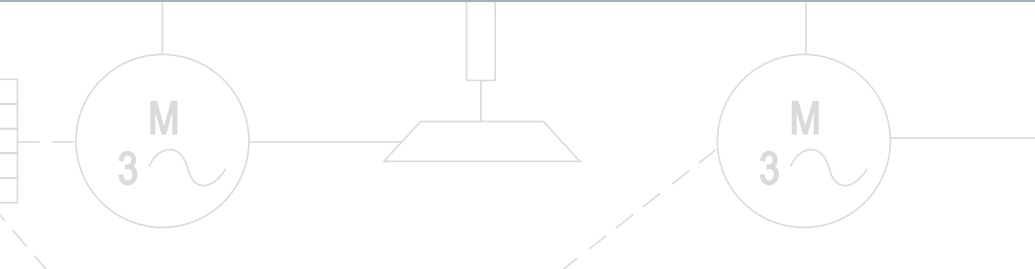
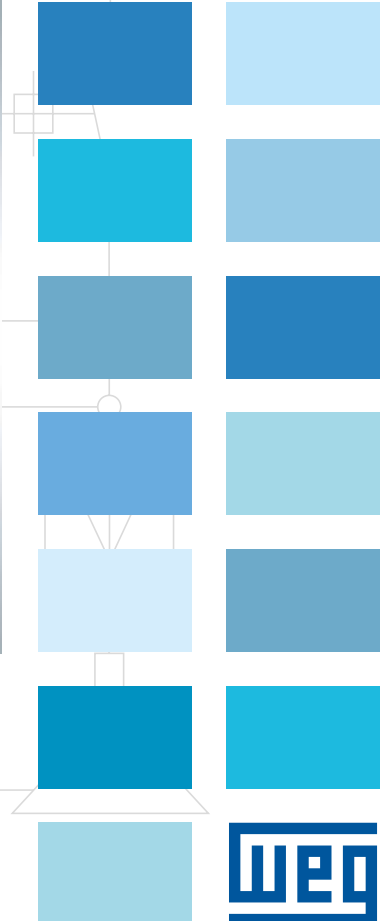
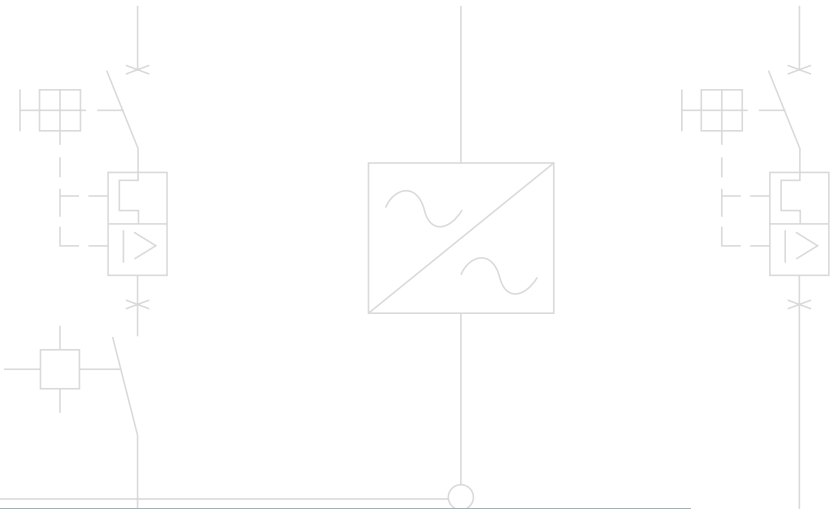


Air Circuit Breaker ABW





ABW Air Circuit Breaker

Designed for the protection of high power electrical circuits, the ABW Air Circuit Breakers are state-of-the-art products in terms of technology and design.

The characteristics that make this line stand out include:

Wide range of current adjustment

ABW16	640 to 1600 A
ABW20	800 to 2000 A
ABW25	1000 to 2500 A
ABW32	1280 to 3200 A
ABW40	1600 to 4000 A
ABW50	2000 to 5000 A
ABW63	2520 to 6300 A

High short circuit breaking capacity, with $I_{cs} = I_{cu}$ for the entire series

I _{cu} = I _{cs} @ 460/480/500 V	ABW16	65 kA
	ABW20	85 kA
	ABW25...32	85 kA
	ABW40...50	100 kA
	ABW63	120 kA

Available in two versions: FIXED and WITHDRAWABLE



Microprocessed electronic protection units, with LSIG protection and the possibility for network communication



ABW 1600 A



ABW 5000 A



ABW 3200 A

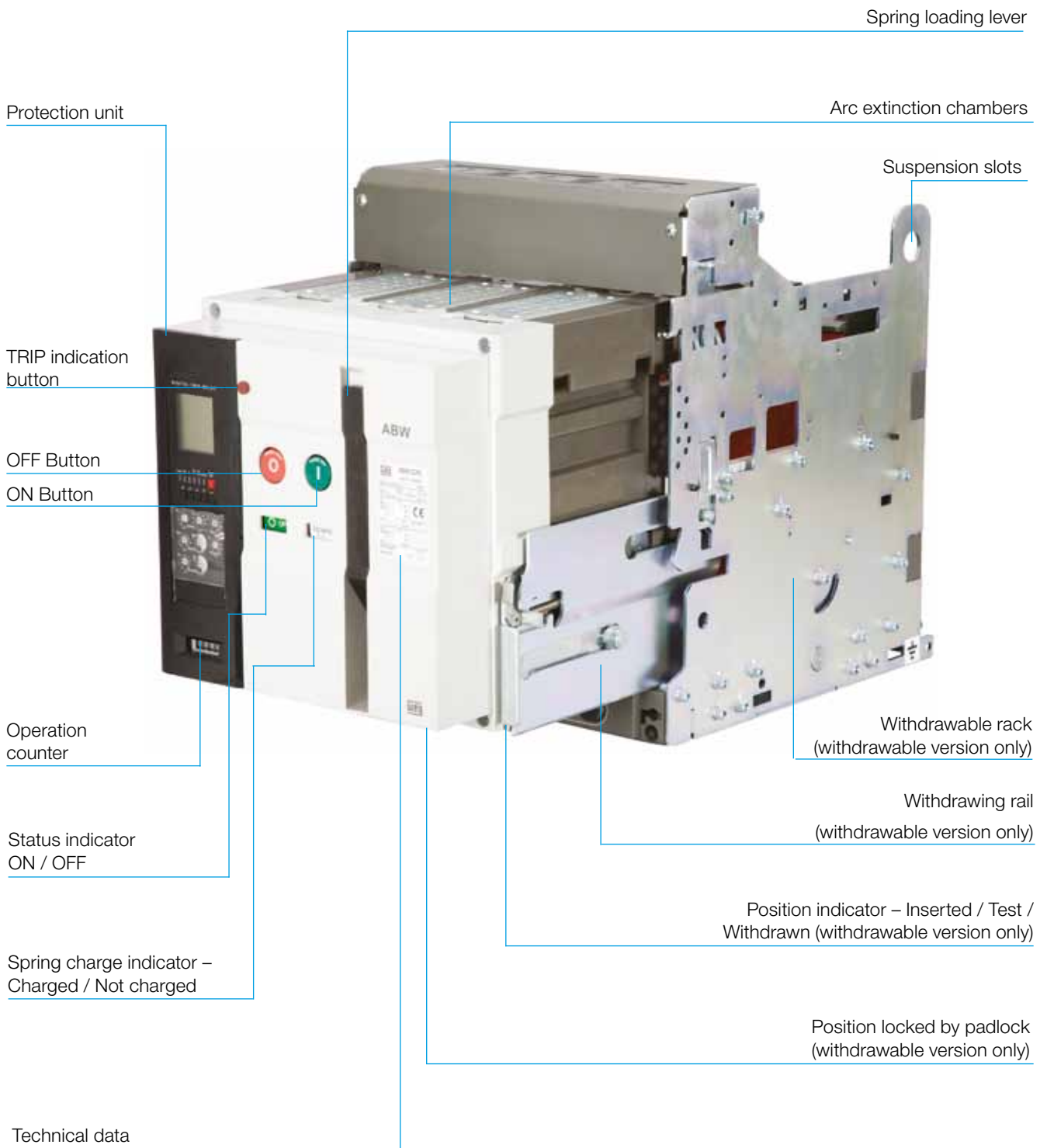


ABW 6300 A

Complete range of accessories



Construction Characteristics



Technical Data

		ABW16	ABW20	ABW25	ABW32	ABW40	ABW50	ABW63
Max. Rated Current - In max. (A) (40 °C)		1600	2000	2500	3200	4000	5000	6300
Rated Operational Voltage - Ue (V)		690						
Rated Insulation Voltage - Ui (V)		1000						
Impulse Voltage - Uimp (kV)		12						
Frequency (Hz)		50 / 60						
Number of poles		3 / 4						
Versions		Fixed / Withdrawable						
Protection units		Electronic						
Rated ultimate short-circuit breaking capacity - Icu (kA)	220 / 380 / 415 V	65		85		100		120
	440 / 480 / 500 V	65		85		100		120
	550 / 600 / 690 V	50		85		85		100
Rated service short-circuit breaking capacity - Ics (kA)	220 / 380 / 415 V	65		85		100		120
	440 / 480 / 500 V	65		85		100		120
	550 / 600 / 690 V	50		85		85		100
Rated short-time withstand current - Icw (kA)	1 s	50		85		85		100
	2 s	42		75		75		90
	3 s	36		65		65		85
Rated making capacity - Icm (kA peak)	220 / 380 / 415 V	143		187		220		264
	440 / 480 / 500 V	143		187		220		264
	550 / 600 / 690 V	105		187		187		220
Utilisation category		B						
Operating time (ms)	Max. total breaking time	40						
	Max. closing time	80						
Mechanical lifespan (number of operations)	Without maintenance	20000		15000		10000		10000
	With maintenance	30000		20000		15000		15000
Electrical lifespan (number of operations)	Without maintenance	5000		5000		2000		2000
	With maintenance	10000		10000		5000		5000
Altitude (m)		≤ 2000 ¹⁾						
Ambient temperature	Operating	-5...40 °C ²⁾						
	Storage	-20...60 °C						
Weight (kg)	Withdrawable ³⁾	61		85		143		184
	Fixed	32		42		74		96
Connection terminal - Fixed / Withdrawable	Horizontal	Standard						
	Vertical	Standard - change position				Optional (under request)		
External dimensions HxWxD (mm)	3P	Withdrawable	430x334x424		430x412x424		460x629x449	460x785x449
		Fixed	320x354x328		320x432x328		380x649x363	380x805x363
	4P	Withdrawable	430x419x424		430x527x424		460x799x449	460x1015x449
		Fixed	320x439x328		320x547x328		380x819x363	380x1035x363

Notes:

- 1) For installation above 2000 m from sea level, please consider derating factors, as shown in the chart below;
- 2) For ambient temperature above 40 °C, check maximum rated current values in the chart below;
- 3) Including withdrawable rack.

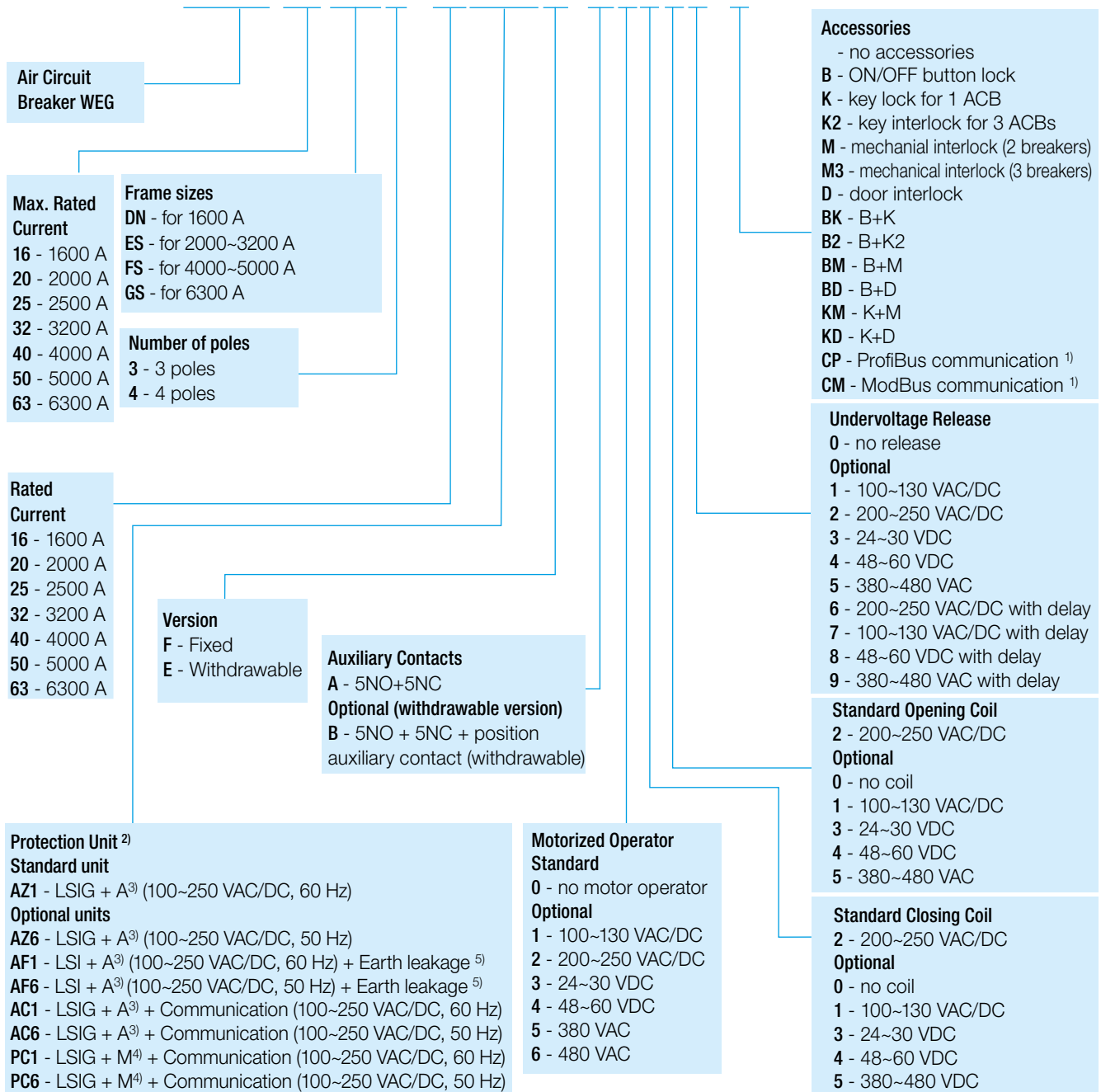
Altitude - h	Rated voltage reduction factor	Insulation voltage	Rated current reduction factor
h ≤ 2000 m	690	1000	1.00
2000 < h ≤ 3000 m	590	900	0.99
3000 < h ≤ 4000 m	520	700	0.96
4000 < h ≤ 5000 m	460	600	0.94

Ambient temperature	Horizontal position terminal						
	ABW16	ABW20	ABW25	ABW32	ABW40	ABW50	ABW63
40 °C	1600	2000	2500	3200	4000	5000	6300
45 °C	1600	2000	2500	3200	3900	5000	6300
50 °C	1600	2000	2500	3100	3800	4900	6200
55 °C	1550	2000	2400	3000	3700	4800	6100
60 °C	1500	2000	2300	2900	3600	4700	6000

Vertical position terminal						
ABW16	ABW20	ABW25	ABW32	ABW40	ABW50	ABW63
1600	2000	2500	3200	4000	5000	6300
1600	2000	2500	3200	3950	5000	6300
1600	2000	2500	3150	3850	4950	6250
1600	2000	2450	3050	3750	4850	6150
1550	2000	2350	2950	3650	4750	6050

Selection Guide

ABW16DN3-16AZ1F-A0220



Accessories supplied as standard for the entire range
Auxiliary contacts (5NO+5NC)
Alarm contacts
Opening coil 200-250 VAC/DC
Closing coil 200-250 VAC/DC
Operation counter
Position locking with Padlock (padlock not included) – withdrawable version only
Position indicator (Inserted /Test/ Withdrawn) – withdrawable version only

Accessories supplied as optionals
Motor operator
Undervoltage release
Condenser trip device
Key lock
Key interlock
Door frame
Transparent cover
Mechanical interlock
Door interlock
Position auxiliary contacts

Note:
 1) To be used with circuit breakers that have protection units type AC or PC.
 2) For further information about the protection units, see pages 12, 13 and 14.
 3) A - Current measurement
 4) M - Current, voltage, power and frequency measurements
 5) The current transformer ABW-ZCT must be used for earth leakage protection (supplied how accessory), see page 9.

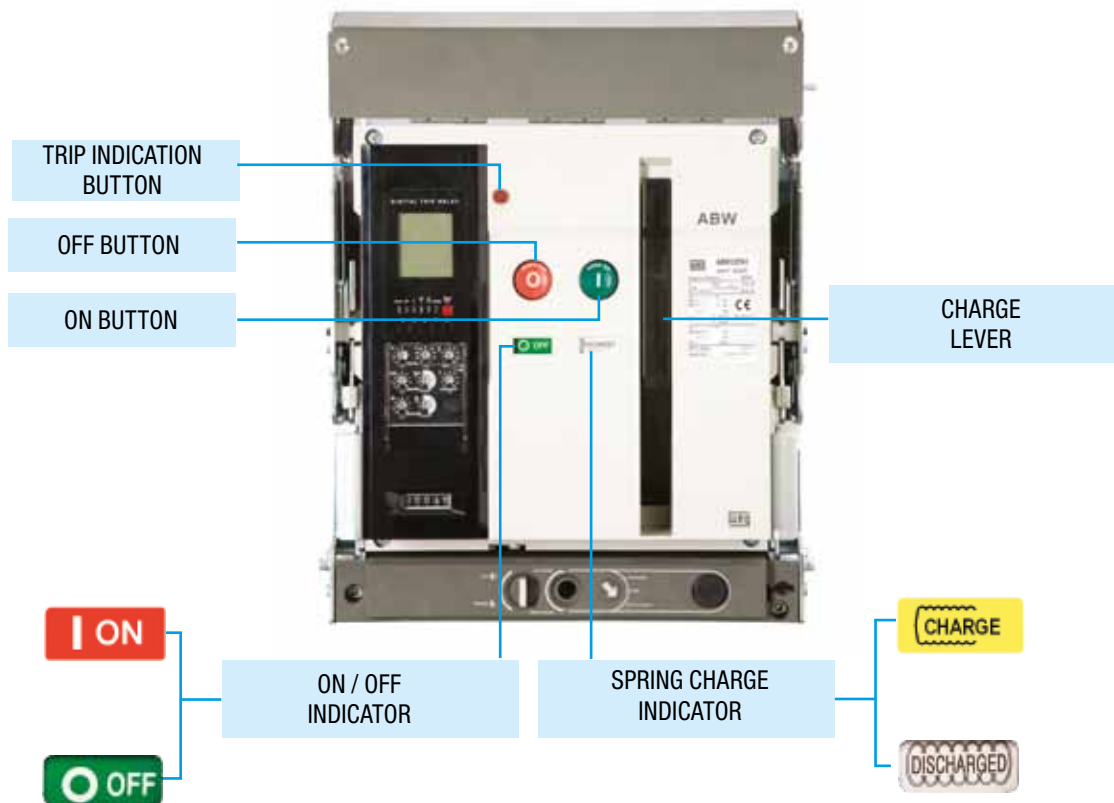
Operation System

ABW air circuit breakers operate through a spring system, which can be manually charged through a front lever, or electrically through a motor (supplied as an accessory).

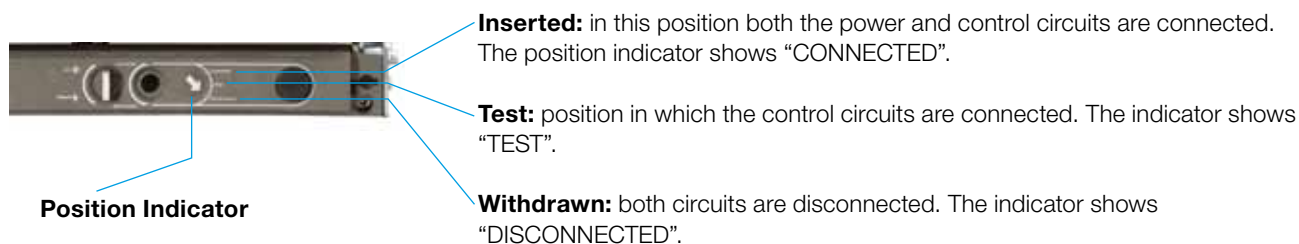
With the springs charged, situation in which the charge indicator shows “CHARGED”, the circuit breaker can be operated locally using the ON and OFF buttons.

Remote operation is also possible, through the Open and Close coils assembled inside the circuit breaker. The closing coil has an “antipumping” electronic circuit, which prevents successive switching on a single command.

Another feature of this product is the indicator on the front showing the status of the product: ON or OFF.



In relation to the installation version, the circuit breakers can be installed as fixed or as withdrawable. The withdrawable version is indicated for applications where eventual replacement or maintenance must be done in the shortest time possible. These circuit breakers can be positioned at three distinct points in the withdrawable rack:



Accessories

Auxiliary Contacts ¹⁾

Indicate circuit breaker status – ON or OFF.

Configuration		5NO + 5NC	
		Resistive load	Inductive load
Switch capacity (A)	125 VAC	10	6
	250 VAC	10	6
	460 VAC	5	6
	30 VDC	10	6
	125 VDC	0.6	0.6
	250 VDC	0.3	0.3

Alarm Contacts

These contacts are incorporated into the protection units and indicate trigger occurrence for any of the protection functions.

Configuration	2NO (generic) + 4NO (individual)	
Switch capacity (A)	250 VAC	5
	380 VAC	3
	30 VDC	5
	125 VDC	1
Minimum application levels		5 VDC / 10 mA

Closing Coil ¹⁾



These coils allow remote closing of the circuit breaker through electrical control. This remote control is valid only if the springs of the operating mechanism is charged.

Operation voltage		Reference	Consumption (VA or W)	
Range	0.75...1.1 x Un	-	Energization 200	Steady-state 5
	110~130 VAC/DC	ABW-BF E10		
	200~250 VAC/DC	ABW-BF E12		
	380~480 VAC	ABW-BF C34		
	24~30 VDC	ABW-BF E55		
	48~60 VDC	ABW-BF E27		
Closing time (ms)			≤ 80	
"Anti-pumping" characteristic			Yes, through electronic circuit	
Minimum supply time for operation (ms)			200	

Opening Coil ¹⁾



These coils allow remote opening of the circuit breaker through electric control.

Operation voltage		Reference	Consumption (VA or W)	
Range	0.60...1.1 x Un	-	Energization 200	Steady-state 5
	110~130 VAC/DC	ABW-BA E10		
	200~250 VAC/DC	ABW-BA E12		
	380~480 VAC	ABW-BA C34		
	24~30 VDC	ABW-BA E55		
	48~60 VDC	ABW-BA E27		
Trip time (ms)			≤ 40	

Note: ¹⁾ Accessories supplied as standard for the entire line.

Accessories

Motor Operator



The motorized drive is used for automatic charging of the circuit breaker springs operating mechanism. The operation begins immediately after curcuit breaker opening and, at the end of this process, an auxiliary contact indicates that the springs are charged. Even if the motorized operation is installed, it is still possible to charge the springs manually through the front lever.

Reference	ABW-AM E10	ABW-AM E27	ABW-AM E12	ABW-AM C34	ABW-AM D33	ABW-AM D74
Supply Voltage	110~130 VAC/DC	48~60 VDC	200~250 VAC/DC	24~30 VDC	380 VAC	440~480 VAC
Load current (A)	1	3	0.5	5	0.3	0.3
Starting Current (A)	5 x Load Current					
Motor speed (rpm)	1500~1900					
Charge Time (to spring charging) (s)	≤ 5					

Charged Spring Auxiliary Contact

It has a built-in contacts which transmits the signal to the opening, when motor charging is completed. It includes 2NO contacts; one of these is used for communication and the other indicates the complete charging.

Undervoltage Release



Automatically disconnects the circuit breaker in cases of undervoltage or phase loss.

Pick-up voltage	0.65...0.85 x Un
Drop-out voltage	0.4...0.6 x Un
Trip time (instantaneous)	≤50 ms

Operation voltage range	Consumption (VA or W)		Reference
	Energization	Steady-state	
110~130 VAC/DC	200	5	ABW-UVT E10
200~250 VAC/DC			ABW-UVT E12
380~480 VAC			ABW-UVT E55
24~30 VDC			ABW-UVT C34
48~60 VDC			ABW-UVT E27

Undervoltage Time Delay Module



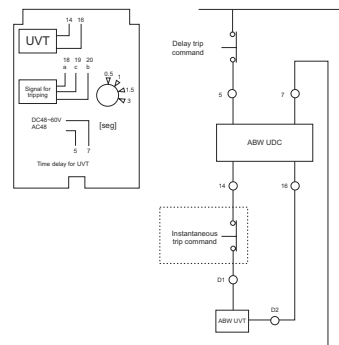
Delays the opening of the circuit after the command from the undervoltage release.

Pick-up voltage	0.65...0.85 x Un
Drop-out voltage	0.4...0.6 x Un

Operation voltage range	Consumption (VA or W)		Trip time (s)	Reference
	Energization	Steady-state		
110~130 VAC/DC	200	5	0.5 - 1 - 1.5 - 3	ABW-UDC E10
200~250 VAC/DC				ABW-UDC E12
380~480 VAC				ABW-UDC E55
48~60 VDC				ABW-UDC E27

Accessories

Electrical Wiring for undervoltage time delay module



Current transformer for earth leakage protection



The current transformer ABW-ZCT must be connected on ABW (protection unit AF) to measure and protect the circuit against earth leakage.



Circuit breakers	Diameter	Reference
ABW16...63	120 mm	ABW-ZCT-120
ABW16...63	200 mm	ABW-ZCT-200

Position Auxiliary Contacts



Enables remote indication of circuit breaker position inside withdrawable rack.

Circuit Breakers	Reference
ABW16...63 (withdrawable)	ABW-PS4

Configuration		2NO for INSERTED position 1NO for TEST position 1NO for WITHDRAWN position		
ABW Status		Disconnected		Connected
ABW position		Disconnected	Test	Connected
Contact Operation	CL - C (connected)	OFF	OFF	ON
	CL - T (Test)	OFF	ON	OFF
	CL - D (Disconnected)	ON	OFF	OFF
Switching Capacity (A)	Voltage	Resistive load	Inductive load	
	125 VAC	10	10	
	250 VAC	10	10	
	460 VAC	5	2.5	
	30 VDC	10	10	
	125 VDC	10	10	
250 VDC	3	1.5		

Accessories

Key Lock

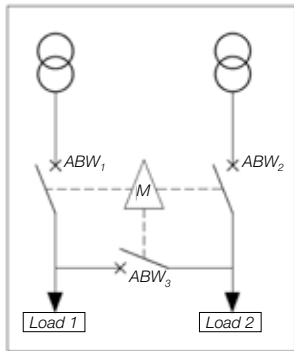
Locks the circuit breaker in the OFF position.

Circuit Breakers	Reference
ABW16...63	ABW-BK1

Key Interlock

Allows mutual interlock of three circuit breakers by using the key lock fitted to each circuit breaker.

Circuit Breakers	Reference
ABW16...63	ABW-IK2



■	Release
■	Lock

ABW (1)	ABW (2)	ABW (3)	Status	
			Load1	Load2
■	■	■	OFF	OFF
■	■	■	OFF	ON
■	■	■	ON	OFF
■	■	■	ON	ON
■	■	■	OFF	OFF
■	■	■	OFF	ON
■	■	■	ON	OFF

Terminals

The contacts can be rotated allowing the assembly in a vertical or horizontal position for ABW16...32. The vertical terminals are supplied on request in sets of three units for ABW40...63.

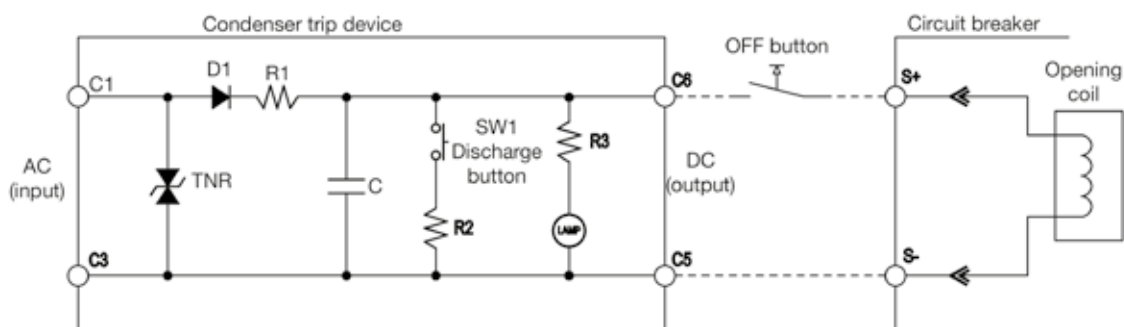
Condenser Trip Device



Electrically trips the circuit breaker within a preset time when control power supply is OFF. It discharges a capacitor by operating directly in the opening coil. Includes a lamp to indicate if the capacitor is charged and a discharge button. Installation on panel door.

Characteristics	Specification	
	ABW-CTD D58	ABW-CTD D68
Reference		
Supply voltage (VAC)	100...110	200...220
Operation voltage range	0.85...1.1 x Un	
Rated frequency (Hz)	50/60	
Charging time (s)	≤ 5	
Possible trip time (m)	3	2

Electrical Wiring



Accessories

Door Frame

A door frame can be fitted to cover the cut out in the panel and provide IP protection.



	Circuit breakers	Version	Reference
	ABW16...63	Fixed	ABW-DFF
	ABW16...63	Withdrawable	ABW-DFE
Protection degree	IP 3x		

Transparent Cover

Transparent covers provide IP protection even if the breaker is in the isolated position



	Circuit breakers	Reference
	ABW16...63	ABW-DC
Protection degree	IP 5x	

Mechanical Interlock

Enables two circuit breakers to be mechanically interlocked simultaneously through a flexible cable system.



	Circuit Breakers	Quantity	Reference
	ABW16, 40 and 50	2	ABW-IM1
	ABW20, 25, 32, and 63	2	ABW-IM2
	ABW16, 40 and 50	3	ABW-IM3
	ABW20, 25, 32 and 63	3	ABW-IM4
Cable length (m)	1.6		

Door Interlock

Prevents panel door from being opened while the circuit breaker is in operation.



	Circuit Breakers	Reference
	ABW16...63	ABW-DI
Cable length (m)	1.6	

Communication Module

The communication module has an I/O unit that allows remote circuit breaker's operation. The ABWs, with protection units AC or PC, are able to communicate via network, allowing the user to verify the status of the circuit breaker through ModBus (standard) or ProfiBus-DP (ABW-CP is required). However, to control the circuit breaker, it requires a communication module ABW-CM for ModBus communication or ABW-CP for ProfiBus-DP communication. It can be installed either on the withdrawable rack or on DIN rail.



Circuit Breakers	Communication	Reference
ABW16...63	ProfiBus	ABW-CP
ABW16...63	Modbus	ABW-CM

Accessories

Protection unit

On ABW air circuit breakers, protection against over currents is performed through the ABW-OCR electronic protection units.

The ABW-OCR AZ1 is supplied as standard for the circuit breakers from ABW16 up to ABW63 and offers protection against overload (L), timed short circuit (S), instantaneous short circuit (I), ground fault (G) and earth leakage (needs an external CT supplied as optional). These protections may be adjusted through the front dials.

Other protection units are supplied as optional accessories, allowing network communication, measurements and other protections.



		AZ	AF	AC	PC
Circuit breakers		ABW16...63	ABW16...63	ABW16...63	ABW16...63
Supply voltage*		110...250 VAC/DC	110...250 VAC/DC	110...250 VAC/DC	110...250 VAC/DC
Consumption		5 VA	5 VA	5 VA	5 VA
Rated frequency	1	60 Hz	60 Hz	60 Hz	60 Hz
	6	50 Hz	50 Hz	50 Hz	50 Hz
Protection functions	L - Long-time delay (overload)	■	■	■	■
	S - Short-time delay short-circuit	■	■	■	■
	I - Instantaneous short-circuit	■	■	■	■
	G - Ground fault	■	■	■	■
	Earth leakage (external CT is needed - under request)	-	■	-	-
	ZSI (protective coordination)	■	■	■	■
	Over and under current	-	-	-	■
	Frequency out of range	-	-	-	■
	Unbalance (voltage/current)	-	-	-	■
	Pre trip alarm	-	-	-	■
Discrimination / Trip type indication		■ (LEDs / aux. cont.)	■ (LEDs / aux. cont.)	■ (LEDs / aux. cont.)	■ (LEDs / aux. cont.)
Measurements	Current (R / S / N / T)	■	■	■	■
	3-phase Voltage/Current/RMS/Vector	-	-	-	■
	Power (P, Q, S), FP (3-phase)	-	-	-	■
	Frequency	-	-	-	■
Fault recording	Recording possibility	■	■	■	■
	Number of records	10	10	10	256
	Events sequence	■	■	■	■
	Broken current value	■	■	■	■
	Breaking total time	■	■	■	■
	Event recording	-	-	-	256
Digital outputs		3 fixed	3 fixed	3 fixed	3 programmable
Parameterization	Front adjustment knobs	■	■	■	■
	Display + navigation keys	■	■	■	■
	Parameterization password	■	■	■	■
Network communication	Serial connection	-	-	RS485	RS485
	ModBus Protocol (Status y measurements)	-	-	■	■
	ModBus Protocol (Status, measurements and operation)	-	-	ABW-CM required	ABW-CM required
	ProfiBus Protocol (Status, measurements and operation)	-	-	ABW-CP required	ABW-CP required
	Baud rate	-	-	9600 bps, 19200 bps, 38400 bps	9600bps, 19200 bps, 38400 bps

* Protection unit is self-powered when breaker's current $I > 20\%$ In. For communication, external power is required.

Trip units

Type A

Technical Features

The characteristics of the ABW-OCR116 protection unit meet all requirements for most systems and applications. It is supplied standard for ABW16...63 circuit breakers.

- LSIG protections
- 3 fixed digital outputs to indicate the alarms of each protection
- Sequence of events, for the last 10 faults
- Protective coordination by ZSI (Zone Selective Interlocking)

Display







The digital display indicates the values of instantaneous current in each phase. It is also possible to check other information, available in the system menus.

Indication LEDs

LED	Function
Alarm	Overload alarm - switches on in 90% I _r and flashes in 105% I _r
SP	Indicates self-protection and battery test
I _r	Indicates overload tripping (L)
I _{sd} /I _i	Indicates timed (S) or instantaneous (I) short circuit tripping
I _g	Indicates ground fault (G)
Comm	Indicates communication status trip (optional)

Navigation Keys

Used for navigating through the available menus.

Key	Function
	Menu
	Move the cursor or setting right/left on screen
	Move the cursor up on screen or increase a setting value
	Move the cursor down on screen or decrease a setting value
	Enter
	Fault reset / ESC from menu



Setting of the Protection Functions

Trip unit type	Parameter	Function / Setting range
AZ AC	I _u	Rated current setting (0.5-0.6-0.7-0.8-0.9-1.0) x I _n
	I _r	Overload current setting (function L) (0.8-0.83-0.85-0.88-0.89-0.9-0.93-0.95-0.95-1.0) x I _u
	t _r	Overload tripping delay setting (0.5-1-2-4-8-12-16-20-OFF) s @ 6xI _r
	I _{sd}	Short-time short-circuit current setting (function S) (1.5-2-3-4-5-6-7-8-9-10-OFF) x I _r
	t _{sd}	Short-time tripping delay setting I _{sd} I ² t OFF (0.05-0.1-0.2-0.3-0.4) s / I ² t ON (0.1-0.2-0.3-0.4) s
	I _i	Instantaneous short-circuit current setting (function I) (2-3-4-6-8-10-12-15-OFF) x I _n
	I _g	Ground fault current setting (function G) (0.2-0.3-0.4-0.5-0.6-0.7-0.8-1-OFF) x I _n
	t _g	Ground fault time delay I ² t OFF (0.05-0.1-0.2-0.3-0.4) s / I ² t ON (0.1-0.2-0.3-0.4) s
AF	I _g	Earth leakage current setting (0.5-1-2-3-5-10-20-30-OFF) (A)
	t _g	Earth leakage time delay (140-230-350-800-950) ms

Trip units

Type P

Technical Features

This unit was developed to meet the needs for electrical applications and systems that require high technical aspects. Supplied as accessory for the entire line.

- LSIG protection
- Protection against under and overcurrent, under and overvoltage, current unbalance and frequency out of range.
- Records up to 256 fault information
- Records up to 256 events related to setting change, operation and state change (user choice)
- Protective coordination by ZSI (Zone Selective Interlocking)
- Measurement of current, phase angle, voltage, power, frequency, power factor, and others

Display







The digital display indicates the values of instantaneous current in each phase. It is also possible to check other information, available in the system menus.

Indication LEDs

LED	Function
Alarm	Overload alarm
SP	Indicates self-protection and battery test
Ir	Indicates overload tripping (L)
Isd/li	Indicates timed (S) or instantaneous (I) short circuit tripping
Ig	Indicates ground fault (G)
Comm	Indicates communication status trip (optional)

Navigation Keys

Used for navigating through the available menus.

Key	Function
	Menu
	Move the cursor or setting right/left on screen
	Move the cursor up on screen or increase a setting value
	Move the cursor down on screen or decrease a setting value
	Enter
	Fault reset / ESC from menu

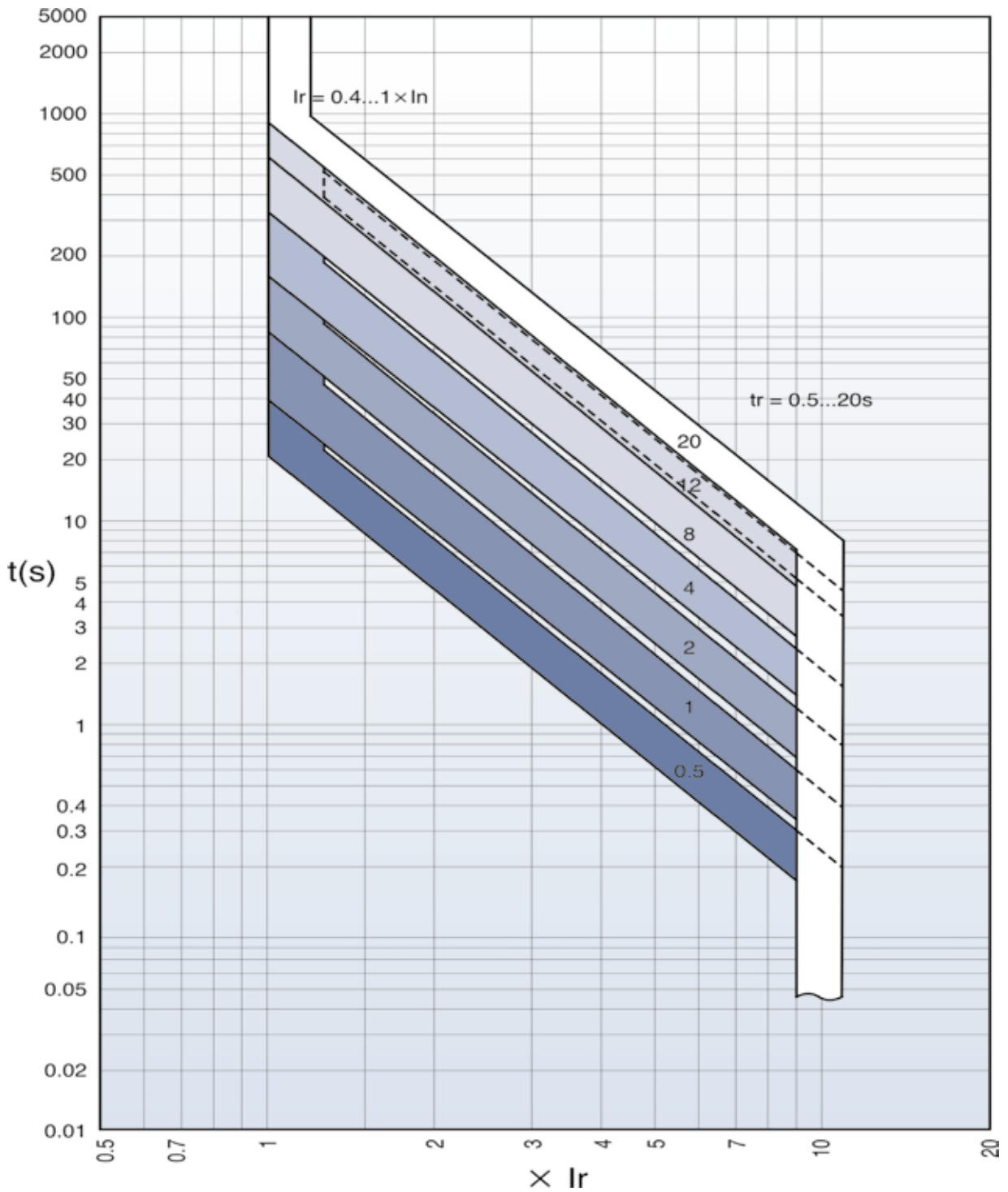


Setting of the Protection Functions

Parameter	Function / Setting range
Ir	Overload current setting (function L) (0.4-0.5-0.6-0.7-0.8-0.9-1.0) x In
tr	Overload tripping delay setting Ir (0.5-1-2-4-8-12-16-20-OFF) s @ 6xIr
Isd	Short-time short-circuit current setting (function S) (1.5-2-3-4-5-6-7-8-9-10-OFF) x Ir
tsd	Short-time tripping delay setting Isd I ² t OFF (0.05-0.1-0.2-0.3-0.4) s / I ² t ON (0.1-0.2-0.3-0.4) s
li	Instantaneous short-circuit current setting (function I) (2-3-4-6-8-10-12-15-OFF) x In
Ig	Ground fault current setting (function G) (0.2-0.3-0.4-0.5-0.6-0.7-0.8-1-OFF) x In
tg	Ground fault time delay I ² t OFF (0.05-0.1-0.2-0.3-0.4) s / I ² t ON (0.1-0.2-0.3-0.4) s

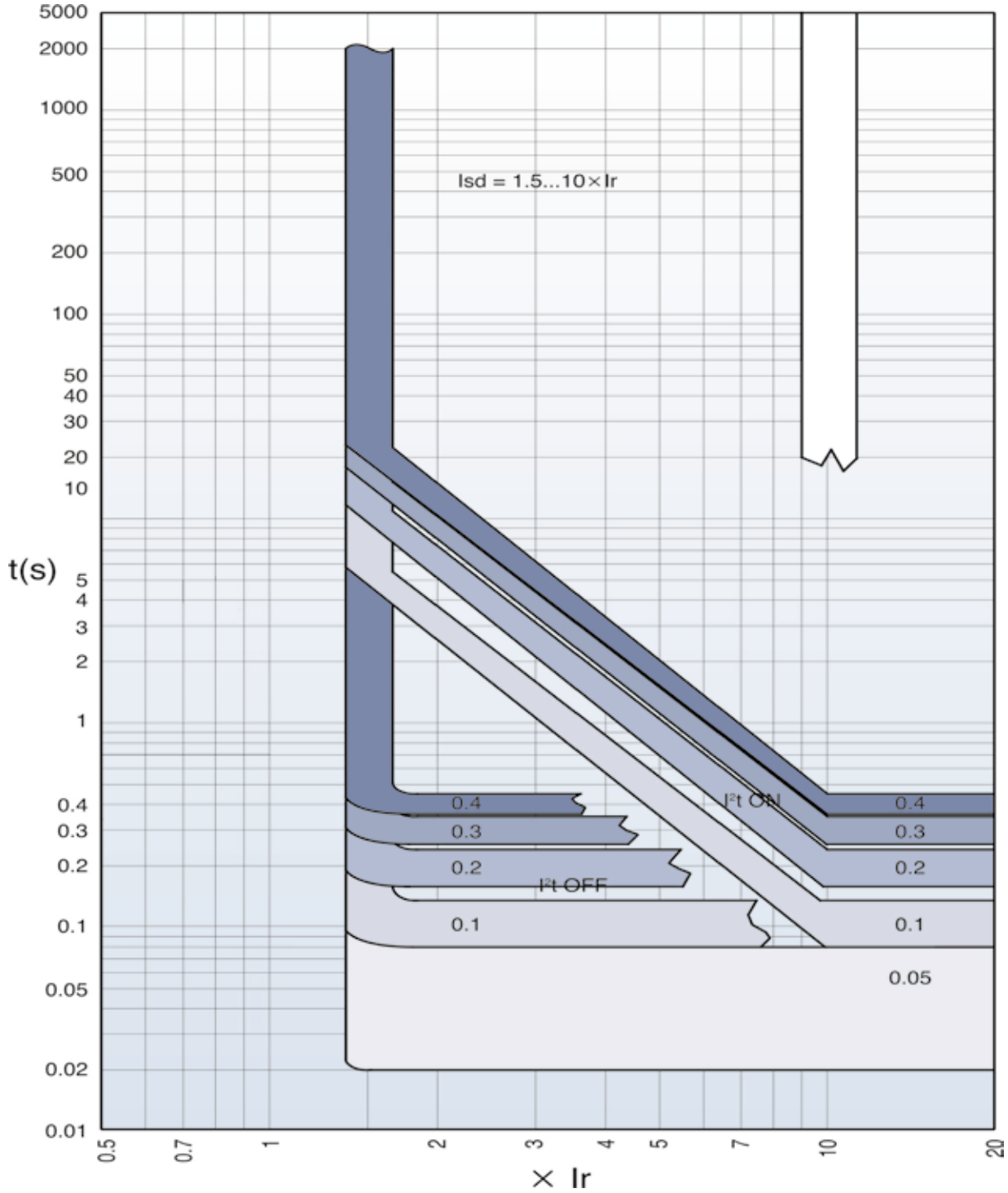
Characteristic curves

Protection function L - Overload adjustment - I_r and t_r



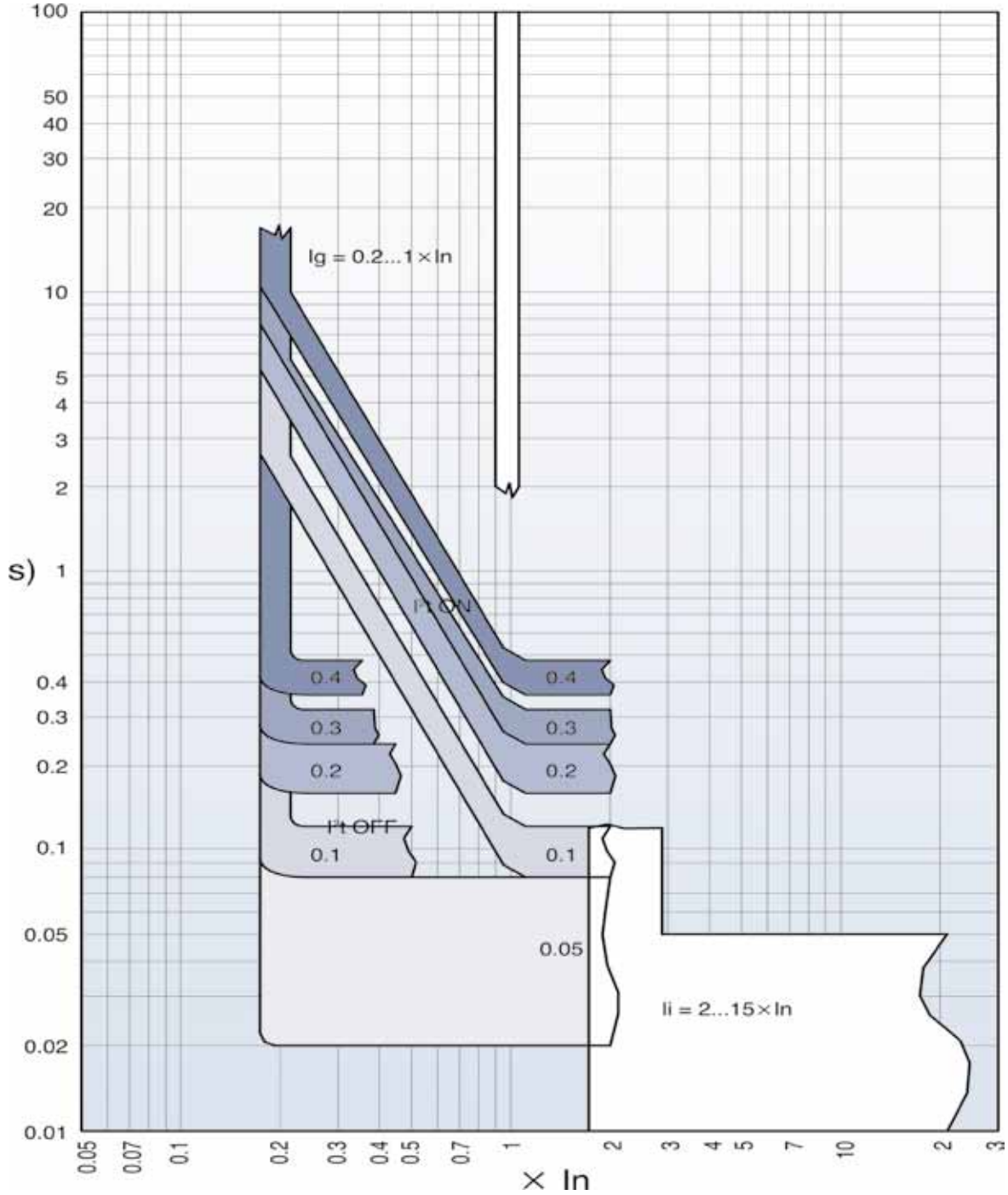
Characteristic curves

Protection function S - Timed short circuit adjustment - I_{sd} and t_{sd}



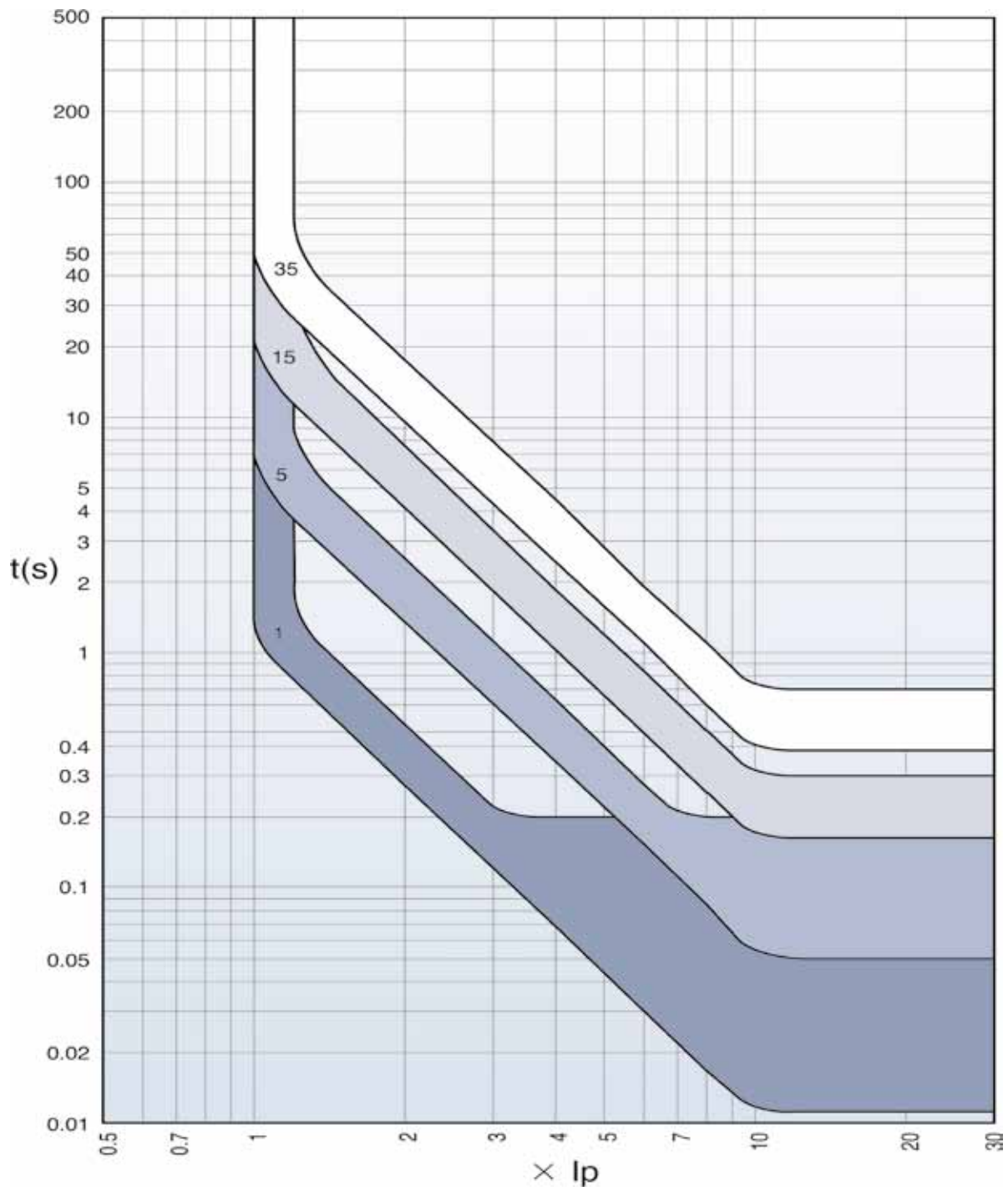
Characteristic curves

Protection function I - Short circuit instantaneous adjustment- II
 Protection function G - Ground fault adjustment - I_g and t_g



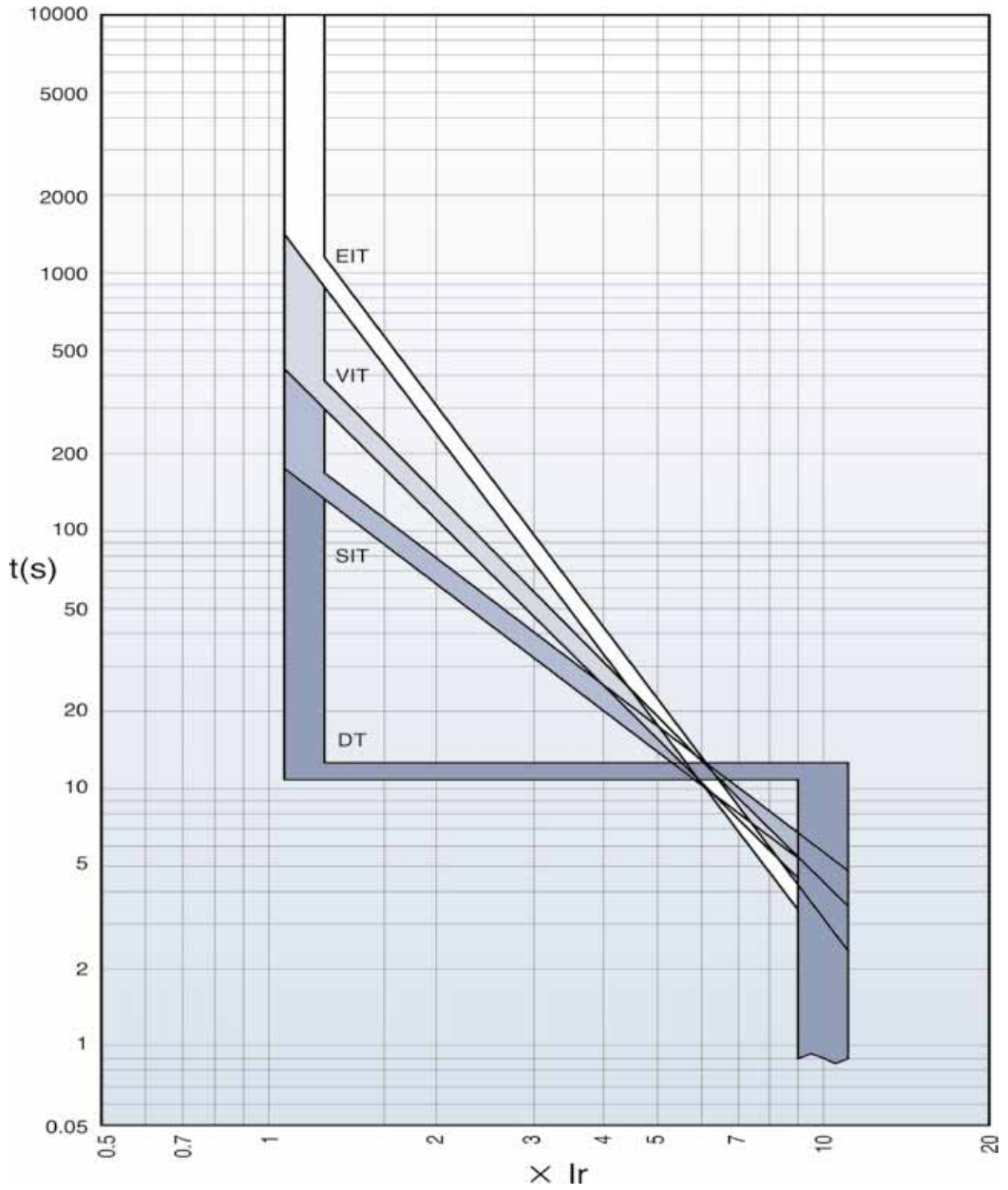
Characteristic curves

Pre Alarm indication curve (available only on type P protection unit)



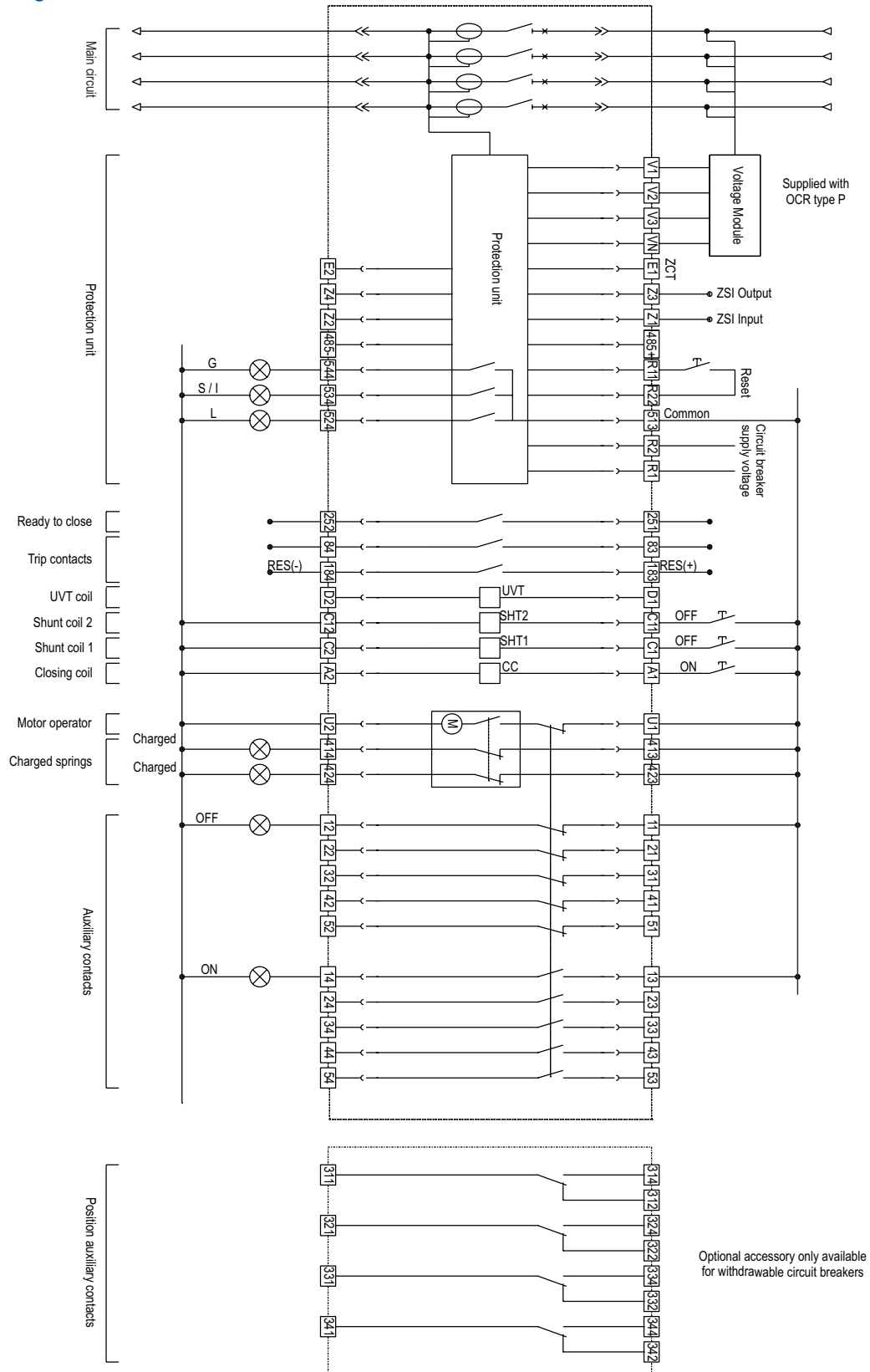
Characteristic curves

Current x Time characteristic curve adjustment - IDTML (available only on type P protection unit)



ABW – OCRAZ1

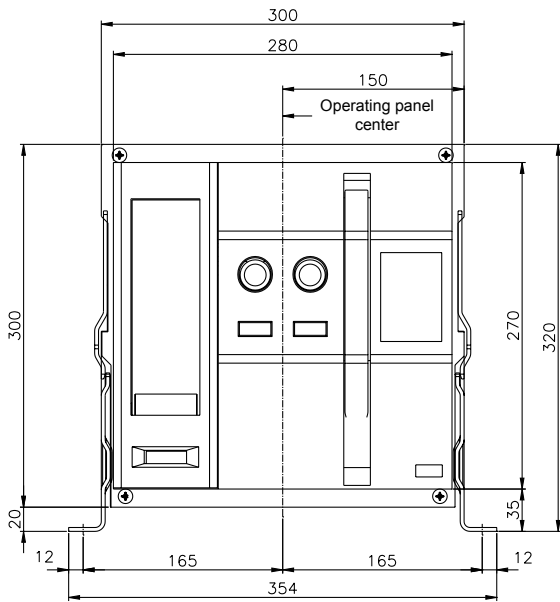
Electrical Wiring



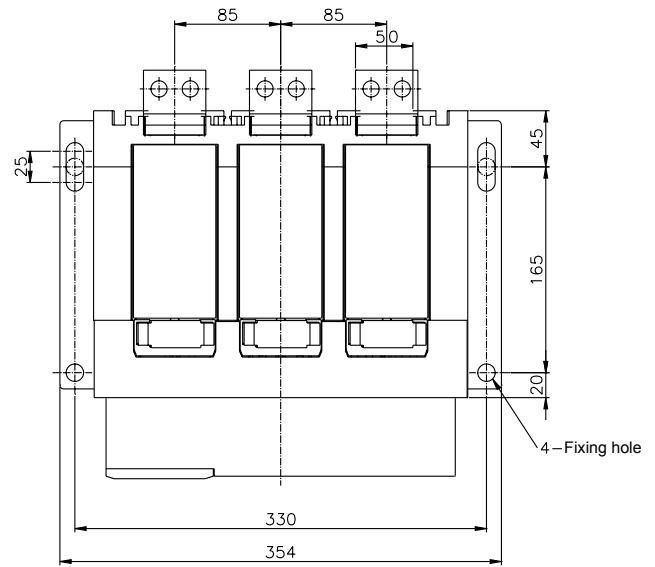
Dimensions (mm)

ABW16 – 3P Fixed Version

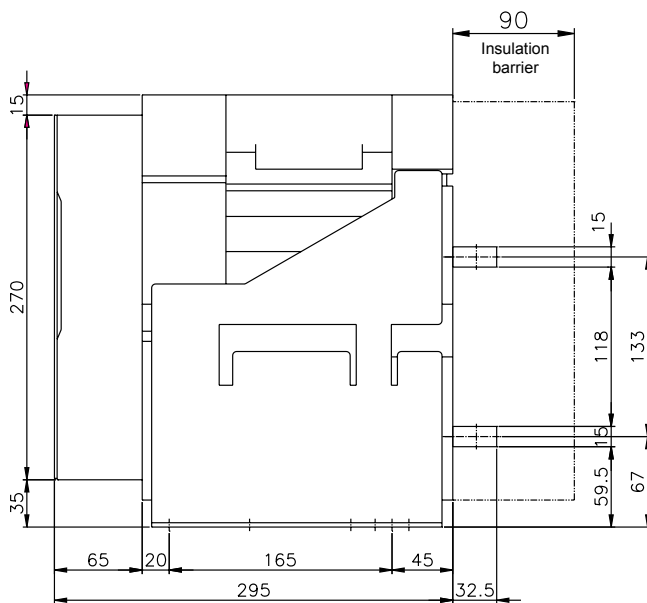
ABW16
Front view



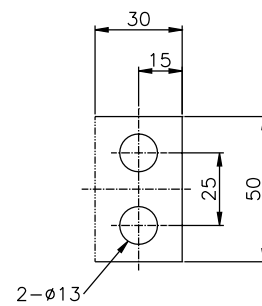
ABW16
Top view



ABW16
Side view



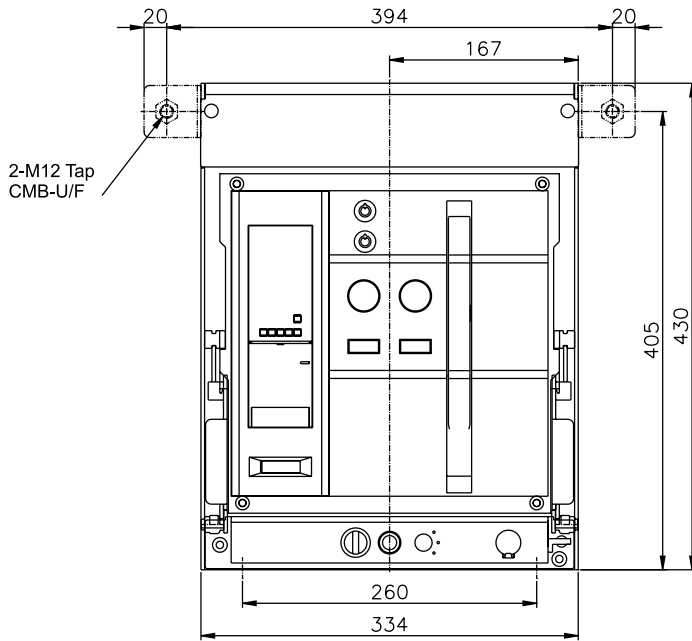
ABW16
Horizontal terminals



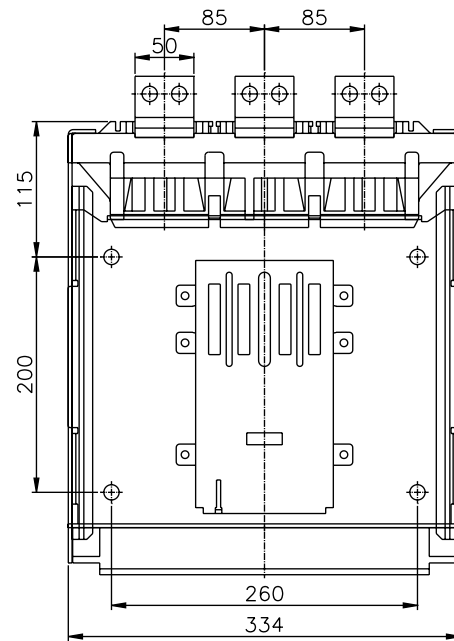
Dimensions (mm)

ABW16 – 3P Withdrawable Version

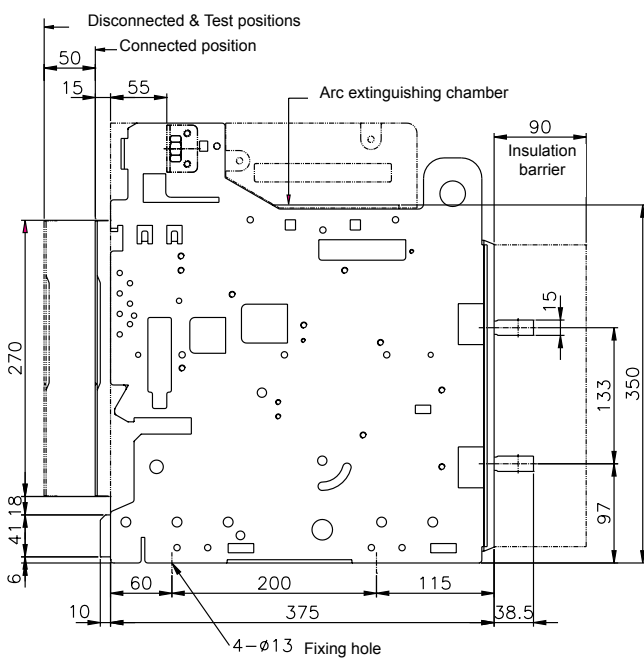
ABW16
Front view



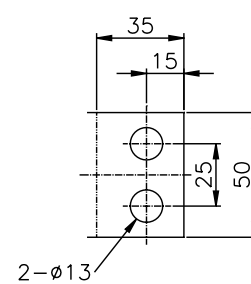
ABW16
Bottom view



ABW16
Side view



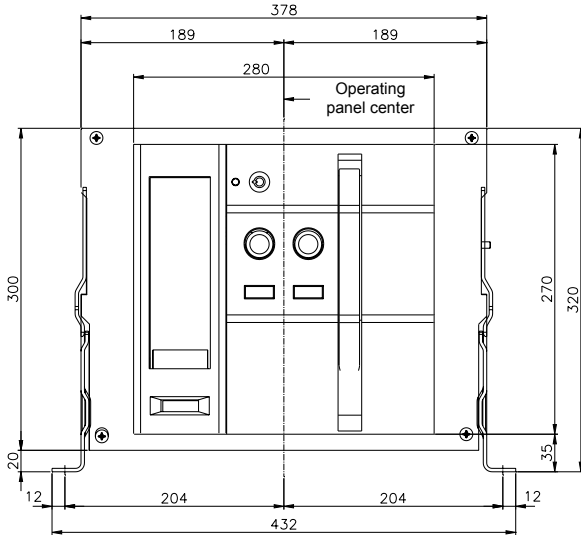
ABW16
Horizontal terminals



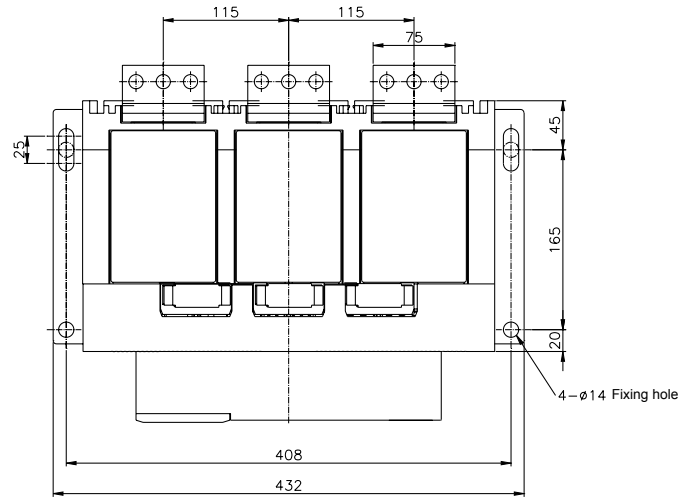
Dimensions (mm)

ABW20...32 – 3P Fixed Version

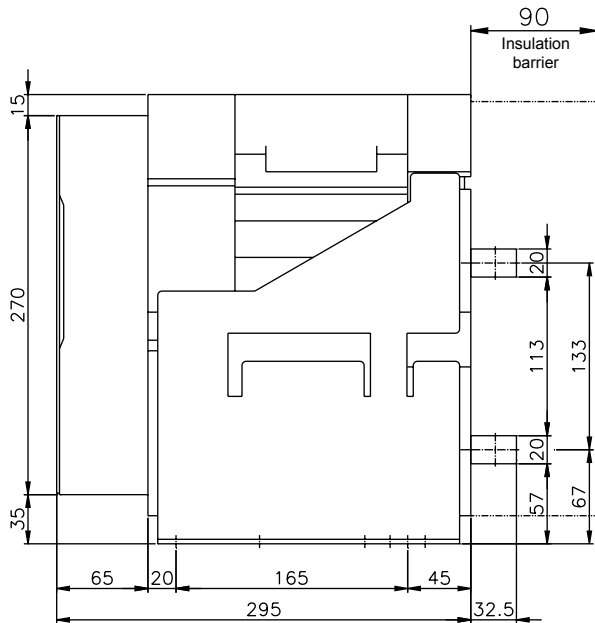
ABW20...32
Front view



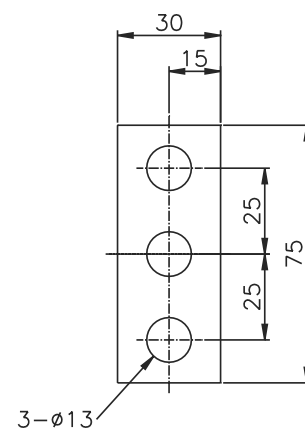
ABW20...32
Top view



ABW20...32
Side view



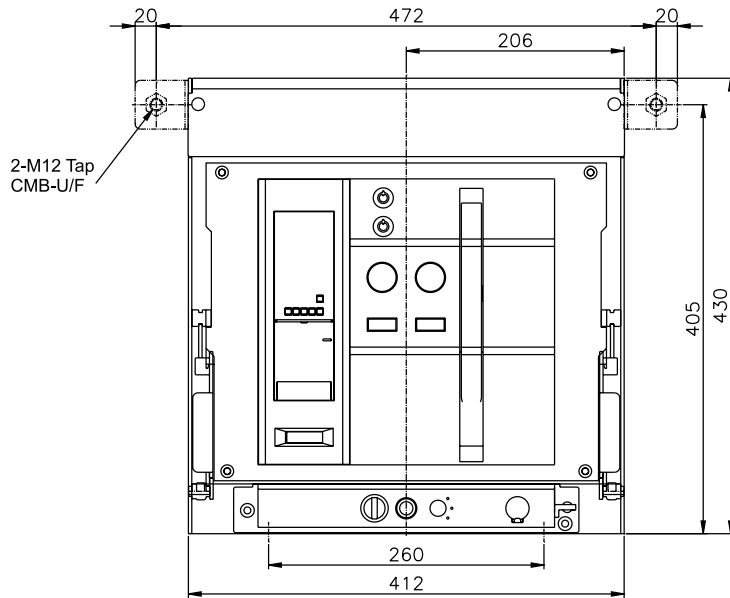
ABW20...32
Horizontal terminals



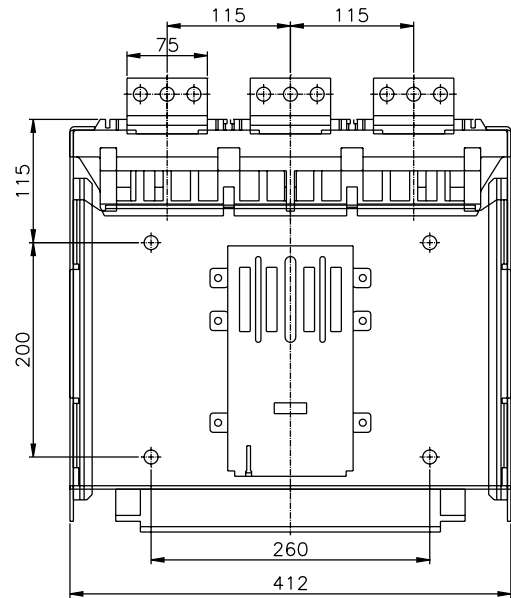
Dimensions (mm)

ABW20...32 - 3P Withdrawable Version

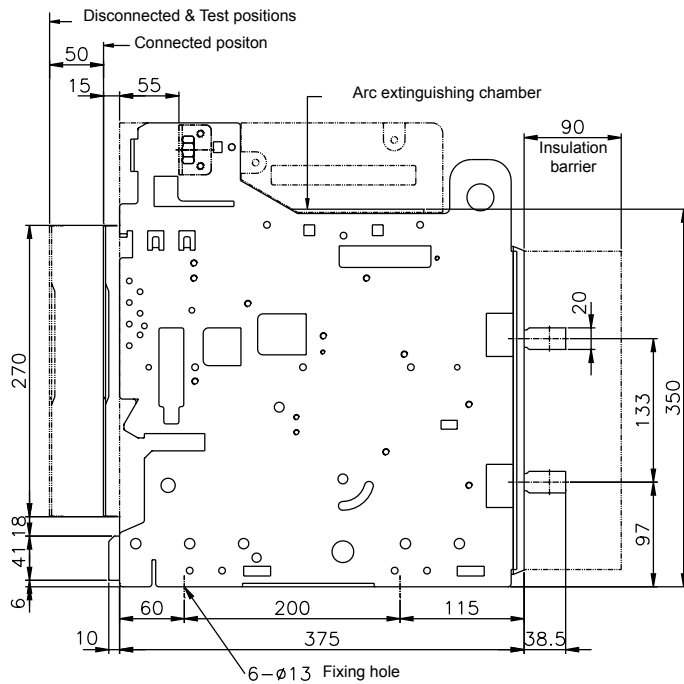
ABW20...32
Front view



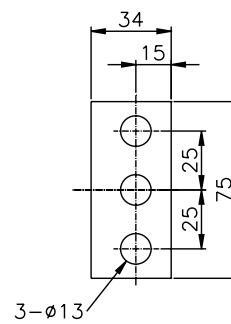
ABW20...32
Bottom view



ABW20...32
Side view



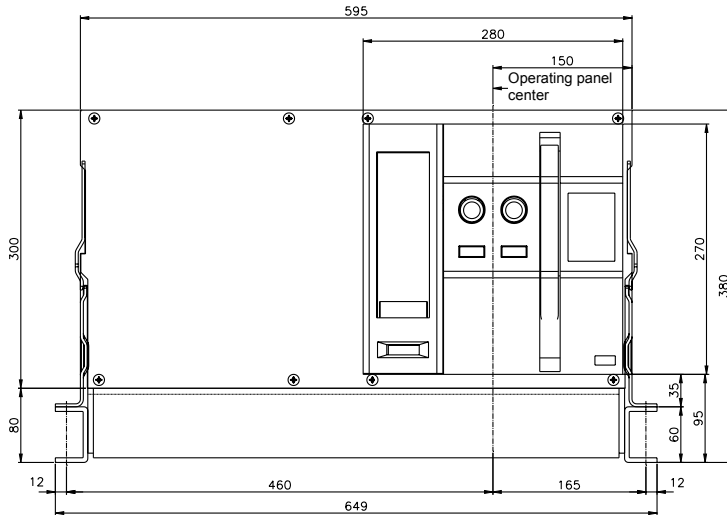
ABW20...32
Horizontal terminals



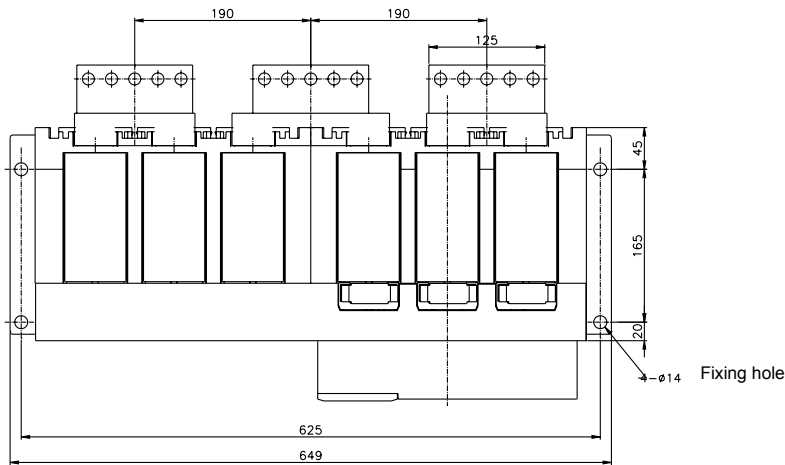
Dimensions (mm)

ABW40...50 - 3P Fixed Version

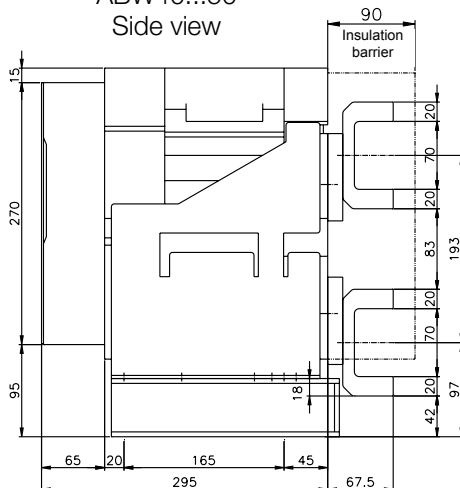
ABW40...50
Front view



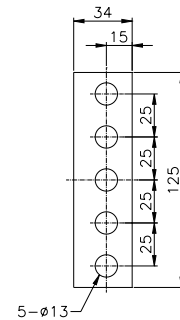
ABW40...50
Top view



ABW40...50
Side view

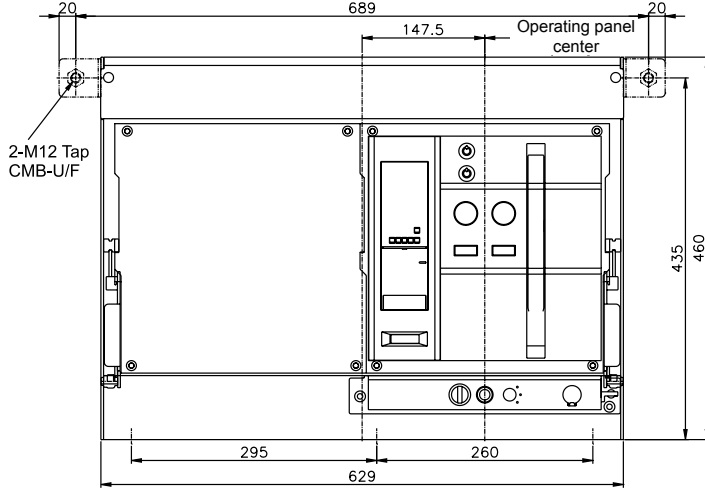


ABW40...50
Horizontal terminals

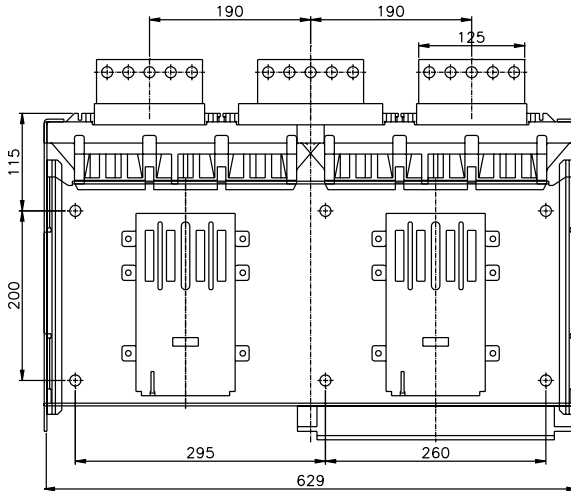


Dimensions (mm)

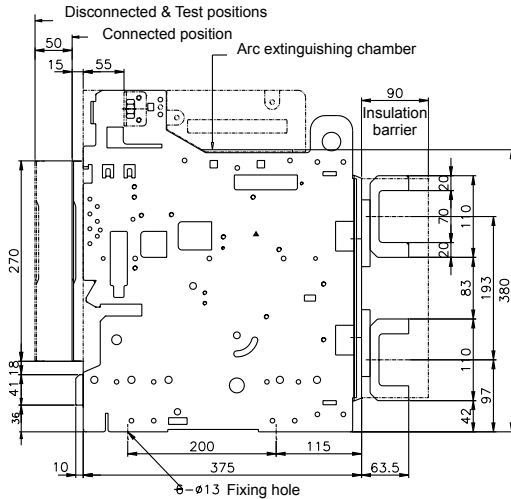
ABW40...50
Front view



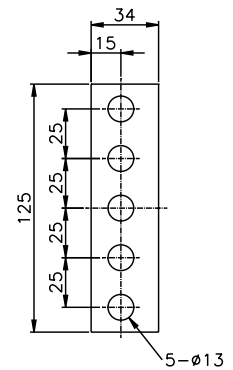
ABW40...50
Bottom view



ABW40...50
Side view

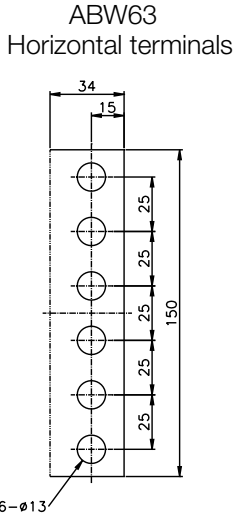
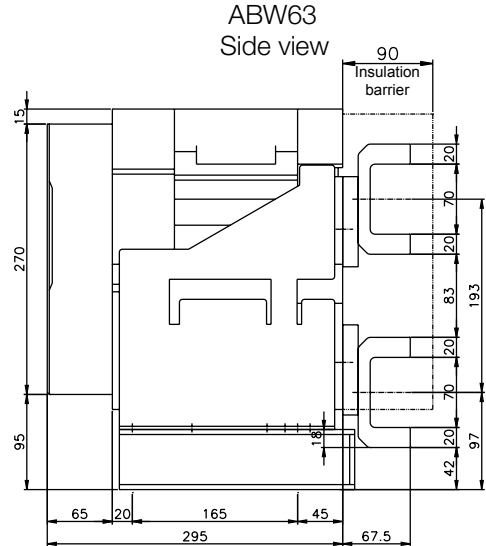
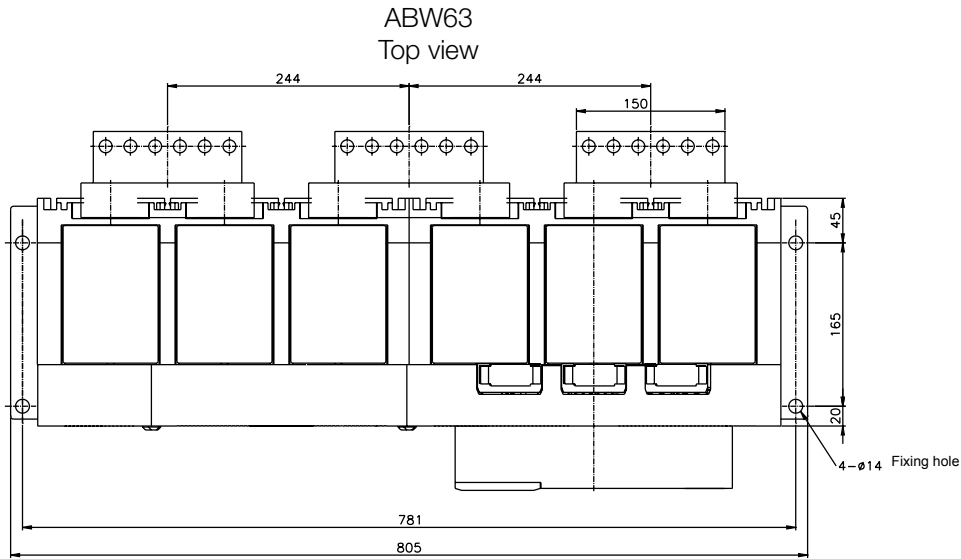
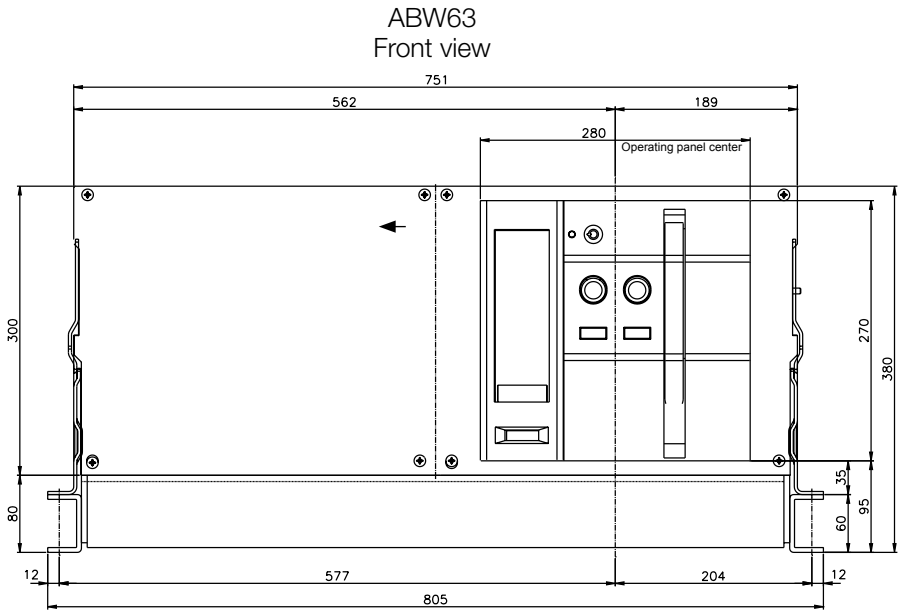


ABW40...50
Horizontal terminals



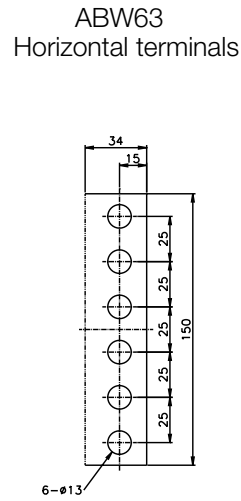
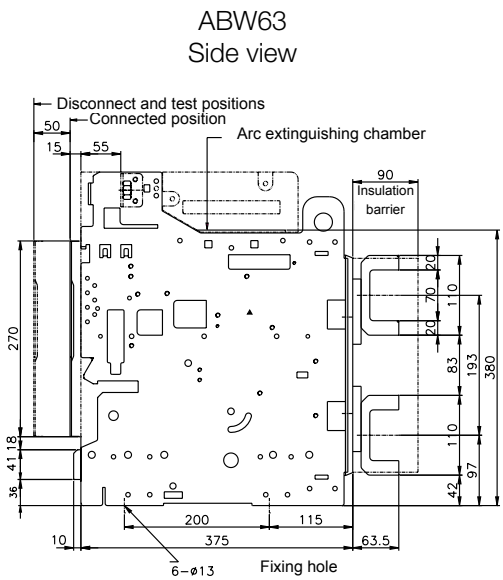
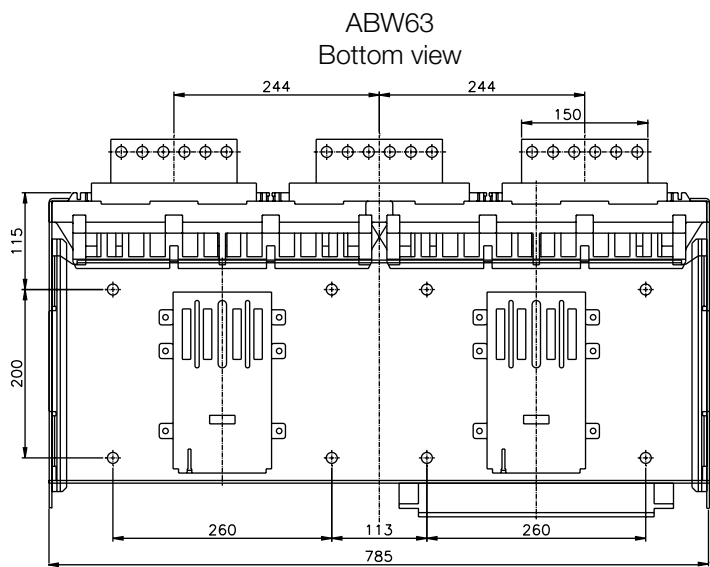
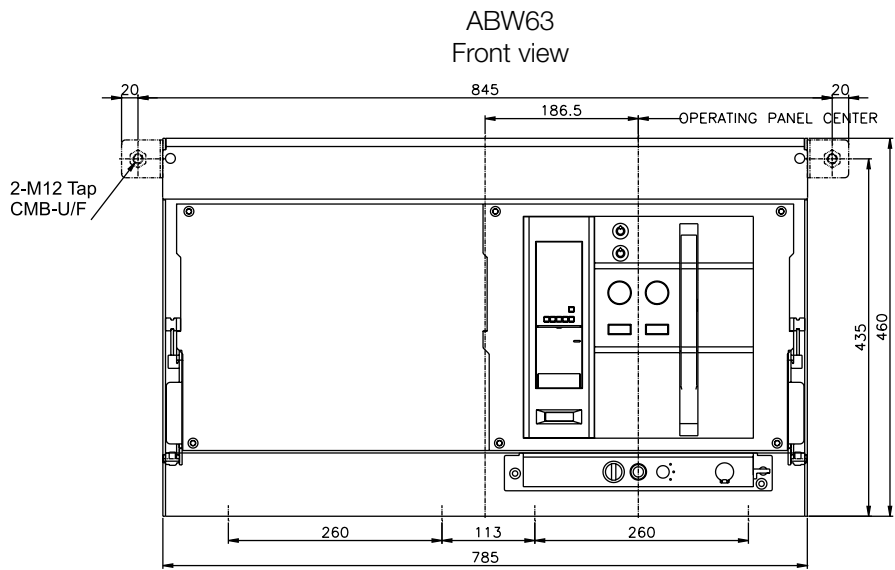
Dimensions (mm)

ABW63 - 3P Fixed Version



Dimensions (mm)

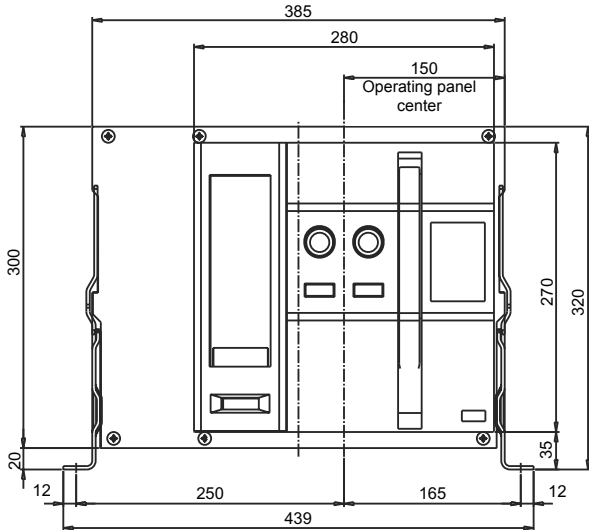
ABW63 – 3P Withdrawable Version



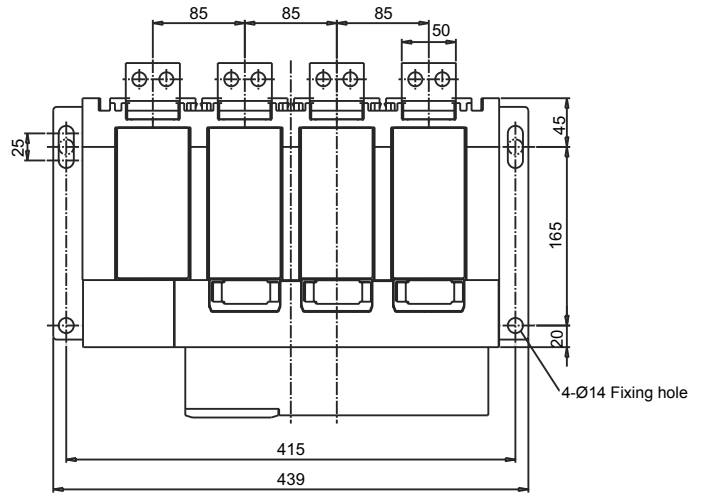
Dimensions (mm)

ABW16 - 4P Fixed Version

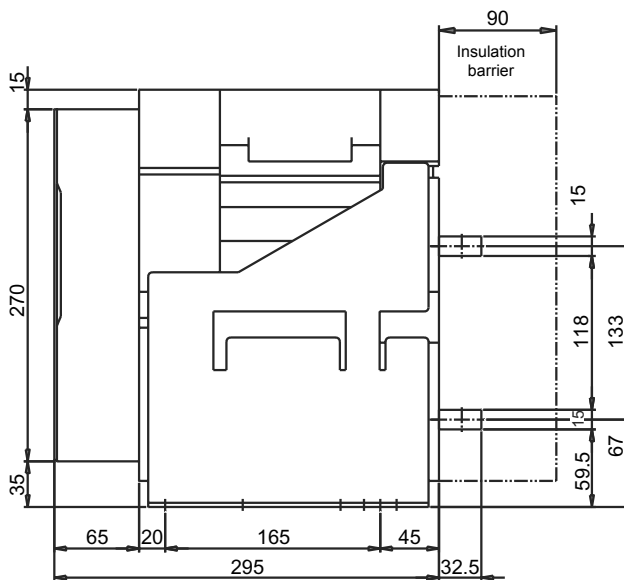
ABW16
Front view



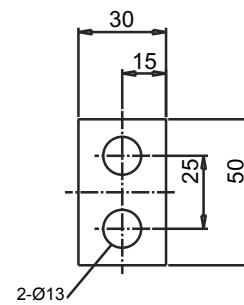
ABW16
Top view



ABW16
Side view



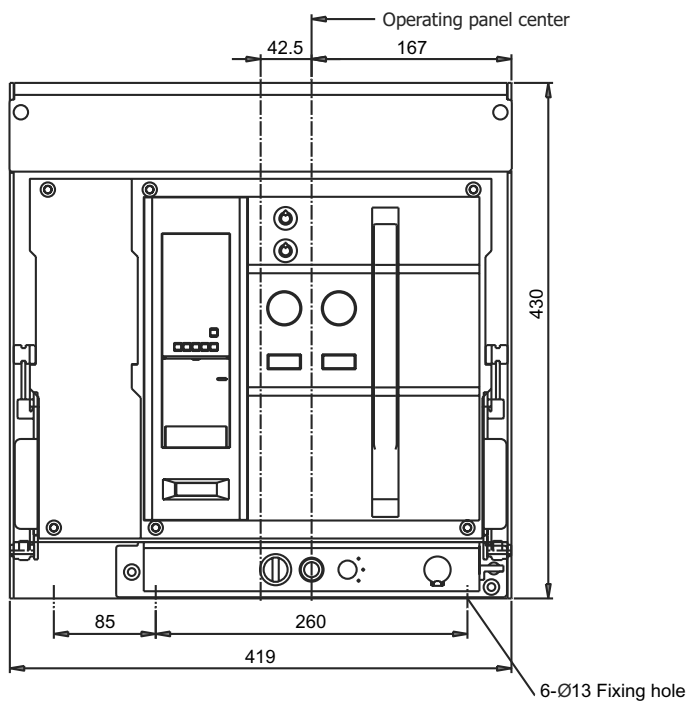
ABW16
Horizontal terminals



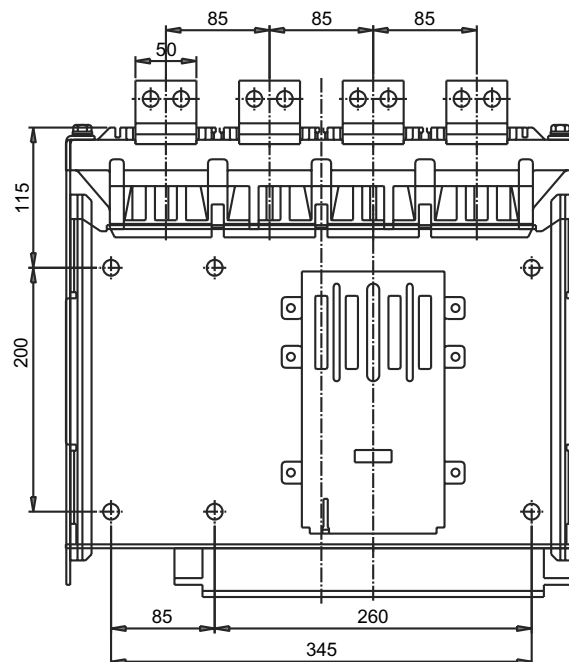
Dimensions (mm)

ABW16 - 4P Withdrawable Version

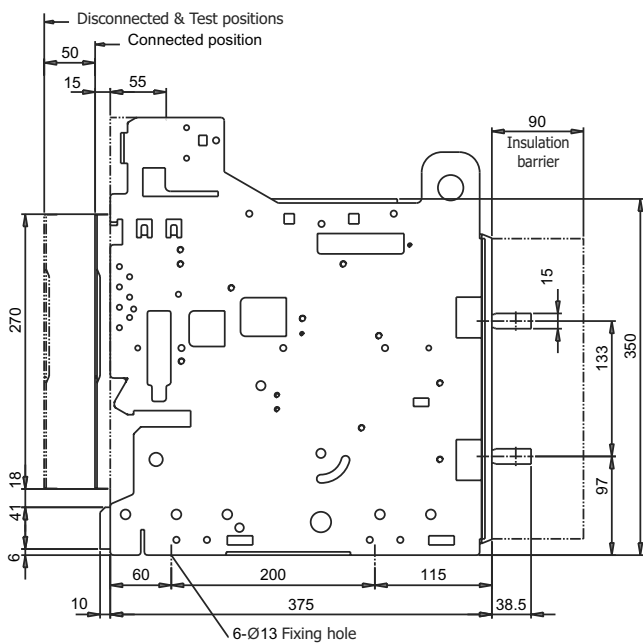
ABW16
Front view



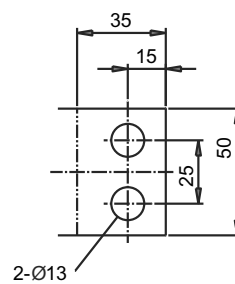
ABW16
Bottom view



ABW16
Side view



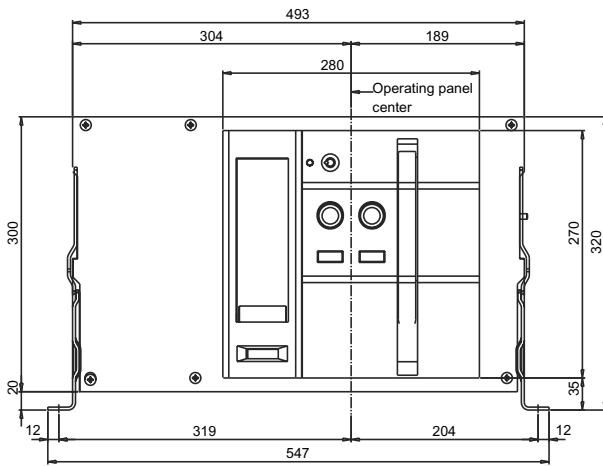
ABW16
Horizontal terminals



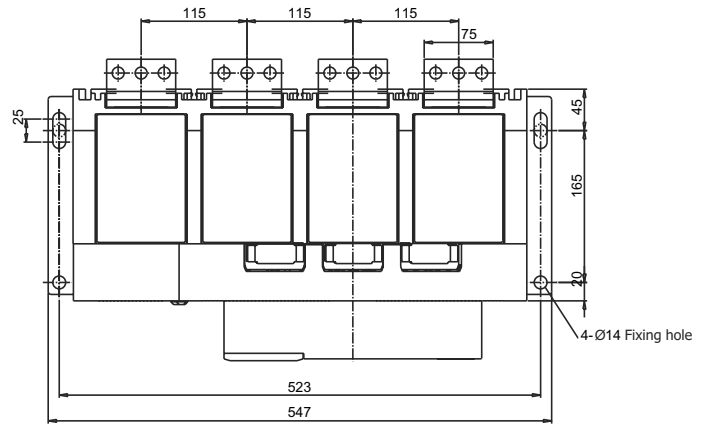
Dimensions (mm)

ABW20...32 - 4P Fixed Version

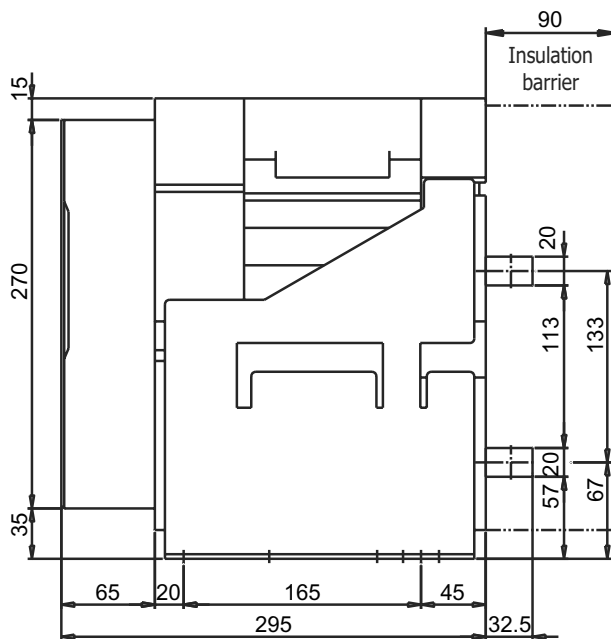
ABW20...32
Front view



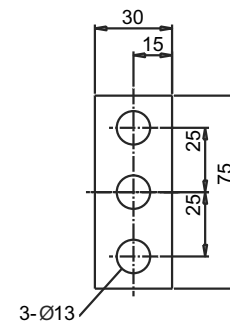
ABW20...32
Top view



ABW20...32
Side view



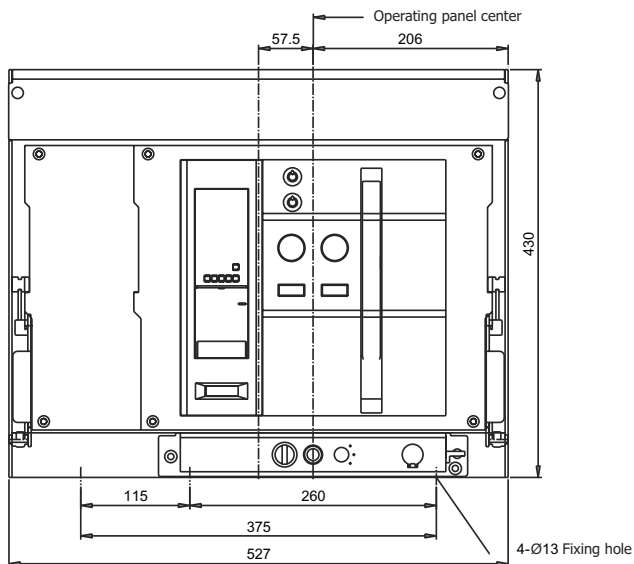
ABW20...32
Horizontal terminals



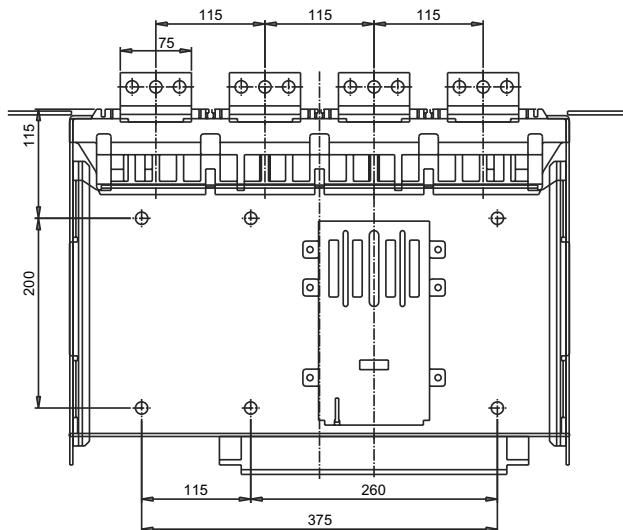
Dimensions (mm)

ABW20...32 - 4P Withdrawable Version

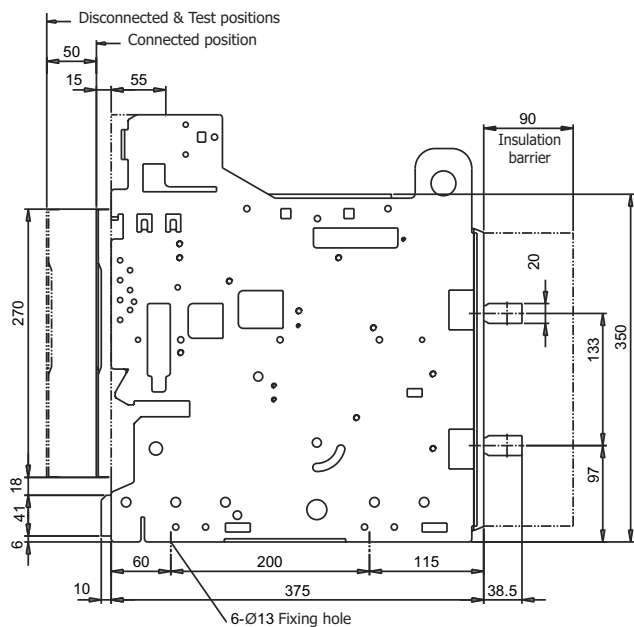
ABW20...32
Front view



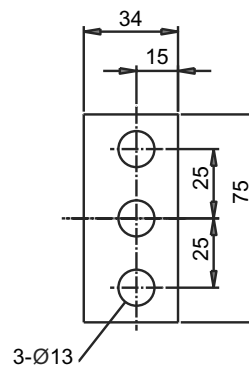
ABW20...32
Bottom view



ABW20...32
Side view



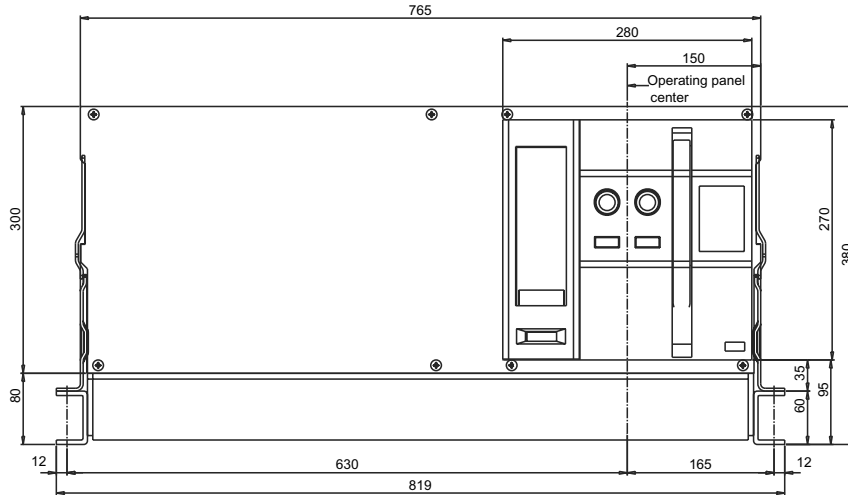
ABW20...32
Horizontal terminals



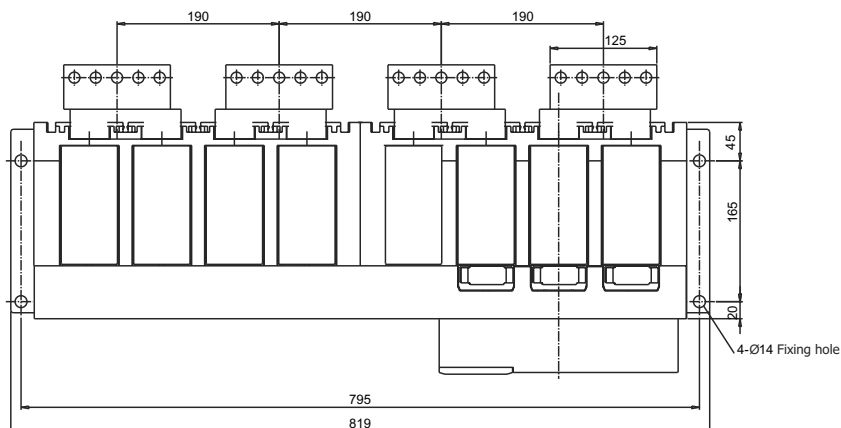
Dimensions (mm)

ABW40...50 - 4P Fixed Version

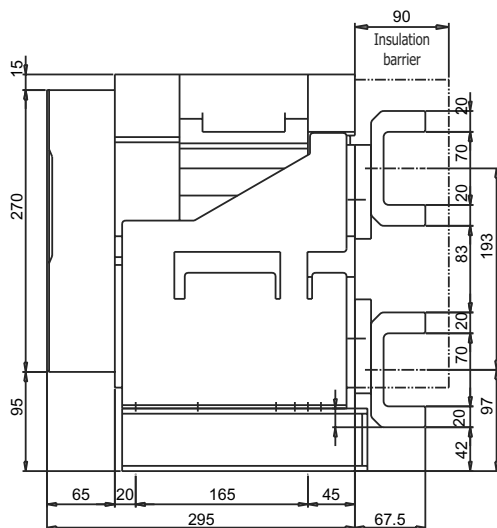
ABW40...50
Front view



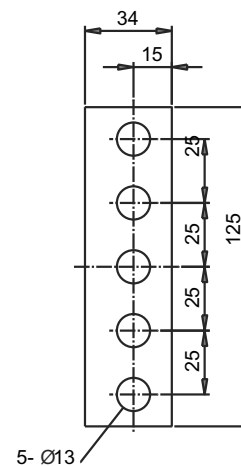
ABW40...50
Top view



ABW40...50
Side view



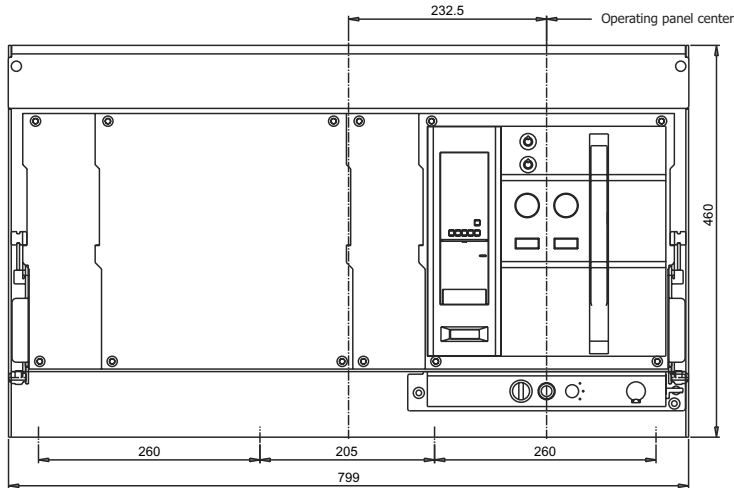
ABW40...50
Horizontal terminals



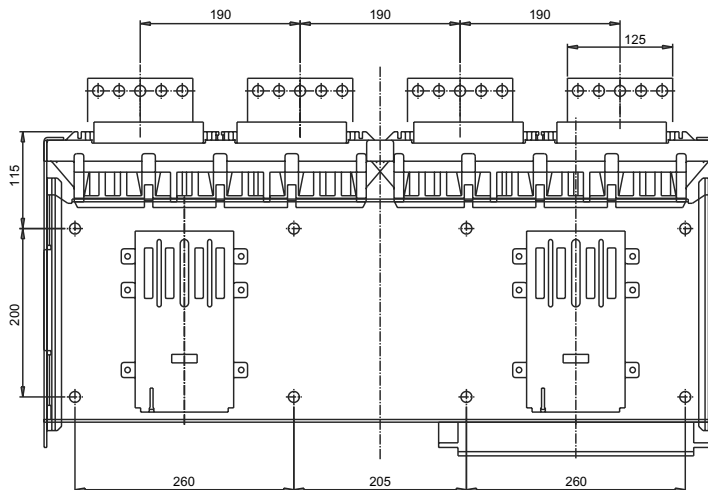
Dimensions (mm)

ABW40...50 - 4P Withdrawable Version

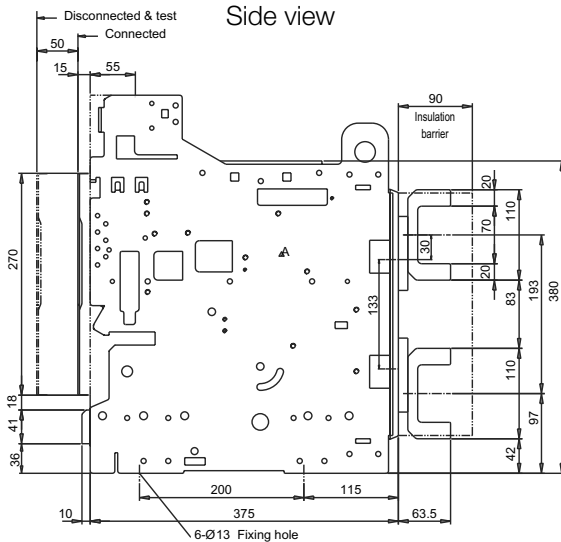
ABW40...50
Front view



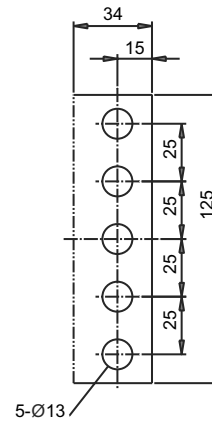
ABW40...50
Bottom view



ABW40...50
Side view



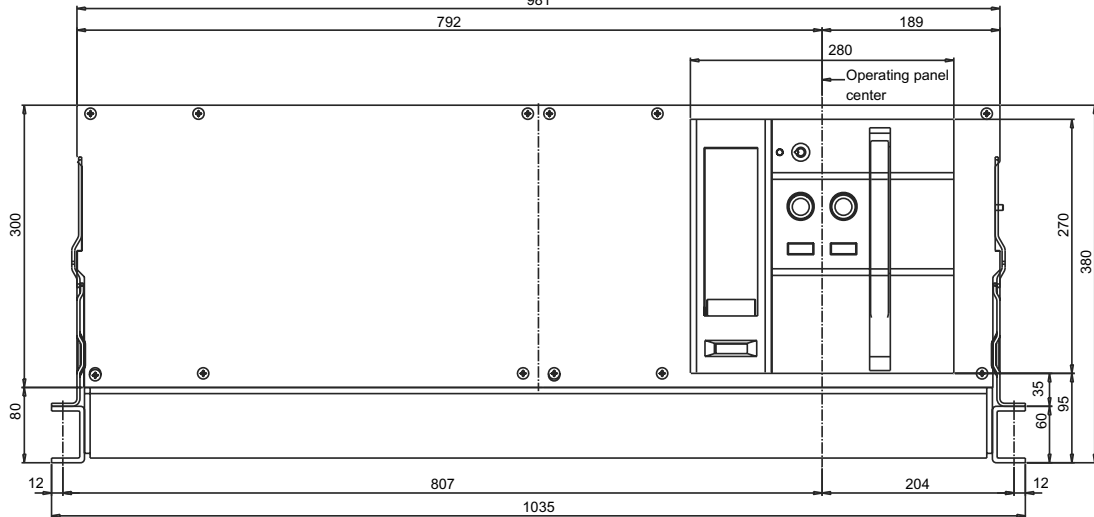
ABW40...50
Horizontal terminals



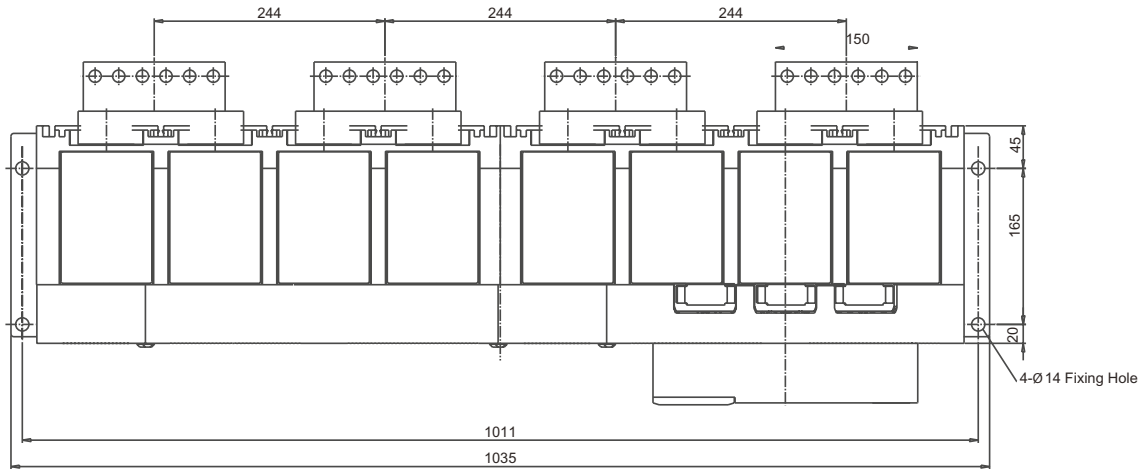
Dimensions (mm)

ABW63 - 4P Fixed Version

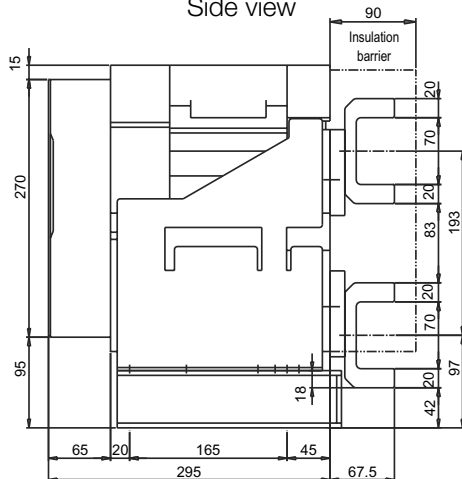
ABW63
Front view



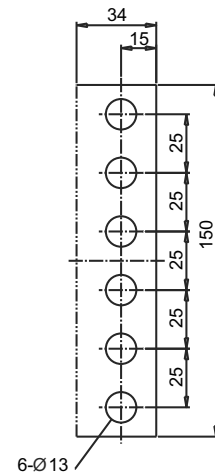
ABW63
Top view



ABW63
Side view



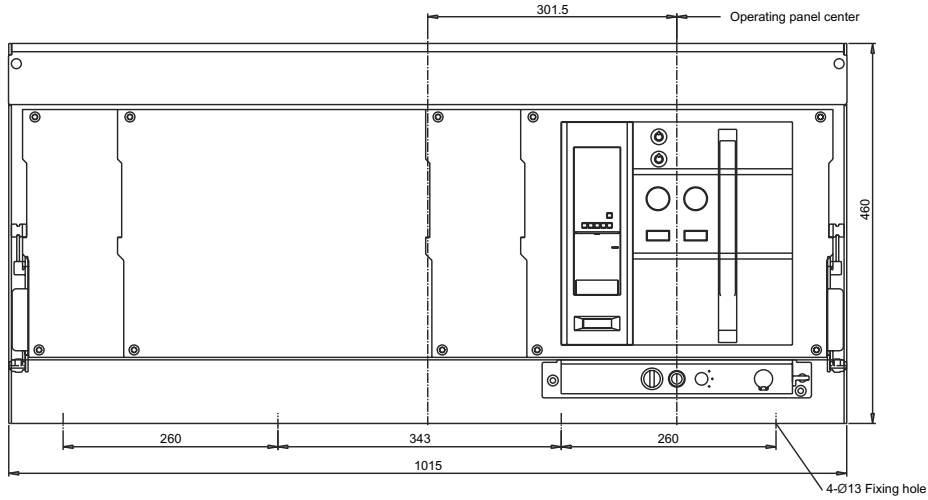
ABW63
Horizontal terminals



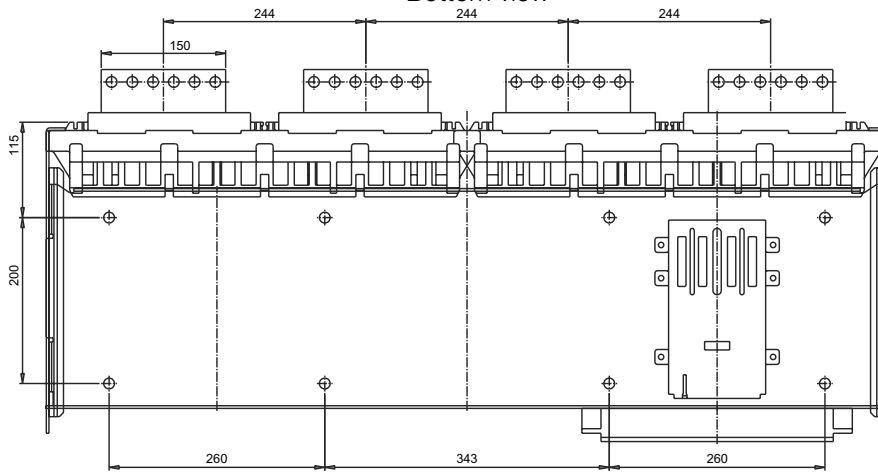
Dimensions (mm)

ABW63 - 4P Withdrawable Version

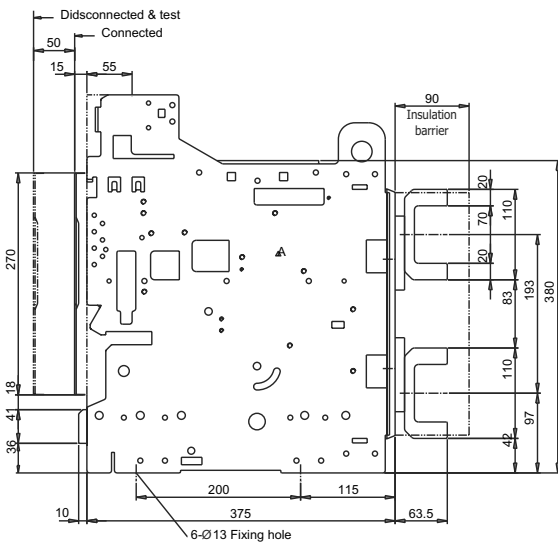
ABW63
Front view



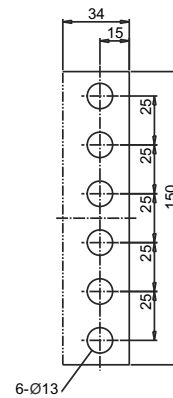
ABW63
Bottom view



ABW63
Side view



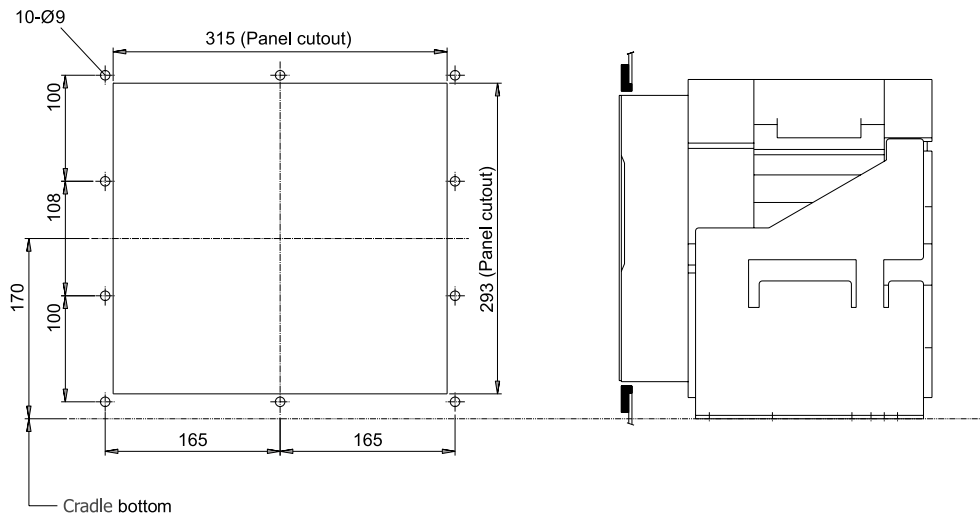
ABW63
Horizontal terminals



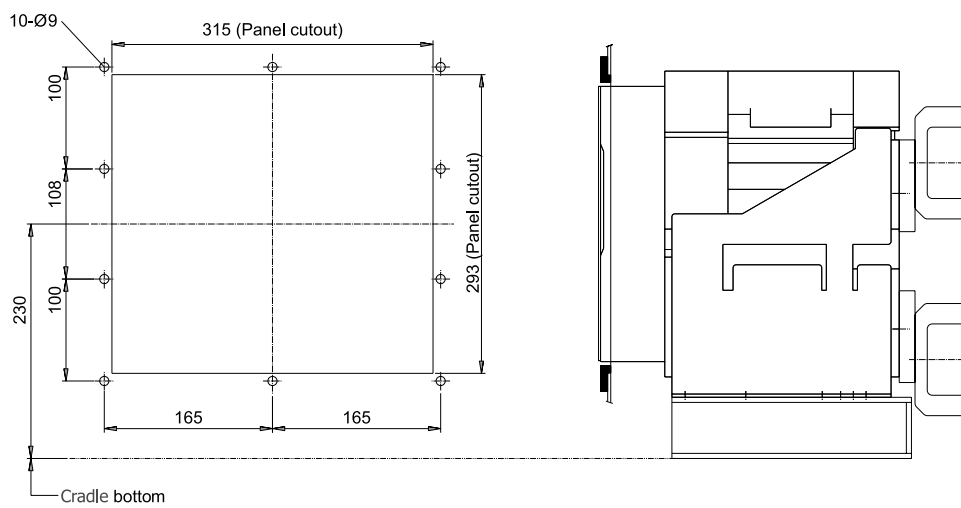
Dimensions (mm)

Panel Cutout - Fixed Version

ABW16~32

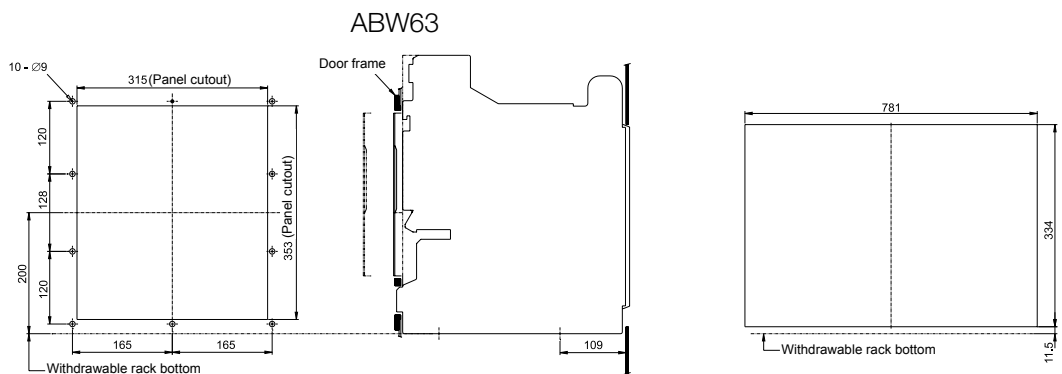
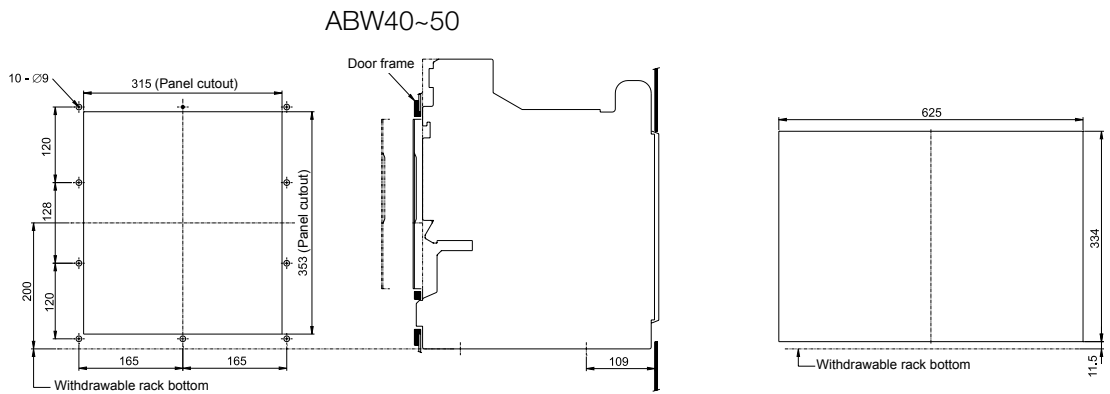
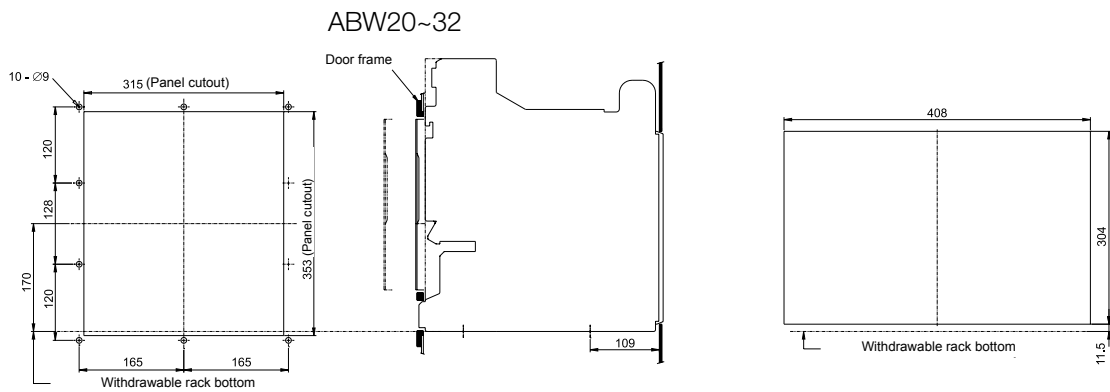
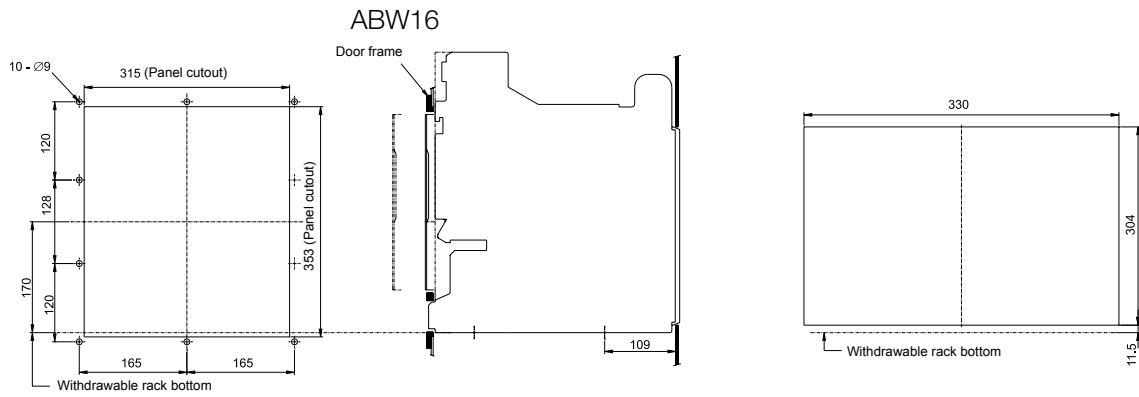


ABW40~63



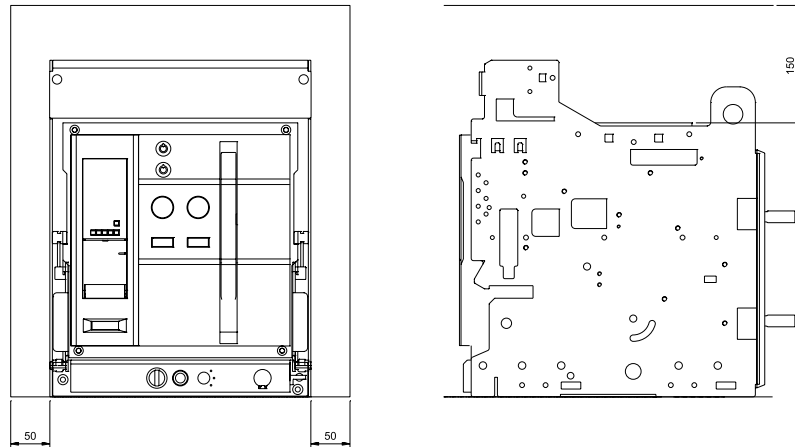
Dimensions (mm)

Panel Cutout - Withdrawable Version

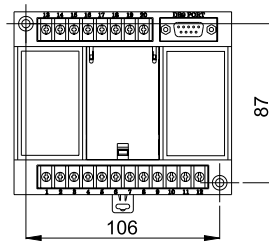


Dimensions (mm)

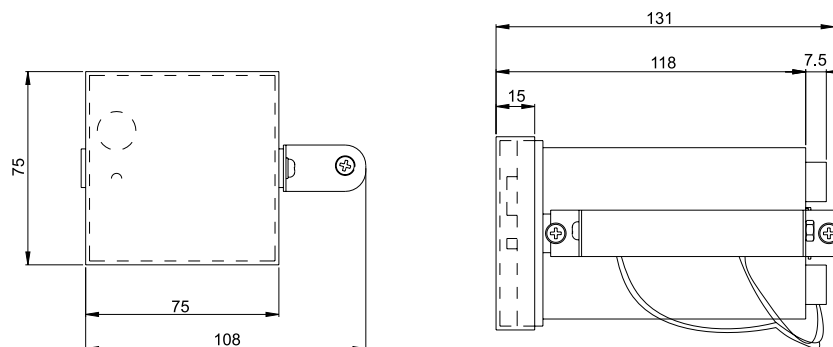
Minimum Distances



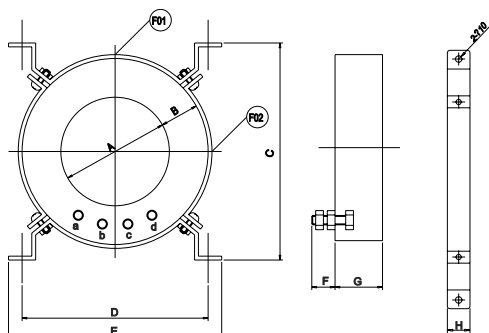
Undervoltage Time Delay Module ABW-UDC Communication Modules ABW-CM or ABW-CP



Condenser Trip Device ABW-CTD



Current transformer - ABW-ZCT



Dimensions (mm)	A	B	C	D	E	F	G	H
ABW-ZCT-120	120	45	225	180	210	20	55	35
ABW-ZCT-200	200	53	310	260	286	20	70	35

Connections	
ABW-ZCT	Circuit Breaker ABW
Terminal "b"	Terminal "E1"
Terminal "c"	Terminal "E2"

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