Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Air Circuit Breaker

- Draw out and fixed units
- 90-degree adjustable rear connection tags
- Button locks
- Standard Auxiliary 3 N/O and 3 N/C contact blocks
- Realization of protective coordination by ZSI

A□ □□□□ -□□

ACB Type
AS
AN

Frame Size	
16	1600AF
20	2000AF
25	2500AF
32	3200AF
40	4000AF
50	5000AF

Phase Array/Poles	
D3	Standard Type 3P
E3	Standard Type 3P
F3	Standard Type 3P

Rated Current	
16	1600A
20	2000A
25	2500A
32	3200A
40	4000A
50	5000A

Configuration

Fixed Type ACB

Air Circuit Breaker

1. Trip relay
2. Counter
3. ON button
4. OFF button
5. Series name
6. Charge handle
7. Rated name plate
8. Charge/Discharge indicator
9. ON/OFF indicator
10. Corporation logo
11. Arc cover
12. Terminal cover
13. Cradle
14. Draw-out handle
15. Position indicator
16. Handle storage space
17. Pad lock button
18. Arc chute
19. Control cover
20. Fixed type bracket

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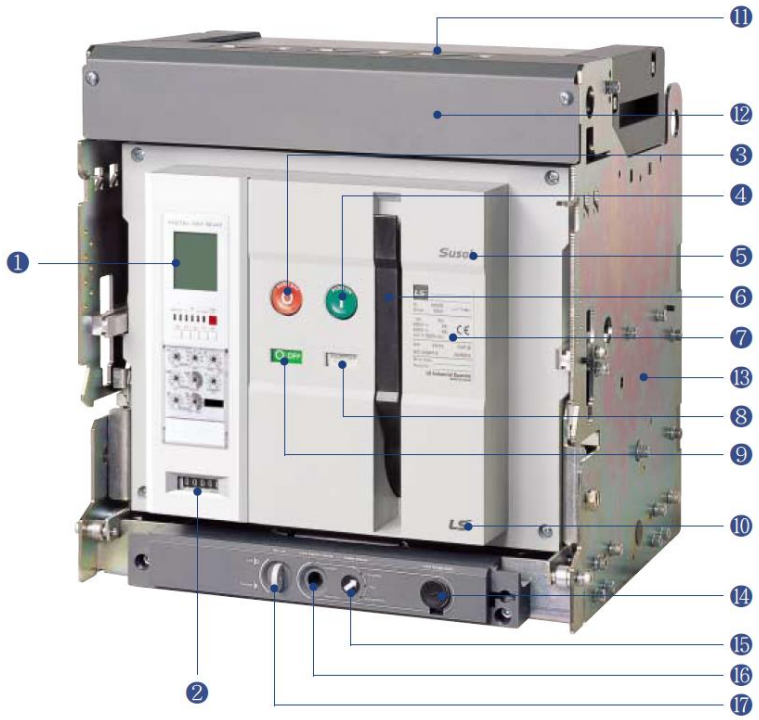
Air Circuit Breaker 1600-5000 70-85kA

Draw-out Type ACB



Air Circuit Breaker

1. Trip relay
2. Counter
3. ON button
4. OFF button
5. Series name
6. Charge handle
7. Rated name plate
8. Charge/Discharge indicator
9. ON/OFF indicator
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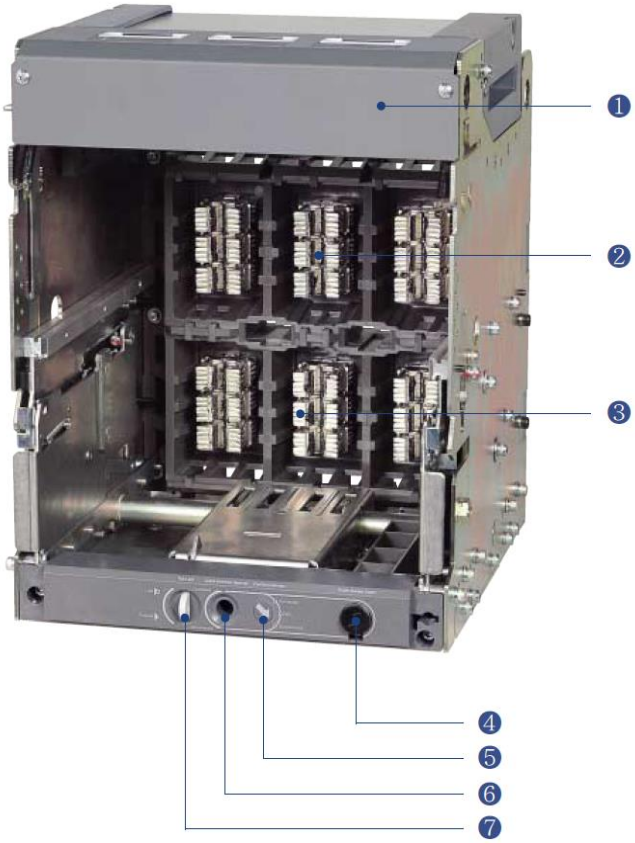
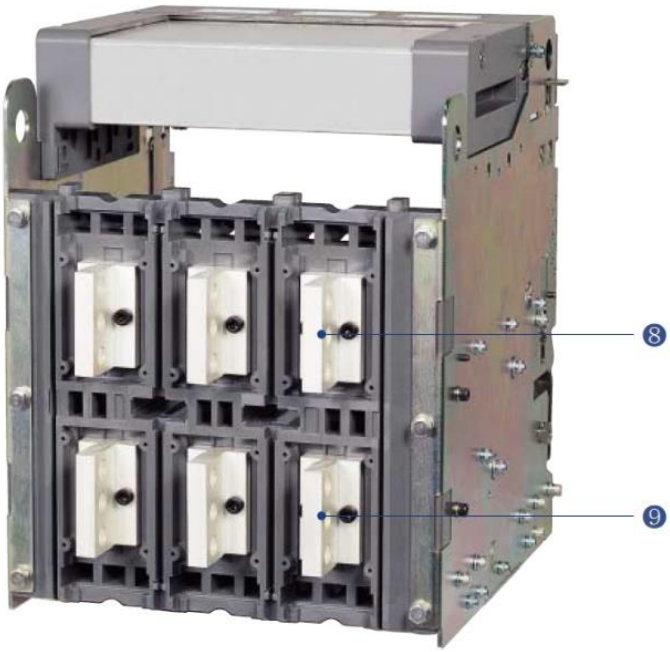
19. Control cover
20. Fixed type bracket





1. Terminal cover of control circuit
2. Cradle finger (Line side)
3. Cradle finger (Load side)
4. Draw-out handle
5. Position indicator
6. Handle storage space
7. Pad lock button
8. Connecting conductor (Line side)
9. Connecting conductor (Load side)

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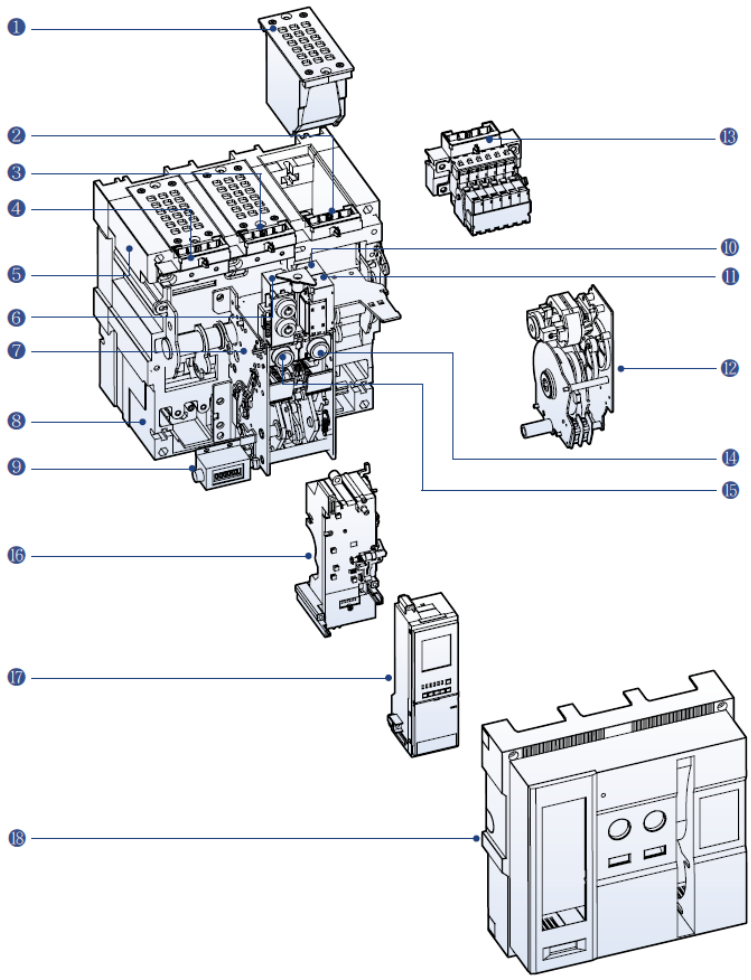
Air Circuit Breaker 1600-5000 70-85kA

Internal Configuration



1. Arc chute
2. Aux. switch control terminal
3. Control power supply terminal
4. Trip relay control terminal
5. Carrying grip
6. Trip coil or UVT coil
7. Mechanism
8. Main body
9. Counter
10. Trip coil
11. Closing coil
12. Motor Ass'y
13. Aux. switch
14. ON button
15. OFF button
16. MTD base
17. Trip relay
18. Front cover

Catalogue number: **AN□□□□□□**
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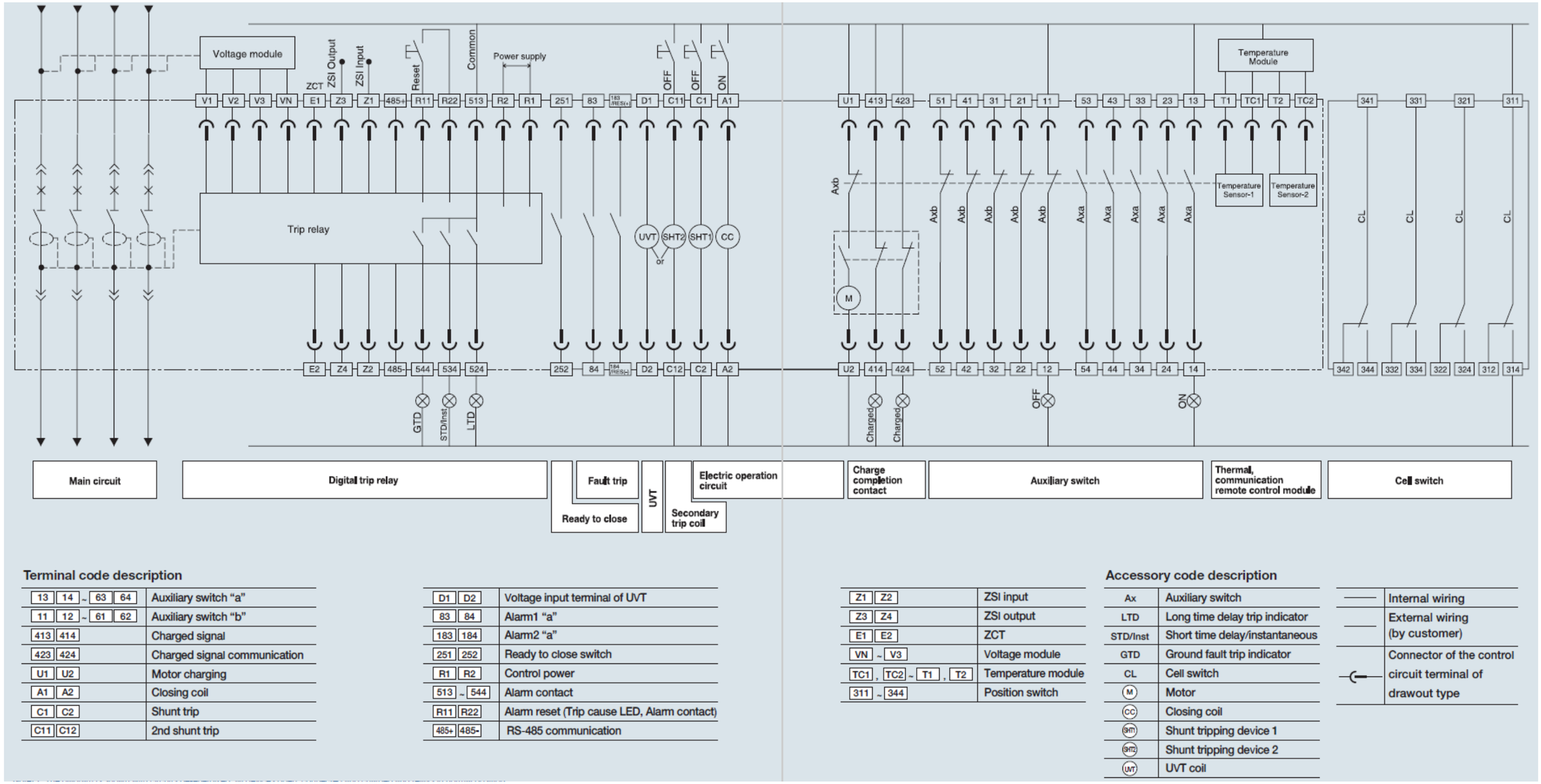
Air Circuit Breaker 1600-5000 70-85kA

ACB Type				AN16D3	AS20D3	AS25E3	AS32E3	AS40E3	AS50F3
Ampere frame				1600	2000	2500	3200	4000	5000
Rated current (A)		(In max)	at 40℃	1600	2000	2500	3200	4000	5000
Setting current (A)		Control trip relay	(... × In max)	(0.4 ~ 1.0) × In max					
Rated current of neutral pole (A)				1600	2000	2500	3200	4000	5000
Rated insulation voltage (V)	(Ui)			1000					
Rated operational voltage (V)	(Ue)			690					
Rated impulse withstand voltage (kV)	(Uimp)			12					
Frequency (Hz)				50/60					
Number of poles (P)				3/4					
Rated breaking capacity (kA sym)			220V/230V/380V/415V	65	70	85			100
AC 50/60Hz	(Icu)	IEC 60947-2	460V/480V/500V	65	70	85			100
		KS C 4620	550V/600V/690V	50	65	85			85
Rated service breaking capacity (kA)	(Ics)		... %×Icu	100%	100%	100%			100%
Rated making capacity (kA peak)		IEC 60947-2	220V/230V/380V/415V	143	154	187			220
	(Icm)	KS C 4620	AC 50/60Hz 460V/480V/500V	143	154	187			220
			550V/600V/690V	105	143	187			187
Rated short-time withstand current (kA)	(Icw)		1 sec	50	65	85			85
			2 sec	42	55	75			75
			3 sec	36	55	65			65
Operating time (ms)			Maximum total breaking time	40		40			40
			Maximum closing time	80		80			80
Life cycle (time)		Mechanical		20000		15000			10000
		Electrical		5000		5000			2000
Weight (kg) (3P/4P)	Draw-out type	Main body (With cradle)	Motor charging type	63/74	70/85	87/103		104/147	107/139
			Manual charging type	61/72	68/83	85/101		102/145	102/145
		Cradle only		29/32	33/40	44/50		58/70	65/85
	Fixed type		Motor charging type	24/44	38/47	44/55		63/100	61/81
			Manual charging type	32/42	36/45	42/53		61/98	60/80
Trip relay				N, A, P Type					
Certificate & Approval				KS / KEMA / KERI / GOST					
Marine clasiflcation				LR, ABS, DNV, KR, BV, GL, RINA, NK					

Electrical Single Line Diagram



Terminal code description

13 14 ~ 63 64	Auxiliary switch “a”
11 12 ~ 61 62	Auxiliary switch “b”
413 414	Charged signal
423 424	Charged signal communication
U1 U2	Motor charging
A1 A2	Closing coil
C1 C2	Shunt trip
C11 C12	2nd shunt trip

D1 D2	Voltage input terminal of UVT
83 84	Alarm1 “a”
183 184	Alarm2 “a”
251 252	Ready to close switch
R1 R2	Control power
513 ~ 544	Alarm contact
R11 R22	Alarm reset (Trip cause LED, Alarm contact)
485+ 485-	RS-485 communication

Z1 Z2	ZSI input
Z3 Z4	ZSI output
E1 E2	ZCT
VN ~ V3	Voltage module
TC1 , TC2 ~ T1 , T2	Temperature module
311 ~ 344	Position switch

Accessory code description

Ax	Auxiliary switch
LTD	Long time delay trip indicator
STD/Inst	Short time delay/instantaneous
GTD	Ground fault trip indicator
CL	Cell switch
M	Motor
CC	Closing coil
SHT1	Shunt tripping device 1
SHT2	Shunt tripping device 2
UVT	UVT coil

———	Internal wiring
———	External wiring (by customer)
—⊂—	Connector of the control circuit terminal of drawout type

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Optional Configuration

Sunt Coil
D0 Without Shunt coil
D1 AC/DC 100V~130V
D2 AC/DC 200V~250V
D3 DC 125V
D4 DC 24V~30V
D5 DC 48V~60V
D6 AC 380V~480V
D7 AC 48V

Closing coil
D0 Without Closing coil
D1 AC/DC 100V~130V
D2 AC/DC 200V~250V
D3 DC 125V
D4 DC 24V~30V
D5 DC 48V~60V
D6 AC 380V~480V
D7 AC 48V

UVT Coil
U0 Without UVT coil
U1 AC/DC 100V~130V
U2 AC/DC 200V~250V
U3 DC 125V
U4 DC 24V~30V
U5 DC 48V~60V
U6 AC 380V~480V
U7 AC 48V

Aux. contact & charging types
AX Standard OFF-Charge 3a3b
AC Standard ON-Charge 3a3b
BX Standard OFF-Charge 5a5b
BC Standard ON-Charge 5a5b
HX High capacity OFF-Charge 5a5b
HC High capacity ON-Charge 5a5b
CC Standard ON-Charge 6a6b
JC High capacity ON-Charge 6a6b
GX High capacity OFF-Charge 3a3b
GC High capacity ON-Charge 3a3b
TX TCS OFF-Charge 4a4b
TC TCS ON-Charge 5a5b

AL Option	AL Option
AL AL1+MRB	B B On/Off Button lock
A1 AL1+MRB+RES (AC110~130V)	M MI Mechanical interlock
A2 AL1+AL2+MRB	D Door Interlock or MOC
A3 AL1+MRB+RES (DC110~125V)	K K1 Keylock
A4 AL1+MRB+RES (AC200~250V)	K2 K2 Key Interlock set
A5 AL1+MRB+Auto reset	K3 K3 Key lock double
A6 AL1+AL2+MRB+Auto reset	R RCS Ready to close switch
A7 AL1+MRB+RES (DC110~125V)+Auto reset	T TM Temperature monitoring
A8 AL1+MRB+RES (AC200~250V)+Auto reset	H1 AC/DC 100~130V
A9 AL1+MRB+RES (AC110~130V)+Auto reset	H2 AC/DC 200~250V
Y2 AL1+AL2+MRB (2b contact)	H3 DC 125V
Y6 AL1+AL2+MRB+Auto reset (2b contact)	H4 DC 24~30V
Z2 AL1+AL2+MRB (1a1b contact)	H5 DC 48~60V
Z6 AL1+AL2+MRB+Auto reset (1a1b contact)	H6 AC 380~480V
C C Counter	H7 AC 48V
S CS2 Charge switch communication	

** The standard ACB in the catalog comes with D0, D0, U0, AX, and B options.

* AL- Trip Alarm
MRB- Manual Reset Button
RES- Remote reset switch
MOC- Mechanically Operated cell Switch

** Only 1 alarm trips options can be installed.
Only 1 key lock options can be installed.
Only 1 double shunt to be installed, and it cannot be used simultaneously with UVT.
MI cannot be used simultaneously with DI or MOC.
RCS and CS2 cannot be used simultaneously.

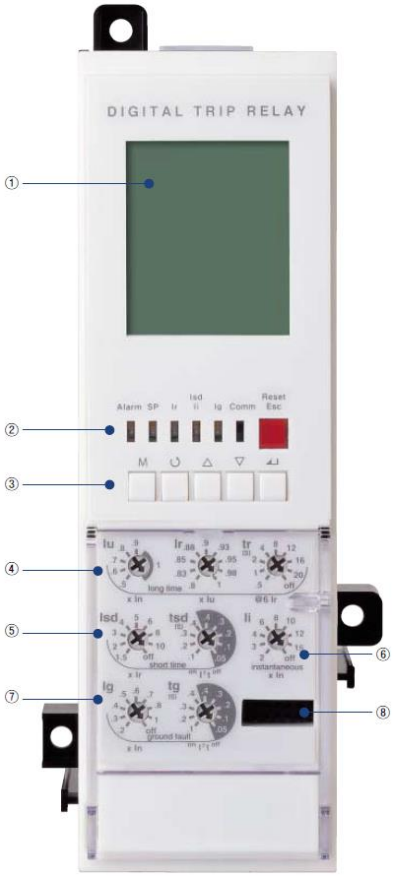
Trip Unit Configuration

AG5

- Protection: Long time, Short time, Instantaneous, ground fault and thermal.
- Measurement of current on each phase.
- Fault alarm for long time, short time, Instantaneous and ground faults.
- Communication: Modbus/RS-485
  Profibus- DP
- Power supply: self-power, work over 20% of the load current. (External power source required for comms).
  -AC/DC 100~250V
  -DC 24~60V
- 10 fault recording stored
- Operating buttons: Reset, Menu

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA



1 LCD: indication of measurement and information

2 LED: indication of trip information and overload state

3 Key: Move to menu or reset

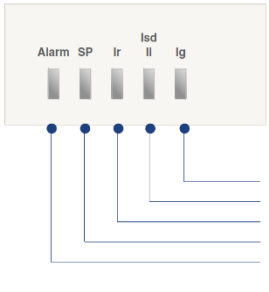
4 Iu, Ir: Long-time current setting, tr: Long-time tripping delay setting

5 Isd: Short-time current setting, tsd: Short-time tripping delay setting

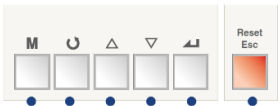
6 Ii: Instantaneous current setting

7 Ig: Ground fault current setting, tg: Ground fault tripping delay setting

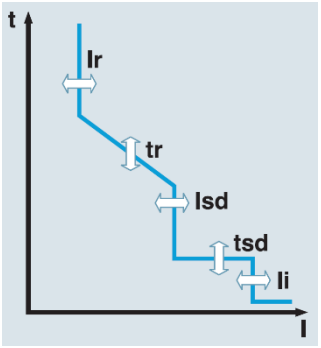
8 Test terminal: OCR test terminal (Connected with OCR tester)



Ig: LED indicating ground-fault
Isd/Ii: LED indicating short-time or instantaneous tripping
Ir: LED indicating long-time delay
SP: Self-protection and battery test LED
Alarm: LED indicating an overload
(Turn on above 90%, Blink above 105%)



Reset/ESC: Fault reset or ESC from menu
Enter: Enter into secondary menu or setting input
Up/Down: Move the cursor up/down on screen or increase/decrease a setting value
Right/Left: Move the cursor or setting right/left on screen (Rotation)
Menu: Menu display ↔ Measurement display

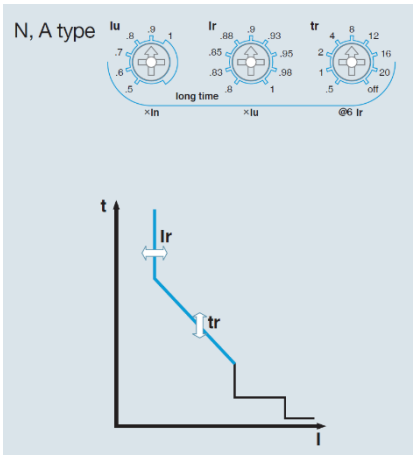


Trip Unit: A type										
Long time										
Current setting (A)	Iu = In×		0.5	0.6	0.7	0.8	0.9	1		
	Ir = Iu×		0.8	0.83	0.85	0.88	0.9	0.93	0.95	0.98	1
Time delay (s)	tr@(1.5×Ir)		12.5	25	50	100	200	300	400	500	Off
Accuracy: ±15% or below	tr@(6.0×Ir)		0.5	1	2	4	8	12	16	20	Off
100ms	tr@(7.2×Ir)		0.34	0.69	1.38	2.7	5.5	8.3	11	13.8	Off
Short Time										
Current setting (A)	Isd = Ir×		1.5	2	3	4	5	6	8	10	Off
Accuracy: ±10%											
Time delay (s)	tsd	I²t Off	0.05	0.1	0.2	0.3	0.4				
		I²t On @(10×Ir)		0.1	0.2	0.3	0.4				
	I²t Off	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Instantaneous										
Current setting (A)	Ii = In×		2	3	4	6	8	10	12	15	Off
Tripping time			Below 50ms								
Ground fault										
Pick-up (A)	Ig = In×		0.2	0.3	0.4	0.5	0.6	0.7	0.8	1	Off
Time delay (s)	tg	I²t Off	0.05	0.1	0.2	0.3	0.4				
Accuracy: ±10%(Ig>0.4In)		I²t On @(1×In)		0.1	0.2	0.3	0.4				
±20%(Ig>0.4In) or below 50ms	(I²t Off)	Min. Trip Time (ms)	20	80	160	260	360				
		Max. Trip Time (ms)	80	140	240	340	440				
Earth leakage (Option)										
Current setting (A)	IΔn		0.5	1	2	3	5	10	20	30	Off
Time delay (ms)	Δt	Alarm Time(ms)	140	230	350	800	950				
Accuracy: ±15%		Alarm Time(ms)	140	230	350	800					

Catalogue number: **AN□□□□□□**
AS□□□□□□

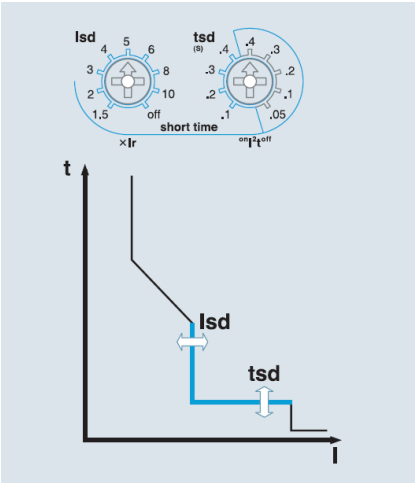
Air Circuit Breaker 1600-5000 70-85kA

Long-time delay (L)- Iu, Ir, tr



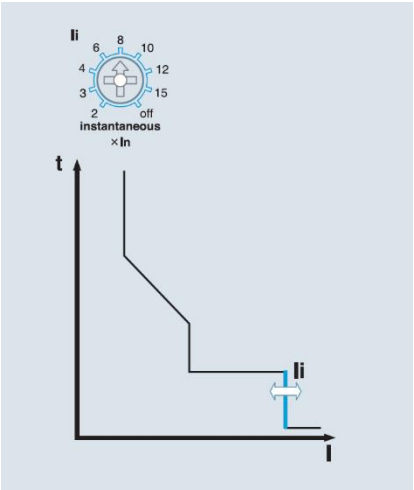
1. Standard current setting knob: Ir
   - Setting range in N type and A type: (0.4 ~1.0) × In
   - Iu: (0.5-0.6-0.7-0.8-0.9-1.0) × In
   - Ir: (0.8-0.83-0.85-0.88-0.9-0.93-0.95-0.98-1.0) × Iu
2. Time delay setting knob: tr
   - Standard operating time is based on the time of 6 × Ir
   - Setting range: 0.5-1-2-4-8-12-16-20-Off sec
3. Relay pick-up current
   - When current over (1.15) × Ir flows in, relay is picked up.
4. Relay operates basing on the largest load current among the 3 phases.

Short-time delay (S)- Isd, tsd



1. Standard current setting knob: Isd
   - Setting range: (1.5-2-3-4-5-6-8-10-Off) × Ir
2. Time delay setting knob: tsd
   - Standard operating time is based on the time of 10 × Ir.
   - Inverse time (I2t On): 0.1-0.2-0.3-0.4 sec
   - Definite time (I2t Off): 0.05-0.1-0.2-0.3-0.4 sec
3. Relay operates basing on the largest load current among the 3 phases.
4. When ZSI function was set, the protection operation will take place instantaneously with input absence by downstream devices. It is advised to disable its ZSI function on the last downstream device.

Instantaneous (I)- Ii

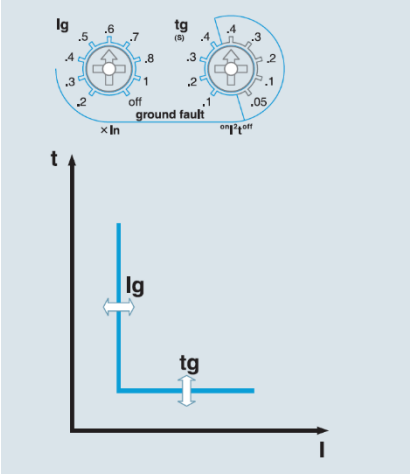


1. Standard current setting knob: Ii
   - Setting range: (2-3-4-6-8-10-12-15-Off) × In
2. Relay operates basing on the largest load current among the 3 phases.
3. Total breaking time is below 50ms.

Catalogue number: **AN□□□□□□**
AS□□□□□□

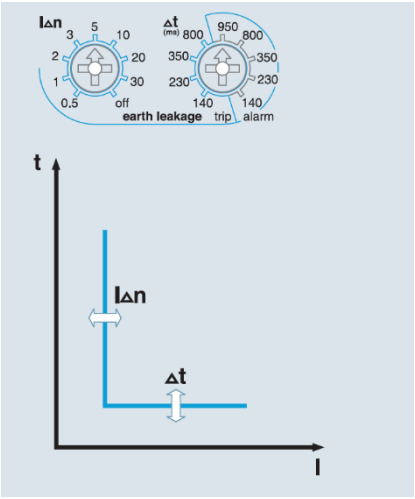
Air Circuit Breaker 1600-5000 70-85kA

Ground Fault (G)- Ig, tg



1. Standard setting current knob: Ig
   - Setting range: (0.2-0.3-0.4-0.5-0.6-0.7-0.8-1.0-Off) × In
2. Time delay setting knob: tg
   - Inverse time (I2t On): 0.1-0.2-0.3-0.4 sec
   - Definite time (I2t Off): 0.05-0.1-0.2-0.3-0.4 sec
3. Ground fault current is vector sum of each phase current. Therefore, 3 Pole products may operate under its phase-unbalance including in a ground fault situation.
4. When ZSI function is set, the protection operation will take place instantaneously with the input absence by downstream devices. It is advised to disable its ZSI function on the last downstream device.
5. Ground-fault functions are basically provided with products equipped with a trip relay through its internal CT that is embedded in each phase. (But, it can't be used with earth leakage protection function at the same time)

Earth Leakage, Optional (G)- IΔn, Δt



1. Standard setting current knob: IΔn
   - Setting range: 0.5-1-2-3-5-10-20-30-Off (A)
2. Time delay setting knob: Δt
   - Trip time: 140-230-350-800 ms
   - Alarm time: 140-230-350-800-950 ms
3. Settings within its alarm range will prevent its breaker from tripping but activating its alarm.
4. This function is enabled and can be used only with standard ZCT provided by LS or private external CT (secondary output 5A) selected by customers.
5. When ZSI function was set, the protection operation will take place instantaneously with input absence by downstream devices. It is advised to disable its ZSI function on the last downstream device.

Other protections		Pick-up			Time delay(s)		
		Setting range	Step	Accuracy	Setting range	Step	Accuracy
Under voltage		80V ~ 0V_Pick-up	1V	±5%	1.2~40sec	0.1sec	±0.1sec
Over voltage		UV_Pick-up ~ 980V	1V	±5%			
Voltage unbalance		6% ~ 99%	0.01	±2.5% or (±10%)			
Reverse power		10~500 kW	1kW	±10%	0.2~40sec		
Over power		500~5000 kW	1kW	±10%			
Current unbalance		6% ~ 99%	0.01	±2.5% or (±10%)	1.2~40sec		
Over	60Hz	UF_Pick-up ~ 65	1Hz	±0.1Hz			
frequency	50Hz	UF_Pick-up ~ 55	1Hz	±0.1Hz			
Under	60Hz	55Hz ~ OF_Pick-up	1Hz	±0.1Hz			
frequency	50Hz	45Hz ~ OF_Pick-up	1Hz	±0.1Hz			

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Remote reset and digital I/O (A, P, S types)

In case of that MCCB operates due to accidents or over current,
Trip relay indicates the information of the accident through the LED and LCD.
Trip relay A, P and S type is possible to perform the remote reset by digital input,
and have 3 DO(Digital output).

1. Methods to reset Trip relay is to push the Reset button on the frontal side and to use the remote reset.

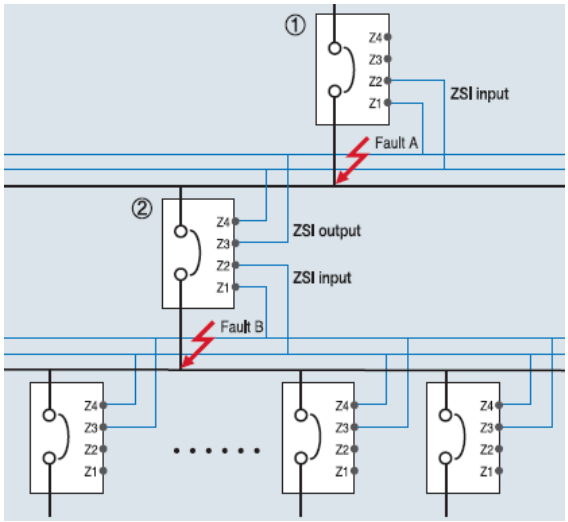
2. Digital input
   - [R11-R22] input: Remote reset
   - [Z1-Z2] Input: ZSI input
   - [E1-E2] Input: ZCT for earth leakage detection or external CT input

* All DI are dry contact that has 3.3V of recognition voltage. When inputting close by SSR(Solid State Relay) or open-collector, connect collector(Drain) to R11.

3. Digital output 3a(524, 534, 544-513)
   - Fault output: Long/Short time delay, Instantaneous, Ground fault, UVR, OVR, UFR, OFR, rPower, Vunbal, Iunbal
     (Maintains state as Latch form until user pushes reset.)
   - General DO: when setting L/R as remote, it is available to control close/open remotely by using communication.

ZSI- Zone Selective Interlocking (A, P, S type)

1. In case of that short time-delay or ground fault accident occurs at ZSI built in system, the breaker at accident site sends ZSI signal to halt upstream breaker's operation.
2. To eliminate a breakdown, trip relay of MCCB at accident site activates trip operation without time delay.
3. The upstream breaker that received ZSI signal adhere to pre-set short time-delay or ground fault time-delay for protective coordination in the system. However upstream breaker that did not receive its signal will trip instantaneously.
4. For ordinary ZSI operation, it should arrange operation time accordingly so that downstream circuit breakers will react before upstream ones under overcurrent/short time delay/ ground fault situations.
5. ZSI connecting line needs to be Max. 3m.

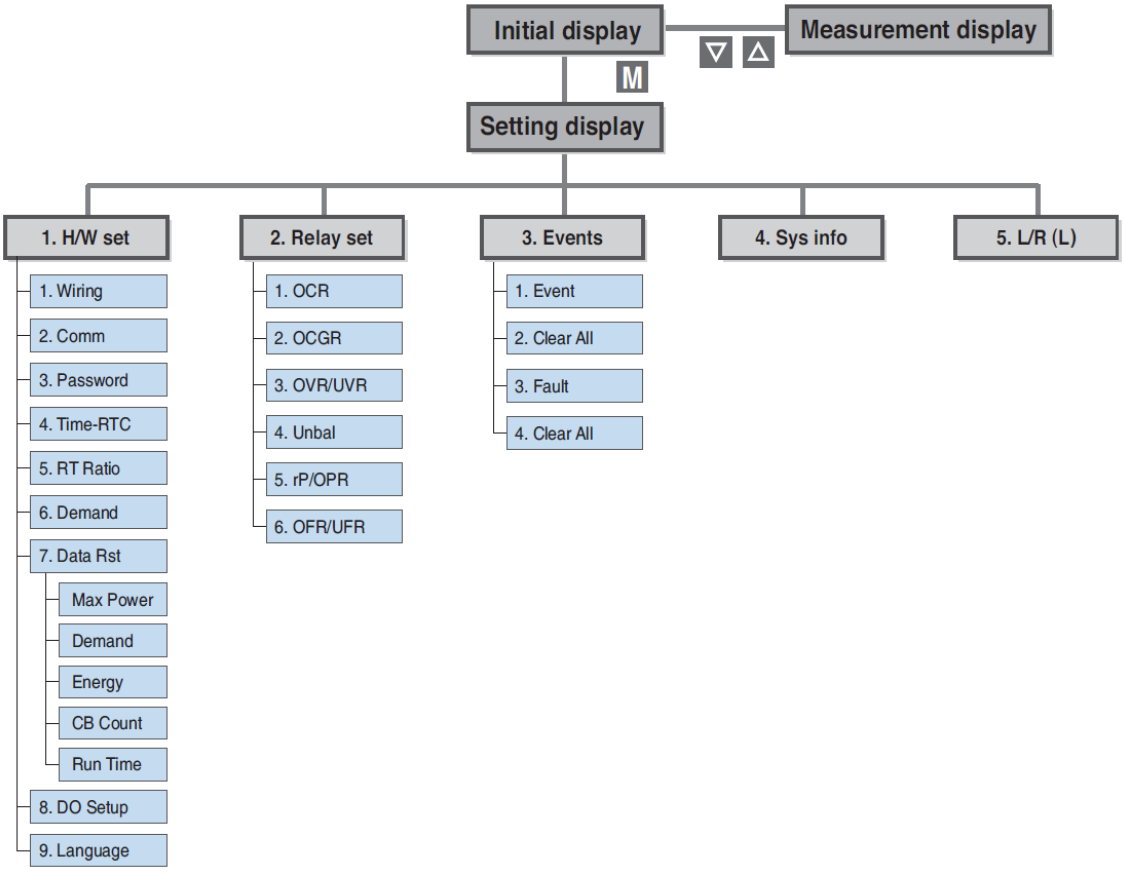


1) Occurrence of fault A
   - Only breaker "1" performs instantaneous trip operation.
2) Occurrence of fault B
   - Breaker '2' performs instantaneous trip operation,
   breaker '1' performs trip operation after prearranged delay time
   - But if breaker '2' did not break the fault normally,
   Breaker '1' performs instantaneous trip operation to protect system.

Catalogue number: **AN□□□□□□**
AS□□□□□□

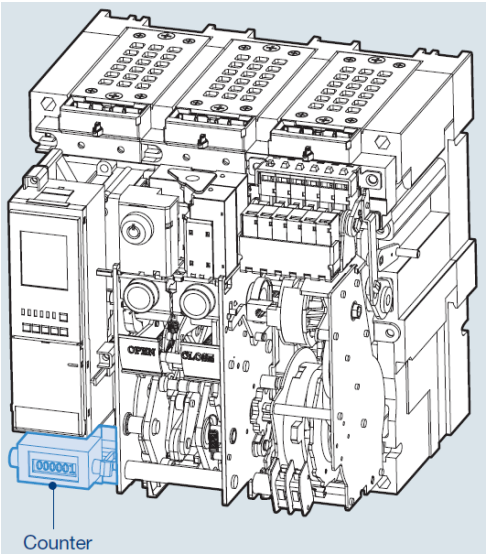
Air Circuit Breaker 1600-5000 70-85kA

Trip Relay Machine Interface



Accessories

Counter

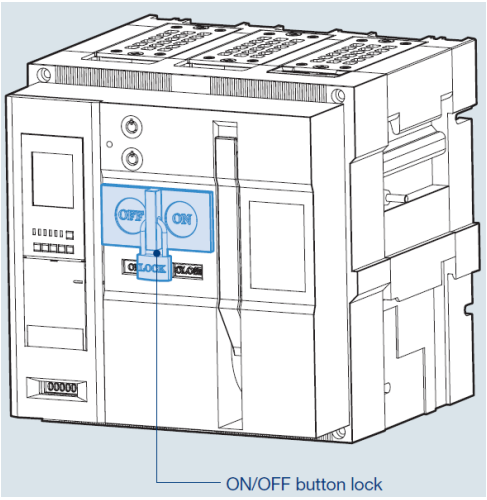


The Counter displays the total number of NO/OFF operations performed on the ACB

Catalogue number: **AN□□□□□□**
AS□□□□□□

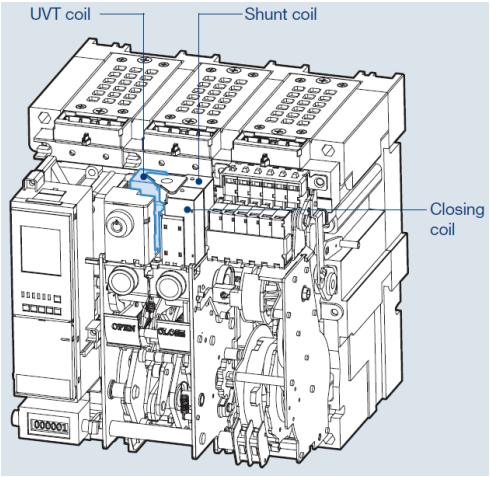
Air Circuit Breaker 1600-5000 70-85kA

ON/OFF Button Lock



It is to prevent manual operation of ACB's closing / tripping button due to user's accidental handling.
It is not possible to perform ON / OFF operation under the "Button lock" status.

Under Voltage Trip device (UVT)



If the voltage of the main or the control power is under voltage, UVT which is installed inside of the breaker breaks the circuit automatically.
Please connect with UVT time-delay device to present the time-delay function because UVT is technically an instantaneous type trip unit.

If control power not supplied to UVT, closing of a circuit breaker is impossible mechanically or electrically. To close the circuit breaker, 65~85% of rated voltage should be applied to both terminals of UVT coil.

When using UVT coil, a double trip coil cannot be used simultaneously.

Rated voltage and Characteristics of UVT coil						
Rated voltage		Operating voltage range (V)		Power consumption (VA or W)		Trip time (ms)
DC	AC	Pick up	Drop out	Inrush	Steady-state	
24-30	-	0.65-0.85 Vn	0.4-0.6 Vn	200	5	less than 50ms
48-60	48					
100-130	00-130					
200-250	200-250					
-	380-480					

Specifiction for the Maximum wire length to be used					
Wire type		#14 AWG (2.08mm2)	#16 AWG (1.31mm2)	#14 AWG (2.08mm2)	#16 AWG (1.31mm2)
Operating voltage	100%	48.5m	30.5m	233.2m	143.9m
	85%	13.4m	8.8m	62.5m	39.9m

Catalogue number: **AN□□□□□□**
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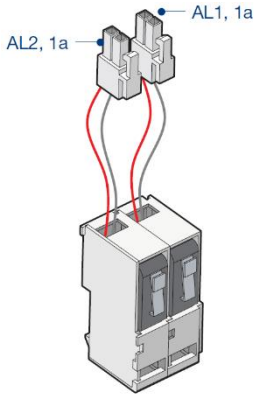
Air Circuit Breaker 1600-5000 70-85kA

Trip Alarm Contact (AL)



When a circuit breaker is tripped by OCR (Over current Relay) which operates against the fault current, the Trip Alarm switch provides the information regarding the trip of circuit breaker by sending an electrical signal from the mechanical indicator on front cover of main circuit breaker or internal auxiliary switch (Installed at the inside of circuit breaker).

When a circuit breaker tripped by fault current, a mechanical trip indicator (MRB, Manual Reset Button) pops out from the front cover and the switch (AL) outputs the fault location.

MRB and AL can be operated only when tripping by an OCR.

To re-close a circuit breaker after a trip, press MRB to reset it for closing.

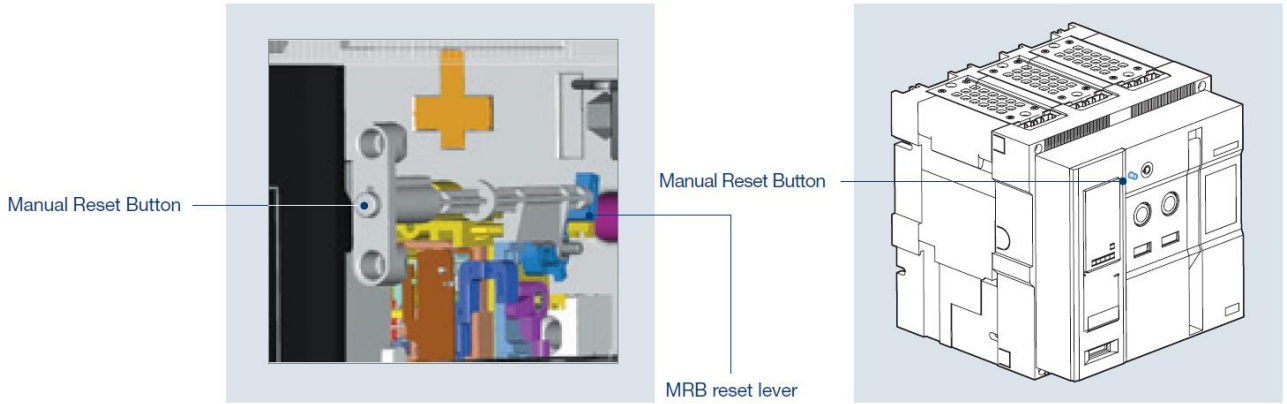
Trip alarm contact and MRB (Manual reset bottom) need to be purchased together.

Electrical characteristic of trip alarm contact					
Rated voltage (V)	Non-inductive load (A)		Inductive load (A)		Inrush current
	Resistive load	lamp load	Inductive load (A)	Motor load	
8 VDC	11	3	6	3	
30 VDC	10	3	6	3	
125 VDC	0.6	0.1	0.6	0.1	MAX. 24A
250 VDC	0.3	0.05	0.3	0.05	
250 VAC	11	1.5	6	2	

Manual Reset Button

It is a function which resets a circuit breaker manually when a circuit breaker is tripped by OCR.

MRB can be operated only by OCR .



Note) The manual reset button is protruded in the event of trip.

Catalogue number: **AN□□□□□□**
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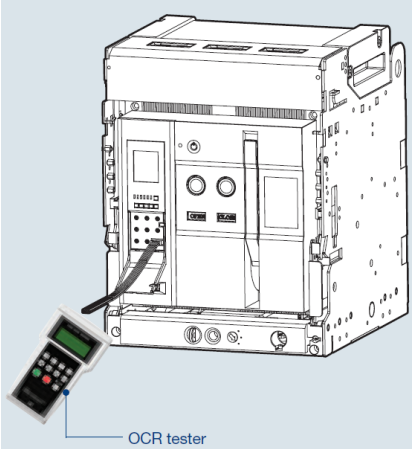
Air Circuit Breaker 1600-5000 70-85kA

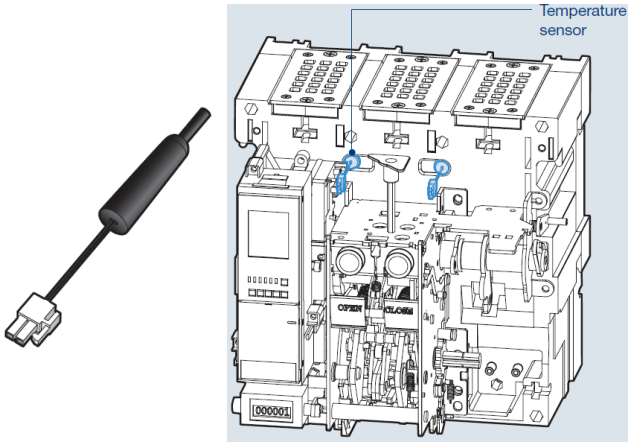
OCR Tester (OT)



It is a device which be used to test the operation of Trip Relay under no power.

- An of input of 17 times the rated current can be inputted as a maximum.
- Allows to manipulate currents on each phase.
- Frequency is adjustable.
- It is available to test for long time delay, short time delay, instantaneous & ground fault.

Temperature Remote I/O Unit (TRIO)



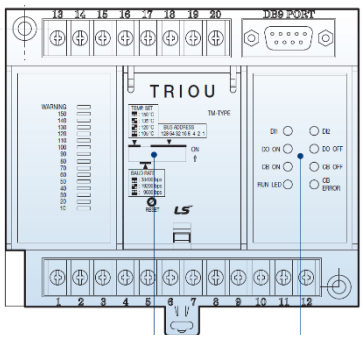
TRIO unit is a device to show the temperature through a sensor inside the ACB.

Two temperature sensors can be installed at a time and the output is connected to the control terminal blocks.

It displays the maximum temperature of them and transmits through a network.

If the temperature rises to an abnormal value, the unit automatically sounds an alarm.

TRIO unit is installed on the cradle or the inside of panel.



1 TRIO Unit

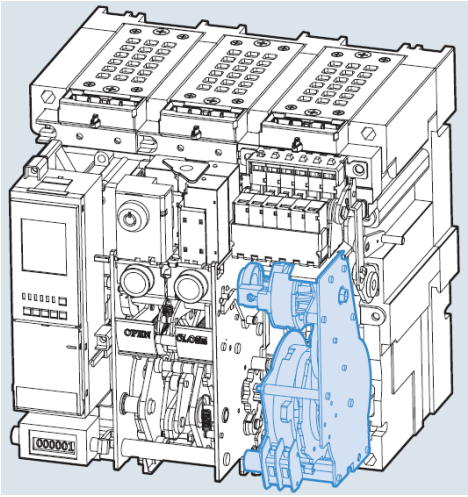
LED	Status
DI1	Indicates digital Input #1condition
DI2	Indicates digital Input #2condition
DO ON	Indicates temperature alarm output is ON
DO OFF	Indicates temperature alarm output is OFF
5 CB ON	Indicates circuit break close condition
CB OFF	Indicates circuit break open condition
RUN LED	Indicates unit run condition
CB ERROR	Indicates circuit break terminal Disconnection / control Err condition

	Classification	Applied range	Remarks
CB control	Contact switching capacity	AC230V 16A / DC30V 16A	
	Max. switching capacity	3680VA, 480W	
Alarm	Contact switching capacity	AC230V 6A / DC25V 6A	Induction load
	Max. switching capacity	1880VA, 150W	(cosØ=0.4, L / R=7ms)

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Motor



Charge the closing spring of a circuit breaker by the external power source. Without the external power source, the spring must be charge manually.

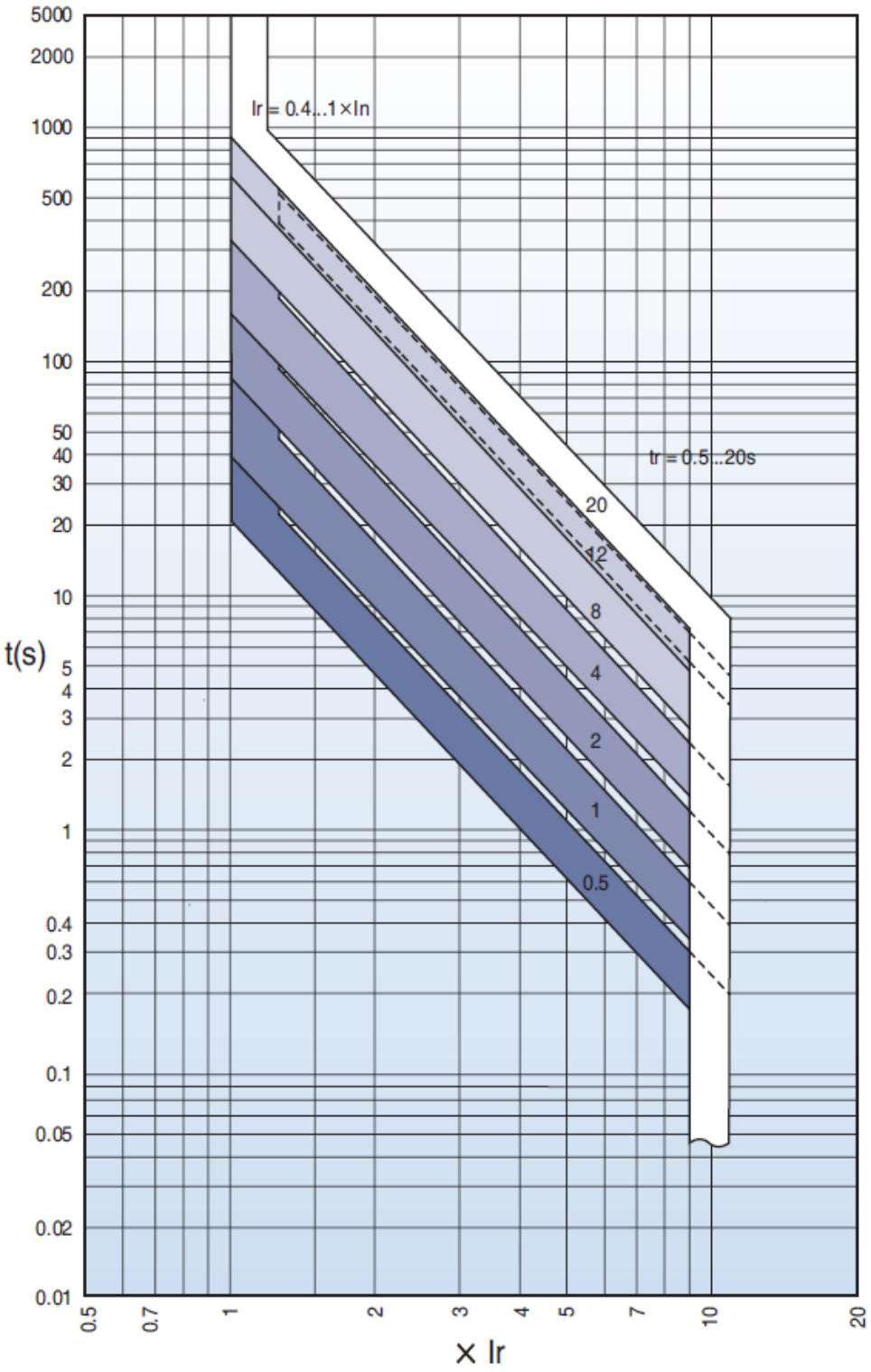
Operating voltage range (IEC 60947)
85%~110%Vn

Input voltage (V)	DC 24~30V	AC/DC 48~60V	AC/DC 100~130V	AC/DC 200~250V	AC 380V	AC 440~480V
Load curent (Max.)	5A	3A	1A	0.5A	0.3A	0.3A
Starting current (Max.)	5 times of load current					
Load rpm (Motor)	15000 ~ 19000 rpm					
Charge time	Less than 5sec.					
Dielectric strength	2kV/min					
Using temperature range	-20°~ 60°					
Using humidity range	Max. RH 80% (No dew condensation)					
Charge switch	10A at 250VAC					

Type	AN, AS-D	AN, AS-E	AS-F	AS-G
Endurance	20000	15000	10000	10000

Characteristic Curve: Long-time delay (L)

AS16D3-16H
AS20D3-20H
AN25E3-25H
AS32E3-32H
AS40E3-40V
AN16D3-16A
AS20D3-20A
AN25E3-20A
AN32E3-32A
AS40E3-40A
AS50F3-50A

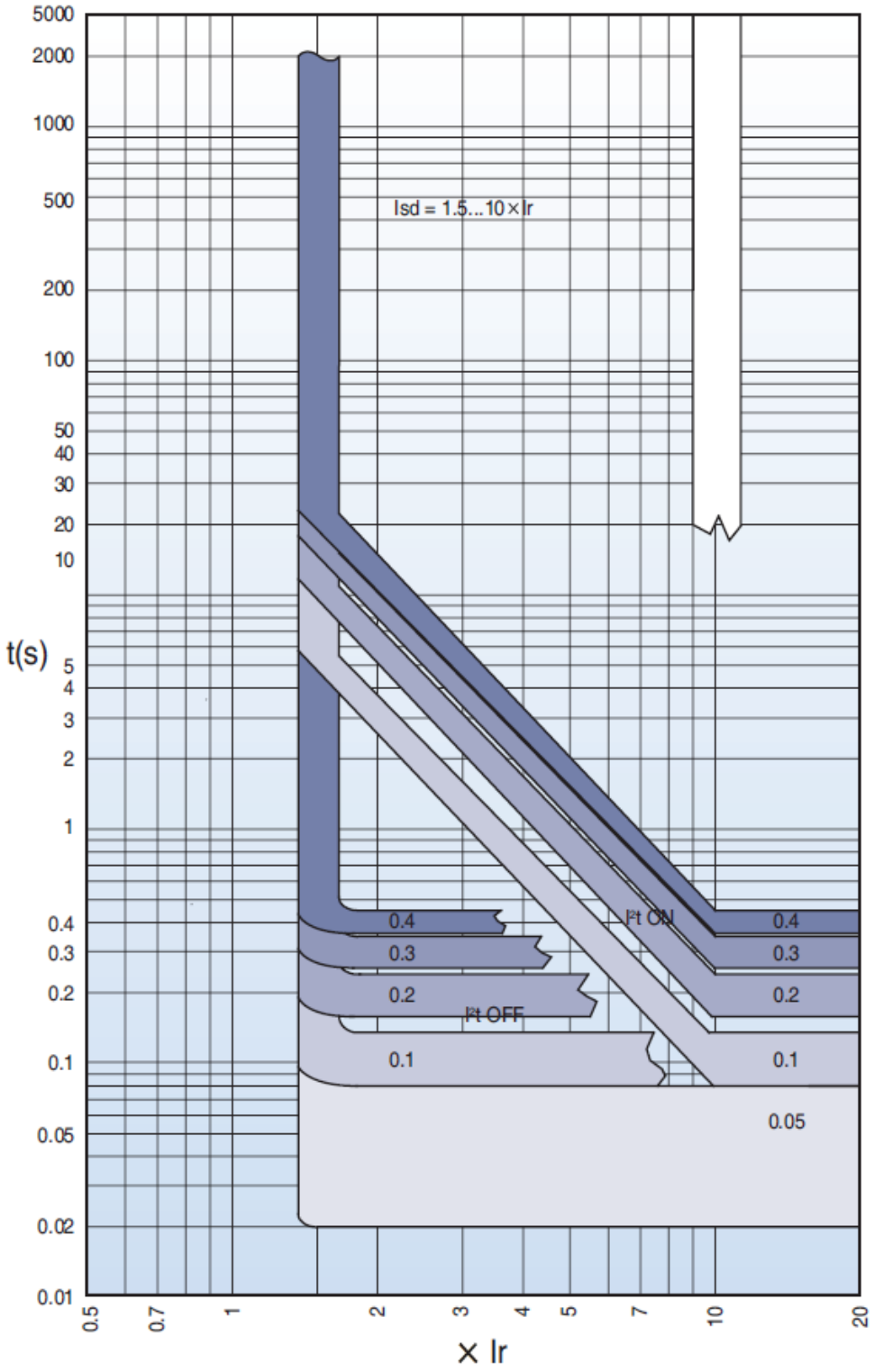


Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Characteristic Curve: Short-time delay (S)

AS16D3-16H
AS20D3-20H
AN25E3-25H
AS32E3-32H
AS40E3-40V
AN16D3-16A
AS20D3-20A
AN25E3-20A
AN32E3-32A
AS40E3-40A
AS50F3-50A

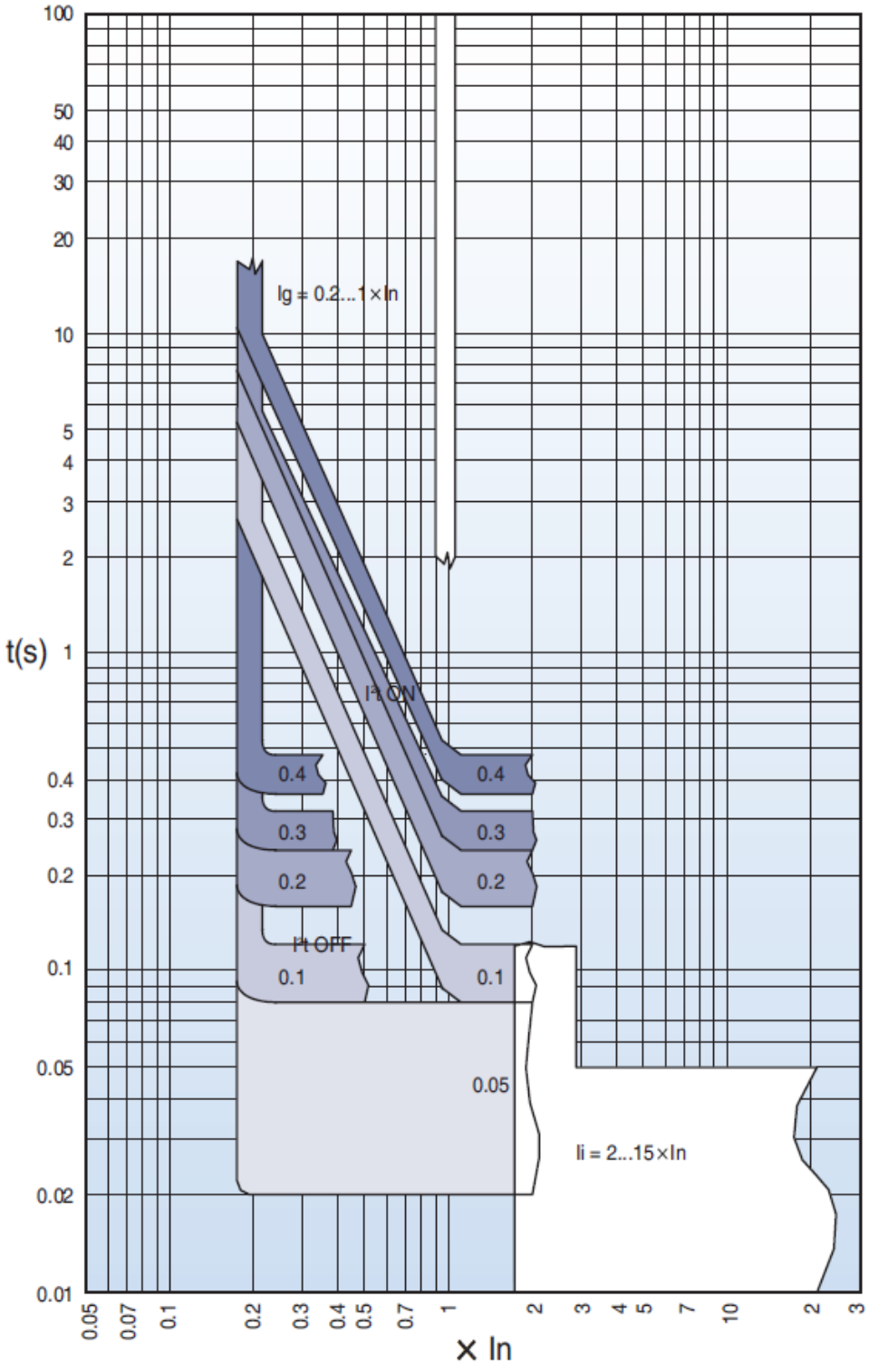


Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Characteristic Curve: Instantaneous(I) & Ground fault (G)

AS16D3-16H
AS20D3-20H
AN25E3-25H
AS32E3-32H
AS40E3-40V
AN16D3-16A
AS20D3-20A
AN25E3-20A
AN32E3-32A
AS40E3-40A
AS50F3-50A

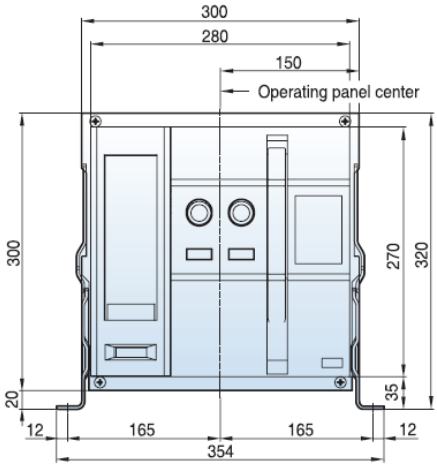


Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AS-06-16D Fixed unit
AS16D3-16H

Dimensions: [mm]



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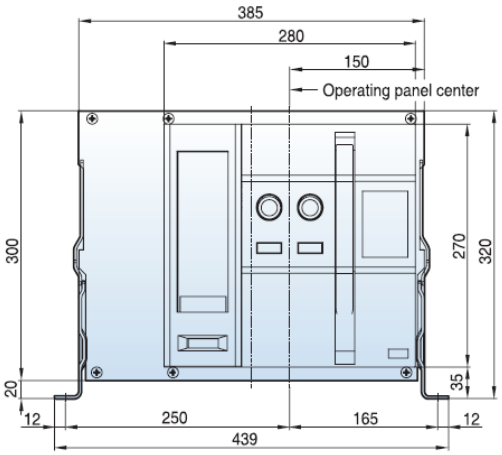

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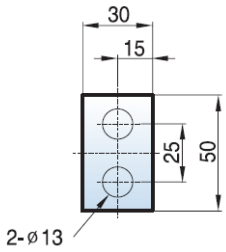

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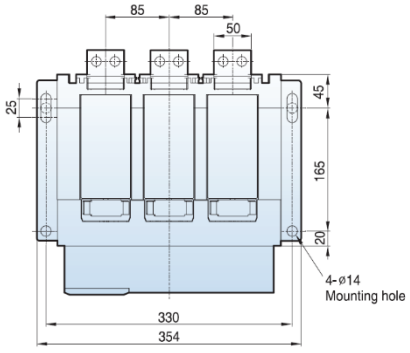

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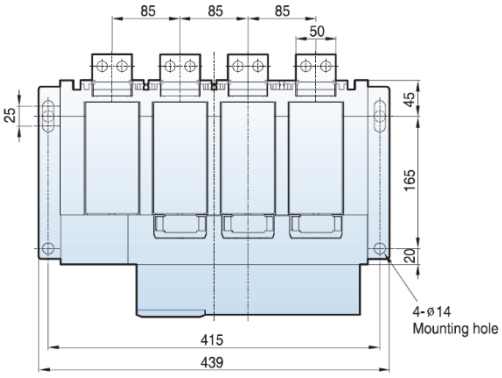

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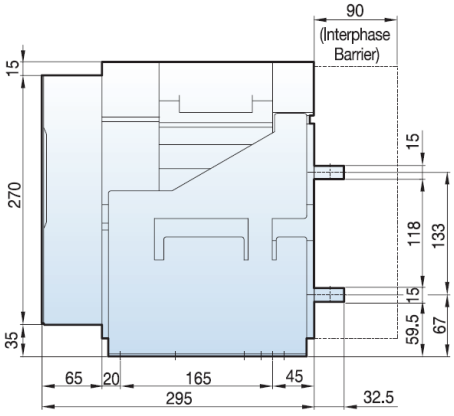
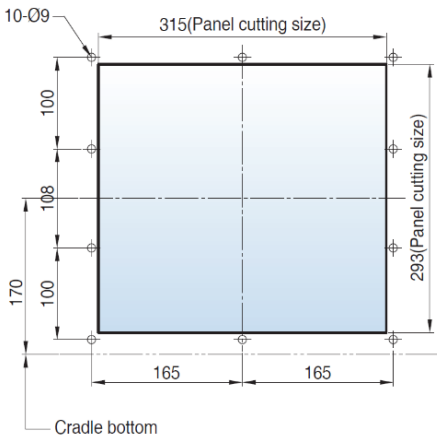


Door Frame

<Mounting hole>



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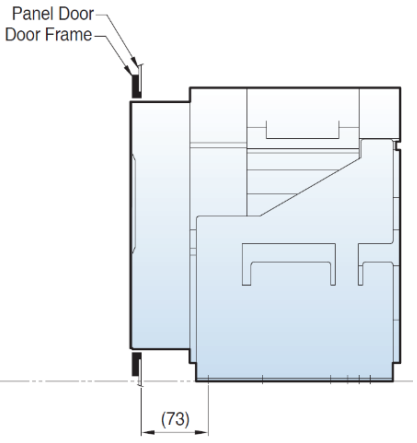


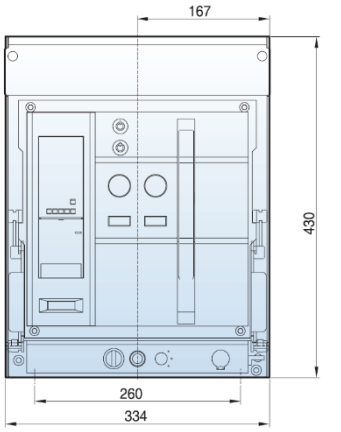
Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AN-06-16D Draw-out Unit

AN16D3-16A

Dimensions: [mm]



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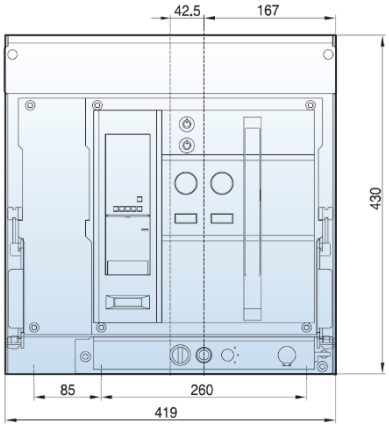

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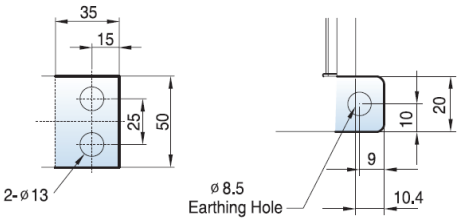

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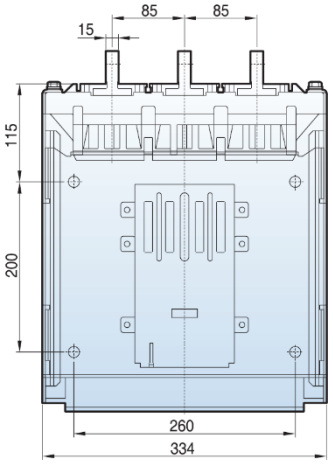

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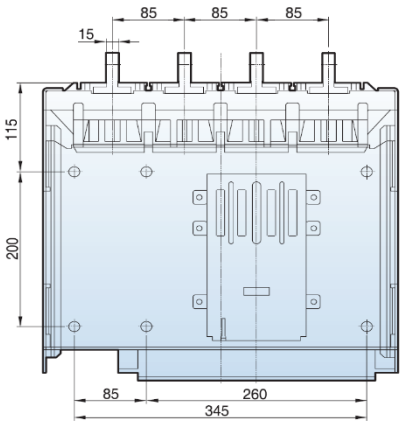

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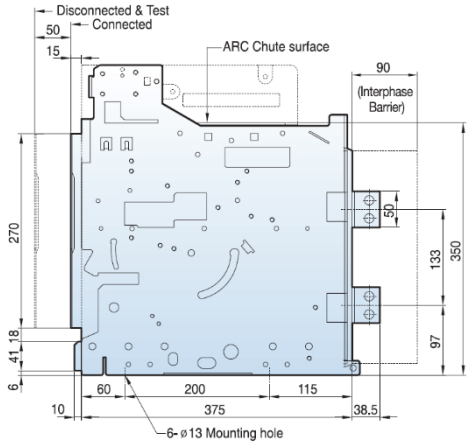
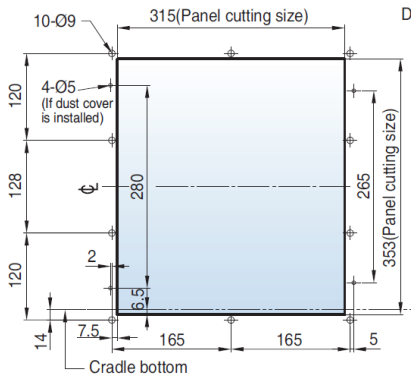
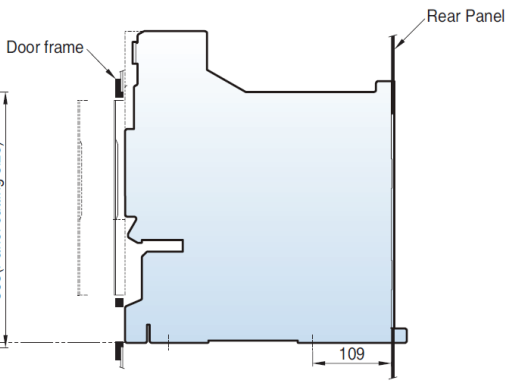


Door Frame

<Mounting hole>

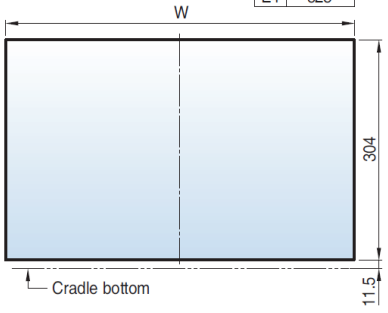


<Side hole>



<Panel cutting >

	Dim. "W"
D3	330
D4	415
E3	408
E4	523

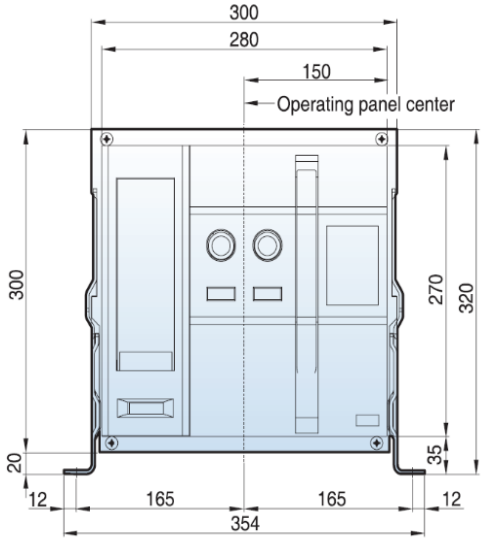


Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AS-20D Fixed Unit
AS20D3-20H

Dimensions: [mm]



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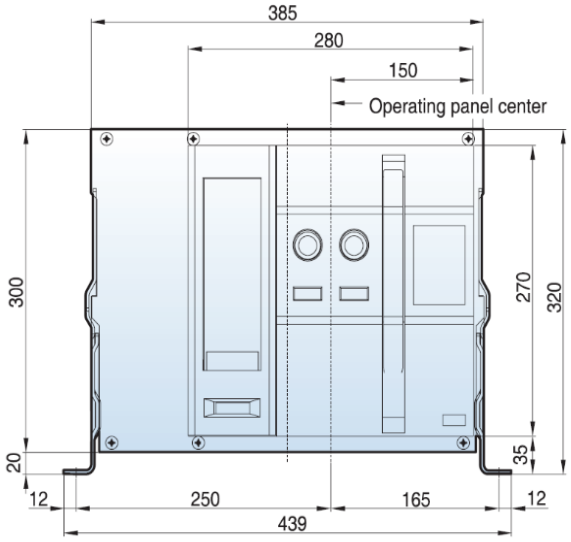

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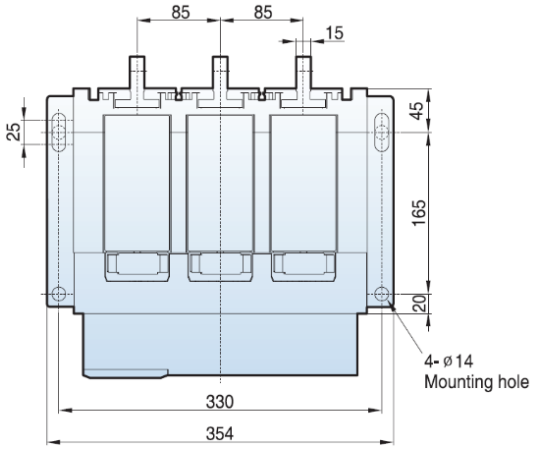

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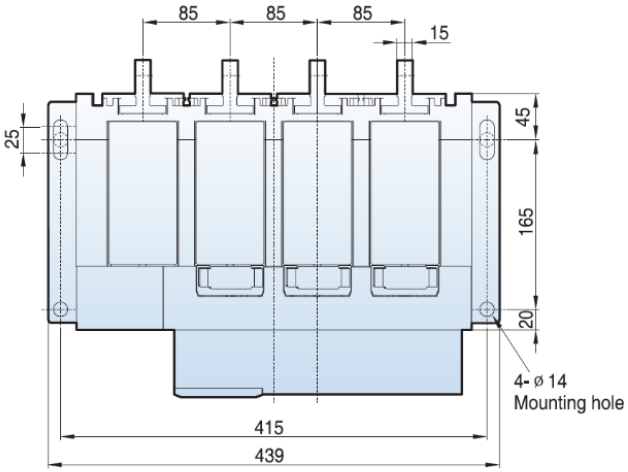

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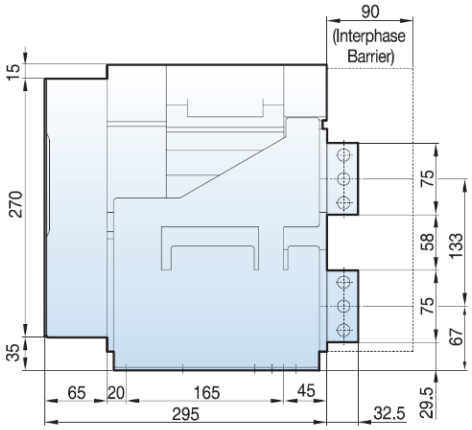
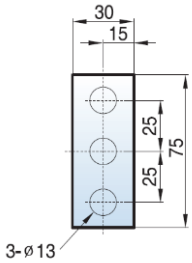




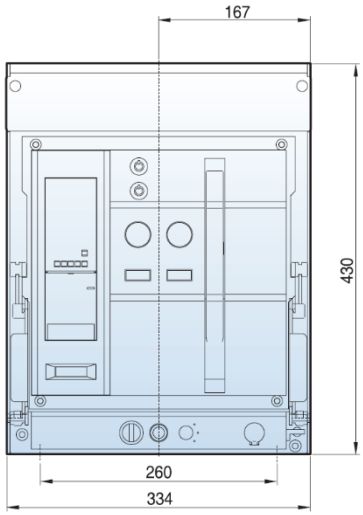
<Conductor>

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AS-20D Draw-out Unit
AS20D3-20A

Dimensions: [mm]



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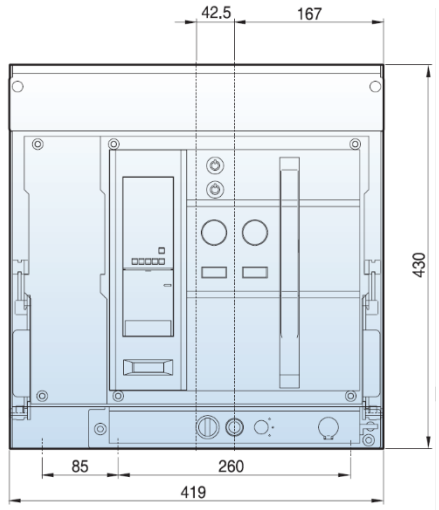

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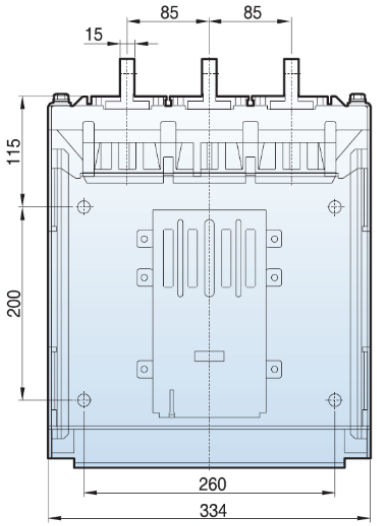

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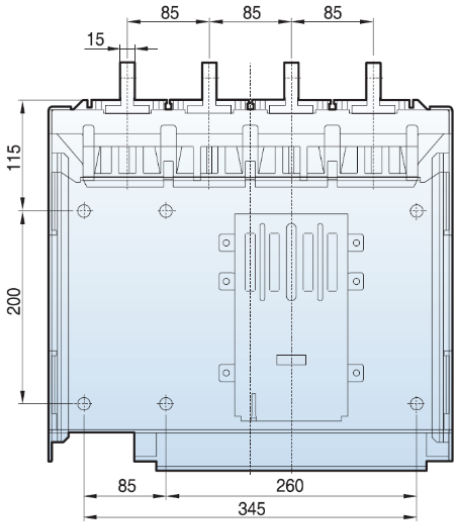

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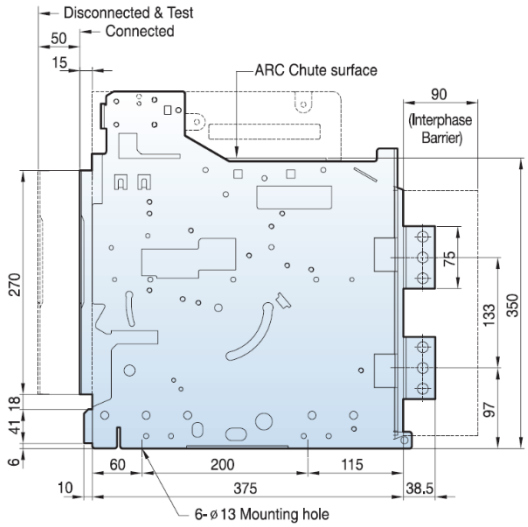
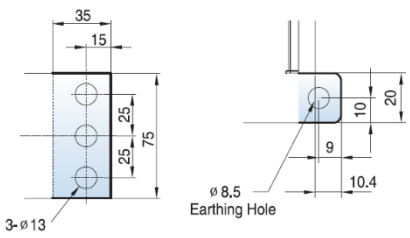




<Conductor>

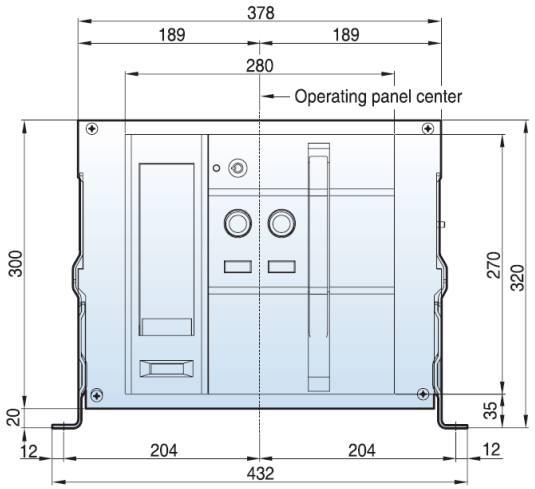
Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AN/AS-20~35E Fixed Unit

AN25E3-25H
AS32E3-32H

Dimensions: [mm]



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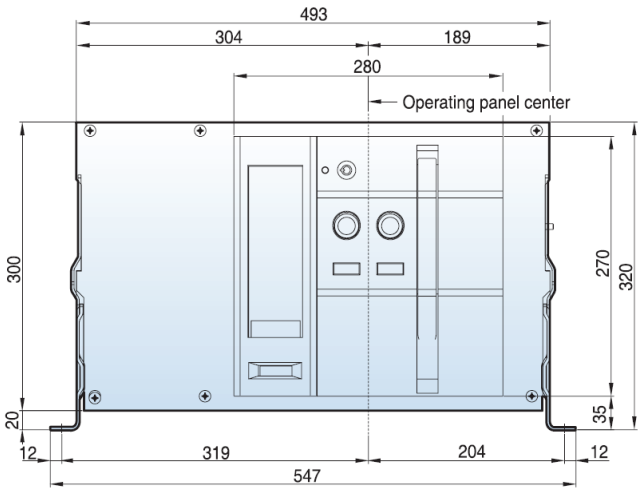

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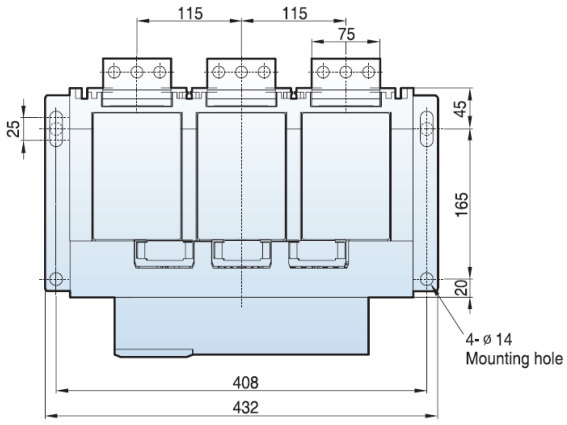

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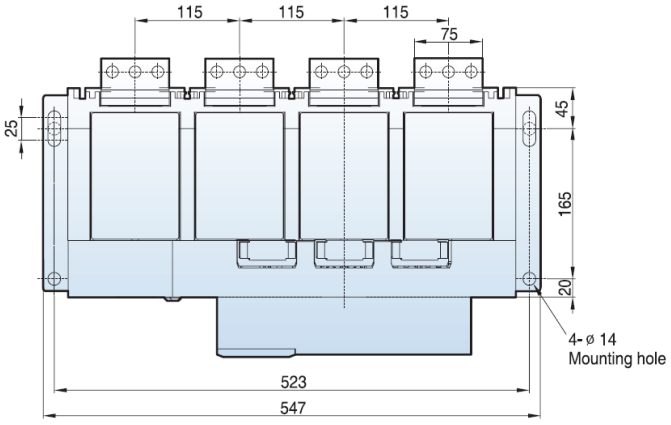

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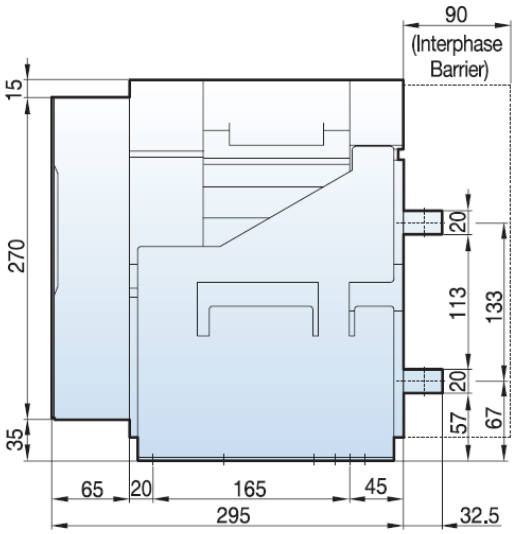
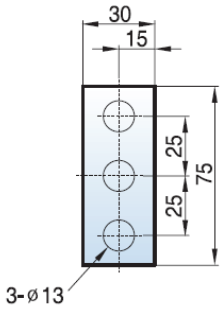




<Conductor>

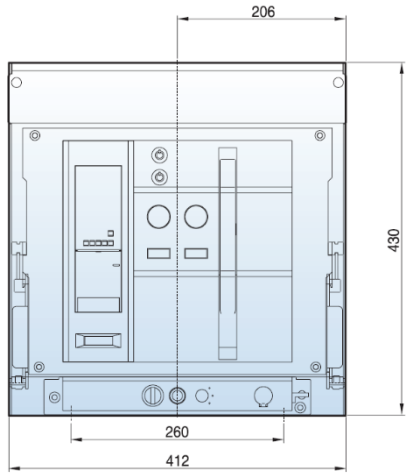
Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AN/AS-20~35E Draw-out Unit

AN25E3-25A
AN32E3-32A

Dimensions: [mm]



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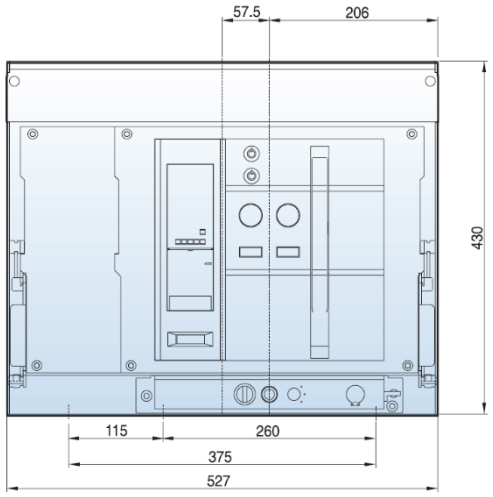

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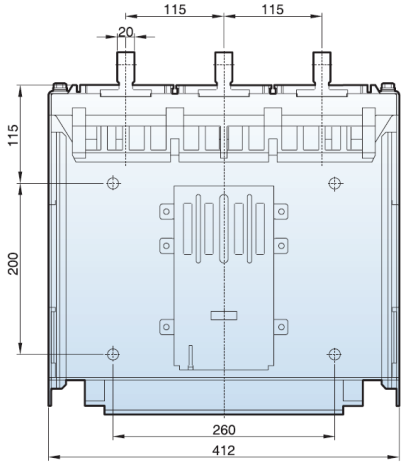

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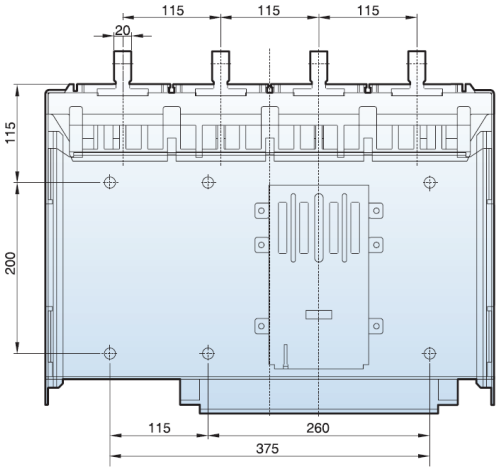

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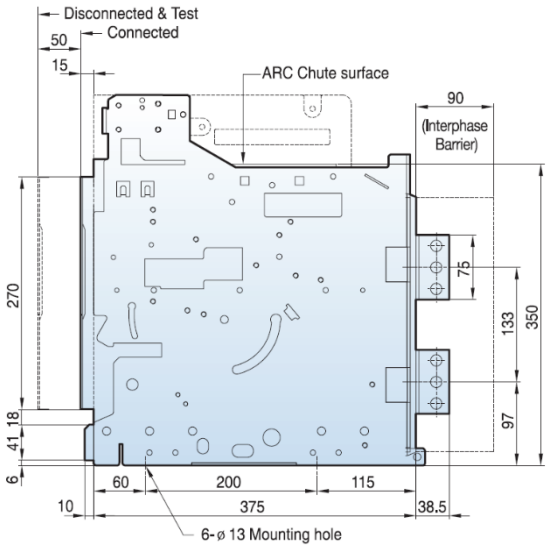
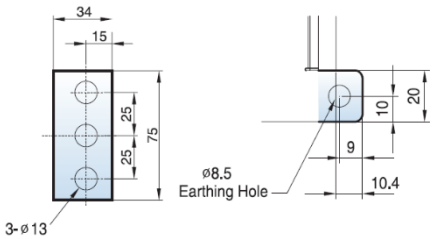




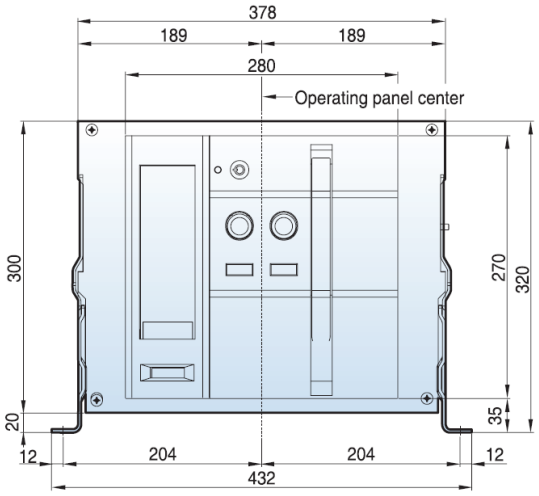
<Conductor>

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AS-40E Fixed Unit
AS40E3-40V

Dimensions: [mm]



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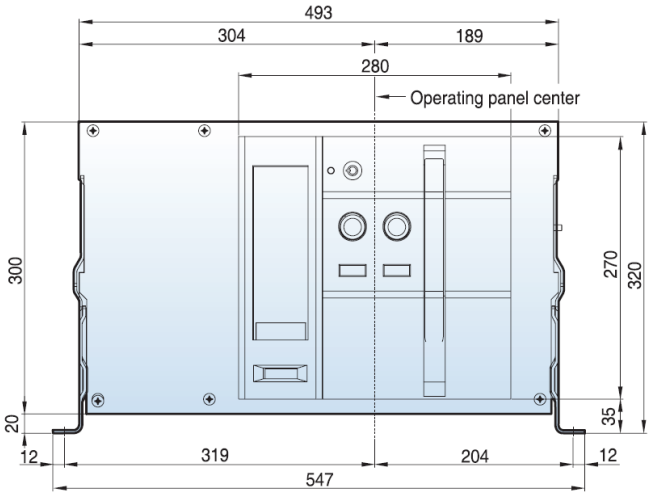

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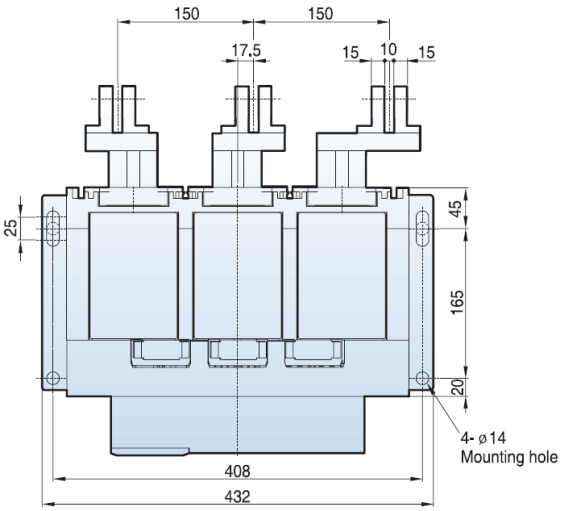

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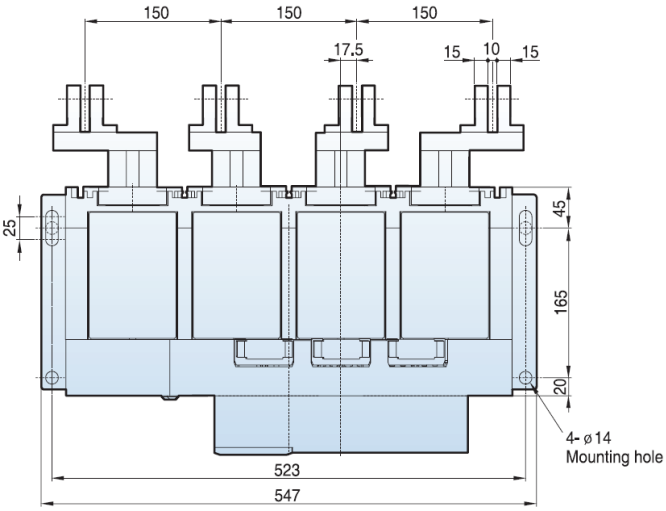

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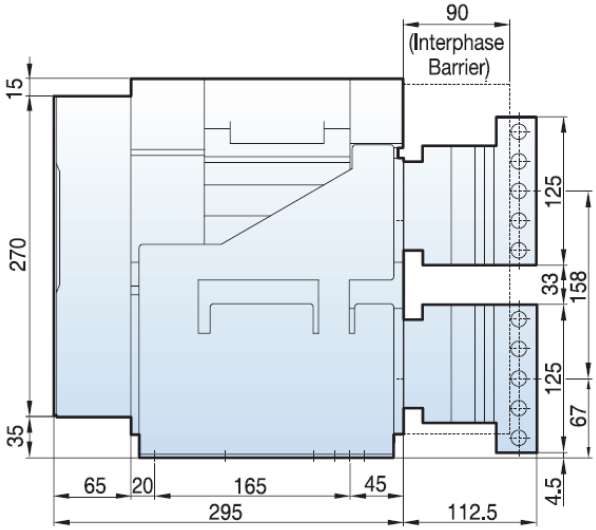
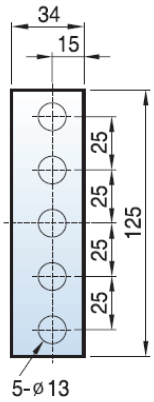




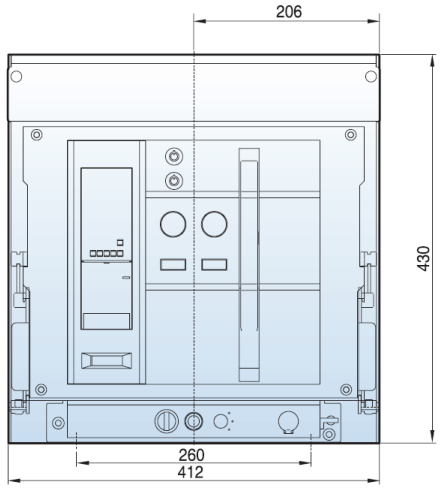
<Conductor>

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AS-40E Draw-out Unit
AS40E3-40A

Dimensions: [mm]



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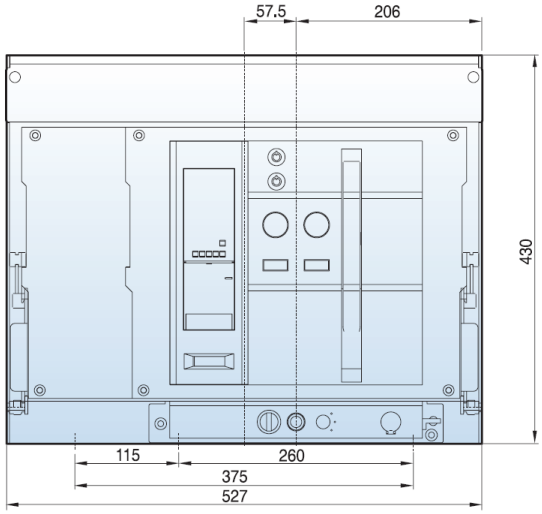

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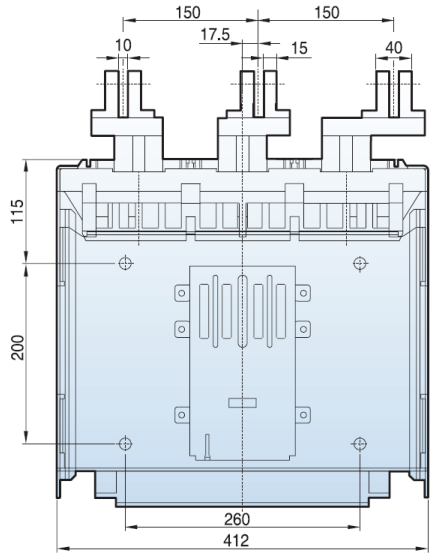

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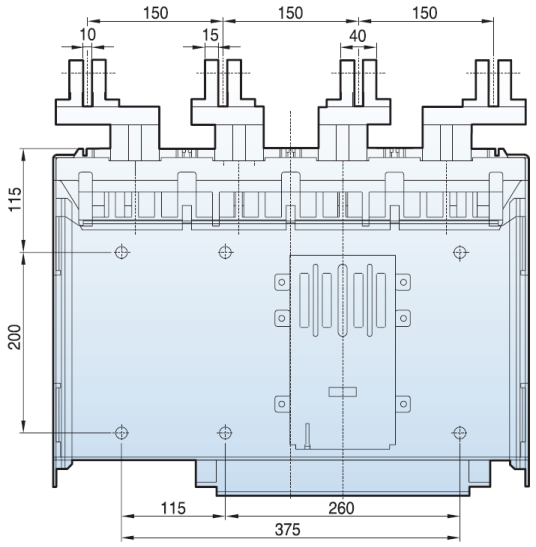

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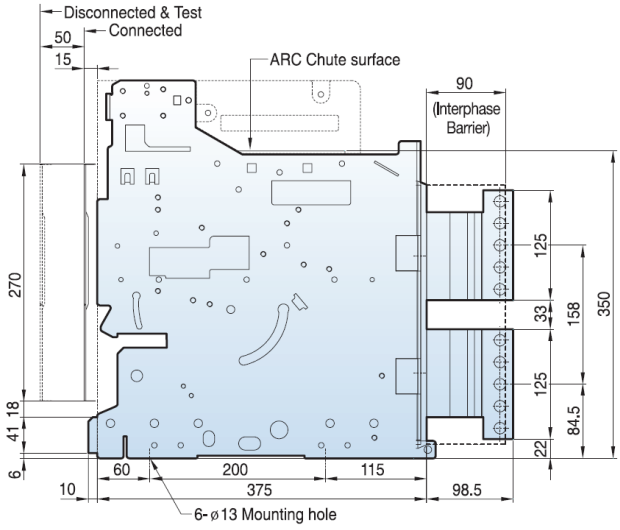
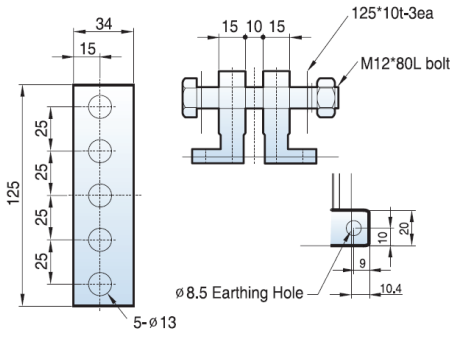




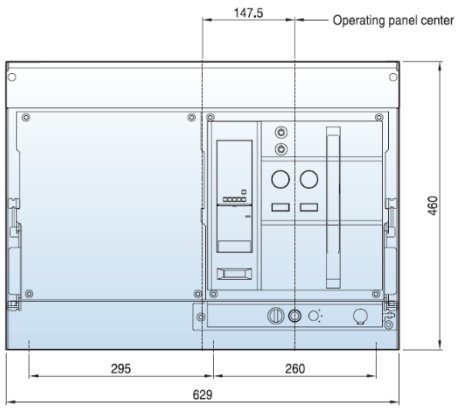
<Conductor>

Catalogue number: **AN□□□□□□**
AS□□□□□□

Air Circuit Breaker 1600-5000 70-85kA

Dimension AS-50F Draw-out Unit
AS50F3-50A

Dimensions: [mm]



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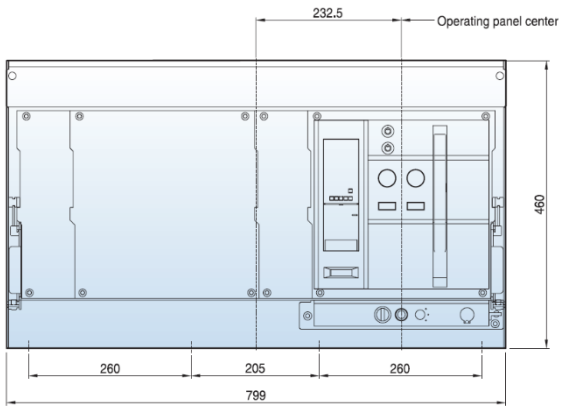

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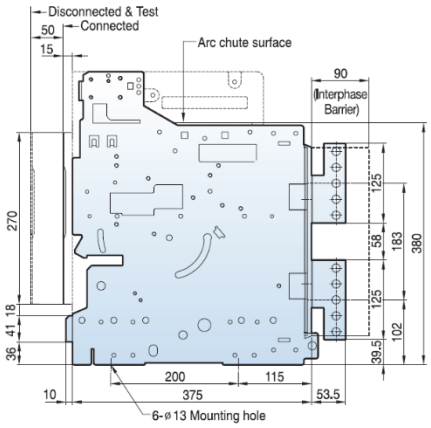

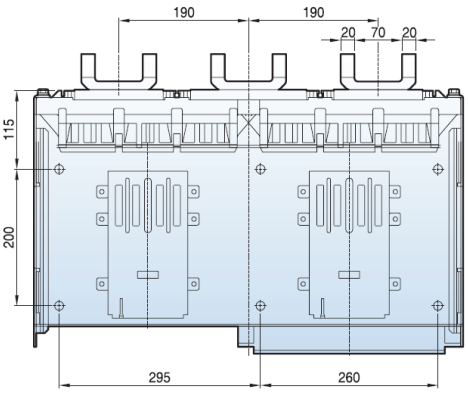

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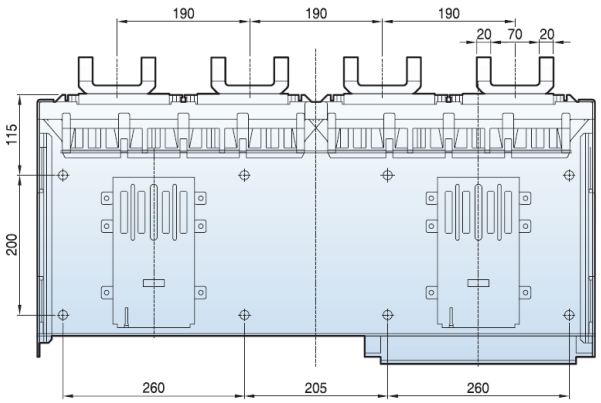

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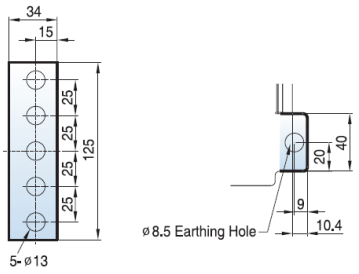

<Conductor>

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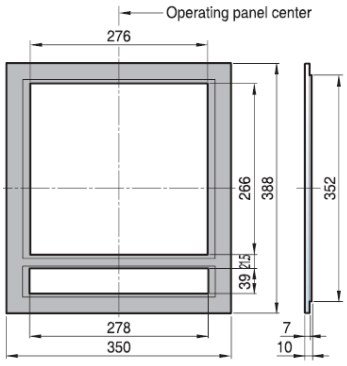

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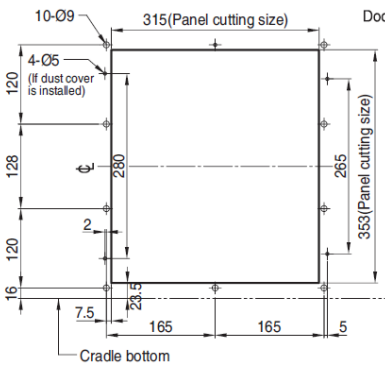

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