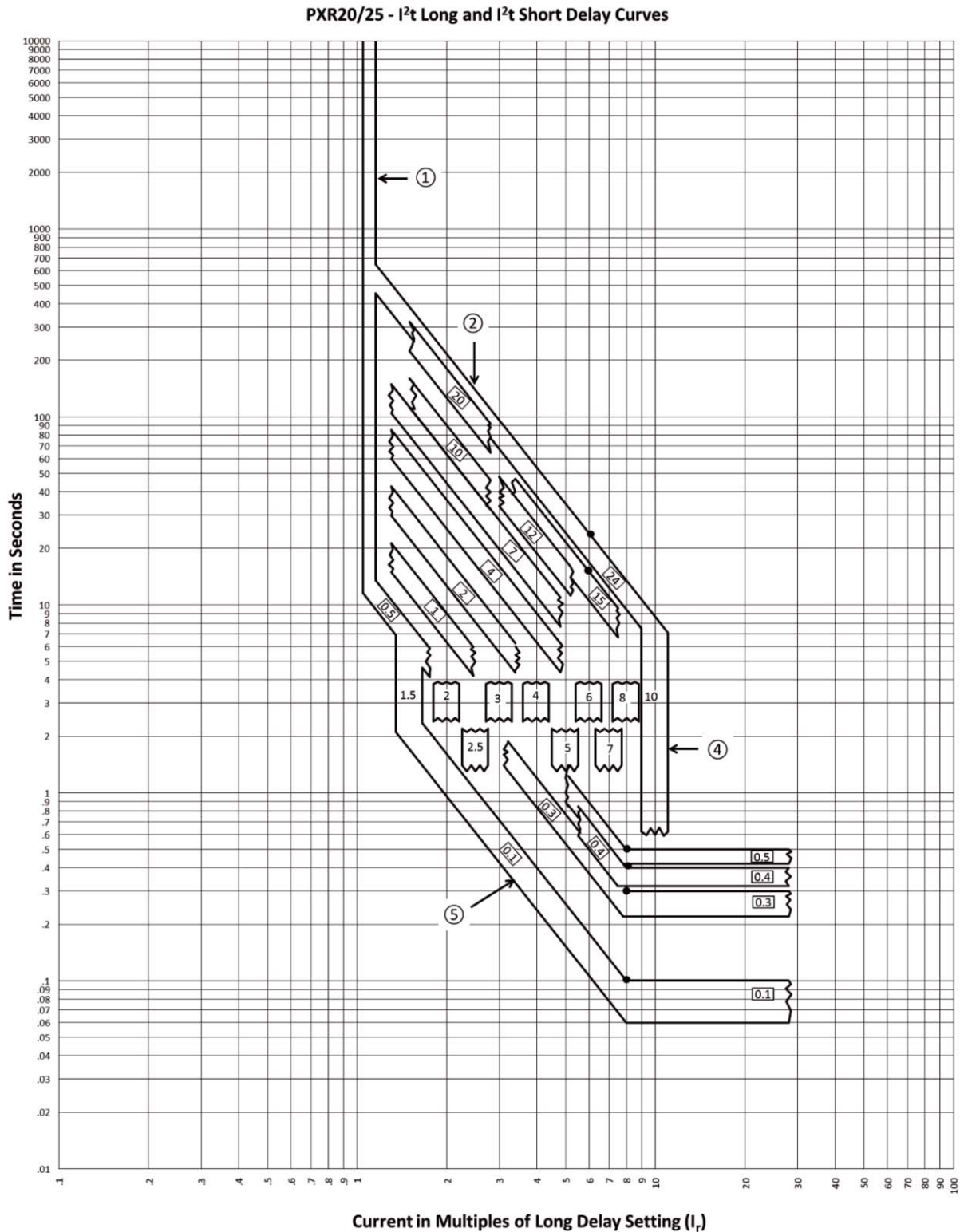


IZMX16(40)...V(U)... PXR20/25 Long Delay(L) and Short Delay(S) Curves
L-Protection: I²t-Characteristic curve and S-Protection: Flat characteristic curve



- Notes**
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with ±5% tolerance.
 2. Long Delay Time Settings 0.5s to 24s have +0%/-30% tolerance.
 3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
 4. Short Delay pickup settings have ±10% tolerance.
 5. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
 6. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

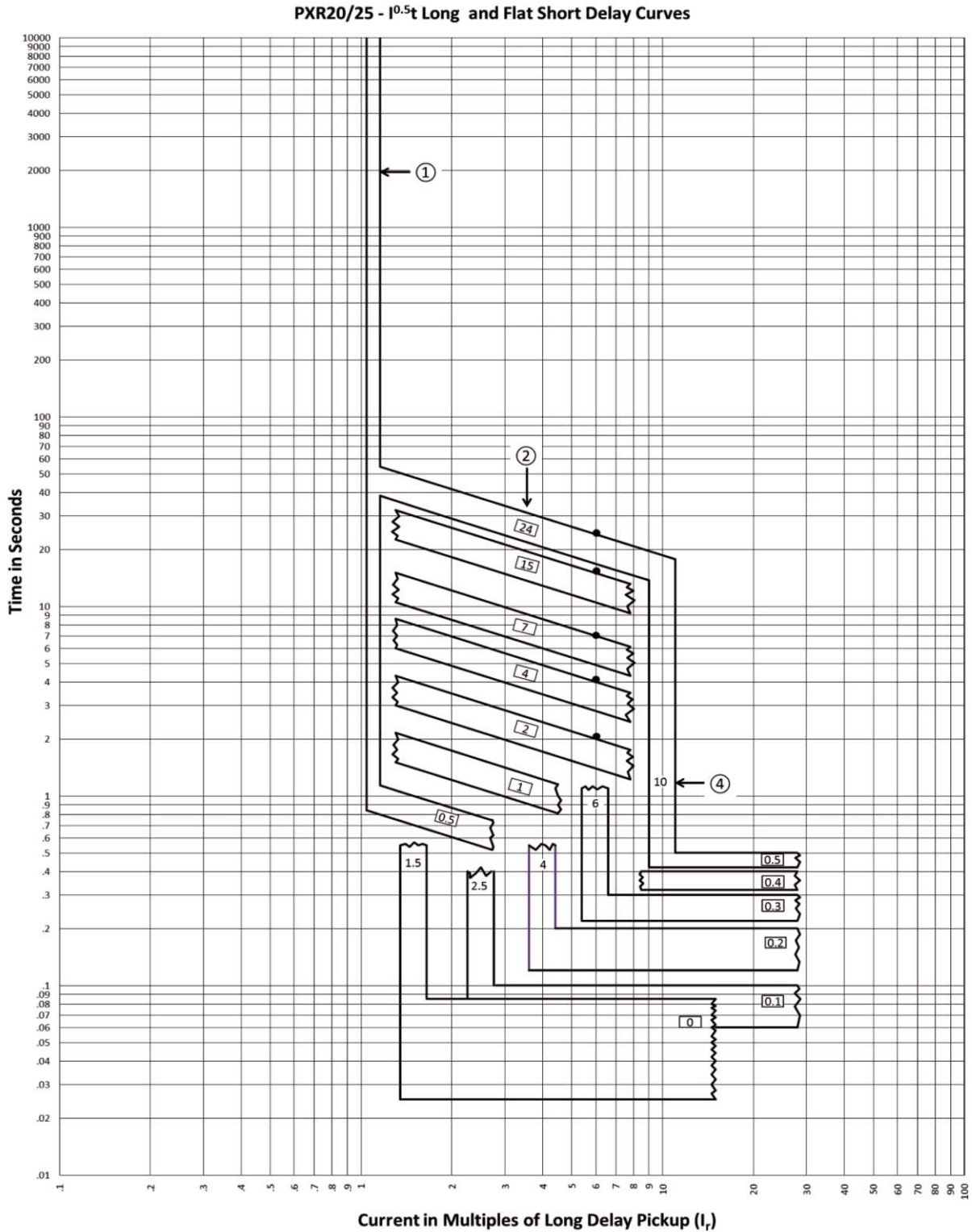
IZMX16(40)...V(U)... PXR20/25 Long Delay(L) and Short Delay(S) Curves S-Protection with: I²t-Characteristic curve ON



Notes

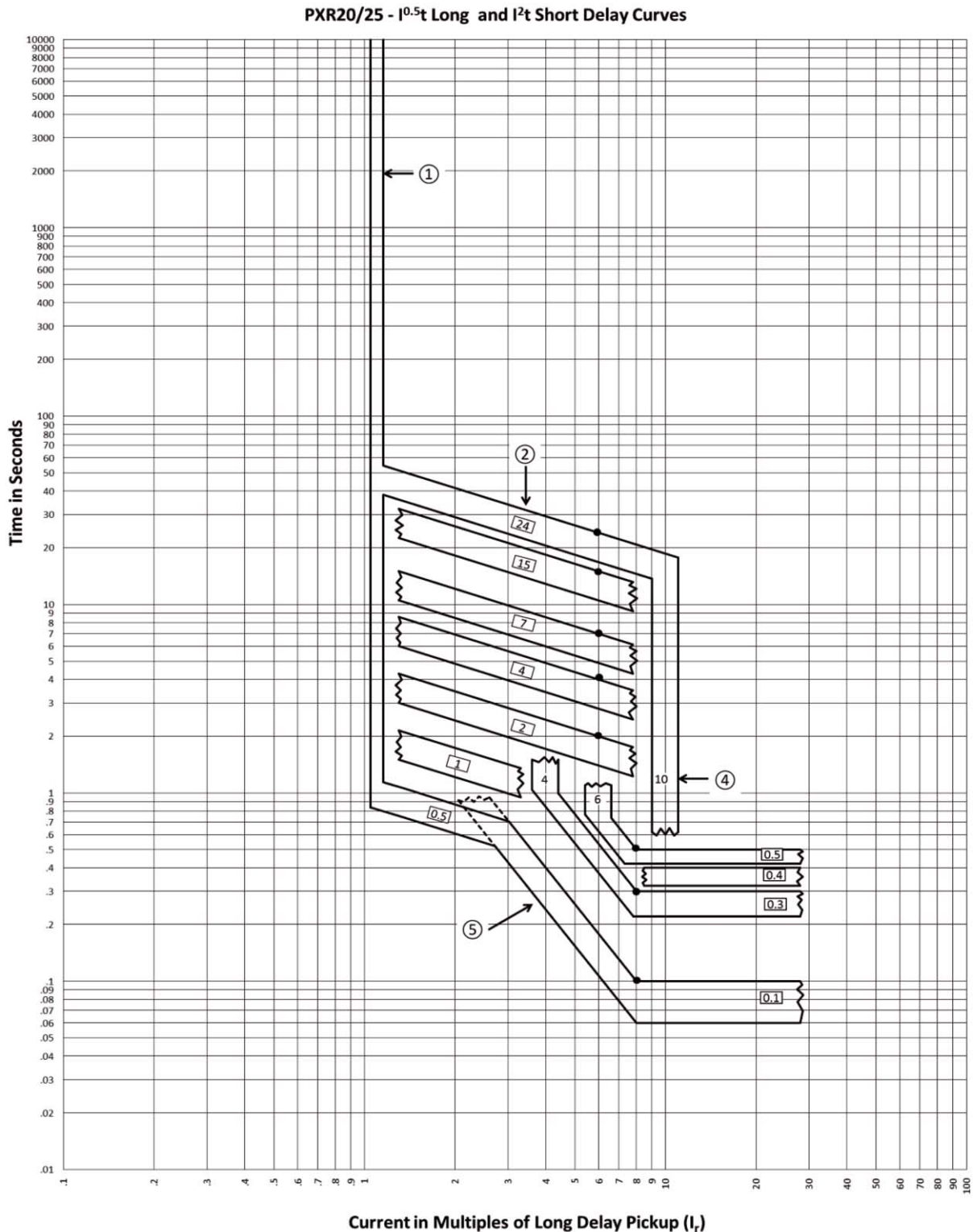
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with ± 5% tolerance.
2. Long Delay Time Settings 0.5s to 24s have +0% /-30% tolerance.
3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
4. Short Delay pickup settings have ±10% tolerance.
5. Short Time delay (0.5, 0.4, 0.3) I²t slopes have a +0%/-30% tolerance, 0.1s slope has a +0%/-40% tolerance.
6. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
7. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz

IZMX16(40)...V(U)... PXR20/25 Long Delay(L) Curves
L-Protection: 10.5t-Characteristic curve; S-Protection: flat



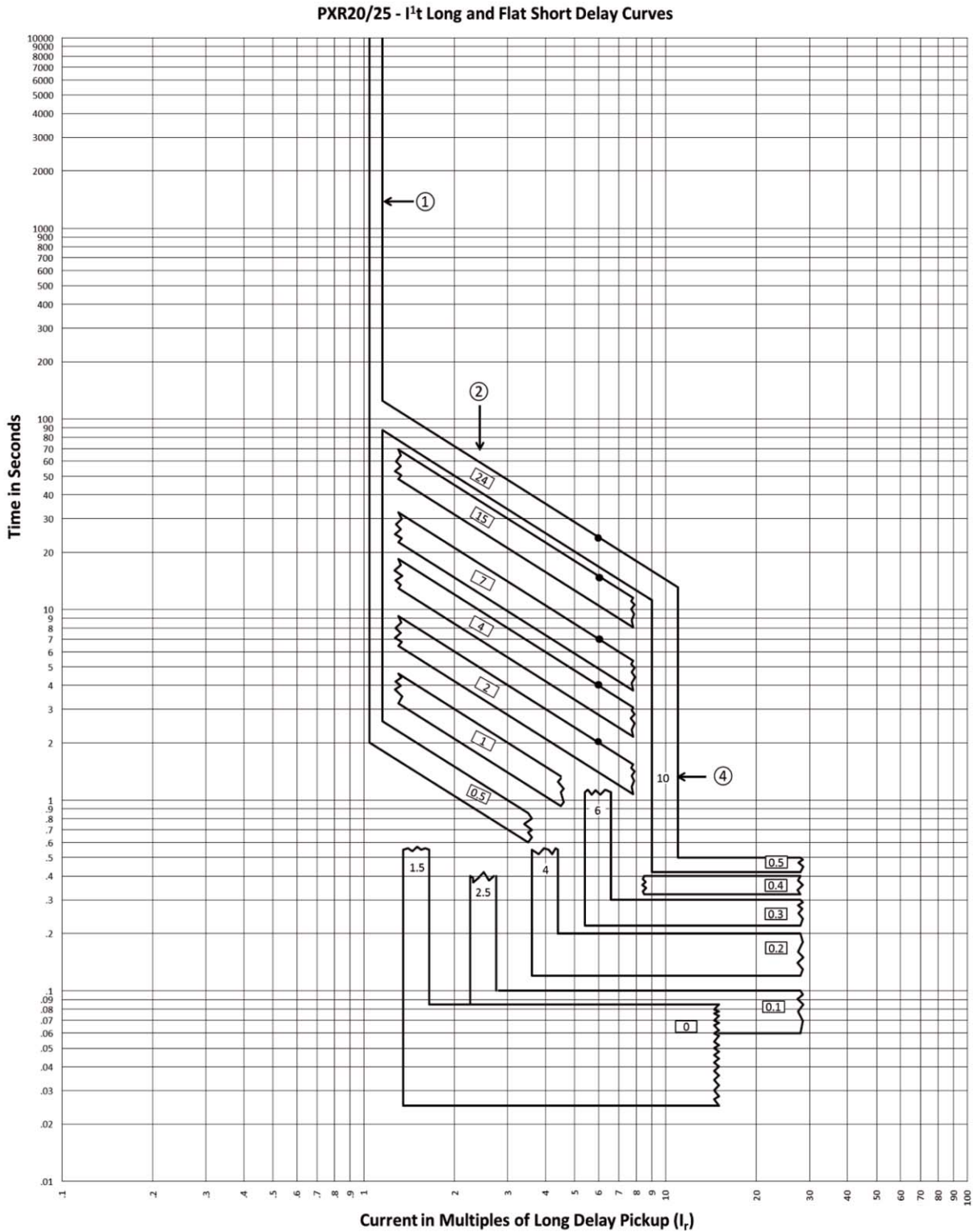
- Notes**
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with $\pm 5\%$ tolerance.
 2. Long Delay Time Settings 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24s (not all shown) have $+0\%/-30\%$ tolerance.
 3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
 4. Short Delay pickup settings of 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 (not all shown) have $\pm 10\%$ tolerance.
 5. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
 6. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

IZMX16(40)...V(U)... PXR20/25 Long Delay(L) Curves
L-Protection: I^{0.5t}-Characteristic curve; S-Protection: I^{2t}



- Notes**
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with ± 5% tolerance.
 2. Long Delay Time Settings 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24s (not all shown) have +0%/-30% tolerance.
 3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
 4. Short Delay pickup settings of 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 (not all shown) have ±10% tolerance.
 5. Short Time delay (0.5, 0.4, 0.3) I^{2t} slopes have a +0%/-30% tolerance, 0.1s slope has a +0%/-40% tolerance.
 6. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
 7. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

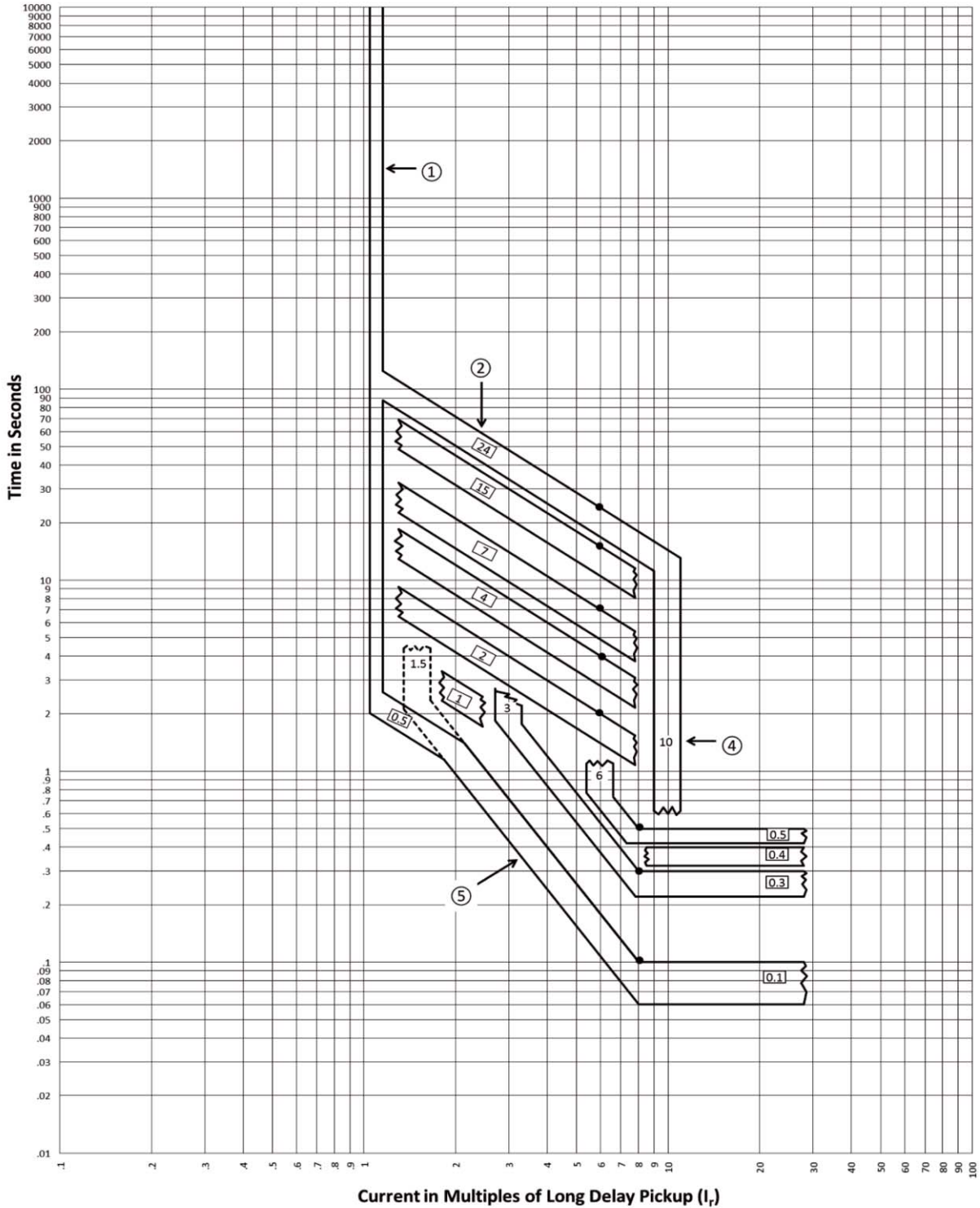
IZMX16(40)...V(U)... PXR20/25 Long Delay(L) Curves
L-Protection: I1t-Characteristic curve; S-Protection: flat



- Notes**
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with $\pm 5\%$ tolerance.
 2. Long Delay Time Settings 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24s (not all shown) have $+0\%/-30\%$ tolerance.
 3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
 4. Short Delay pickup settings have of 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 (not all shown) $\pm 10\%$ tolerance.
 5. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
 6. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

IZMX16(40)...V(U)... PXR20/25 Long Delay(L) Curves
L-Protection: I¹t-Characteristic curve; S-Protection: I²t

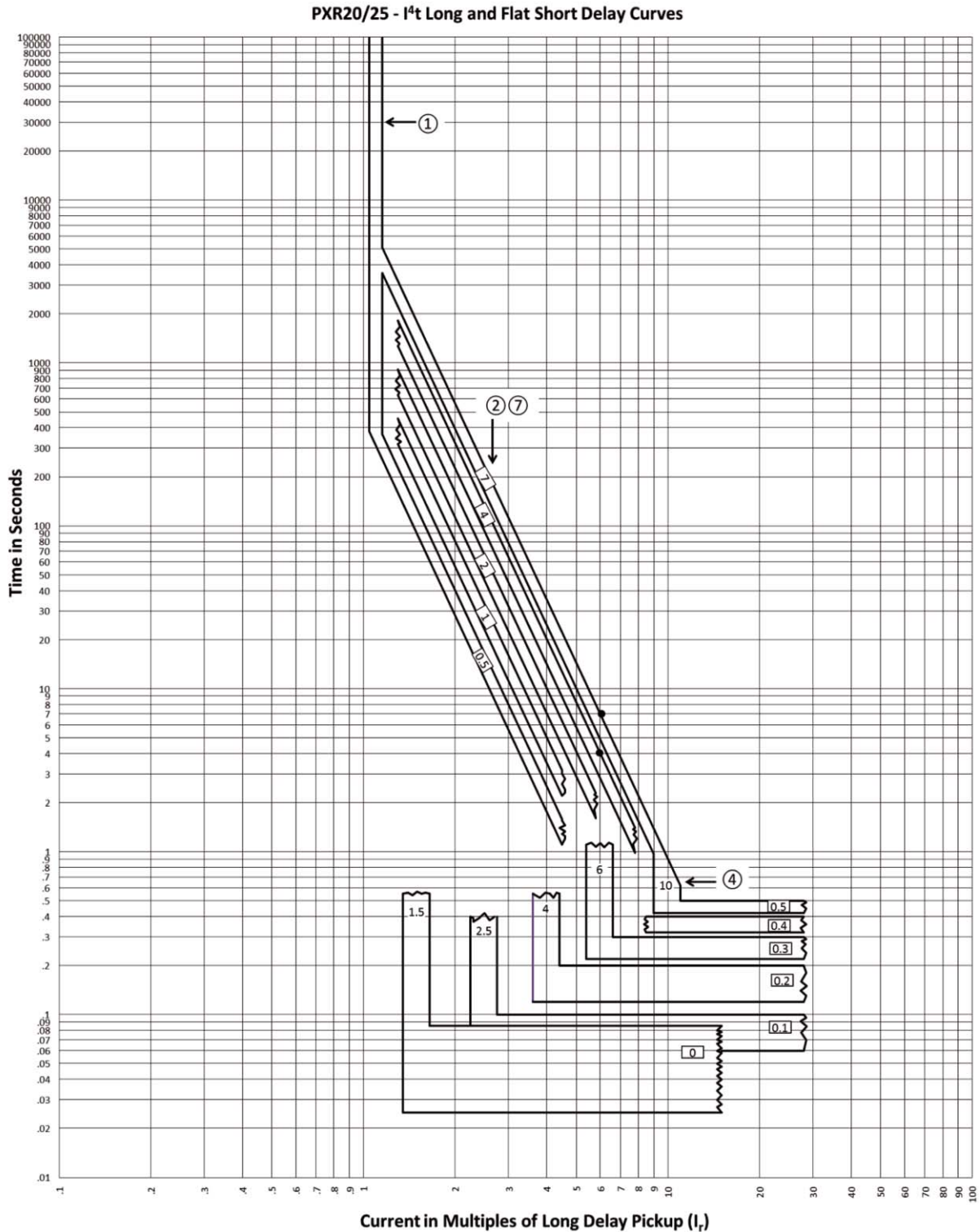
PXR20/25 - I¹t Long and I²t Short Delay Curves



Notes

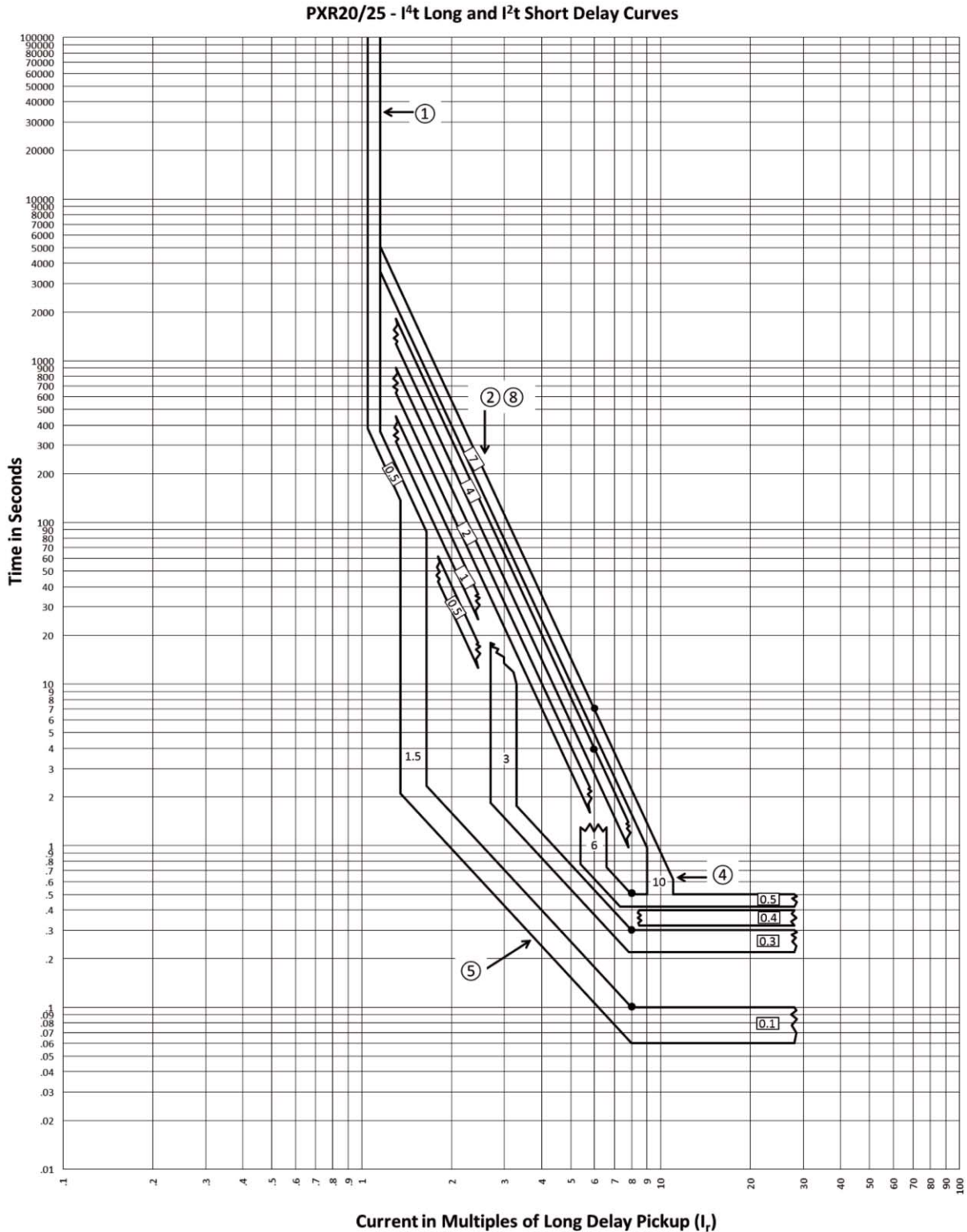
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with ± 5% tolerance.
2. Long Delay Time Settings 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24s (not all shown) have +0%/-30% tolerance.
3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
4. Short Delay pickup settings of 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 (not all shown) have ±10% tolerance.
5. Short Time delay (0.5, 0.4, 0.3) I²t slopes have a +0%/-30% tolerance, 0.1s slope has a +0%/-40% tolerance.
6. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
7. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

IZMX16(40)...V(U)... PXR20/25 Long Delay(L) Curves
L-Protection: I4t-Characteristic curve; S-Protection: flat



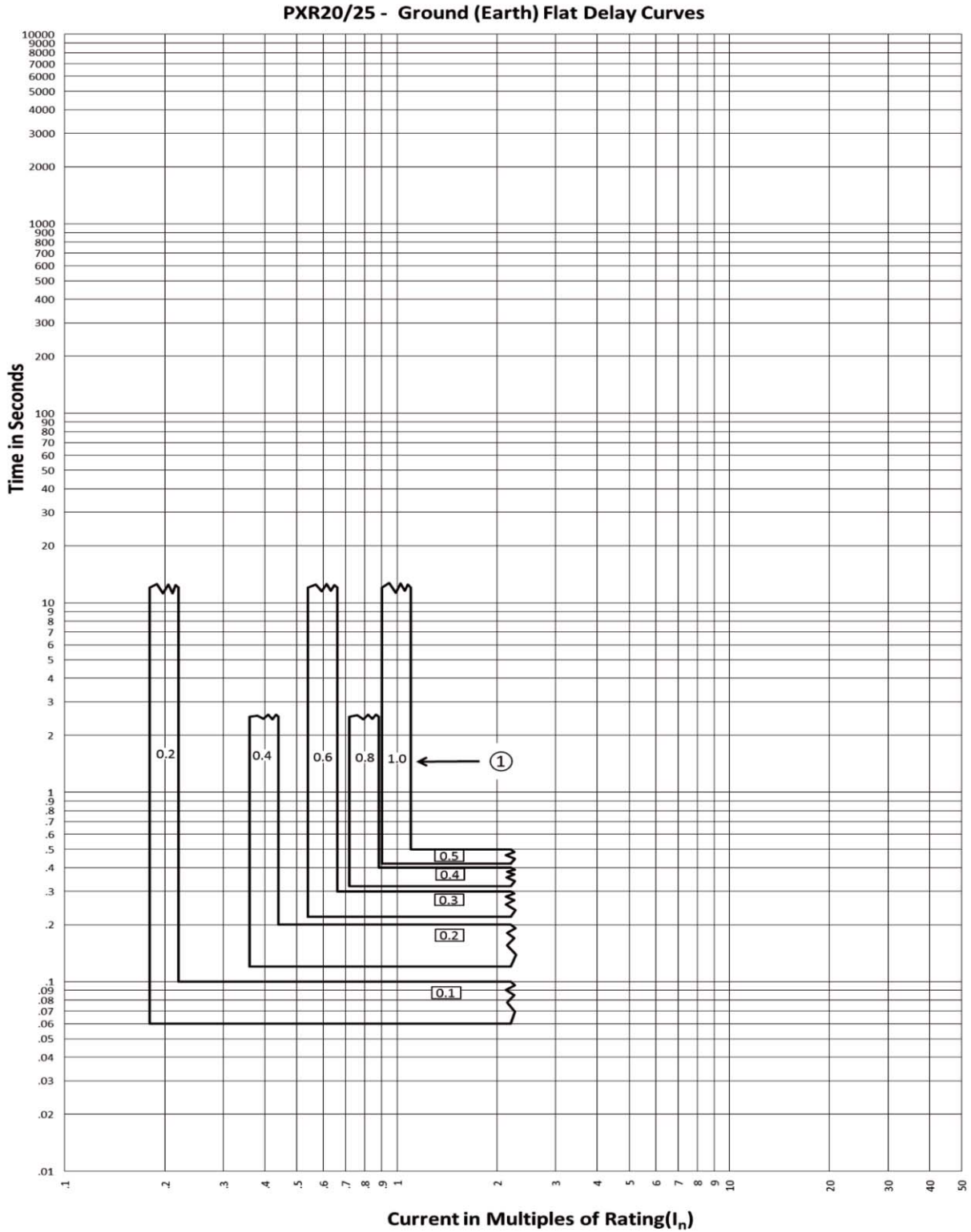
- Notes**
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with ±5% tolerance.
 2. Long Delay Time Settings 0.5s to 7s have +0%/-30% tolerance.
 3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
 4. Short Delay pickup settings of 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 (not all shown) have ±10% tolerance.
 5. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
 6. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.
 7. For the Long Time I⁴t slope only, all settings above 7 seconds will default to a maximum allowable 7 second time delay band.

IZMX16(40)...V(U)... PXR20/25 Long Delay(L) Curves
L-Protection: I⁴t-Characteristic curve; S-Protection: I²t



- Notes**
1. Long Delay pickup is 110% of the I_r setting (0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 1.0) with ± 5% tolerance.
 2. Long Delay Time Settings 0.5s to 7s have +0%/-30% tolerance.
 3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
 4. Short Delay pickup settings of 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 (not all shown) have ±10% tolerance.
 5. Short Time delay (0.5, 0.4, 0.3) I²t slopes have a +0%/-30% tolerance, 0.1s slope has a +0%/-40% tolerance.
 6. If the Long Delay time is projected to be faster than the Short Delay time, the Long Delay trip time will go no faster than the Short Delay time value.
 7. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.
 8. For the Long Time I⁴t slope only, all settings above 7 seconds will default to a maximum allowable 7 second time delay band.

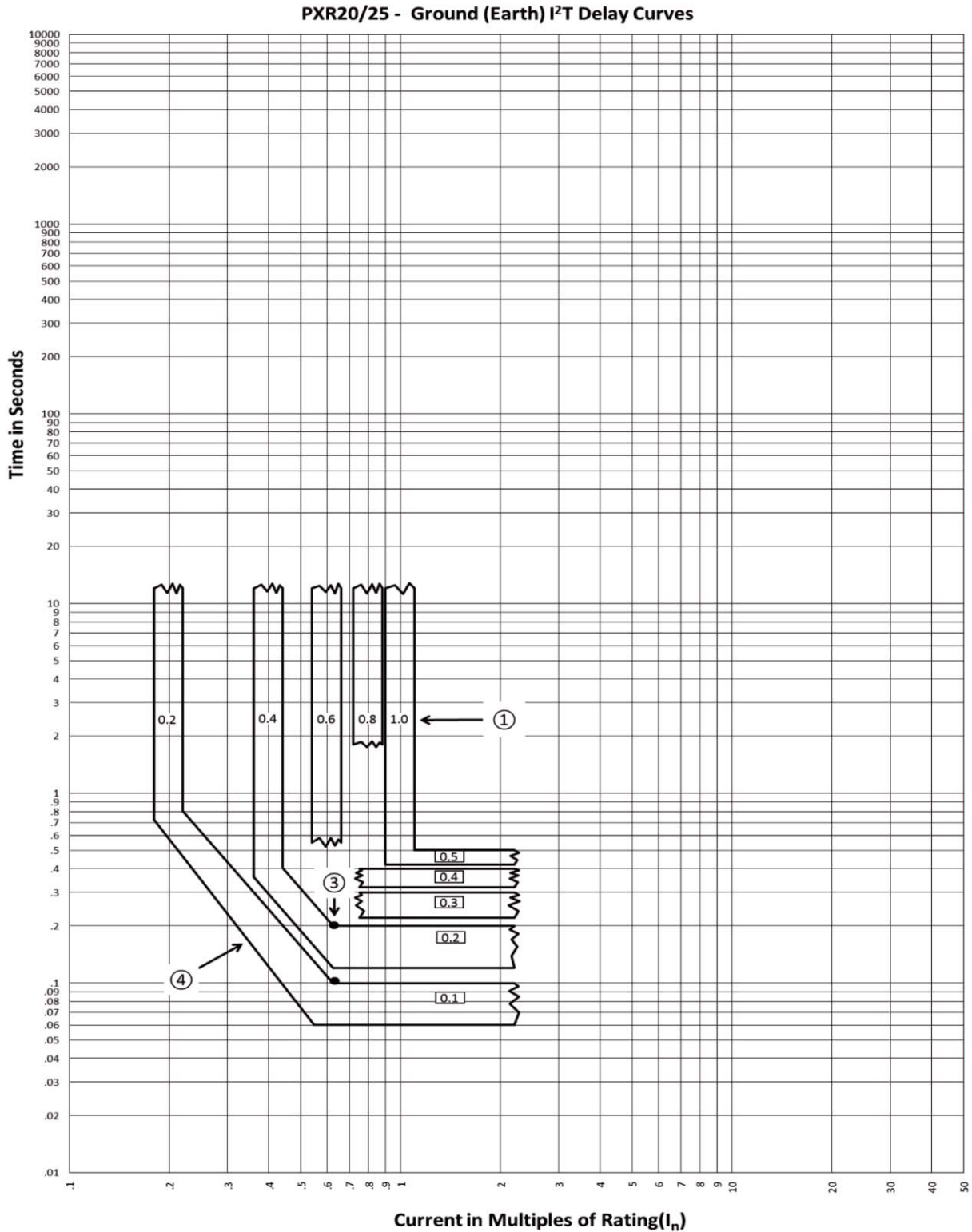
IZMX16(40)...V(U)... PXR20/25 Ground(G) Curves
G: Ground fault protection - Flat characteristic curve



Notes

1. Ground Pickup settings shown are for Residual sensing with a tolerance of $\pm 10\%$.
Pick up settings for Source Ground/Zero Sequence sensing have a tolerance of $\pm 15\%$.
2. Ground slope Flat, trip time tolerance is $+0\text{ms}/-80\text{ms}$ for all settings except 0.1s setting is $+0\text{ms}/-40\text{ms}$
3. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
4. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

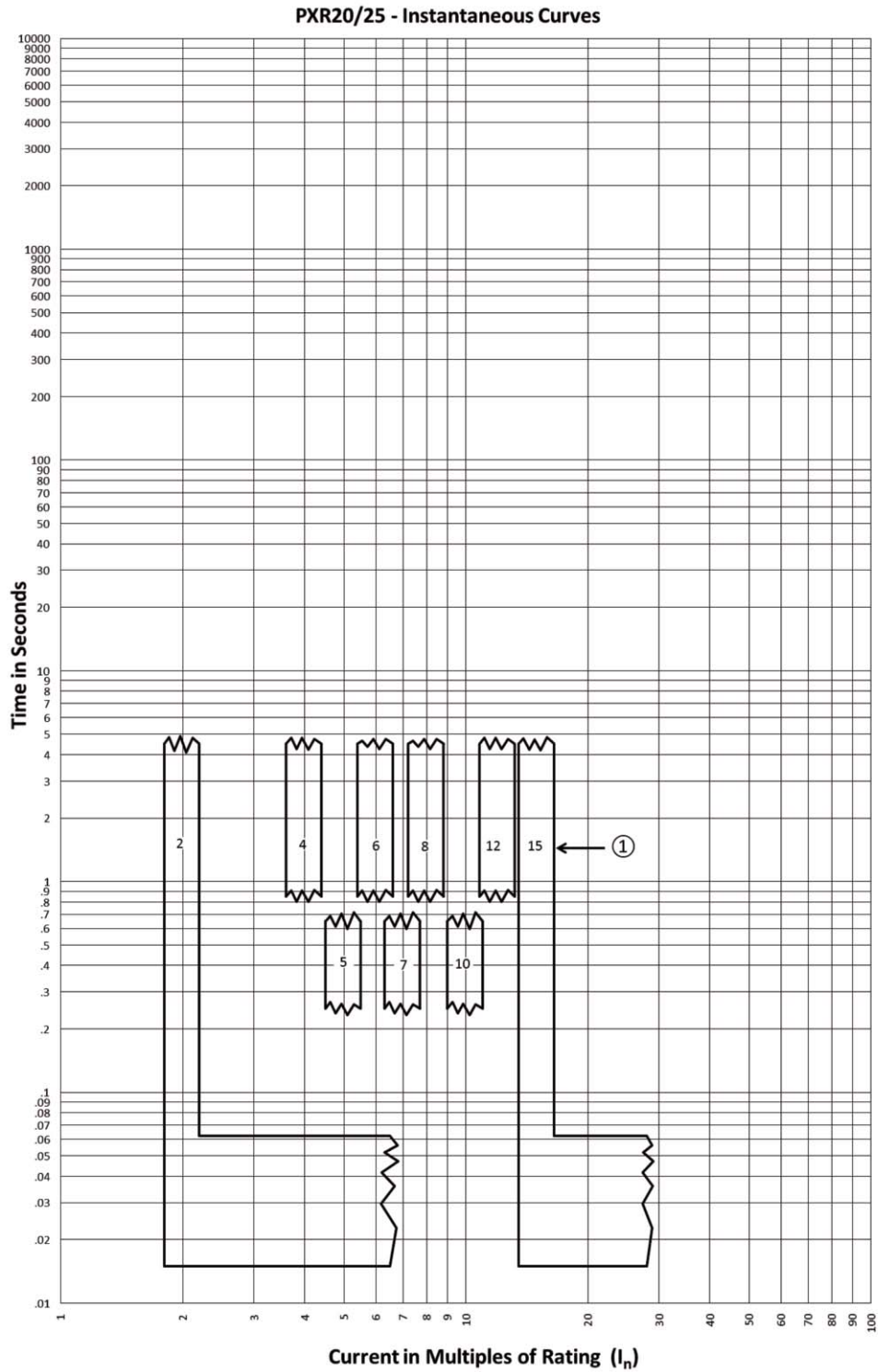
IZMX16(40)...V(U)... PXR20/25 Ground(G) Curves
G: Ground fault protection-I²t-Characteristic curve ON



Notes

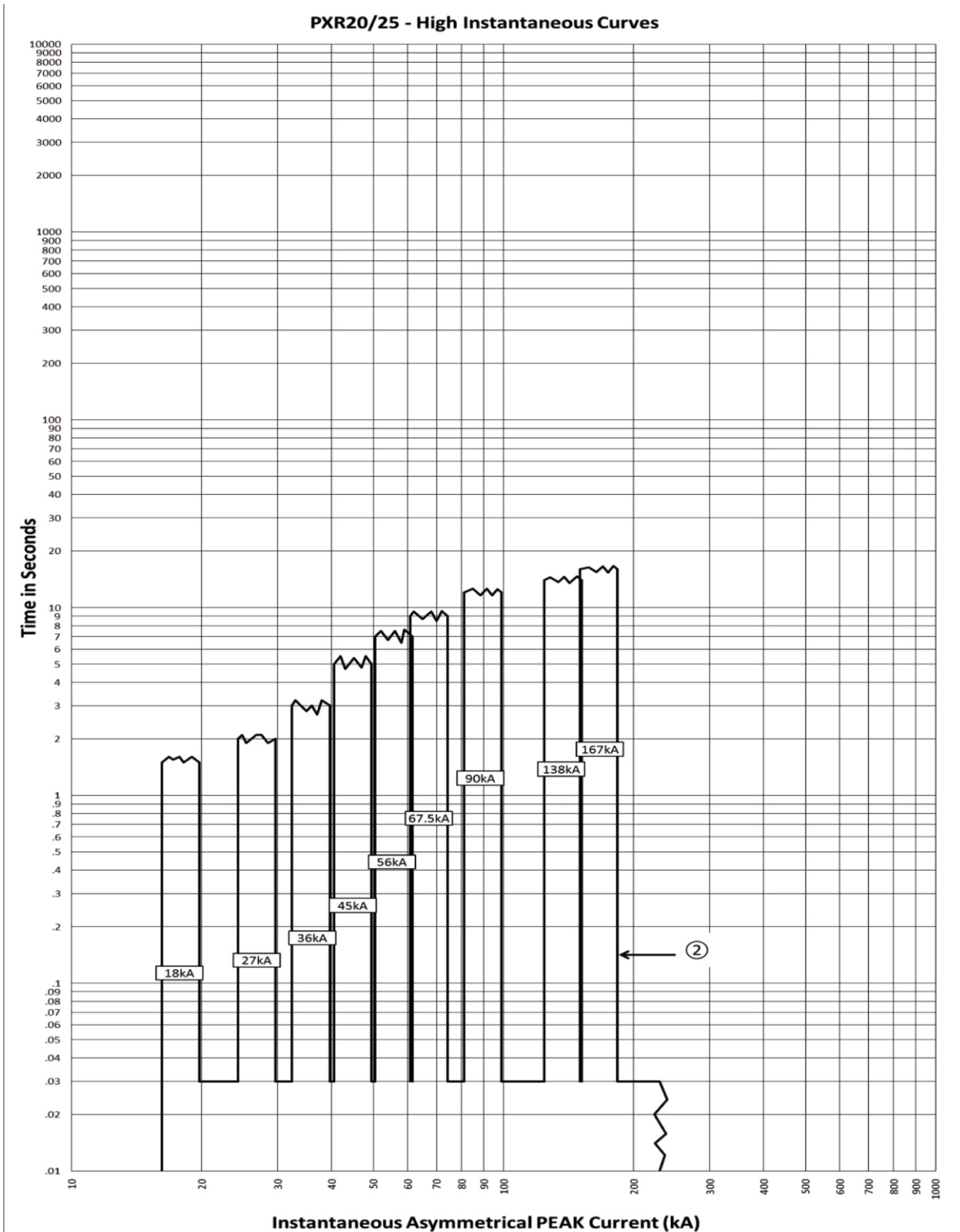
1. Ground Pickup settings shown are for Residual sensing with tolerance of $\pm 10\%$.
Pick up settings for Source Ground/Zero Sequence sensing have a tolerance of $\pm 15\%$.
2. If Thermal Memory is enabled, trip times may be shorter than indicated in this curve.
3. Break point is at $0.625 \times I_n$ from I^2t to flat.
4. Ground slope: I^2t , tolerance is:
0.1s, 0.2s : $+0\%/ -40\%$
0.3s, 0.4s, 0.5s : $+0\%/ -30\%$
5. With ZSI enabled, tripping times for 3-phase faults, no aux. power will be a maximum of 75ms for 60Hz and 80ms for 50Hz.

IZMX16(40)...V(U)... PXR20/25 Instantaneous(I) Curves I-Protection: Adjustable



Notes 1. The Instantaneous pickup settings have a ±10% tolerance.

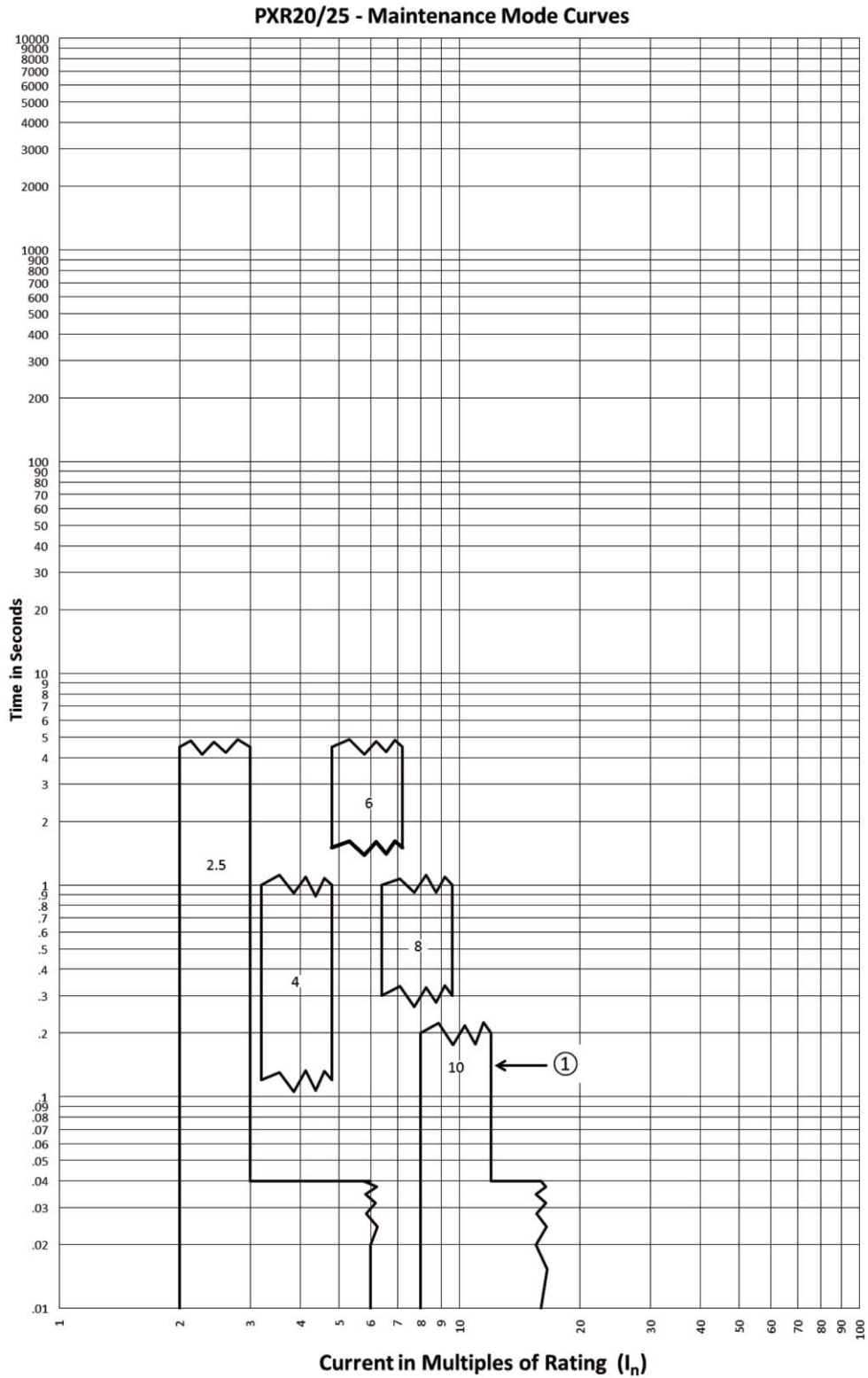
IZMX16(40)...V(U)... PXR20/25 Instantaneous(I) Curves Instantaneous Trip at High Fault Currents



Notes

1. The 90kA peak curve applies to IEC and UL 489 Selective NF (IZMX16) frame Series NRX breakers.
2. The 167kA peak curve applies to RF (IZM40) frame Series NRX breakers with an (Icu) interrupting rating of 100kA and above.
3. The 138kA peak curve applies to UL 489 Selective Series NRX RF frame series with an (Icu) interrupting rating of 85kA and above.
4. The 18-67kA peak curves apply to UL 489 Switchboard Protective Series NRX breakers with the instantaneous asymmetrical peak value of 22.5 times the frame current rating.
5. The Instantaneous pickup settings have a $\pm 10\%$ tolerance.
6. This protection is functional even when the Instantaneous is set to the OFF position.
7. The PXR trip unit will light the Instantaneous LED for a High Instantaneous trip.
8. The total High Instantaneous clearing times shown are conservative and consider the maximum response times of the trip unit, the circuit breaker opening, and the interruption of the current under factors that contribute to worst case conditions, such as: maximum rated voltages, single phase interruption, and minimum power factor. Faster clearing times are possible depending on the specific system conditions.

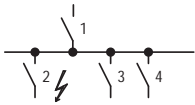
IZMX16...V(U)... PXR20/25 Maintenance Mode Curve



- Notes**
1. Reduction Pickup settings have a ±20% tolerance.
 2. The trip unit will light the Instantaneous LED for a Maintenance Mode protective trip.

Selectivity between incoming circuit breaker ACB, outgoing circuit breaker MCCB without using ZSI function

IZMX16...



I_n : Rated operational current
 I_U : Rated uninterrupted current
 I_{cu} : Rated short-circuit breaking capacity
 I_f : Set value non-delayed short-circuit releases

Selectivity 415 V AC

Selectivity exists between incoming circuit-breaker 1 and outgoing Circuit Breaker 2 if, only outgoing breaker 2 trips at position 2 - during a short-circuit. System sections 3 and 4 remain operational.

Selection:

Provided that the short-circuit current does not exceed those - values specified ($I_{cc\ eff}$)
 These details represent the limits of selectivity.
 Both Circuit Breakers will switch off with higher short-circuit-currents.
 On IZMX Circuit Breakers with V, P releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4). The I_f setting of IZMX breaker should be on OFF to allow on any short circuit level a time delayed tripping.

Incoming circuit breaker (1)		IZMX16...-V..., IZMX16...-P...															
I_n [A]	I_{cu} [kA]	I_f [A]max.	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
630	42	OFF															
630	50	OFF															
630	65	OFF															
800	42	OFF															
800	50	OFF															
800	65	OFF															
1.000	42	OFF															
1.000	50	OFF															
1.000	65	OFF															
1.250	42	OFF															
1.250	50	OFF															
1.250	65	OFF															
1.600	42	OFF															
1.600	50	OFF															
1.600	65	OFF															

Outgoing Circuit Breaker (2)		Selectivity - limit current I_s (kA)															
I_U [A]	I_{cu} [kA]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	
NZMB(C)(N) (H)1-A(M)...	20	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	25	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	32	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	40	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	50	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	63	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	80	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	100	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
NZMB(C)(N) (H)2-A(M)(V)...	125	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	160	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	20	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	25	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	32	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	40	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	50	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	63	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	80	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	90	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	100	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	125	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
NZMC(N)(H) 3-A(M)(V)...	140	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	160	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	200	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	220	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	250	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	300	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	220	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	250	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	320	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	350	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
NZMN(H) 4-A(M)(V)...	400	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	450	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	500	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	630	36 - 150	-	-	-	T	T	T	T	T	T	T	T	T	T	T	
	550	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	
	630	50 - 100	-	-	-	T	T	T	T	T	T	T	T	T	T	T	
	800	50 - 100	-	-	-	-	-	-	T	T	T	T	T	T	T	T	
	875	50 - 100	-	-	-	-	-	-	-	T	T	T	T	T	T	T	
1000	50 - 100	-	-	-	-	-	-	-	-	-	T	T	T	T	T		
1250	50 - 100	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T	
1400	50 - 100	-	-	-	-	-	-	-	-	-	-	-	-	-	T	T	T
1600	50 - 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes

B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

Technical data


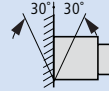
			IZMX16B... 06...	IZMX16B... 08...	IZMX16B... 10...	IZMX16B... 12...	IZMX16B... 16...
General							
Standards			IEC/EN 60947				
Ambient temperature	Storage	°C	-20 - +70				
	Operating (open)	°C	-20 - +70				
Mounting position							
Utilization category			B	B	B	B	B
Protection type			IP31 with door gasket, IP55 with protective cover				
Direction of incoming supply			as required	as required	as required	as required	as required
Main conducting paths							
Rated current = rated uninterrupted current	$I_n = I_U$	A	630	800	1000	1250	1600
Rated uninterrupted current at 50 °C ¹⁾	I_U	A	630	800	1000	1250	1500
Rated uninterrupted current at 60 °C ¹⁾	I_U	A	630	800	1000	1250	1400
Rated uninterrupted current at 70 °C ¹⁾	I_U	A	630	800	1000	1250	1350
Rated impulse withstand voltage	U_{imp}	V AC	12000	12000	12000	12000	12000
Rated operational voltage, max.	U_e	V AC	690	690	690	690	690
Overvoltage category/pollution degree			III/3	III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V	1000	1000	1000	1000	1000
Switching capacity							
Rated short-circuit making capacity	up to 240 V 50/60 Hz	I_{cm}	88	88	88	88	88
	up to 440 V 50/60 Hz	I_{cm}	88	88	88	88	88
	up to 690 V 50/60 Hz	I_{cm}	88	88	88	88	88
Rated short-time withstand current 50/60 Hz t = 1 s	I_{cw}	kA	42	42	42	42	42
Rated short-circuit breaking capacity I_{cn}							
IEC/EN 60947 Operating sequence I_{cu} O-t-CO							
	up to 240 V 50/60 Hz	I_{cu}	42	42	42	42	42
	up to 440 V 50/60 Hz	I_{cu}	42	42	42	42	42
	up to 690 V 50/60 Hz	I_{cu}	42	42	42	42	42
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO							
	up to 240 V 50/60 Hz	I_{cs}	42	42	42	42	42
	up to 440 V 50/60 Hz	I_{cs}	42	42	42	42	42
	up to 690 V 50/60 Hz	I_{cs}	42	42	42	42	42
Manual operating time ON or OFF			30	30	30	30	30
Electrical operating times							
	Closing time electrically (via closing release)	ms	30	30	30	30	30
	Opening time electrically (via shunt release)	ms	30	30	30	30	30
	Opening time electrically (via undervoltage release)	ms	50	50	50	50	50
	Opening time via trip electronics (from short circuit to OA) (non-delayed short-circuit trip)		27	27	27	27	27
Lifespan	mechanical, without maintenance	Operations	10000	10000	10000	10000	10000
	mechanical, with maintenance	Operations	20000	20000	20000	20000	20000
	electrical, without maintenance	Operations	10000	10000	10000	10000	10000
	electrical, with maintenance	Operations	20000	20000	20000	20000	20000
Maximum operating frequency			60	60	60	60	60
Total heat dissipation at rated current I_n	Fixed mounting	W	36	59	92	132	235
	Withdrawable	W	50	80	125	180	320
Weight							
Fixed mounting	3 pole	kg	16	16	16	16	16
	4 pole	kg	24	24	24	24	24
Withdrawable (CB only)	3 pole	kg	23	23	23	23	23
	4 pole	kg	33	33	33	33	33
Cassette	3 pole	kg	18	18	18	18	18
	4 pole	kg	21	21	21	21	21

Notes

¹⁾ Permissible continuous current for Circuit Breakers used at increased temperatures within a switchgear assembly. The expected internal temperatures can be estimated according to the applicable IEC standards.


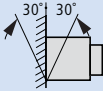
IZMX16N... 06...	IZMX16N... 08...	IZMX16N... 10...	IZMX16N... 12...	IZMX16N... 16...	IZMX16H... 06...	IZMX16H... 08...	IZMX16H... 10...	IZMX16H... 12...	IZMX16H... 16...	
IEC/EN 60947										
-20 - +70										
-20 - +70										
B	B	B	B	B	B	B	B	B	B	
IP31 with door gasket, IP55 with protective cover										
as required	as required	as required	as required	as required	as required	as required	as required	as required	as required	
630	800	1000	1250	1600	630	800	1000	1250	1600	
630	800	1000	1250	1500	630	800	1000	1250	1500	
630	800	1000	1250	1400	630	800	1000	1250	1400	
630	800	1000	1250	1350	630	800	1000	1250	1350	
12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	
690	690	690	690	690	690	690	690	690	690	
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
105	105	105	105	105	145	145	145	145	145	
105	105	105	105	105	145	145	145	145	145	
88	88	88	88	88	88	88	88	88	88	
42	42	42	42	42	42	42	42	42	42	
85	85	85	85	85	85	85	85	85	85	
50	50	50	50	50	66	66	66	66	66	
42	42	42	42	42	42	42	42	42	42	
50	50	50	50	50	50	50	50	50	50	
50	50	50	50	50	50	50	50	50	50	
42	42	42	42	42	42	42	42	42	42	
30	30	30	30	30	30	30	30	30	30	
30	30	30	30	30	30	30	30	30	30	
30	30	30	30	30	30	30	30	30	30	
50	50	50	50	50	50	50	50	50	50	
27	27	27	27	27	27	27	27	27	27	
10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	
20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	
10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	
20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	
60	60	60	60	60	60	60	60	60	60	
36	59	92	132	235	36	59	92	132	235	
50	80	125	180	320	50	80	125	180	320	
16	16	16	16	16	16	16	16	16	16	
24	24	24	24	24	24	24	24	24	24	
23	23	23	23	23	23	23	23	23	23	
33	33	33	33	33	33	33	33	33	33	
18	18	18	18	18	18	18	18	18	18	
21	21	21	21	21	21	21	21	21	21	

Technical data


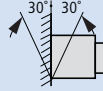
				INX16B...06...	INX16B...08...
General					
Standards		IEC/EN 60947			
Ambient temperature	Storage	°C		-40 - +70	
	Operating (open)	°C		-25 - +70	
Mounting position					
Utilization category				B	B
Protection type				IP31 with door gasket, IP55 with protective cover	
Direction of incoming supply				as required	as required
Main conducting paths					
Rated current = rated uninterrupted current		$I_n = I_u$	A	630	800
Rated uninterrupted current at 50 °C ¹⁾		I_u	A	630	800
Rated uninterrupted current at 60 °C ¹⁾		I_u	A	630	800
Rated uninterrupted current at 70 °C ¹⁾		I_u	A	630	800
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000
Rated operational voltage, max.		U_e	V AC	690	690
Overvoltage category/pollution degree				III/3	III/3
Rated insulation voltage		U_i	V	1000	1000
Switching capacity					
Rated short-circuit making capacity	up to 240 V 50/60 Hz	I_{cm}	kA	88	88
	up to 440 V 50/60 Hz	I_{cm}	kA	88	88
	up to 690 V 50/60 Hz	I_{cm}	kA	88	88
Rated short-time withstand current 50/60 Hz t = 1 s		I_{cw}	kA	42	42
Electrical operating times					
Closing time electrically (via closing release)			ms	30	30
Opening time electrically (via shunt release)			ms	30	30
Opening time electrically (via undervoltage release)			ms	50	50
Lifespan	mechanical, without maintenance		Operations	10000	10000
	mechanical, with maintenance		Operations	20000	20000
	electrical, without maintenance		Operations	10000	10000
	electrical, with maintenance		Operations	20000	20000
Maximum operating frequency				Operations/h	60
Total heat dissipation at rated current I_n with 3-phase symmetrical load	Fixed mounting		W	36	59
	Withdrawable		W	50	80
Weight					
Fixed mounting	3 pole		kg	14	14
	4 pole		kg	22	22
Withdrawable (CB only)	3 pole		kg	21	21
	4 pole		kg	31	31
Cassette	3 pole		kg	18	18
	4 pole		kg	21	21

Notes

¹⁾ Permissible continuous current for Circuit Breakers used at increased temperatures within a switchgear assembly. The expected internal temperatures can be estimated according to the applicable IEC standards.

INX16B...10...	INX16B...12...	INX16B...16...	
IEC/EN 60947			
-40 - +70			
-25 - +70			
 			
B	B	B	
IP31 with door gasket, IP55 with protective cover			
as required	as required	as required	
1000	1250	1600	
1000	1250	1500	
1000	1250	1400	
1000	1250	1350	
12000	12000	12000	
690	690	690	
III/3	III/3	III/3	
1000	1000	1000	
88	88	88	
88	88	88	
88	88	88	
42	42	42	
30	30	30	
30	30	30	
50	50	50	
10000	10000	10000	
20000	20000	20000	
10000	10000	10000	
20000	20000	20000	
60	60	60	
92	132	235	
125	180	320	
14	14	14	
22	22	22	
21	21	21	
31	31	31	
18	18	18	
21	21	21	

Technical data

				IZMX40B...08...	IZMX40B...10...	IZMX40B...12...
General						
Standards	IEC/EN 60947					
Ambient temperature	Storage	°C		-20 - +70		
	Operating (open)	°C		-20 - +70		
Mounting position						
Utilization category				B	B	B
Protection type				IP31 with door gasket, IP55 with protective cover		
Direction of incoming supply				as required	as required	as required
Main conducting paths						
Rated current = rated uninterrupted current	$I_n = I_u$	A		800	1000	1250
Rated uninterrupted current at 50 °C ¹⁾	I_u	A		800	1000	1250
Rated uninterrupted current at 60 °C ¹⁾	I_u	A		800	1000	1250
Rated uninterrupted current at 70 °C ¹⁾	I_u	A		800	1000	1250
Rated impulse withstand voltage	U_{imp}	V AC		12000	12000	12000
Rated operational voltage, max.	U_e	V AC		690	690	690
Use in IT electrical power networks up to U = 440 V	I_{IT}	kA		50	50	50
Oversvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage	U_i	V		1000	1000	1000
Switching capacity						
Rated short-circuit making capacity	up to 240 V 50/60 Hz	I_{cm}	kA	145	145	145
	up to 440 V 50/60 Hz	I_{cm}	kA	145	145	145
	up to 690 V 50/60 Hz	I_{cm}	kA	145	145	145
Rated short-time withstand current 50/60 Hz t = 1 s / 3 s		I_{cw}	kA	66/53	66/53	66/53
Rated short-circuit breaking capacity I_{cn}	IEC/EN 60947 Operating sequence I_{cu} 0-t-CO					
	up to 240 V 50/60 Hz	I_{cu}	kA	66	66	66
	up to 440 V 50/60 Hz	I_{cu}	kA	66	66	66
	up to 690 V 50/60 Hz	I_{cu}	kA	66	66	66
	IEC/EN 60947 Operating sequence I_{cs} 0-t-CO-t-CO					
	up to 240 V 50/60 Hz	I_{cs}	kA	66	66	66
	up to 440 V 50/60 Hz	I_{cs}	kA	66	66	66
	up to 690 V 50/60 Hz	I_{cs}	kA	66	66	66
Operating times for closing (ON)						
	Closing time electrically (via closing release)		ms	35	35	35
Operating times for opening (OFF)						
	Opening time electrically (via shunt release)		ms	35	35	35
	Opening time electrically (via undervoltage release)		ms	40	40	40
	Opening time via trip electronics (from short-circuit to OA) (non-delayed short-circuit trip)		ms	52	52	52
Lifespan	mechanical, without maintenance		Operations	10000	10000	10000
	mechanical, with maintenance		Operations	20000	20000	20000
	electrical 440V, without maintenance		Operations	10000	10000	10000
	electrical 440V, with maintenance		Operations	20000	20000	20000
Maximum operating frequency			Operations/h	60	60	60
Total heat dissipation at rated current I_n	Fixed mounting		W	35	55	90
	Withdrawable		W	65	100	155
Weight						
Fixed mounting	3 pole		kg	41	41	41
	4 pole		kg	54	54	54
Withdrawable (CB only)	3 pole		kg	66	66	66
	4 pole		kg	83	83	83
Cassette	3 pole		kg	29	29	29
	4 pole		kg	35	35	35

Instructions ¹⁾ Permissible continuous current for Circuit Breakers operating in switchboards at various internal ambient temperatures.

The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

²⁾ Rated continuous current stated applies only with 4 x 120 x 10 mm vertical terminal rails painted black. The values are reduced by 100 A each with 4 x 100 x 10 mm.

IZMX40B...16...	IZMX40B...20...	IZMX40B...25...	IZMX40B...32...	IZMX40B...40...	IZMX40N...08...	IZMX40N...10...	IZMX40N...12...	IZMX40N...16...
IEC/EN 60947								
-20 - +70								
-20 - +70								
B	B	B	B	B	B	B	B	B
IP31 with door gasket, IP55 with protective cover								
as required	as required	as required	as required	as required	as required	as required	as required	as required
1600	2000	2500	3200	4000	800	1000	1250	1600
1600	2000	2500	3200	4000 ²⁾	800	1000	1250	1600
1600	2000	2500	3200	3650 ²⁾	800	1000	1250	1600
1600	2000	2280	3200	3500 ²⁾	800	1000	1250	1600
12000	12000	12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690	690	690
50	50	50	50	50	50	50	50	50
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000	1000	1000
145	145	145	145	145	187	187	187	187
145	145	145	145	145	187	187	187	187
145	145	145	145	145	166	166	166	166
66/53	66/53	66/53	66/53	66/53	85/75	85/75	85/75	85/75
66	66	66	66	66	85	85	85	85
66	66	66	66	66	85	85	85	85
66	66	66	66	66	75	75	75	75
66	66	66	66	66	85	85	85	85
66	66	66	66	66	85	85	85	85
66	66	66	66	66	75	75	75	75
35	35	35	35	35	35	35	35	35
35	35	35	35	35	35	35	35	35
40	40	40	40	40	40	40	40	40
52	52	52	52	52	52	52	52	52
10000	10000	10000	10000	10000	10000	10000	10000	10000
20000	20000	20000	20000	20000	20000	20000	20000	20000
10000	8000	5000	5000	5000	10000	10000	10000	10000
20000	16000	10000	10000	10000	20000	20000	20000	20000
60	60	60	60	60	60	60	60	60
140	220	345	385	600	25	40	60	100
255	395	620	560	880	35	55	90	140
41	41	41	41	41	41	41	41	41
54	54	54	56	56	56	56	56	56
66	66	66	69	69	69	69	69	69
83	83	83	86	86	86	86	86	86
29	29	29	29	29	29	29	29	29
35	35	35	35	35	35	35	35	35

Technical data

				IZMX40N...20...	IZMX40N...25...	IZMX40N...32...
General						
Standards				IEC/EN 60947		
Ambient temperature	Storage	°C	-20 - +70			
	Operating (open)	°C	-20 - +70			
Mounting position						
Utilization category				B	B	B
Protection type				IP31 with door gasket, IP55 with protective cover		
Direction of incoming supply				as required	as required	as required
Main conducting paths						
Rated current = rated uninterrupted current		$I_n = I_U$	A	2000	2500	3200
Rated uninterrupted current at 50 °C ¹⁾		I_U	A	2000	2500	3200
Rated uninterrupted current at 60 °C ¹⁾		I_U	A	2000	2500	3200
Rated uninterrupted current at 70 °C ¹⁾		I_U	A	2000	2500	3200
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000	12000
Rated operational voltage, max.		U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V				I_{IT}	kA	50
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity	up to 240 V 50/60 Hz	I_{cm}	kA	187	187	187
	up to 440 V 50/60 Hz	I_{cm}	kA	187	187	187
	up to 690 V 50/60 Hz	I_{cm}	kA	166	166	166
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	85/75	85/75	85/75
	t = 3 s	I_{cw}	kA	66	66	66
Rated short-circuit breaking capacity I_{cn}						
IEC/EN 60947 Operating sequence I_{cu} O-t-CO						
up to 240 V 50/60 Hz		I_{cu}	kA	85	85	85
up to 440 V 50/60 Hz		I_{cu}	kA	85	85	85
up to 690 V 50/60 Hz		I_{cu}	kA	75	75	75
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO						
up to 240 V 50/60 Hz		I_{cs}	kA	85	85	85
up to 440 V 50/60 Hz		I_{cs}	kA	85	85	85
up to 690 V 50/60 Hz		I_{cs}	kA	75	75	75
Operating times for closing (ON)						
Closing time electrically (via closing release)		ms		35	35	35
Operating times for opening (OFF)						
Opening time electrically (via shunt release)		ms		35	35	35
Opening time electrically (via undervoltage release)		ms		40	40	40
Opening time via trip electronics (from short-circuit to O/A) (non-delayed short-circuit trip)		ms		52	52	52
Lifespan	mechanical, without maintenance		Operations	10000	10000	10000
	mechanical, with maintenance		Operations	20000	20000	20000
	electrical 440V, without maintenance		Operations	8000	5000	5000
	electrical 440V, with maintenance		Operations	16000	10000	10000
Maximum operating frequency				Operations/h	60	60
Total heat dissipation at rated current I_n	Fixed	W		150	235	385
	Withdrawable	W		220	350	560
Weight						
Fixed mounting	3 pole	kg		41	41	41
	4 pole	kg		56	56	56
Withdrawable (CB only)	3 pole	kg		69	69	69
	4 pole	kg		86	86	86
Cassette	3 pole	kg		29	29	29
	4 pole	kg		35	35	35


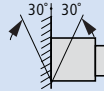
Instructions ¹⁾ Permissible continuous current for Circuit Breakers operating in switchboards at various internal ambient temperatures.

The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

²⁾ Rated continuous current stated applies only with 4 x 120 x 10 mm vertical terminal rails painted black. The values are reduced by 100 A each with 4 x 100 x 10 mm.

IZMX40N...40...	IZMX40H...08...	IZMX40H...10...	IZMX40H...12...	IZMX40H...16...	IZMX40H...20...	IZMX40H...25...	IZMX40H...32...	IZMX40H...40...
IEC/EN 60947								
-20 - +70								
-20 - +70								
B	B	B	B	B	B	B	B	B
IP31 with door gasket, IP55 with protective cover								
as required	as required	as required	as required	as required	as required	as required	as required	as required
4000	800	1000	1250	1600	2000	2500	3200	4000
4000 ²⁾	800	1000	1250	1600	2000	2500	3200	4000 ²⁾
3650 ²⁾	800	1000	1250	1600	2000	2500	3200	3650 ²⁾
3500 ²⁾	800	1000	1250	1600	2000	2500	3200	3500 ²⁾
12000	12000	12000	12000	12000	12000	12000	12000	12000
690	690	690	690	690	690	690	690	690
50	50	50	50	50	50	50	50	50
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000	1000	1000
187	231	231	231	231	231	231	231	231
187	231	231	231	231	231	231	231	231
166	166	166	166	166	166	166	166	166
85	85	85	85	85	85	85	85	85
66	66	66	66	66	66	66	66	66
85	105	105	105	105	105	105	105	105
85	105	105	105	105	105	105	105	105
75	75	75	75	75	75	75	75	75
85	105	105	105	105	105	105	105	105
85	105	105	105	105	105	105	105	105
75	75	75	75	75	75	75	75	75
35	35	35	35	35	35	35	35	35
35	35	35	35	35	35	35	35	35
40	40	40	40	40	40	40	40	40
52	52	52	52	52	52	52	52	52
10000	10000	10000	10000	10000	10000	10000	10000	10000
20000	20000	20000	20000	20000	20000	20000	20000	20000
5000	10000	10000	10000	10000	8000	5000	5000	5000
10000	20000	20000	20000	20000	16000	10000	10000	10000
60	60	60	60	60	60	60	60	60
600	25	40	60	100	150	235	385	600
880	35	55	90	140	220	350	560	880
41	41	41	41	41	41	41	41	
56	56	56	56	56	56	56	56	56
69	69	69	69	69	69	69	69	69
86	86	86	86	86	86	86	86	86
29	29	29	29	29	29	29	29	29
35	35	35	35	35	35	35	35	35

Technical data


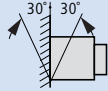
				INX40B...08...	INX40B...10...
General					
Standards				IEC/EN 60947	
Ambient temperature	Storage	°C	-40 - +70		
	Operating (open)	°C	-25 - +70		
Mounting position					
Utilization category				B	B
Protection type				IP31 with door gasket, IP55 with protective cover	
Direction of incoming supply				as required	as required
Main conducting paths					
Rated current = rated uninterrupted current		$I_n = I_u$	A	800	1000
Rated uninterrupted current at 50 °C ¹⁾		I_u	A	800	1000
Rated uninterrupted current at 60 °C ¹⁾		I_u	A	800	1000
Rated uninterrupted current at 70 °C ¹⁾		I_u	A	800	1000
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000
Rated operational voltage, max.		U_e	V AC	690	690
Use in IT electrical power networks up to U = 440 V		I_{IT}	kA	50	50
Overvoltage category/pollution degree				III/3	III/3
Rated insulation voltage		U_i	V	1000	1000
Switching capacity					
Rated short-circuit making capacity	up to 240 V 50/60 Hz	I_{cm}	kA	145	145
	up to 440 V 50/60 Hz	I_{cm}	kA	145	145
	up to 690 V 50/60 Hz	I_{cm}	kA	145	145
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	66	66
	t = 3 s	I_{cw}	kA	53	53
Operating times for opening (ON)					
Closing time electrically (via closing release)			ms	35	35
Operating times for opening (OFF)					
Opening time electrically (via shunt release)			ms	35	35
Opening time electrically (via undervoltage release)			ms	40	40
Lifespan	mechanical, without maintenance		Operations	10000	10000
	mechanical, with maintenance		Operations	20000	20000
	electrical 440V, without maintenance		Operations	10000	10000
	electrical 440V, with maintenance		Operations	20000	20000
Maximum operation frequency			Operations/h	60	60
total heat dissipation at rated current I_n	Fixed		W	35	55
	bei 3-phasiger symmetrischer Belastung	Withdrawable	W	65	100
Weight					
Fixed mounting	3 pole		kg	39	39
	4 pole		kg	52	52
Withdrawable (CB only)	3 pole		kg	60	60
	4 pole		kg	76	76
Cassette	3 pole		kg	29	29
	4 pole		kg	35	35

Instructions ¹⁾ Permissible continuous current for Circuit Breakers operating in switchboards at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

²⁾ Rated continuous current stated applies only with 4 x 120 x 10 mm vertical terminal rails painted black. The values are reduced by 100 A each with 4 x 100 x 10 mm.

INX40B...12...	INX40B...16...	INX40B...20...	INX40B...25...	INX40B...32...	INX40B...40...
IEC/EN 60947					
-40 - +70					
-25 - +70					
B	B	B	B	B	B
IP31 with door gasket, IP55 with protective cover					
as required	as required	as required	as required	as required	as required
1250	1600	2000	2500	3200	4000
1250	1600	2000	2500	3200	4000 ²⁾
1250	1600	2000	2500	3200	3650 ²⁾
1250	1600	2000	2500	3200	3500 ²⁾
12000	12000	12000	12000	12000	12000
690	690	690	690	690	690
50	50	50	50	50	50
III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000
145	145	145	145	145	145
145	145	145	145	145	145
145	145	145	145	145	145
66	66	66	66	66	66
53	53	53	53	53	53
35	35	35	35	35	35
35	35	35	35	35	35
40	40	40	40	40	40
10000	10000	10000	10000	10000	10000
20000	20000	20000	20000	20000	20000
10000	10000	8000	5000	5000	5000
20000	20000	16000	10000	10000	10000
60	60	60	60	60	60
190	140	220	345	385	600
155	255	395	620	560	880
39	39	39	39	39	39
52	52	52	52	53	53
60	60	60	60	66	66
76	76	76	76	82	82
29	29	29	29	29	29
35	35	35	35	35	35

Technical data

				INX40N...08...	INX40N...10...
General					
Standards				IEC/EN 60947	
Ambient temperature	Storage	°C	-40 - +70		
	Operating (open)	°C	-25 - +70		
Mounting position					
Utilization category				B	B
Protection type				IP31 with door gasket, IP55 with protective cover	
Direction of incoming supply				as required	as required
Main conducting paths					
Rated current = rated uninterrupted current		$I_n = I_u$	A	800	1000
Rated uninterrupted current at 50 °C ¹⁾		I_u	A	800	1000
Rated uninterrupted current at 60 °C ¹⁾		I_u	A	800	1000
Rated uninterrupted current at 70 °C ¹⁾		I_u	A	800	1000
Rated impulse withstand voltage		U_{imp}	V AC	12000	12000
Rated operational voltage, max.		U_e	V AC	690	690
Use in IT electrical power networks up to U = 440 V		I_{IT}	kA	50	50
Overvoltage category/pollution degree		III/3			
Rated insulation voltage		U_i	V	1000	1000
Switching capacity					
Rated short-circuit making capacity	up to 240 V 50/60 Hz	I_{cm}	kA	187	187
	up to 440 V 50/60 Hz	I_{cm}	kA	187	187
	up to 690 V 50/60 Hz	I_{cm}	kA	166	166
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	85	85
	t = 3 s	I_{cw}	kA	66	66
Operating times for closing (ON)					
Closing time eöelectrocaööy (via colsing release)			ms	35	35
Operating times for opening (OFF)					
Opening time electrically (via shunt release)			ms	35	35
Opening time electrically (via undervoltage release)			ms	40	40
Lifespan	mechanical, without maintenance		Operations	10000	10000
	mechanical, with maintenance		Operations	20000	20000
	electrical 440V, without maintenance		Operations	10000	10000
	electrical 440V, with maintenance		Operations	20000	20000
Maximum operating frequency			Operations/h	60	60
Heat dissipation at rated current I_n with 3-phase symmetrical load	Fixed mounting		W	25	40
	Withdrawable		W	35	55
Weight					
Fixed mounting	3 pole		kg	39	39
	4 pole		kg	53	53
Withdrawable (CB only)	3 pole		kg	66	66
	4 pole		kg	82	82
Cassette	3 pole		kg	27	27
	4 pole		kg	35	35

Instructions ¹⁾ Permissible continuous current for Circuit Breakers operating in switchboards at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation.

²⁾ Rated continuous current stated applies only with 4 x 120 x 10 mm vertical terminal rails painted black. The values are reduced by 100 A each with 4 x 100 x 10 mm.

INX40...

INX40N...12...	INX40N...16...	INX40N...20...	INX40N...25...	INX40N...32...	INX40N...40...
IEC/EN 60947					
-40 - +70					
-25 - +70					
B	B	B	B	B	B
IP31 with door gasket, IP55 with protective cover					
as required	as required	as required	as required	as required	as required
1250	1600	2000	2500	3200	4000
1250	1600	2000	2500	3200	4000 ²⁾
1250	1600	2000	2500	3200	3650 ²⁾
1250	1600	2000	2500	3200	3500 ²⁾
12000	12000	12000	12000	12000	12000
690	690	690	690	690	690
50	50	50	50	50	50
III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000
187	187	187	187	187	187
187	187	187	187	187	187
166	166	166	166	166	166
85	85	85	85	85	85
66	66	66	66	66	66
35	35	35	35	35	35
25	25	25	25	25	25
40	40	40	40	40	40
10000	10000	10000	10000	10000	10000
20000	20000	20000	20000	20000	20000
10000	10000	8000	5000	5000	5000
20000	20000	16000	10000	10000	10000
60	60	60	60	60	60
60	100	150	235	385	600
90	140	220	350	560	880
39	39	39	39	39	39
53	53	53	53	53	53
66	66	66	66	66	66
82	82	82	82	82	82
29	29	29	29	29	29
35	35	35	35	35	35

Electrical accessories

IZMX-AS22, IZMX-OTS, IZMX-S..., IZMX-U...

		Signalling switch ON-OFF IZMX-AS...	Tripped signalling contact IZMX-OTS...	Latch Check Switch IZMX-LCS...(SR)	Cell switch IZMX-CS...
Rated breaking capacity					
Inductive load					
250 V AC	A	10	10	10	10
125 V DC	A	0.5	0.5	0.5	0.5
250 V DC	A	0.25	0.25	0.25	0.25

		Shunt releases (100% duty)					Closing releases (100% duty)					
		IZMX-ST(S)24DC	IZMX-ST(S)48DC	IZMX-ST(S)60DC	IZMX-ST(S)110AD	IZMX-ST(S)230AD	IZMX-SR24DC	IZMX-SR48DC	IZMX-SR60DC	IZMX-SR110AD	IZMX-SR230AD	
Rated control-voltage												
AC 50/60 Hz	U_s	V	–	–	–	110 - 127	208 - 240	–	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	60	110 - 125	208 - 250	24	48	60	110 - 125	220 - 250
Power consumption												
AC pickup 35ms	VA	–	–	–	540	500	–	–	–	540	500	
continuous		–	–	–	10	9	–	–	–	–	–	
DC pickup 35ms	W	500	530	540	540	500	500	530	540	540	500	
continuous		5	5	5	10	9	–	–	–	–	–	
Circuit Breaker total time switching at U_s												
...X16	ms	30	30	30	30	30	30	30	30	30	30	
...X40	ms	35	35	35	35	35	35	35	35	35	35	
Operating range												
Drop-out voltage												
AC operated, 50/60 Hz, pick-up	Drop-out	$x U_c$	–	–	–	–	–	–	–	–	–	
Pick-up voltage	pick-up	$x U_c$	0.7 - 1.1	0.7 - 1.1	0.7 - 1.1	0.7 - 1.1	0.7 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	

		Undervoltage releases (100% duty)			IZMX-UVR60DC	IZMX-UVR110AD	IZMX-UVR230AD
		IZMX-UVR24DC	IZMX-UVR48DC				
Rated control-voltage							
AC 50/60 Hz	U_s	V	–	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	60	110 - 125	208 - 250
Power consumption							
AC pickup 35ms	VA	–	–	–	–	890	910
continuous		–	–	–	–	5	5
DC pickup 35ms	W	500	850	890	890	890	910
continuous		5	5	5	5	5	5
Circuit Breaker total time opening							
...X16	ms	50	50	50	50	50	50
...X40	ms	40	40	40	40	40	40
Operating range							
Drop-out voltage							
AC operated, 50/60 Hz, pick-up	Drop-out	$x U_c$	0.35 - 0.7	0.35 - 0.7	0.35 - 0.7	0.35 - 0.7	0.35 - 0.7
Pick-up voltage	pick-up	$x U_c$	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1

Motor operators, Altitude Rating Factors

IZMX-M16..., IZMX-M40...

			Motor operators				
			IZMX-M16-24DC	IZMX-M16-48DC	IZMX-M16-60DC	IZMX-M16-110AD	IZMX-M16-230AD
Rated control voltage	U_s	V	24 V DC	48 V DC	60 V DC	110 - 127 V AC 50/60 Hz 110 - 125 V DC	220 - 240 V AC 50/60 Hz 220 - 250 V DC
Necessary time required for charging the spring-operated stored energy mechanism at $1 \times U_s$			4 s	3 s	3 s	3 s AC 50/60 Hz 3 s DC	4 s AC 50/60 Hz 4 s DC
Rated operational current	I_n	A	6 A	3 A	3 A	2 A AC 50/60 Hz 1 A DC	1 A AC 50/60 Hz 1 A DC
Starting current		A	20 A	15 A	15 A	6 A AC 50/60 Hz 5 A DC	10 A AC 50/60 Hz 10 A DC
Power consumption			160 W	150 W	150 W	280 VA AC 50/60 Hz 150 W DC	280 VA AC 50/60 Hz 280 W DC

			Motor operators				
			IZMX-M40-24DC	IZMX-M40-48DC	IZMX-M40-60DC	IZMX-M40-110AD	IZMX-M40-230AD
Rated control voltage	U_s	V	24 V DC	48 V DC	60 V DC	110 - 127 V AC 50/60 Hz 110 - 125 V DC	220 - 240 V AC 50/60 Hz 220 - 250 V DC
Necessary time required for charging the spring-operated stored energy mechanism at $1 \times U_{sDC}$			6 s DC	6 s DC	6 s DC	6 s AC 50/60 Hz 6 s DC	6 s AC 50/60 Hz 6 s DC
Rated operational current	I_n	A	7 A DC	3 A DC	3 A DC	3 A AC 50/60 Hz 2 A DC	1.5 A AC 50/60 Hz 1 A DC
Starting current		A	25 A DC	14 A DC	12 A DC	9 A AC 50/60 Hz 7.5 A DC	4.5 A AC 50/60 Hz 4 A DC
Power consumption			200 W DC	175 W DC	175 W DC	425 VA AC 50/60 Hz 275 W DC	400 VA AC 50/60 Hz 250 W DC

Altitude Rating Factors	Altitude [m]	Voltage Correction	Current Correction
	2000	1.000	1.000
	2150	0.989	0.998
	2300	0.976	0.995
	2450	0.963	0.993
	2600	0.950	0.990
	2750	0.933	0.987
	2900	0.917	0.983
	3050	0.900	0.980
	3200	0.883	0.977
	3350	0.867	0.973
	3500	0.850	0.970
	3650	0.833	0.967
	3800	0.817	0.963
	3950	0.800	0.960
	5000	0.700	0.940

Notes IZMX circuit breakers can be applied at their full voltage and current ratings up to a maximum altitude of 2000 meters above sea level. When installed at higher altitudes, the ratings are subject to correction factors. Short circuit current is not affected as long as the voltage is rated in accordance with the table.

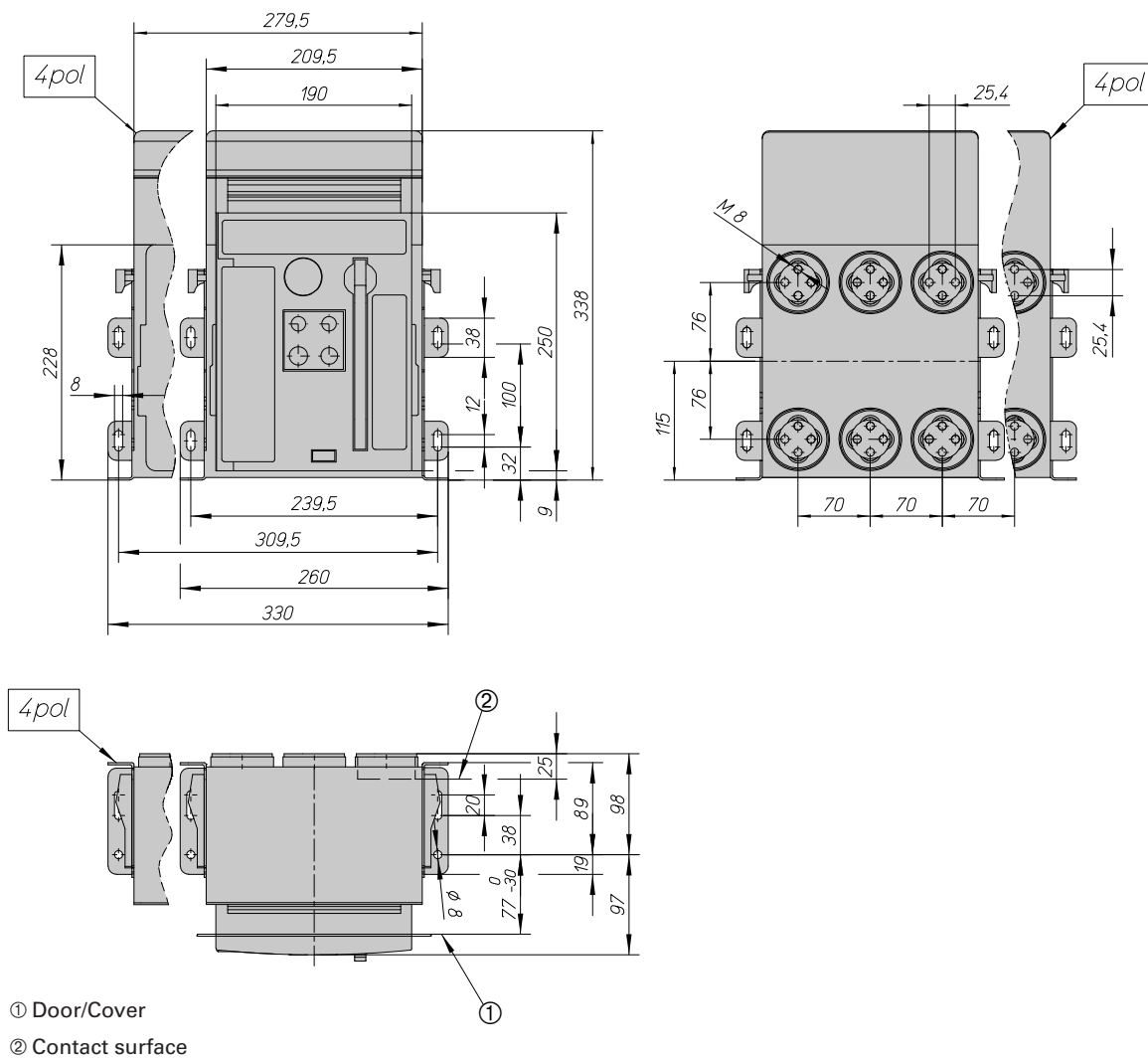
Technical data

		IZMX-PCAM	IZMX-MCAM	IZMX-ECAM
General				
Dimensions (W x H x D)	mm	24 x 105 x 802	4 x 105 x 802	4 x 105 x 80
Mounting		Auxiliary terminals	Auxiliary terminals	Auxiliary terminals
Protection type		IP20	IP20	IP20
Power supply	V DC	24 V DC	24 V DC	24 V DC
LED display		Status	Status	Status
		SF	Transmit	
		BF	Receive	
Network				
Ethernet		–	–	RJ45, socket
PROFIBUS		SUB-D 9 pole, socket	–	–
Modbus		–	Plug-in screw terminals	–
Function		Slave	Slave	TCP/IP user
Interfaces		RS485	RS485	Ethernet
Protocol		PROFIBUS DP	Modbus-RTU	Modbus TCP, http(s), SMTP
Baud Rates		automatic search up to 12 MBit/s	1200/4800/9600/19200 Bit/s, adjustable via Digitrip	automatic search up to 100 MBit/s
Bus terminating resistors		In plug as required	120 Ω external	–
Bus addresses		1 - 127, can be set via Digitrip	1 - 247, can be set via Digitrip	IP, can be set via Digitrip
Maximum distance		2.4 km	1.2 km	100 m
Supported functions		Cyclical data transfer	Function: 03 = read register 04 = read word variables 08 = connection test 16 = write register	Webserver on board

Dimensions

Fixed mounted

IZMX16...F, INX16...F

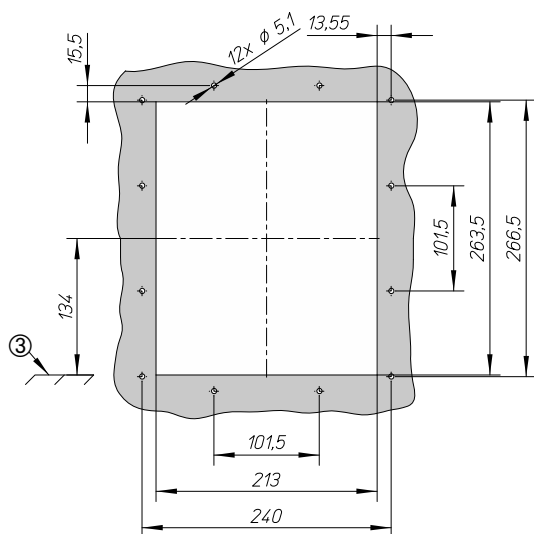


Dimensions

Fixed mounted units

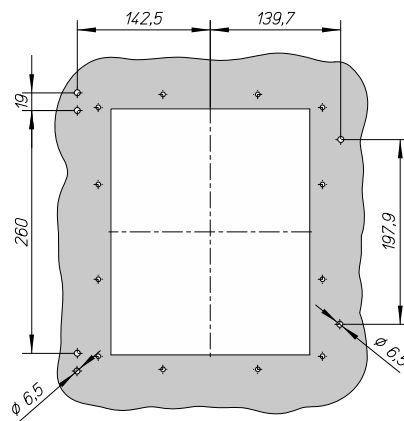
Door cut-out IZMX16

IZMX-DEG16-F



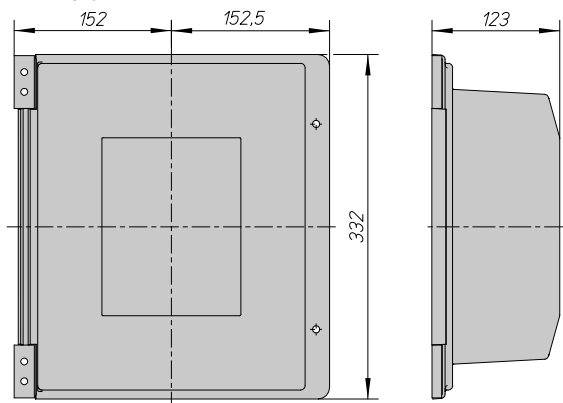
③ Top edge of mounting plate

IZMX-DC16-F



Door cover

IZMX-DC16-F



Basic devices

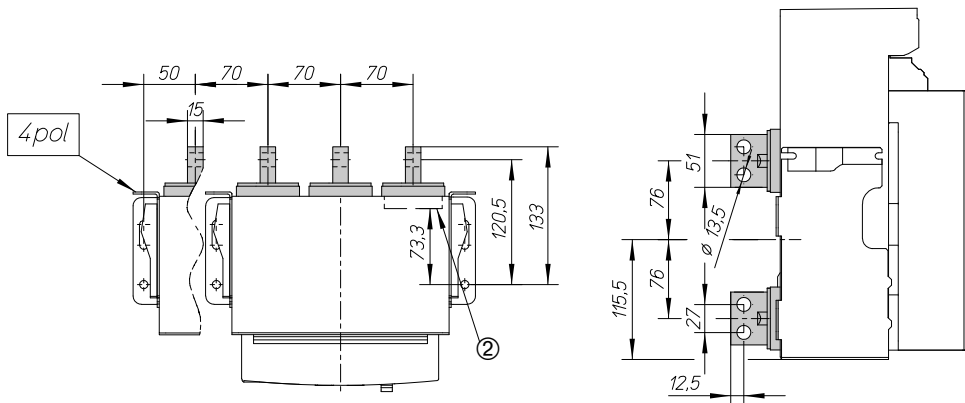
IZMX16..., INX16...

Dimensions

Fixed Units

Terminal adapter horizontal/vertical - vertical mounted

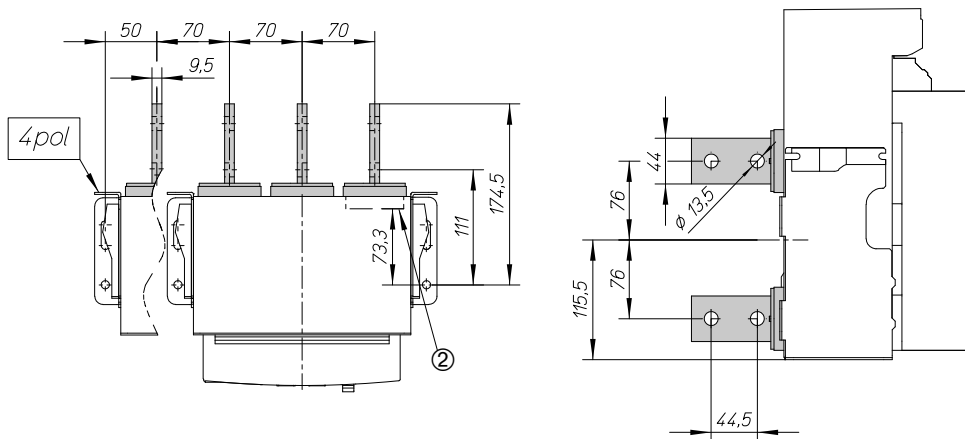
IZMX-THV16...



② Contact surface

Terminal adapter horizontal/vertical long - vertical mounted

IZMX-THVL16...



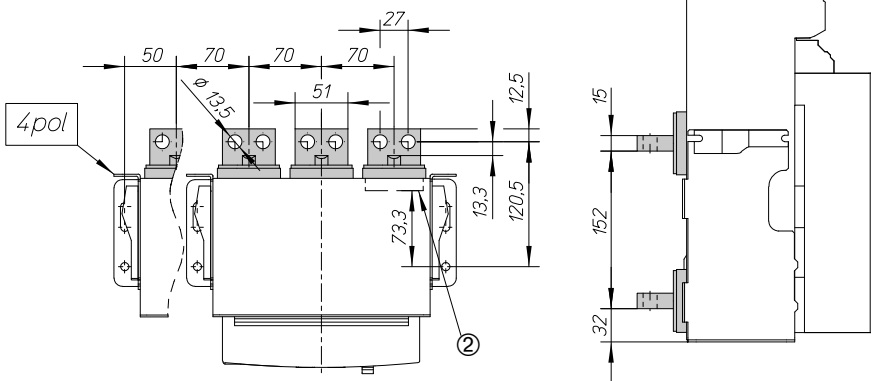
② Contact surface

Dimensions

Fixed Units

Terminal adapter horizontal/vertical - horizontal mounted

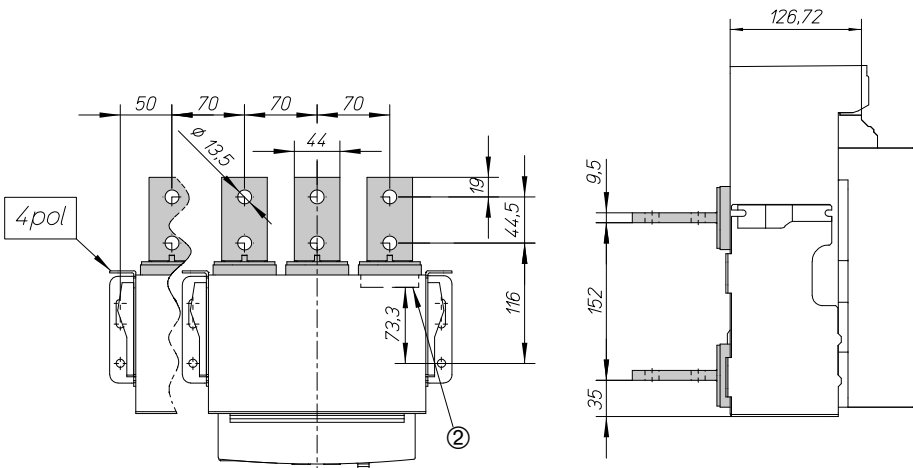
IZMX-THV16...



② Contact surface

Terminal adapter horizontal/vertical long - horizontal mounted

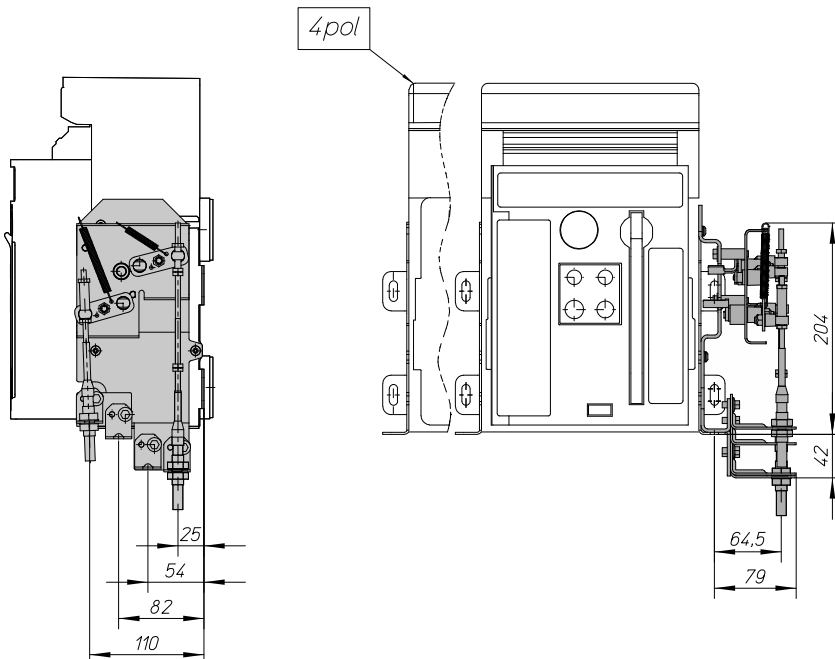
IZMX-THVL16...



② Contact surface

Mechanical interlock for fixed mounting units

IZMX-MIL...F16



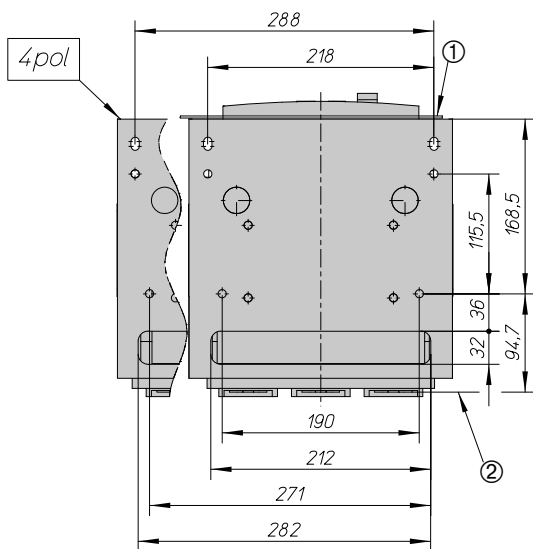
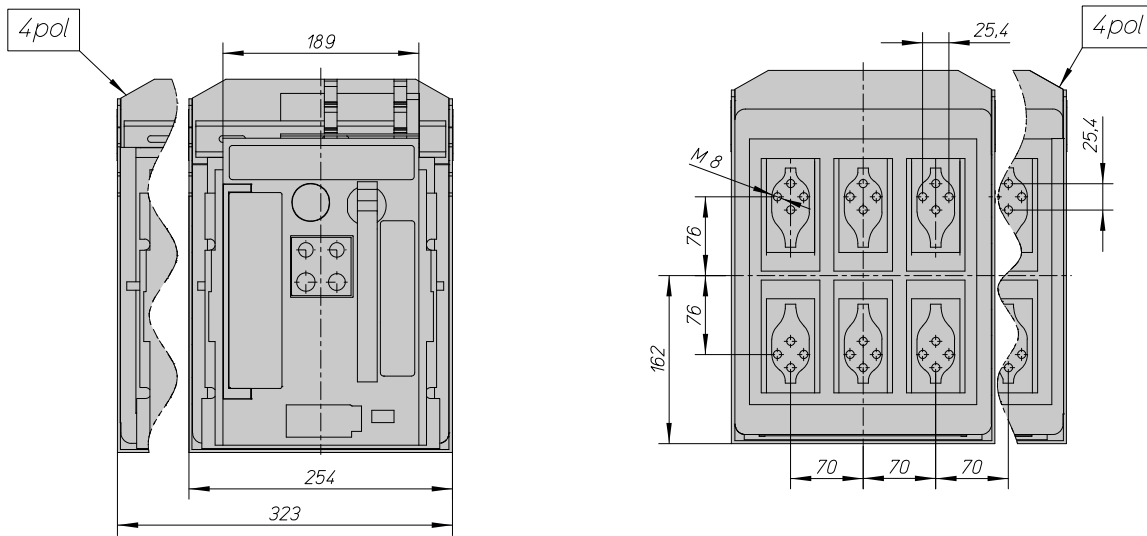
Basic devices

IZMX16..., INX16...

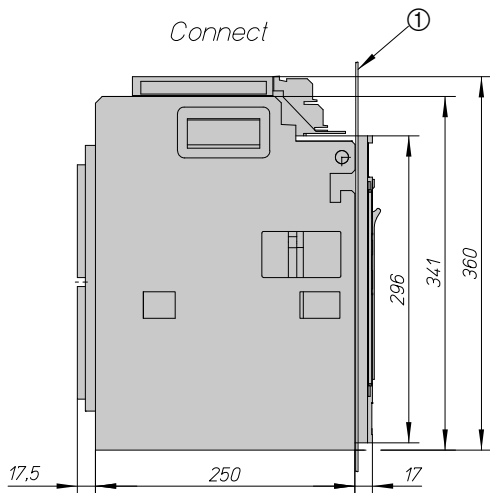
Dimensions

Withdrawable units

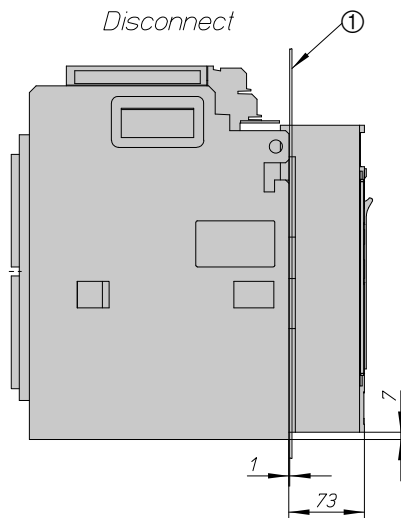
IZMX16...W, INX16...W



- ① Door/Cover
- ② Contact surface



- ① Door/Cover



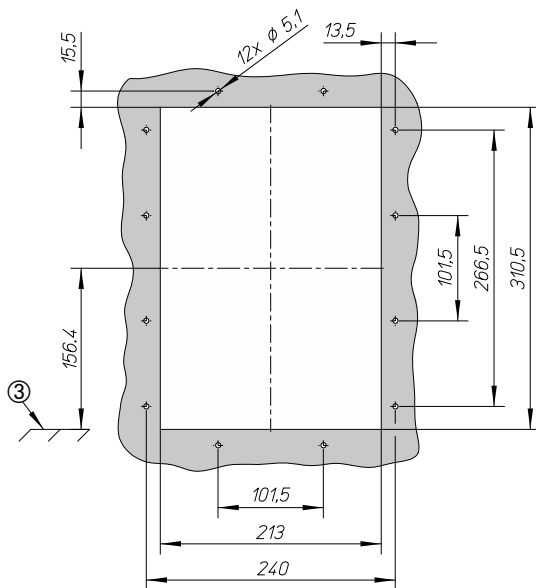
- ① Door/Cover

Dimensions

Withdrawable units

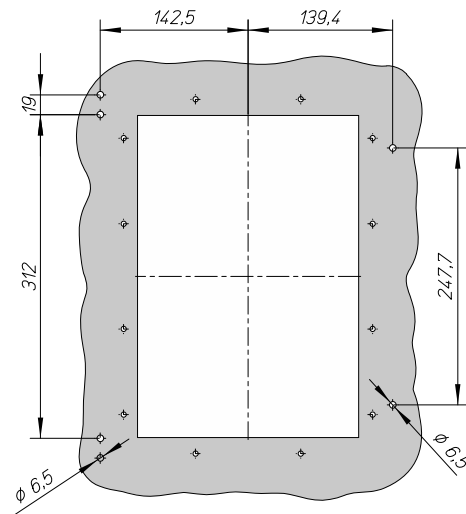
Door cut-out IZMX16

IZMX-DEG16-W



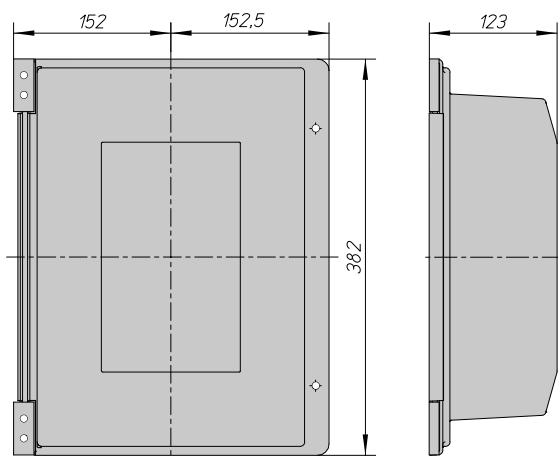
③ Top edge of mounting plate

IZMX-DC16-W



Door cover

IZMX-DC16-W



Basic devices

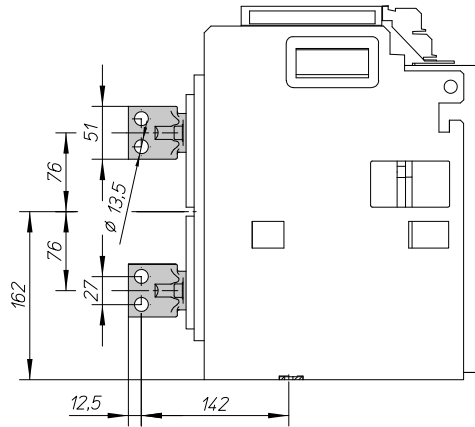
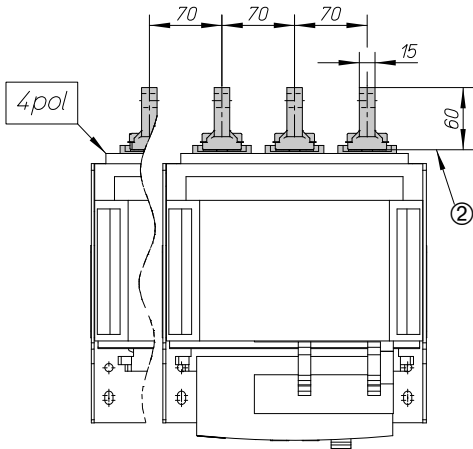
IZMX16..., INX16...

Dimensions

Withdrawable Units

Terminal adapter horizontal/vertical - vertical mounted

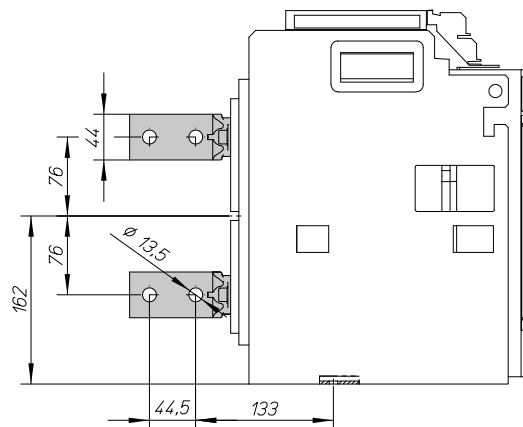
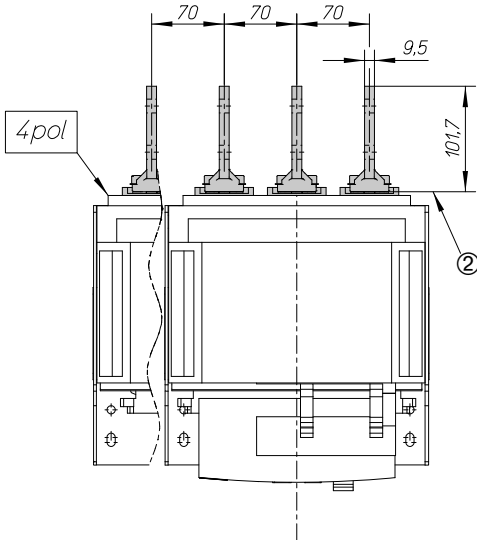
IZMX-THV16...



② Contact surface

Terminal adapter horizontal/vertical long - vertical mounted

IZMX-THVL16...



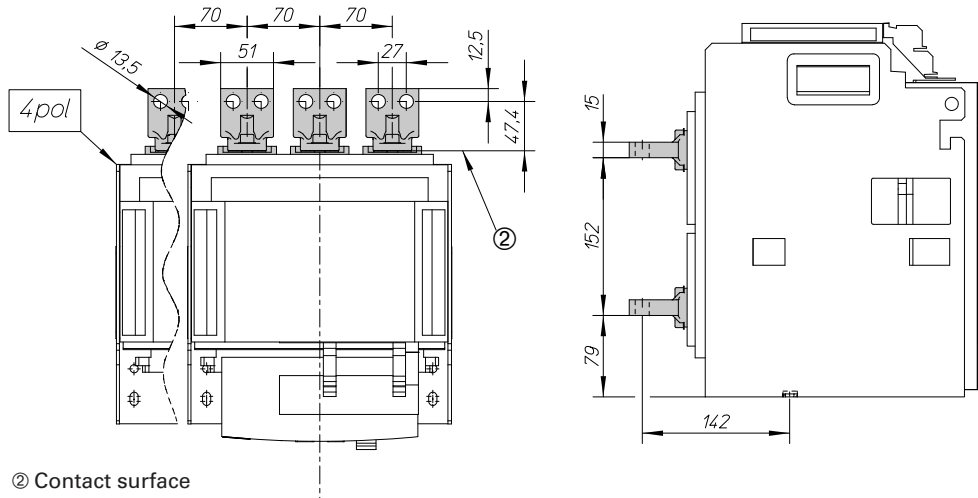
② Contact surface

Dimensions

Withdrawable Units

Terminal adapter horizontal/vertical - horizontal mounted

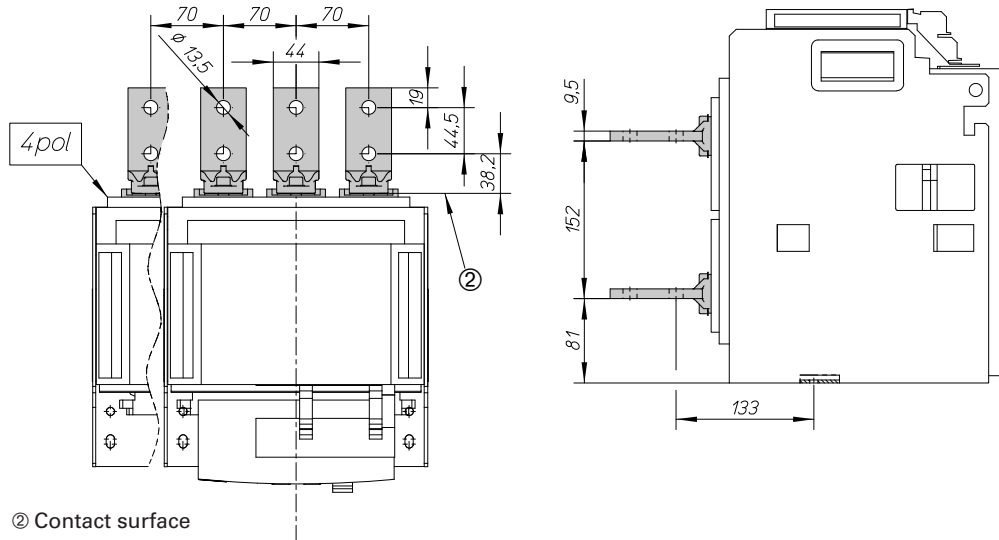
IZMX-THV16...



② Contact surface

Terminal adapter horizontal/vertical long - horizontal mounted

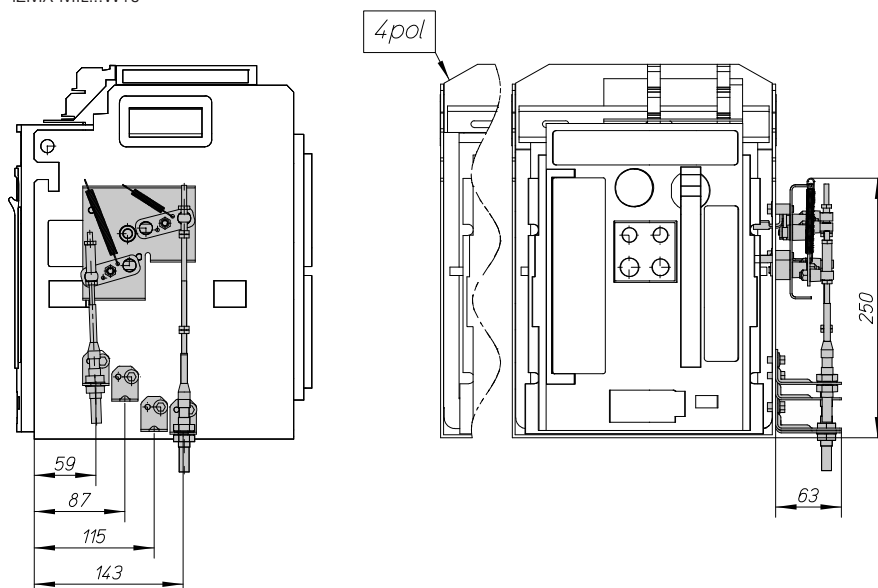
IZMX-THVL16...



② Contact surface

Mechanical interlock for withdrawable units

IZMX-MIL...W16



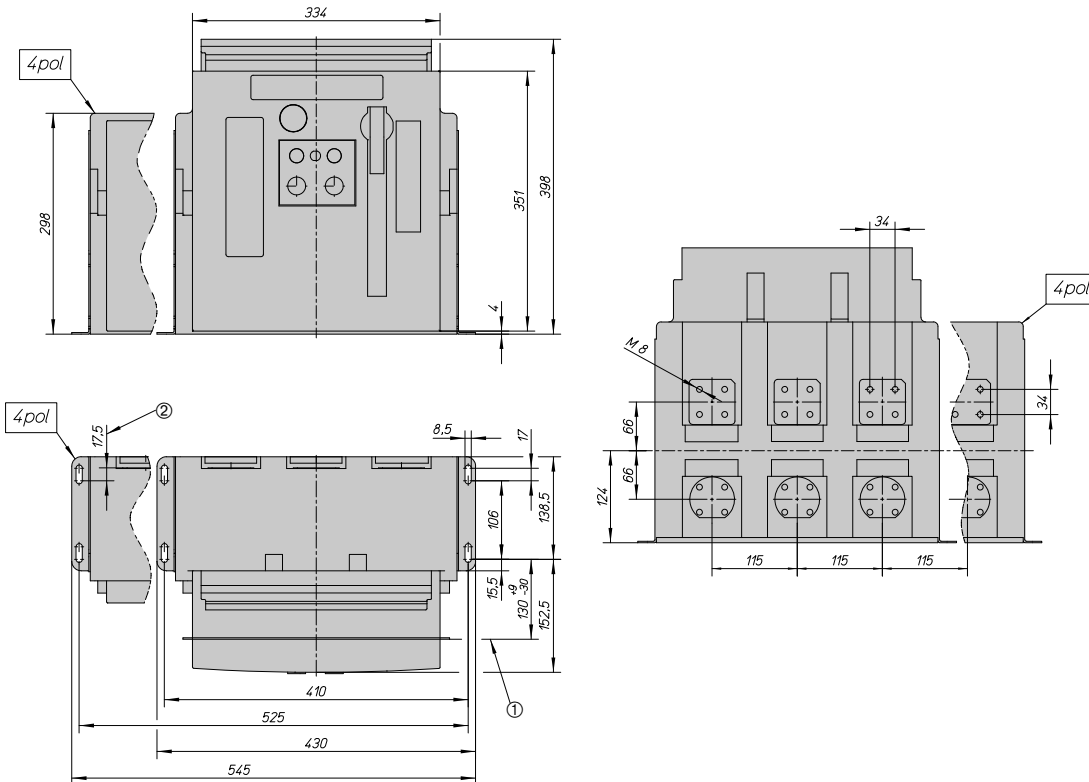
Basic devices

IZMX40..., INX40...

Dimensions

Fixed mounted

IZMX40...F, INX40...F



① Door/Cover

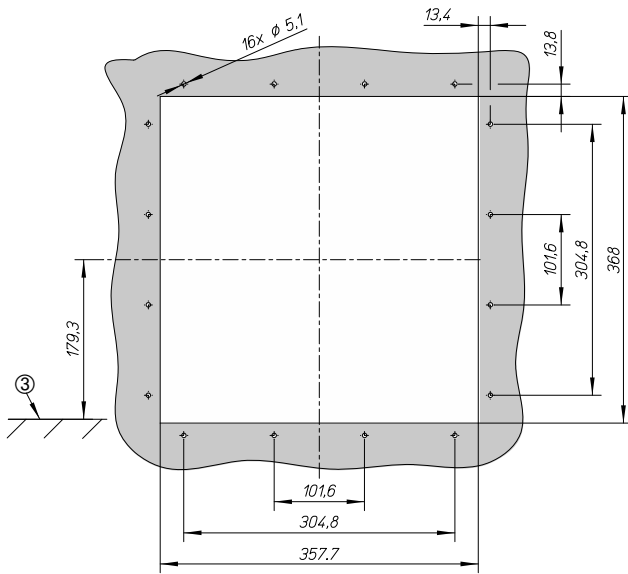
② Contact surface

Dimensions

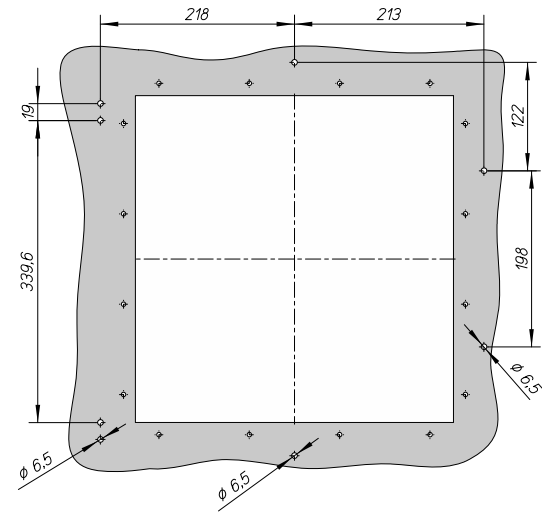
Fixed mounted units

Door cut-out IZMX40

IZMX-DEG40-F



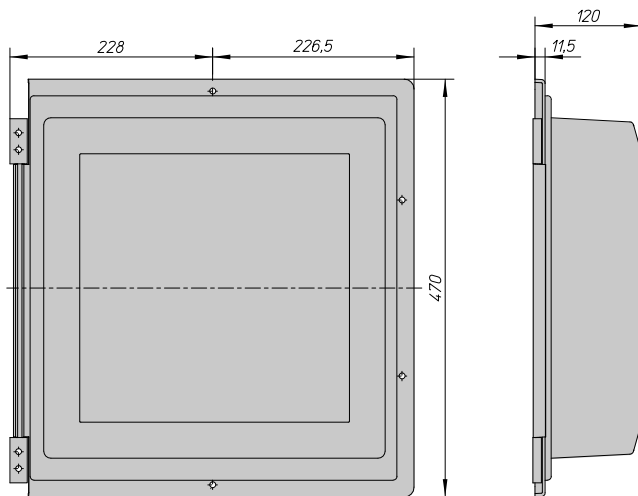
IZMX-DC40-F



③ Top edge of mounting plate

Door cover

IZMX-DC40-F



Basic devices

IZMX40..., INX40...

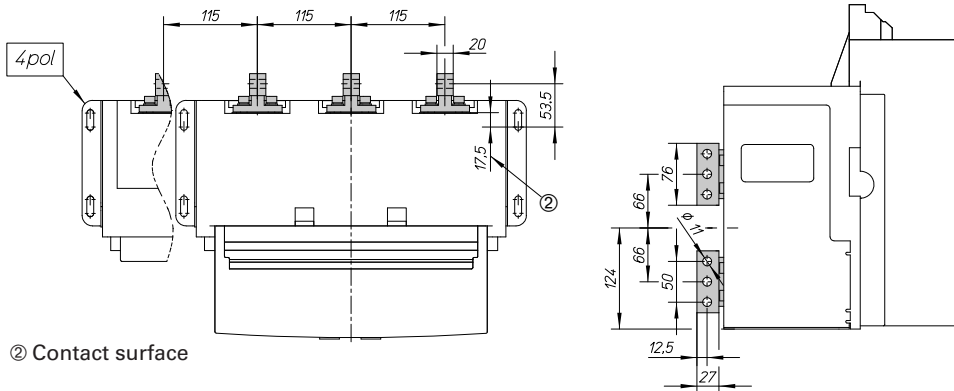
Dimensions

Fixed Units

Terminal adapter horizontal/vertical - vertical mounted

IZMX-THV40...

Terminals up to 3200 A

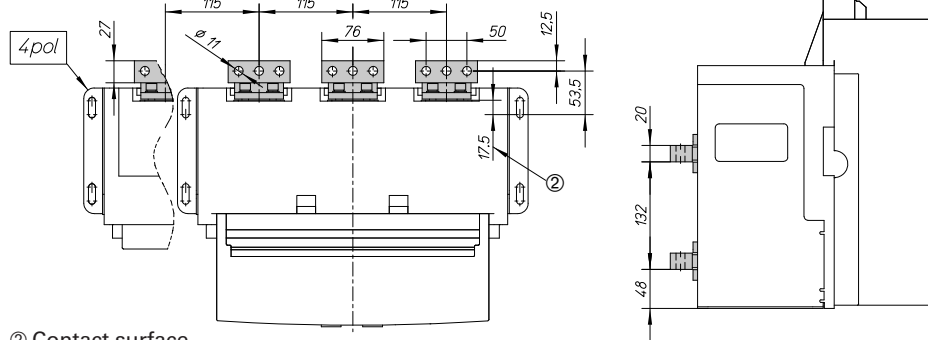


② Contact surface

Terminal adapter horizontal/vertical - horizontal mounted

IZMX-THV40...

Terminals up to 3200 A

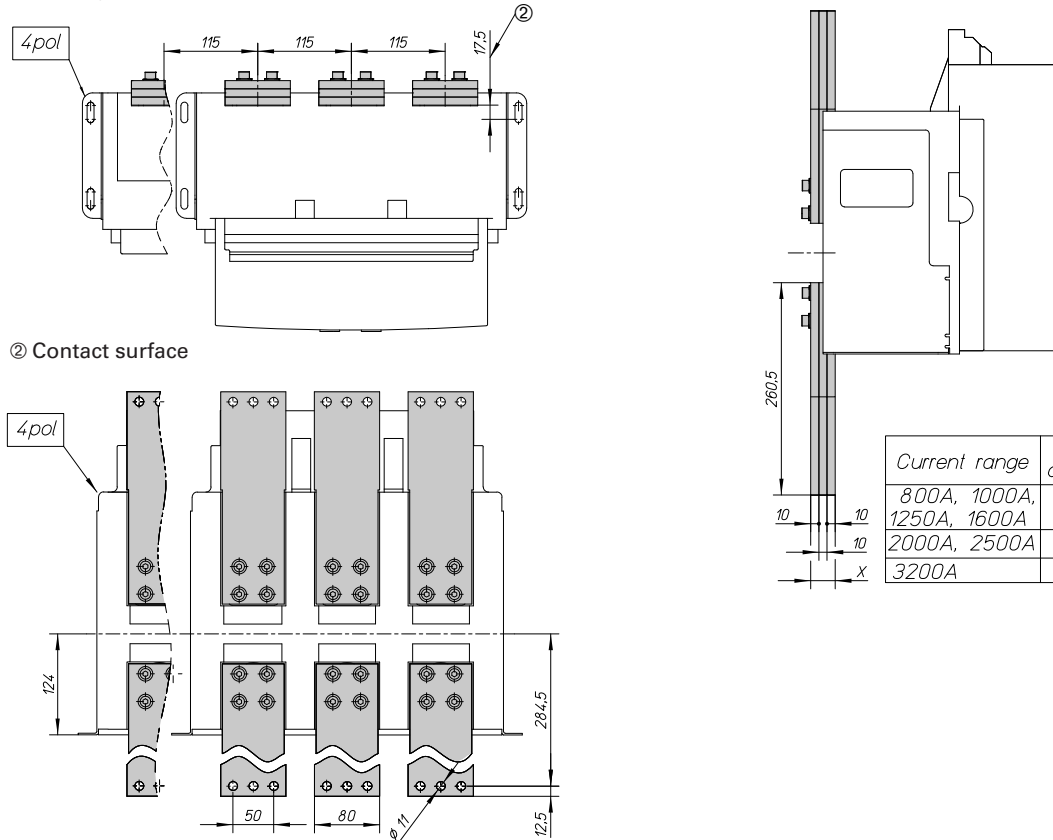


② Contact surface

Terminal adapter front

IZMX-TF40...

Terminals up to 3200 A



② Contact surface

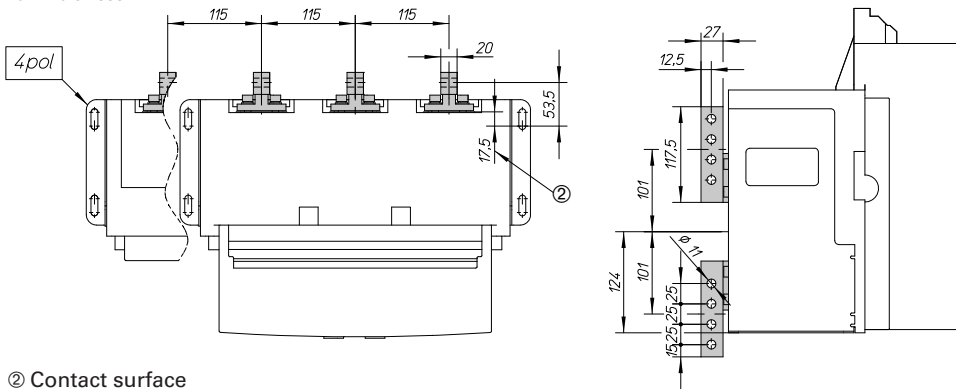
Dimensions

Fixed Units

Terminal adapter vertical 4000 A

IZMX-TV40...

Terminals 4000 A

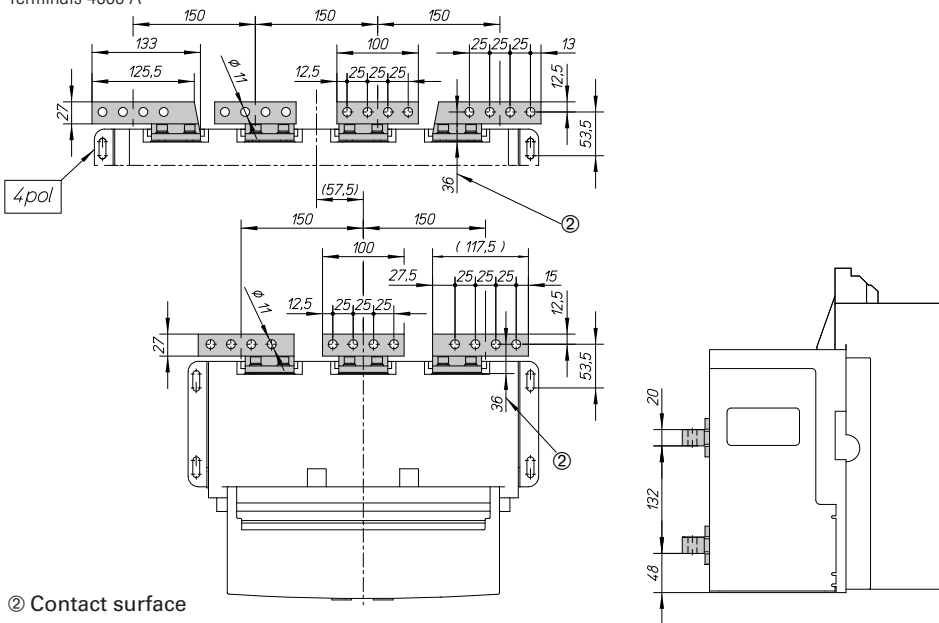


② Contact surface

Terminal adapter horizontal 4000 A

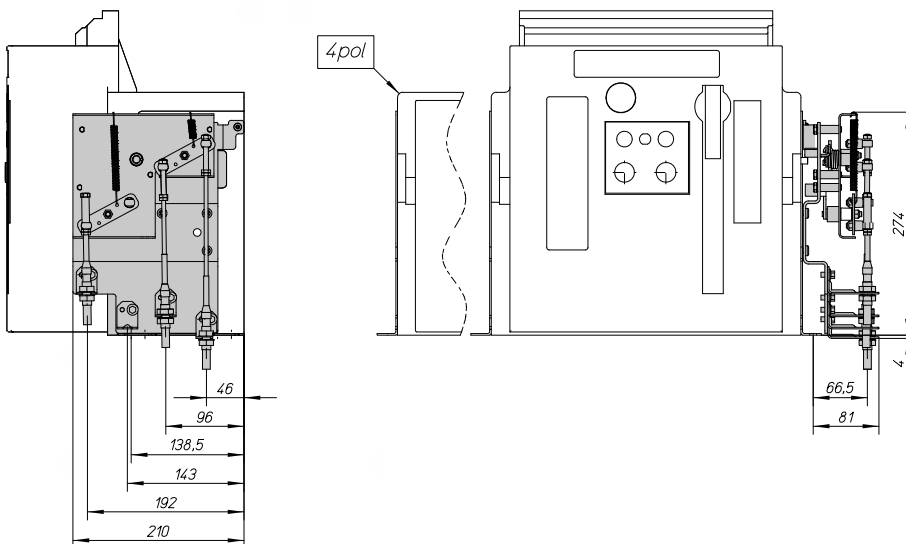
IZMX-TH40...

Terminals 4000 A



② Contact surface

IZMX-MIL-F40



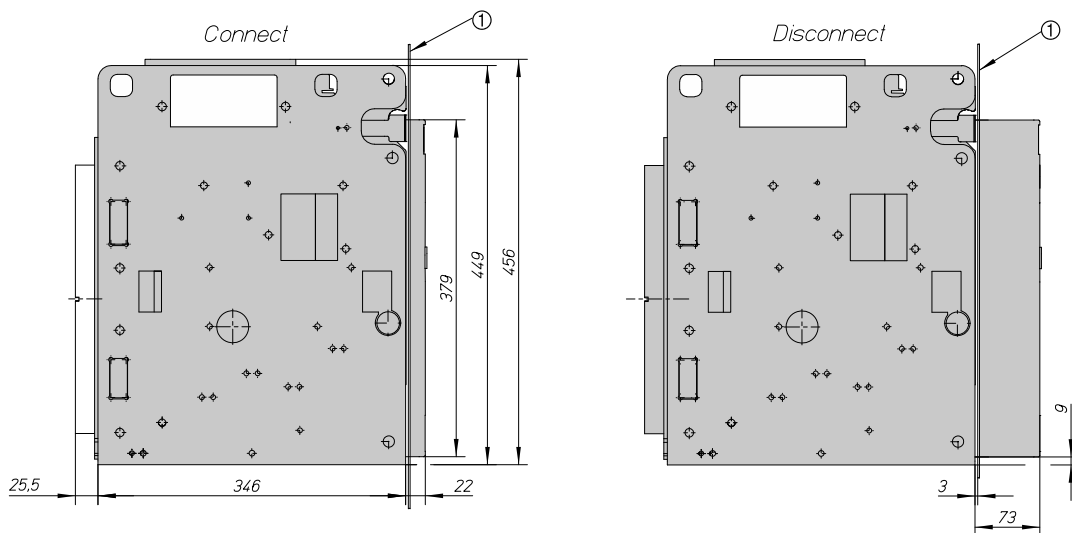
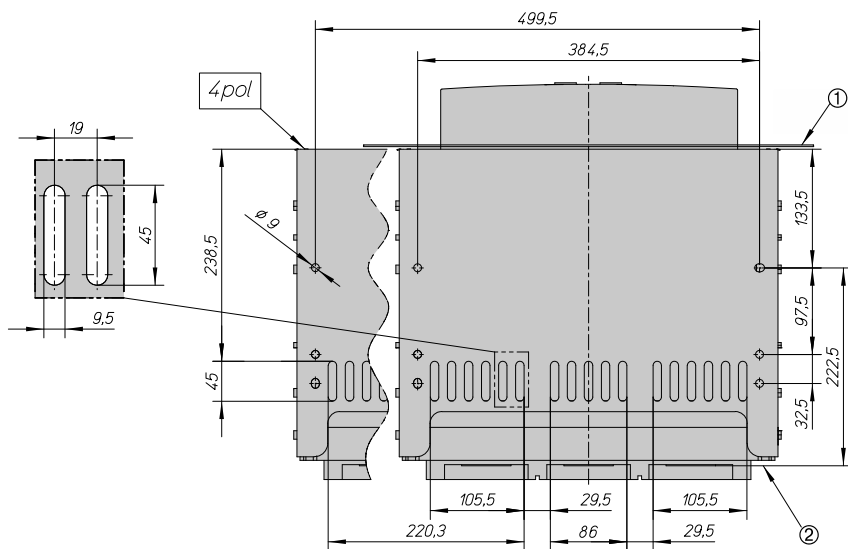
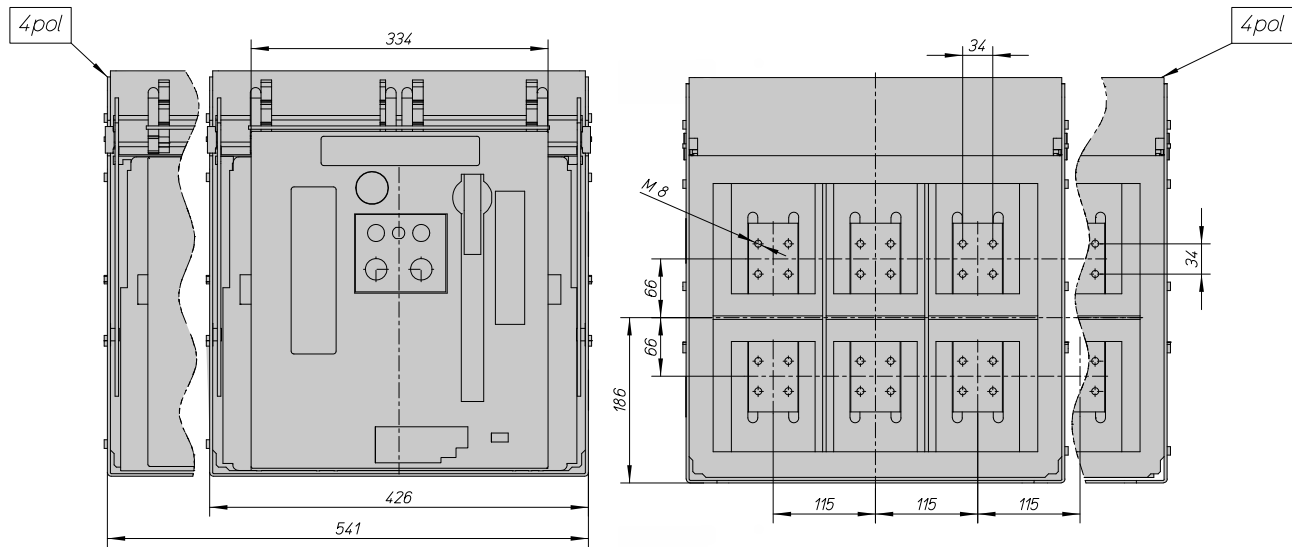
Basic devices

IZMX40..., INX40...

Dimensions

Withdrawable units

IZMX40...W, INX40...W



① Door/Cover

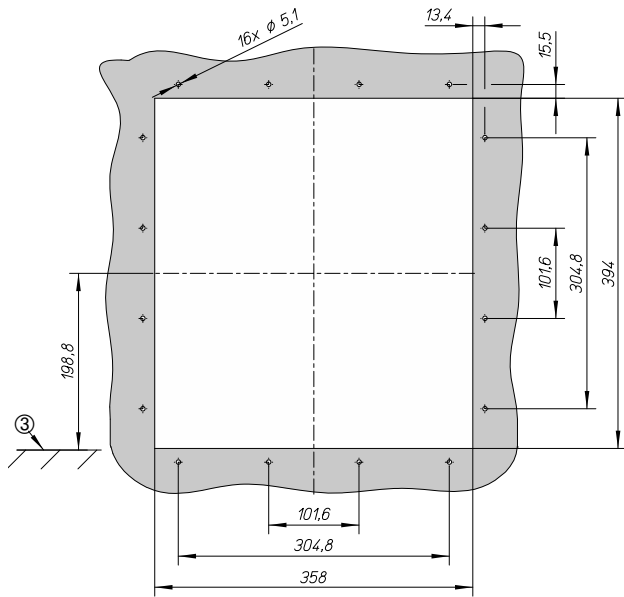
② Contact surface

Dimensions

Withdrawable units

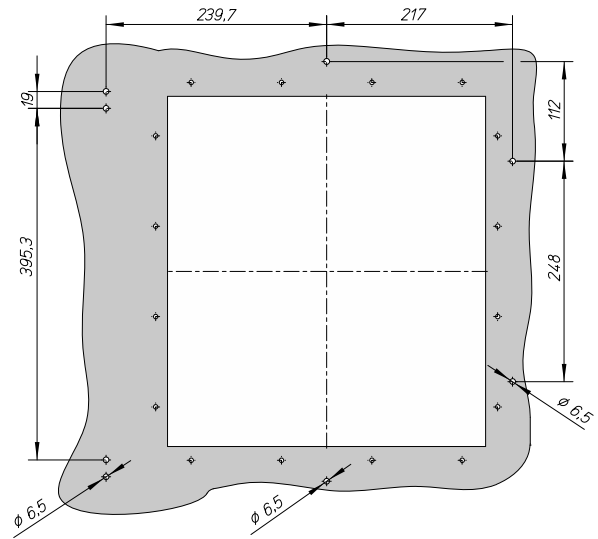
Door cut-out IZMX40

IZMX-DEG40-W



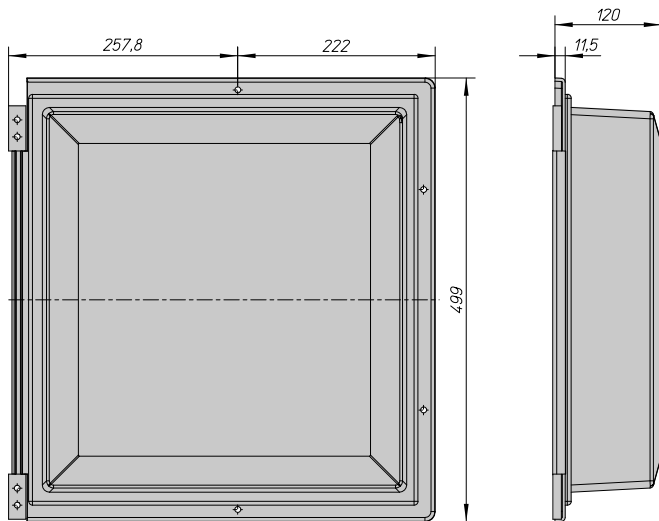
Ⓢ Top edge of mounting plate

IZMX-DC40-W



Door cover

IZMX-DC40-W



Basic devices

IZMX40..., INX40...

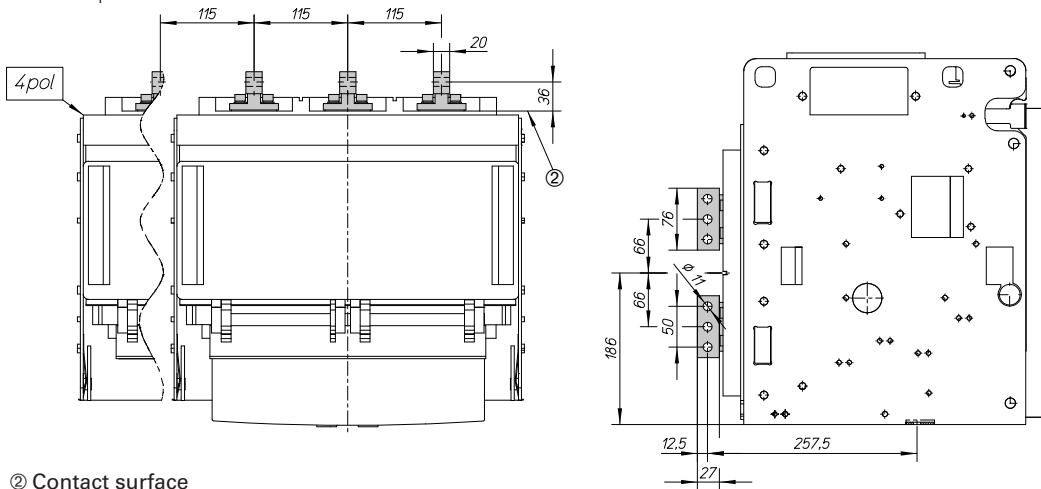
Dimensions

Withdrawable units

Terminal adapter horizontal/vertical - vertical mounted

IZMX-THV40...

Terminals up to 3200 A

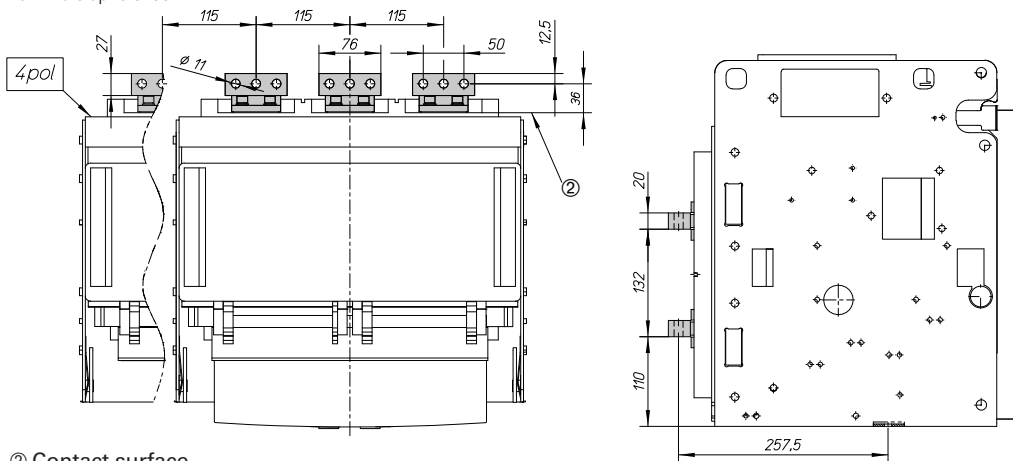


2 Contact surface

Terminal adapter horizontal/vertical - horizontal mounted

IZMX-THV40...

Terminals up to 3200 A

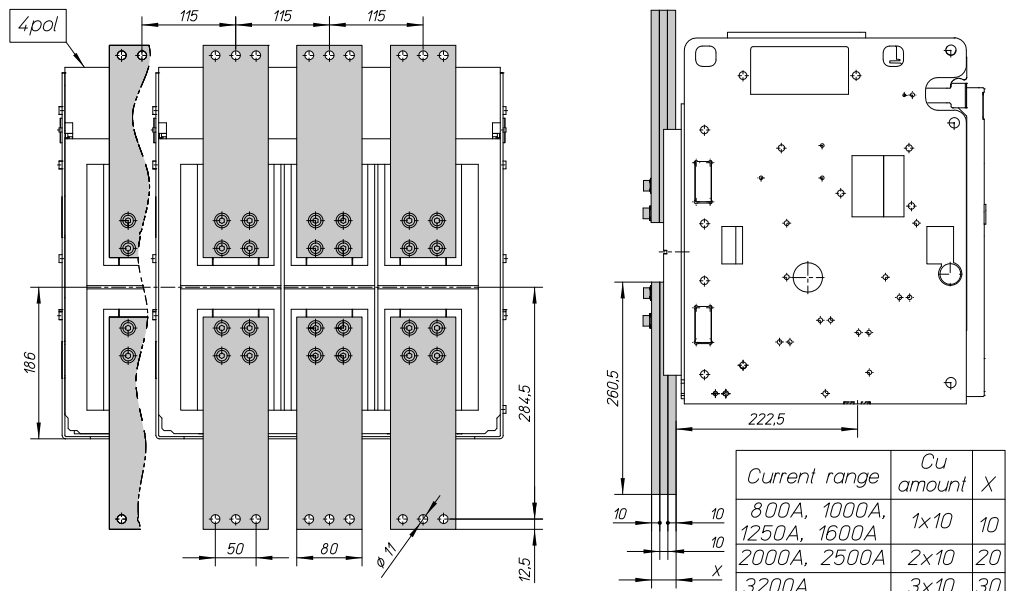


2 Contact surface

Terminal adapter front

IZMX-TF40...

Terminals up to 3200 A



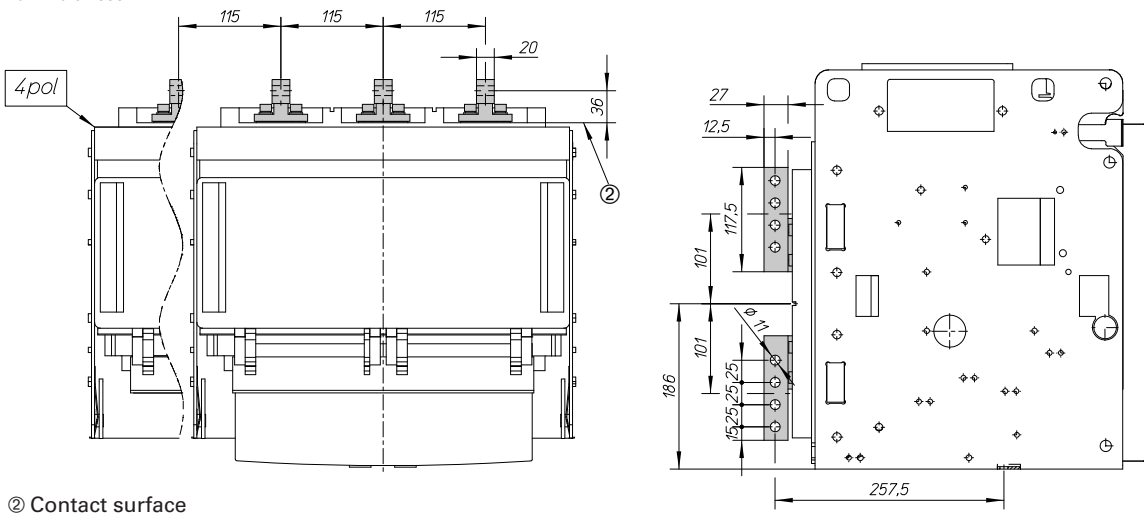
Dimensions

Withdrawable units

Terminal adapter vertical 4000 A

IZMX-TV40...

Terminals 4000 A

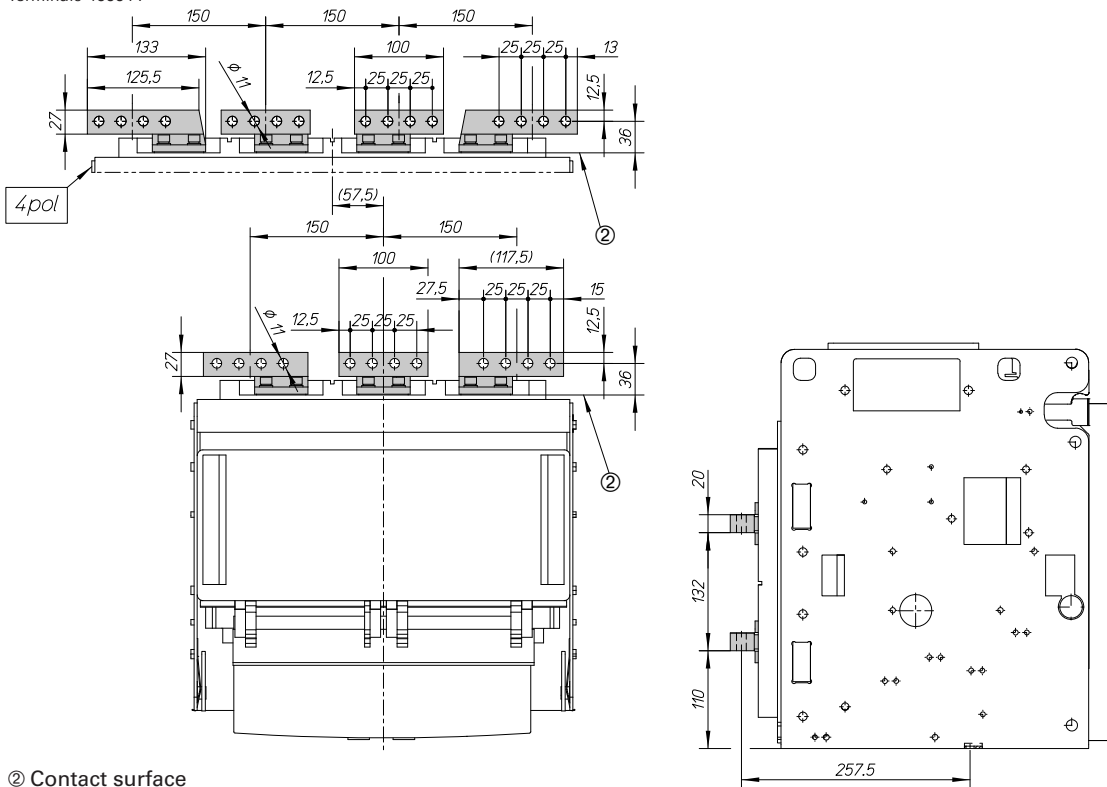


② Contact surface

Terminal adapter horizontal 4000 A

IZMX-TH40...

Terminals 4000 A



② Contact surface

Basic devices

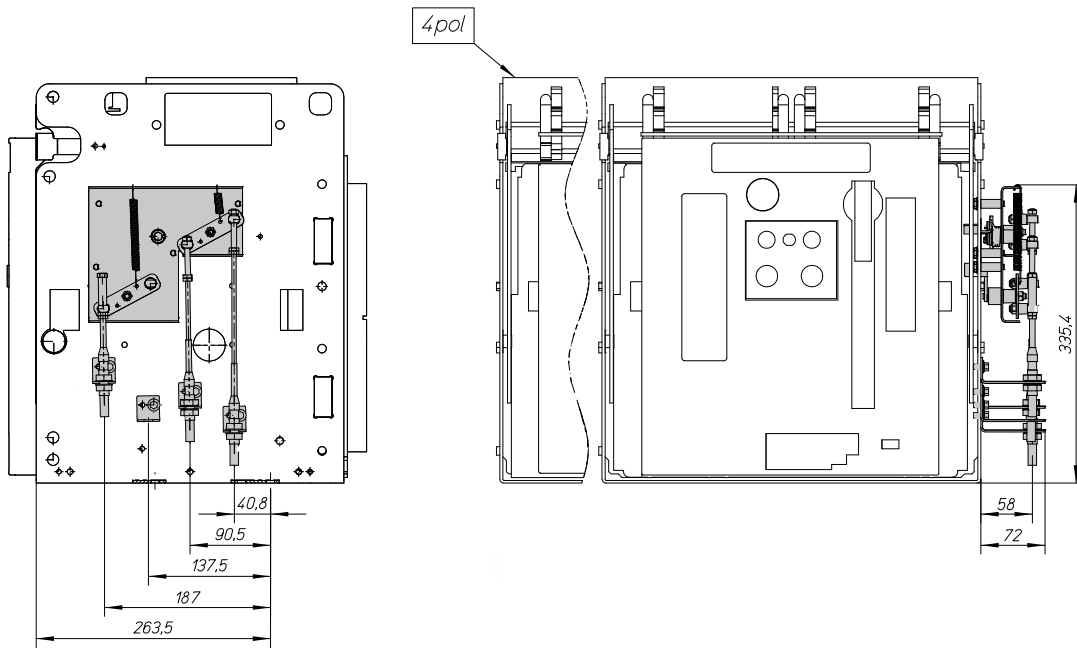
IZMX40..., INX40...

Dimensions

Withdrawable units

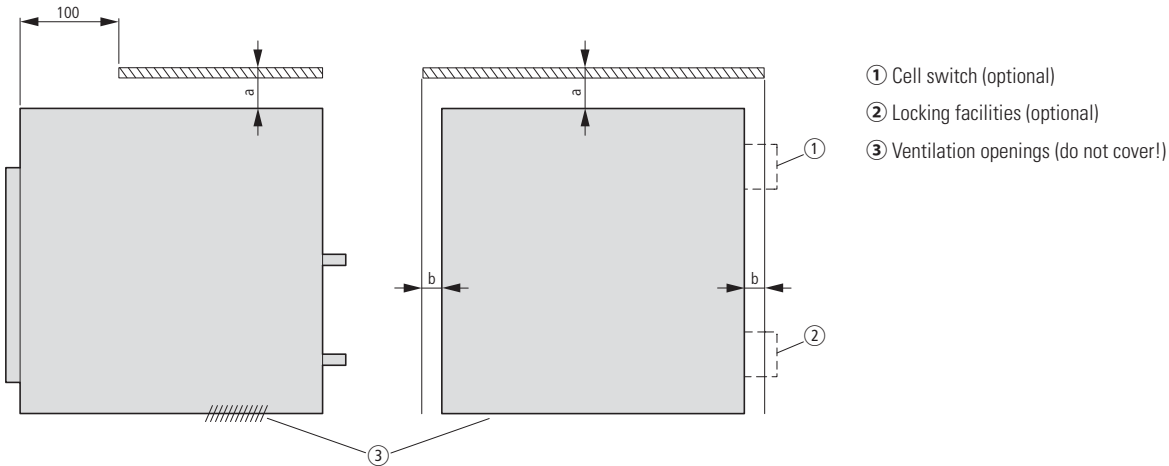
Mechanical interlock for withdrawable units

IZMX-MIL-W40



Recommended safety clearances

The following information about safety distances is intended to provide a guideline for the installation of circuit-breakers in an enclosure.



	Enclosure clearance	To insulated surface	To grounded metal surface	With cell switch or locking facilities
		mm	mm	mm
Withdrawable	a	25	25	25
	b	25	25	25/75
Fixed	a	25	25	–
	b	30	70	–

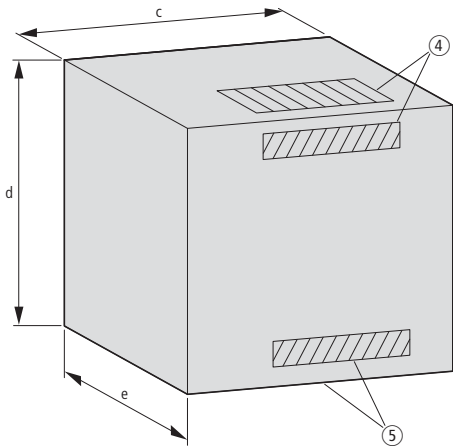
a Δ distance from highest point of breaker or cassette.

Recommended enclosure clearance and ventilation

The illustration shows a typical enclosure.

The table below lists the associated minimum distances between enclosures and ventilation openings.

This information is intended as a guideline for constructing a suitable circuit-breaker enclosure. Ensure the integration complies with IEC 61439.



c	Width of cassette + 75 mm
d	550 mm
e	4450 mm (front control panel bay)
Ventilation holes	160 cm ² (800 - 3200 A) } Top and bottom 320 cm ² (4000 A)

- ④ Top or rear vent
- ⑤ Rear or lower vent

Catalog '16 Page	Art.-No.	Art.	discription	Instruction Leaflet IL...
Main breaker including cassettes:				
11 - 15	IZMX16, INX16 including cassette			MN013001EN
16 - 21	IZMX40, INX40 including cassette			MN013002EN
Accessories:				
PXR trip units				
22				MN013003EN
23	184116	+IZMX-OTS-1	Overcurrent trip switch (OTS/HIA), 2CO	IL0131087EN
23	184117	IZMX-OTS16-1	Overcurrent trip switch (OTS/HIA), 2CO	IL0131087EN
23	184118	IZMX-OTS40-1	Overcurrent trip switch (OTS/HIA), 2CO	IL0131087EN
23	184134	IZMX-TI16-1	Mechanical Trip Indicator, interlocked	IL0131126EN
23	184135	IZMX-TI40-1	Mechanical Trip Indicator, interlocked	IL0131126EN
23	184119	+IZMX-RA-1	Reset, Automatic	IL0131126EN
23	184120	IZMX-RA16-1	Reset, Automatic	IL0131126EN
23	184121	IZMX-RA40-1	Reset, Automatic	IL0131126EN
24	184142	IZMX-PXR-PTM-1	External Voltage Module for PXR	IL0131074EN
24	183990	IZMX-CT16-N-1	Current transformer N, IZMX16	IL0131090EN
24	183991	IZMX-CT40-N-1	Current transformer N, IZMX40	IL0131094EN
24	183937	IZMX-CTNGS-1	Ground Source/Zero Sequence Sensor	IL0131089EN
24	186875	IZMX-PCAM-1	Communication module Profibus	IL0131092EN
24	186874	IZMX-ECAM-1	Communication module Ethernet	IL0131125EN
24	186876	IZMX-MCAM-1	Communication module ModBus	IL0131091EN
24	186877	IZMX-CAM-CAB-1	Communication wire harness	IL019001EN
25	184242	IZMX-SEC-TB2-W-1	Secondary Terminal 4point Block Kit-2, d/o	IL0131093EN
25	184243	IZMX-SEC-TB12-W-1	Secondary Terminal 4point Block Kit-12, d/o	IL0131093EN
26	184186	+IZMX-SH163-1	Shutter for cassette IZMX163	IL01301013E
26	184187	IZMX-SH163-1	Shutter for cassette IZMX163	IL01301013E
26	184188	+IZMX-SH403-1	Shutter for cassette IZMX403	IL01301044E
26	184189	IZMX-SH403-1	Shutter for cassette IZMX403	IL01301044E
26	184190	+IZMX-SH164-1	Shutter for cassette IZMX164	IL01301013E
26	184191	IZMX-SH164-1	Shutter for cassette IZMX164	IL01301013E
26	184192	+IZMX-SH404-1	Shutter for cassette IZMX404	IL01301044E
26	184193	IZMX-SH404-1	Shutter for cassette IZMX404	IL01301044E
26	184194	+IZMX-CS16-1	Cell switch contacts (d/o-pos.) 1CO	IL0131097EN
26	108251	IZMX-CS16-1	Cell switch contacts (d/o-pos.) 1CO	IL0131097EN
26	184195	+IZMX-CS40-1	Cell switch cont.(d/o),1 CO,left/right	IL0131095EN
26	184196	IZMX-CS40-1	Cell switch cont.(d/o),1 CO,left/right	IL0131095EN
26	184200	IZMX-KLPC-RONIS-40-1	Keylock Safe-OFF,-Cass.RONIS provision	IL01301063E
26	184198	IZMX-KLPC-CES-40-1	Keylock Safe-OFF,-Cass.CES provision	IL01301063E
26	184201	IZMX-KLPC-CASTELL-40-1	Keylock Safe-OFF,-Cass.CASTELL provision	IL01301063E
26	184199	IZMX-KLPC-KIRK-40-1	Keylock Safe-OFF,-Cass.KIRK provision	IL01301063E
27	183970	IZMX-THV163-1	Rear Connect 3p, horiz./vertical	IL0131123EN
27	183971	IZMX-THV164-1	Rear Connect 4p, horiz./vertical	IL0131123EN
27	183972	IZMX-THVL163-1	Rear Connect 3p, horiz./vertical, long	IL0131123EN
27	183973	IZMX-THVL164-1	Rear Connect 4p, horiz./vertical, long	IL0131123EN
27	183974	IZMX-THV403-1	Rear Connect 3p, horiz./vertical, 3200A	IL01301053E
27	183975	IZMX-THV404-1	Rear Connect 4p, horiz./vertical, 3200A	IL01301053E
27	183976	IZMX-TH403-4000-1	Rear Connect 3p, horizontal	IL01301053E
27	183977	IZMX-TH404-4000-1	Rear Connect 4p, horizontal	IL01301053E
27	183978	IZMX-TV403-4000-1	Rear Connect 3p, vertical	IL01301053E
27	183979	IZMX-TV404-4000-1	Rear Connect 4p, vertical	IL01301053E
27	183980	IZMX-TF163-1600-1	Con.front 1600A,IZMX16, 3p	IL0131123EN
27	184173	IZMX-TF164-1600-1	Con.front 1600A,IZMX16,4p	IL0131123EN
27	184174	IZMX-TF403-1600F-1	Con.front 1600A,IZMX40, 3p.Fixed mounted	IL01301056E
27	184175	IZMX-TF403-2500F-1	Con.front 2500A,IZMX40, 3p.Fixed mounted	IL01301056E
27	184176	IZMX-TF403-3200F-1	Con.front 3200A,IZMX40, 3p.Fixed mounted	IL01301056E
27	184180	IZMX-TF404-1600F-1	Con.front 1600A,IZMX40, 4p.Fixed mounted	IL01301056E
27	184181	IZMX-TF404-2500F-1	Con.front 2500A,IZMX40, 4p.Fixed mounted	IL01301056E
27	184182	IZMX-TF404-3200F-1	Con.front 3200A,IZMX40, 4p.Fixed mounted	IL01301056E
27	184177	IZMX-TF403-1600W-1	Con.front 1600A,IZMX40,3p.Withdraw.units	IL01301056E
27	184178	IZMX-TF403-2500W-1	Con.front 2500A,IZMX40,3p.Withdraw.units	IL01301056E
27	184179	IZMX-TF403-3200W-1	Con.front 3200A,IZMX40,3p.Withdraw.units	IL01301056E
27	184183	IZMX-TF404-1600W-1	Con.front 1600A,IZMX40,4p.Withdraw.units	IL01301056E
27	184184	IZMX-TF404-2500W-1	Con.front 2500A,IZMX40,4p.Withdraw.units	IL01301056E
27	184185	IZMX-TF404-3200W-1	Con.front 3200A,IZMX40,4p.Withdraw.units	IL01301056E
27	184239	IZMX-SEC-TB2-F-1	Secondary Terminal 4point Block Kit-2, fixed	IL0131093EN
27	184240	IZMX-SEC-TB12-F-1	Secondary Terminal 4point Block Kit-12, fixed	IL0131093EN
28	184245	+IZMX-M16-24DC-1	Motor operator 24 VDC	IL0131088EN
28	184246	IZMX-M16-24DC-1	Motor operator 24 VDC	IL0131088EN
28	184247	+IZMX-M16-48DC-1	Motor operator 48 VDC	IL0131088EN
28	184248	IZMX-M16-48DC-1	Motor operator 48 VDC	IL0131088EN
28	184249	+IZMX-M16-60DC-1	Motor operator 60 VDC	IL0131088EN
28	184250	IZMX-M16-60DC-1	Motor operator 60 VDC	IL0131088EN
28	184251	+IZMX-M16-110AD-1	Motor operator 110-125 VAC/DC	IL0131088EN
28	184252	IZMX-M16-110AD-1	Motor operator 110-125 VAC/DC	IL0131088EN
28	184253	+IZMX-M16-230AD-1	Motor operator 208-240 VAC/DC	IL0131088EN
28	184254	IZMX-M16-230AD-1	Motor operator 208-240 VAC/DC	IL0131088EN
28	184255	+IZMX-M40-24DC-1	Motor operator 24 VDC	IL0131088EN
28	184256	IZMX-M40-24DC-1	Motor operator 24 VDC	IL0131088EN
28	184257	+IZMX-M40-48DC-1	Motor operator 48 VDC	IL0131088EN
28	184258	IZMX-M40-48DC-1	Motor operator 48 VDC	IL0131088EN
28	184259	+IZMX-M40-60DC-1	Motor operator 60 VDC	IL0131088EN
28	184260	IZMX-M40-60DC-1	Motor operator 60 VDC	IL0131088EN
28	184261	+IZMX-M40-110AD-1	Motor operator 110-125 VAC/DC	IL0131088EN
28	184262	IZMX-M40-110AD-1	Motor operator 110-125 VAC/DC	IL0131088EN
28	184263	+IZMX-M40-230AD-1	Motor operator 208-240 VAC/DC	IL0131088EN
28	184264	IZMX-M40-230AD-1	Motor operator 208-240 VAC/DC	IL0131088EN
29	184265	+IZMX-ST24DC-1	Shunt trip 24 VDC	IL0131087EN
29	184266	IZMX-ST24DC-1	Shunt trip 24 VDC	IL0131087EN

29	184267	+IZMX-ST48DC-1	Shunt trip 48 VDC	IL0131087EN
29	184268	IZMX-ST48DC-1	Shunt trip 48 VDC	IL0131087EN
29	184269	+IZMX-ST60DC-1	Shunt trip 60 VDC	IL0131087EN
29	184270	IZMX-ST60DC-1	Shunt trip 60 VDC	IL0131087EN
29	184271	+IZMX-ST110AD-1	Shunt trip 110-125 VAC/DC	IL0131087EN
29	184272	IZMX-ST110AD-1	Shunt trip 110-125 VAC/DC	IL0131087EN
29	184273	+IZMX-ST230AD-1	Shunt trip 220-240 VAC/DC	IL0131087EN
29	184274	IZMX-ST230AD-1	Shunt trip 220-240 VAC/DC	IL0131087EN
29	184275	+IZMX-ST24DC-1	Shunt trip (2) 24 VDC	IL0131087EN
29	184276	+IZMX-ST54DC-1	Shunt trip (2) 48 VDC	IL0131087EN
29	184277	+IZMX-ST60DC-1	Shunt trip (2) 60 VDC	IL0131087EN
29	184278	+IZMX-ST110AD-1	Shunt trip (2) 110-125 VAC/DC	IL0131087EN
29	184279	+IZMX-ST230AD-1	Shunt trip (2) 220-240 VAC/DC	IL0131087EN
30	184107	+IZMX-UVR24DC-1	Undervoltage release 24 VDC	IL0131087EN
30	184108	IZMX-UVR24DC-1	Undervoltage release 24 VDC	IL0131087EN
30	184109	+IZMX-UVR48DC-1	Undervoltage release 48 VDC	IL0131087EN
30	184110	IZMX-UVR48DC-1	Undervoltage release 48 VDC	IL0131087EN
30	184111	+IZMX-UVR60DC-1	Undervoltage release 60 VDC	IL0131087EN
30	184112	IZMX-UVR60DC-1	Undervoltage release 60 VDC	IL0131087EN
30	184113	+IZMX-UVR110AD-1	Undervoltage release 110-125 VAC/DC	IL0131087EN
30	184114	IZMX-UVR110AD-1	Undervoltage release 110-125 VAC/DC	IL0131087EN
30	184161	+IZMX-UVR230AD-1	Undervoltage release 220-240 VAC/DC	IL0131087EN
30	184162	IZMX-UVR230AD-1	Undervoltage release 220-240 VAC/DC	IL0131087EN
30	184165	IZMX-UVR-TD-120AC-1	UVR time delay module 120 VAC	5721B33
30	184166	IZMX-UVR-TD-230AC-1	UVR time delay module 230 VAC	5721B33
30	184167	+IZMX-AS22-1	ON-OFF Auxiliary switch, 2a/2b	IL0131096EN
30	184168	+IZMX-AS44-1	ON-OFF Auxiliary switch, 4a/4b	IL0131096EN
30	184169	+IZMX-AS66-1	ON-OFF Auxiliary switch, 6a/6b	IL0131096EN
30	184170	+IZMX-AS88-1	ON-OFF Auxiliary switch, 8a/8b	IL0131096EN
30	184171	+IZMX-AS1010-1	ON-OFF Auxiliary switch, 10a/10b	IL0131096EN
30	184172	IZMX-AS22-16-1	ON-OFF Auxiliary switch, 2a/2b	IL0131096EN
30	184115	IZMX-AS22-40-1	ON-OFF Auxiliary switch, 2a/2b	IL0131096EN
31	184280	+IZMX-SR24DC-1	Spring release 24 VDC	IL0131088EN
31	184281	IZMX-SR24DC-1	Spring release 24 VDC	IL0131088EN
31	184282	+IZMX-SR48DC-1	Spring release 48 VDC	IL0131088EN
31	184283	IZMX-SR48DC-1	Spring release 48 VDC	IL0131088EN
31	184284	+IZMX-SR60DC-1	Spring release 60 VDC	IL0131088EN
31	184285	IZMX-SR60DC-1	Spring release 60 VDC	IL0131088EN
31	184286	+IZMX-SR110AD-1	Spring release 110-125 VAC/DC	IL0131088EN
31	184287	IZMX-SR110AD-1	Spring release 110-125 VAC/DC	IL0131088EN
31	184288	+IZMX-SR230AD-1	Spring release 220-240 VAC/DC	IL0131088EN
31	184289	IZMX-SR230AD-1	Spring release 220-240 VAC/DC	IL0131088EN
31	184103	+IZMX-LCS-1	Latch check switch (LCS/HIB), 1CO	IL0131088EN
31	184104	IZMX-LCS-1	Latch check switch (LCS/HIB), 1CO	IL0131088EN
31	184105	+IZMX-LCS-SR-1	Latch check switch, wired to SR, 1CO	IL0131088EN
31	184106	IZMX-LCS-SR-1	Latch check switch, wired to SR, 1CO	IL0131088EN
32	184128	+IZMX-OC-1	Operations counter	IL01301011E, IL01301055E
32	184129	IZMX-OC16-1	Operations counter	IL01301011E
32	184130	IZMX-OC40-1	Operations counter	IL01301055E
32	184222	+IZMX-PLPC-P-1	Padlockable pushbutton cover	IL01301065E
32	184223	IZMX-PLPC16-P-1	Padlockable pushbutton cover, plastic	IL01301041E
32	184224	IZMX-PLPC40-P-1	Padlockable pushbutton cover	IL01301065E
32	184225	+IZMX-PLPC-M-1	Padlockable pushbutton cover	IL01301065E
32	184226	IZMX-PLPC16-M-1	Padlockable pushbutton cover, metal	IL01301041E
32	184227	IZMX-PLPC40-M-1	Padlockable pushbutton cover	IL01301065E
32	184228	+IZMX-PLPC-M-OFF-1	Padlockable pushbutton cover, OFF	IL01301041E, IL01301065E
32	184229	IZMX-PLPC16-M-OFF-1	Padlockable pushbutton cover, OFF	IL01301041E
32	184230	IZMX-PLPC40-M-OFF-1	Padlockable pushbutton cover, OFF	IL01301065E
32	184233	IZMX-KLP-SO-RONIS-1	Keylock Safe-OFF, RONIS provision	IL01301040E
32	184231	IZMX-KLP-SO-CES-1	Keylock Safe-OFF, CES provision	IL01301049E
32	184234	IZMX-KLP-SO-CASTELL-1	Keylock Safe-OFF, CASTELL provision	IL01301050E
32	184232	IZMX-KLP-SO-KIRK-1	Keylock Safe-OFF, KIRK provision	IL01301039E
33	184205	IZMX-DI40-W-1	Locked door unless breaker is in disconnect	IL01301066E
33	184197	IZMX-CRB-1	Cell rejection bracket kit for cassette	IL01301006E
33	184136	IZMX-DEG16-F-1	Door escutcheon with gasket IP41, fixed	IL01301012E
33	184137	IZMX-DEG40-F-1	Door escutcheon with gasket IP41, fixed	IL01301012E
33	184138	IZMX-DEG16-W-1	Door escutcheon with gasket IP41, w/o	IL01301012E
33	184139	IZMX-DEG40-W-1	Door escutcheon with gasket IP41, d/o	IL01301012E
33	184235	IZMX-DC16-F-1	Door cover IP55, fixed	IL01301038E
33	184236	IZMX-DC40-F-1	Door cover IP55, fixed	IL01301038E
33	184237	IZMX-DC16-W-1	Door cover IP55, d/o	IL01301038E
33	184238	IZMX-DC40-W-1	Door cover IP55, d/o	IL01301038E
33	184131	IZMX-IB163-1	Phase barrier IZMX16	IL01301021E
33	184952	IZMX-IB164-1	Phase barrier IZMX16	IL01301021E
33	184953	IZMX-IB403-F-1	Phase barrier IZMX403 fix	IL01301048E
33	184954	IZMX-IB404-F-1	Phase barrier IZMX404 fix	IL01301048E
33	184132	IZMX-IB403-W-1	Phase barrier IZMX403 d/o	IL01301048E
33	184955	IZMX-IB404-W-1	Phase barrier IZMX404 d/o	IL01301048E
34	184206	IZMX-MIL2C-F16-1	Mechan. interlock type 2 cable, fixed	IL0131077EN
34	184209	IZMX-MIL2C-F40-1	Mechan. interlock type 2 cable, fixed	IL0131071EN
34	184207	IZMX-MIL3133C-F16-1	Mechan. interlock type 31, 33 cable, fixed	IL0131079EN
34	184210	IZMX-MIL3133C-F40-1	Mechan. interlock type 31, 33 cable, fixed	IL0131073EN
34	184208	IZMX-MIL32C-F16-1	Mechan. interlock type 32 cable, fixed	IL0131081EN
34	184211	IZMX-MIL32C-F40-1	Mechan. interlock type 32 cable, fixed	IL0131075EN
34	184212	IZMX-MIL2C-W16-1	Mechan. interlock type 2 cable, drawout	IL0131076EN
34	184215	IZMX-MIL2C-W40-1	Mechan. interlock type 2 cable, drawout	IL0131070EN
34	184213	IZMX-MIL3133C-W16-1	Mechan. interlock type 31, 33 cable, drawout	IL0131078EN
34	184216	IZMX-MIL3133C-W40-1	Mechan. interlock type 31, 33 cable, drawout	IL0131072EN
34	184214	IZMX-MIL32C-W16-1	Mechan. interlock type 32 cable, drawout	IL0131080EN
34	184217	IZMX-MIL32C-W40-1	Mechan. interlock type 32 cable, drawout	IL0131074EN

Convenience for planning, selection and documentation

Eaton Configurator for Circuit Breakers

The intuition-based software tool makes it easy to select and configure circuit breakers and load disconnectors with their respective accessories from a database of several thousand articles.

It does not require any special knowledge of the system. With just a few clicks you can select any switchgear configuration and transfer it to the parts or ordering list. All combination possibilities are saved in the software logic, which ensures correct ordering. In a logical step-by-step order, the software

will guide you through the switchgear offer and the suitable accessories. The selection process starts with choosing the appropriate standard, i.e. IEC or UL/CSA, the rated operating voltage and the rated frequency.

In the following steps you will need to:

- Determine the number of poles
- Choose a circuit breaker or load disconnecter
- Choose the protection task (e.g. motor protection, cable/line protection)
- Decide on either fixed or withdrawable design

Download from: www.moeller.net/de/products_solutions/index.jsp



CurveSelect

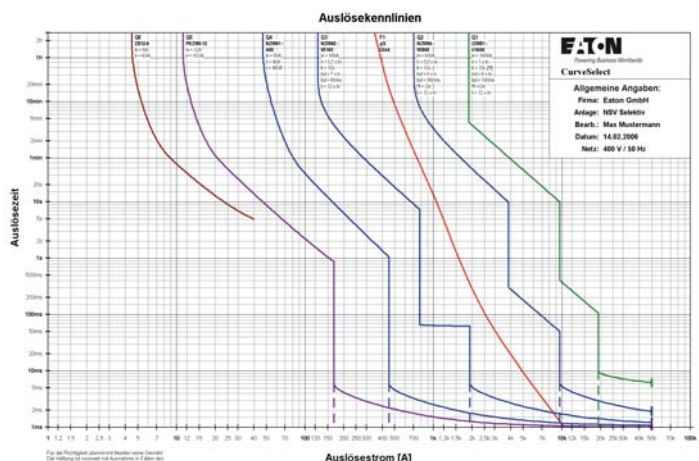
CurveSelect allows the user to simultaneously display setup-specific tripping curves of several protective devices – both in terms of time and electric current values.

This tool makes it easy for the user to analyze the interaction of NZM and IZM circuit breakers, PKZ motor-protectors, motor-protective relays, MCBs and h.b.c. fuses.

Freely defined curves (Free-StyleCurves = FSC) enable the user to directly compare the

- selected motor protector and motor starter characteristics,
- incoming supply switches and up-stream medium-voltage protection
- intended expansions and existing protective equipment

Download from: www.moeller.net/de/products_solutions/index.jsp



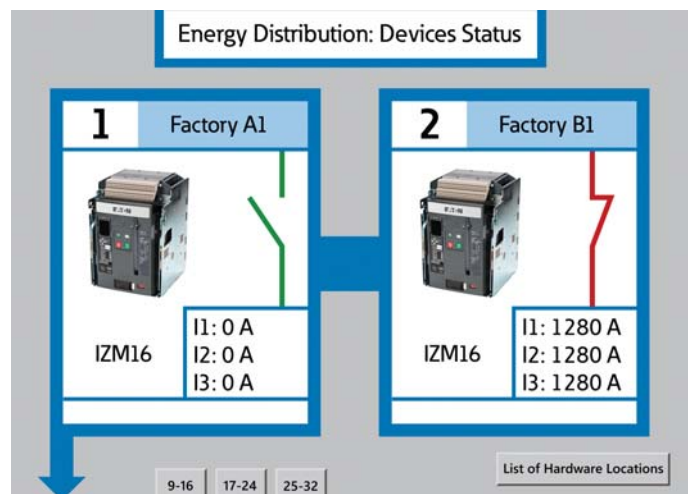
BreakerVisu

BreakerVisu allows the user to monitor several ACBs and MCCBs and helps him to quickly detect and clearly visualize the status of circuit breakers, such as currents, switching statuses or load warnings, and to dynamically visualize them on an http page.

In addition, all events will automatically be recorded in a log file.

This information is necessary to correctly evaluate warnings and malfunctions and to take the appropriate steps. Keeping a log file will also enable you to carry out an additional error analysis. BreakerVisu is composed of ready-made hard and software components. So no special software needs to be installed on the PC. All you need is an Internet browser and Microsoft Excel!

Download from: www.moeller.net/de/products_solutions/index.jsp



Eaton Catalogs in the App Store – all catalogues close at hand!

In order to meet the needs of increasingly mobile customers and employees, Eaton is offering a mobile solution for communication and product information from June 2011.

Clearly designed shelf view

The Eaton Catalogs app offers an outstandingly clear user interface and several fully developed functions. In the form of a shelf view, the user is provided with a clear overview of Eaton's latest product catalogues. These can be leafed through on the fly or downloaded to the device – for situations when there is no Internet access. Choose for yourself which catalogues are of interest and keep up-to-date using the Update function.

Intuitive browsing, searching and finding

Users can simply browse through the catalogues with intuitive navigation ensured. A linked table of contents, thumbnail views and a rapid search function are also provided for finding information quickly and conveniently.

Linked data sheets

It is often the case that product information is required which is not available in the product catalogues. The "Eaton Catalogs" contain article numbers and type designations that are linked to the Online Catalogue. This enables the user to access highly detailed production information in the form of a technical data sheet. From here other documents such as installation instructions and technical publications can be called up.

Whether on the building site, at the customer, on the train or at home – "Eaton Catalogs" make sure that all product information is close to hand.

Scan the QR code with your iPhone or iPad and you will immediately access "Eaton Catalogs".

In the App Store from
June 2011

The Eaton online catalogue

THE PRODUCT GROUP TREE

- > Information
- > Control circuit devices
- > (Safety) position switches/sensors
- > Pressure switches
- > Cam switches, switch-disconnectors up to 315 A
- > Timing and measuring relays
- > Safety relays, safety control relays
- > Control relays, multi-function-display
- > Touch panel, PLC, I/O expansion
- > Contactors
- > Overload relays
- > Motor-protective circuit-breakers
- > Motor-starter combinations
- > Soft starters
- > frequency inverters
- > distributed drives engineering
- > Compact circuit-breakers up to 1600 A
- > Compact switch-disconnectors up to 1600 A
- > Circuit breakers up to 6300 A
- > Switch-disconnectors up to 6300 A
- > Miniature circuit-breakers
- > Transformers

The product group tree: Clear layout of the Eaton products in product groups.

The one-dimensional product structure ensures the user can easily locate the product with a few clicks.

THE SEARCH

- Contactor
- adapter for contactor
- amplifier module for contactor
- auxiliary contactor
- auxiliary contactor relay
- bridge for contactor
- cable terminal block for contactor
- capacitor contactor
- coil for contactor
- connector for contactor
- contactor
- contactor accessories
- contactor amplifier module
- contactor coil
- contactor

Search results

The query for "contactor DC" provided "P" product group hits and "354" product hits

Image	Article No.	Type	Description	Price	Push	Accessories
	278298	SDANLMI220V50HZ,240V60HZ	S-D-contactors,5,500W400V/AC-operated	---	60	100
	278311	SDANLMI620V50HZ,240V60HZ	S-D-contactors,7,500W400V/AC-operated	---	60	100
	276844	DILM12-1101-2VDC	Contactors,5,500W400V/DC-operated	---	60	100
	277781	DILM49RDC60	Contactors,18,500W400V/DC-operated	---	60	100
	277782	DILM49RDC130	Contactors,18,500W400V/DC-operated	---	60	100
	277783	DILM49RDC240	Contactors,18,500W400V/DC-operated	---	60	100
	277780	DILM49RDC24	Contactors,18,500W400V/DC-operated	---	60	100
	277812	DILM49-22RDC24	Contactors,18,500W400V/DC-operated	---	60	100
	278298	SDANLMI220V50HZ,240V60HZ	S-D-contactors,5,500W400V/AC-operated	---	60	100

Search/result list: high performance search with suggestion list by "Entry"

A suggestion list brings the search an above-average success rate, because nothing makes less sense than a 0-hit result.

SELECTION AIDS

Navigation Products Product profiles

Control circuit devices

Number of products: 1206

Product range:

- Accessories
- Foot and palm switches
- IP60-Titan (posting dimensions 22.5 mm)
- IP60-Titan (posting dimensions 16 mm)
- IP60-Titan (posting dimensions 16 mm)
- SL, signal towers

Basic function:

- Acoustic indicator
- Customer specific complete devices
- Double actuators
- Emergency-stop actuators
- Foot and palm switches
- Four-way operator
- Hall pushbuttons
- Illuminated pushbuttons
- Illuminated selector switch actuators
- Indicator lights
- Key-operated actuators
- Mushroom-headed pushbutton
- Position switches
- Push buttons
- Selector switch actuators
- Signal towers
- STOP pushbuttons

Color:

- Without
- Black
- Blue
- Green
- Green, red, green
- Red
- Red, green
- Red, white, green
- White
- Yellow

Housing:

- inside the enclosure
- without enclosure

Control circuit devices

Number of products: 94

Product range:

- IP60-Titan (posting dimensions 22.5 mm)
- IP60-Titan (posting dimensions 16 mm)

Function:

- Spring return
- Stay-put

Front ring:

- Front ring: black
- Front ring: stainless

Design:

- Enclosure
- Embedded
- Flat
- With guard ring

Basic function:

- Acoustic indicator
- Customer specific complete devices
- Double actuators
- Emergency-stop actuators
- Emergency-stop actuators
- Four-way operator
- Hall pushbuttons
- Illuminated pushbuttons
- Illuminated selector switch actuators
- Indicator lights
- Key-operated actuators
- Mushroom-headed pushbutton
- Position switches
- Push buttons
- Selector switch actuators
- STOP pushbuttons

Color:

- Without
- Black
- Blue
- Green
- Green, red, green
- Red
- Red, green
- Red, white, green
- White
- Yellow

Housing:

- inside the enclosure
- without enclosure

Part no.	Article no.	Start text	Accessories	Function	Front ring	Protection type	Color	Design
M22-D-B	216580	Push-button,Push,black		Spring-return	Front ring: stainless	IP67, IP69K	Black	Flat
M22-D-W	216582	Push-button,Push,white		Spring-return	Front ring: stainless	IP67, IP69K	White	Flat
M22-D-R	216584	Push-button,Push,red		Spring-return	Front ring: stainless	IP67, IP69K	Red	Flat
M22-D-G	216586	Push-button,Push,green		Spring-return	Front ring: stainless	IP67, IP69K	Green	Flat
M22-D-Y	216588	Push-button,Push,yellow		Spring-return	Front ring: stainless	IP67, IP69K	Yellow	Flat
M22-D-B	218000	Push-button,Push,blue		Spring-return	Front ring: stainless	IP67, IP69K	Blue	Flat
M22-D-X	216602	Push-button,Push,without label		Spring-return	Front ring: stainless	IP67, IP69K	- Without	Flat

The selection tools: 3 clicks to product

Selection-relevant features allow users to locate their products easily, without problems. From general to specific to product – 3 clicks!

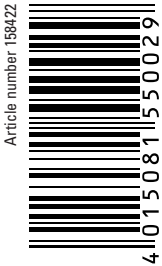
The catalogue portal is the entry page to the Online Catalogue. Important elements include the powerful search function and the graphical navigation. The clearly designed user interface makes the application particularly easy to use.

Continuous updating ensures that you will always find the latest product data and news. <http://ecat.moeller.net>



Eaton is a power management company with 2015 sales of \$20.9 billion. Eaton provides energyefficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 97,000 employees and sells products to customers in more than 175 countries.

For more information, visit www.eaton.eu.



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