Miniature Circuit Breaker & Mould Case Circuit Breaker
Residual Current Circuit Breaker & SPD

DZ47-63 Series Miniature Circuit Breaker

DZ47-63 1P

DZ47-63 2P

DZ47-63 3P

DZ47-63 4P

1. Application

DZ47-63 is applicable to a line of AC 50/60Hz, 230/400V in single pole, 400V in double, three, four poles for protecting overload and short circuit, and rated current up to 63A. It can also be used for infrequent line conversion under the normal condition.The breaker is applicable to lighting distribution system in industrial enterprise, commercially district, high-rise building and dwelling house. It conforms with the standards of IEC60898-1.

2. Main Technical Parameter

Type	DZ47-63			
Pole	1P		2P, 3P, 4P	
Rated current (A)	6,10,16,20,25,32,40,50,63			
Rated voltage(V)	230/400		400	
Ambient temperature	-5˚C~+40˚C			
Type of instantaneous release	C	D	C	D
Rated short circuit breaking capacity Icn(kA)	1-32A: 6 50-63A: 4	4	1-32A: 6 50-63A: 4	4

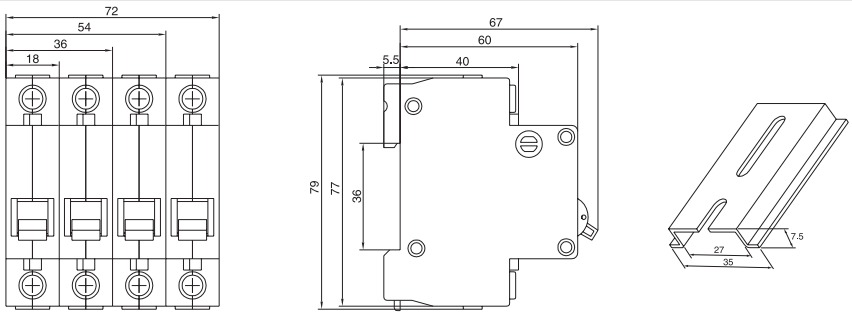
3. Applicable Conducting Wire

Rated current(A)	Norminal cross section of wire mm^2
1-6A	1
10A	1.5
16,20A	2.5
25A	4
32A	6
40,50A	10
63A	16

4. The Over-current Protection Property

Ambient temperature	Initial status	Test current	Test time	Expected result	Note
30±2˚C	Cold position	1.13In	t ⩽ 1h	Non-release	–
	Carried out immediately after previous test	1.45In	t<1h	Release	–
	Cold position	2.55In	1s<t<60s (In ⩽ 32A)	Release	Current smoothly rises to specified value within 5s
	Cold position	2.55In	1s<t<120s (In>32A)	Release	
-5~+40˚C	Cold position	3In	t ⩽ 0.1s	Non-release	Type B
	Cold position	5In	t<0.1s	Release	Type B
	Cold position	5In	t ⩾ 0.1s	Non-release	Type C
	Cold position	10In	t<0.1s	Release	Type C
	Cold position	10In	t ⩾ 0.1s	Non-release	Type D
	Cold position	20In	t<0.1s	Release	Type D

5. Dimension



DZ47-100 Series Miniature Circuit Breaker

1. Application

DZ47-100 1P

DZ47-100 is such features as delicate appearance, light weight, excellent and reliable performance, high breaking capacity, rapid tripping and mounted by rail. Its enclosure and components adopts high fire-retarding and shock-resistance plastic of long durability. It mainly serves for protecting the circuits of AC 50/60Hz, 230V of single pole, 400V of two poles or three or four poles from overload or short-circuit, and also for unfrequent making and breaking electrical apparatus and lighting circuit.It conforms with the standards of IEC60947-2.

2. Main Technical Parameter

DZ47-100 2P

Type	DZ47-100	
Pole	1P	2P, 3P, 4P
Rated current (A)	63,80,100	
Rated voltage (V)	230	400
Ambient temperature	-5˚C~+40˚C	
Type of instantaneous release	C, D	
Rated short circuit breaking capacity Icn(kA)	6	

3. The Over-current Protection Property

DZ47-100 3P

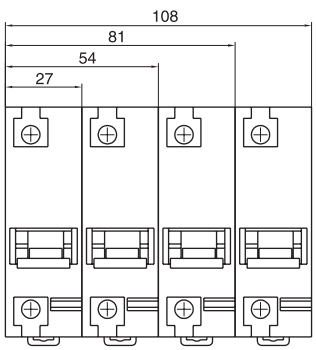
Ambient temperature	Initial status	Test current	Test time	Expected result	Note
40±2˚C	Cold position	1.05In(In ⩽ 63A)	t ⩽ 1h	Non-release	–
	Cold position	1.05In (In>63A)	t ⩽ 2h	Non-release	–
	Carried out immediately after previous test	1.30In(In ⩽ 63A)	t<1h	Release	Current smoothly rises to specified value within 5s
		1.30In (In>63A)	t<2h	Release	
-5~+40˚C	Cold position	8.00In	t ⩽ 0.2s	Non-release	–
	Cold position	12.00In	t<0.2s	Non-release	–

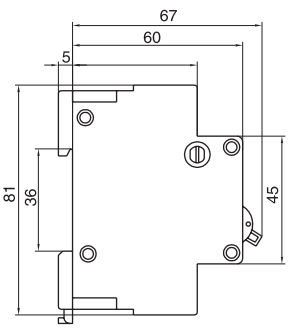
4. Applicable Conducting Wire

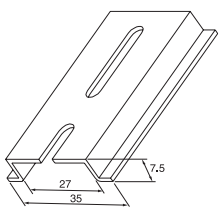
Rated current(A)	Nominal cross section of wire mm²
63A	16
80A	25
100A	35

5. Dimension

DZ47-100 4P







DZ50-63 Series Miniature Circuit Breaker

DZ50-63 1P

DZ50-63 2P

DZ50-63 3P

DZ50-63 4P

1. Application

DZ50-63 high switch-off ability miniature circuit breaker is applicable to a line of AC 50/60Hz, rated voltage 230/400V and rated current up to 63A, used for overload and short circuit protection. It can also be used for infrequent line conversion under the normal condition.The breaker is applicable to industrial enterprise, commercially district, high-rise building and dwelling house. It conforms with the standards of IEC60898.

2. Main Technical Parameter

Type			DZ50-63	
Pole			1P	2P, 3P, 4P
Rated current (A)			1,2,3,4,6,10,16,20,25,32,40,50,63	
Rated voltage(V)			230	400
Type of instantaneous release			B,C,D	
Rated short circuit breaking capacity Icn(kA)			10	
Life (times)	1-32A	Electric life	8000	
		Mechanical life	20000	
		Operation frequency	240 times per hour	
	40-63A	Electric life	8000	
		Mechanical life	20000	
		Operation frequency	120 times per hour	

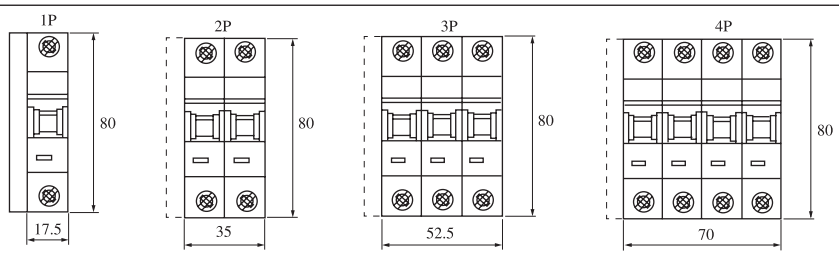
3. Applicable Conducting Wire

Rated current(A)	Nominal cross section of wire mm^2
1-6A	1
10A	1.5
16,20A	2.5
25A	4
32A	6
40,50A	10
63A	16

4. The Over-current Protection Property

Ambient temperature	Initial status	Test current	Test time	Expected result	Note
30±2˚C	Cold position	1.13In	t ⩽ 1h	Non-release	–
	Carried out immediately after previous test	1.45In	t<1h	Release	–
	Cold position	2.55In	1s<t<60s (In ⩽ 32A)	Release	Current smoothly rises to specified value within 5s
	Cold position	2.55In	1s<t<120s (In>32A)	Release	
-5~+40˚C	Cold position	3In	t ⩽ 0.1s	Non-release	Type B
	Cold position	5In	t<0.1s	Release	Type B
	Cold position	5In	t ⩾ 0.1s	Non-release	Type C
	Cold position	10In	t<0.1s	Release	Type C
	Cold position	10In	t ⩾ 0.1s	Non-release	Type D
	Cold position	20In	t<0.1s	Release	Type D

5. Dimension



DZL3 Residual Current Circuit Breaker

DZL3 2P

DZL3 4P

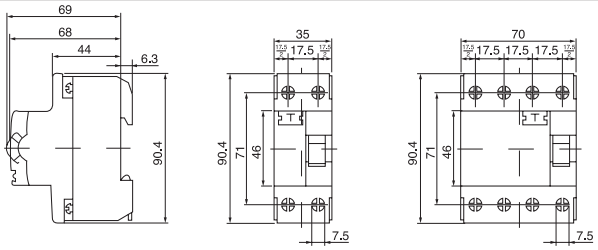
1. Application

DZL3 residual current circuit breaker is in conformity with the standards of IEC61008. It can cut off the fault circuit immediately on the occasion of shock hazard or earth leakage of trunk line. Thus it is suitable to avoid the shock hazard and fire caused by earth leakage. It can be used in circuits up to single phase 240V,three phases 415V, 50/60Hz.

2. Main Technical Parameter

Type	DZL3	
Pole	2P	4P
Rated current In(A)	10, 16, 25,32,40,63	10, 16, 25,32,40,63
Rated residual operating current IΔn(mA)	10,30,100,300	30,100,300
Rated residual non-operating current IΔno(mA)	0.5IΔn	
Rated voltage Un(V)	240(220), 415(380)	
Tripping time	<0.1s	
Ambient temperature	-5˚C~+40˚C	
Vibration resistance	Minimum 5g 30min, 0~8Hz	

3. Dimension



DZL4 Residual Current Circuit Breaker

DZL4 2P

DZL4 4P

1. Application

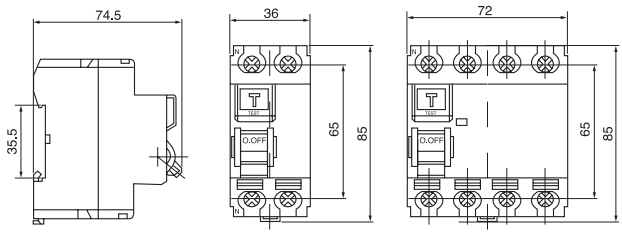
DZL4 RCCB is in conformity with the standard of IEC61008. The RCCB can cut off the fault circuit immediately on the occasion of shock hazard or earth leakage of trunk. Thus, it is suitable to avoid the shock hazard and fire caused by earth leakage.

The RCCB is mainly suitable for use in varieties of plants and enterprises, building construction 1 phase 230V and 3 phase 400V 50/60Hz. RCCB is not suitable for use on DC pulse system.

2. Specification

Number of Poles	2P, 4P
Rated Current (A)	16, 20, 25, 40, 50, 63
Rated Residual Operating Current (IΔn)(mA)	30, 100, 300, 500
Rated Voltage (V)	AC 230/240
	AC 400/415
Residual Operating Current Scope	0.5IΔn~IΔn
Residual Current Off-time	⩽ 0.3S
Short Circuit Capacity (Icu)	6000A
Endurance(times)	4000
Protection Degree	IP20

3. Dimension



AM1 Series Moulded Case Circuit Breaker

AM1-63M/3P

AM1-63M/4P

AM1-100M/3P

AM1-225L/3P

Two option: paper or laser laser label, default is label

1. Application

AM1 series moulded case circuit breaker is one of products developed and manufactured by adopting international advanced technology. It is supplied with rated insulating voltage 550 and 800V and used for circuit of AC 50/60Hz, rated operating voltage AC 400V (or below), rated operating current up to 1600A for infrequent changing over and starting of the motors.The products conforms to IEC60947-2 standard.

2. Main Technical Specification

Table 1

Type	Rated current (A)	Pole	Rated insulating voltage (V)	Rated operating voltage (V)	Arcing-over distance (mm)	Ultimate short circuit breaking capacity (kA)	Servie short circuit breaking capacity (kA)	Operation performance		Utilization category
								Load	Unload	
AM1-63L	(6),10,16,20, 25,32,40,50,63	3, 4	500V	400V	0	25	18	1500	8500	A
AM1-63M					0	50	35			
AM1-100L	(10),16,20,25, 32,40,50,63, 80,100		800V		0(⩽ 50)	35	22			
AM1-100M					0(⩽ 50)	50	35			
AM1-100H					0(⩽ 50)	85	50	1000	7000	
AM1-225L	100,125,160, 180,200,225				⩽ 50	35	22			
AM1-225M					⩽ 50	50	35			
AM1-225H					⩽ 50	85	50	1000	4000	
AM1-400L	225,250,315, 350,400				⩽ 50	50	35			
AM1-400M					⩽ 100	65	42			
AM1-630L	400 500 630				⩽ 100	50	35			
AM1-630M					⩽ 100	65	42			
AM1-630H					⩽ 100	100	65			
AM1-800M	630,700,800	3			⩽ 100	75	50			
AM1-800H					⩽ 100	100	65			
AM1-1250M	1000,1250				⩽ 100	100	65			
AM1-1250H					⩽ 100	125	75			
AM1-1600M	1600				⩽ 100	150	80			

Note: 6A without thermal protection

The N-pole of four-poles breaker is sited at the right side of the product has four types:

Type A: Without current trip-lease on N pole which making all the time, not closing and opening with the other three poles.

Type B: Without current trip-release on N pole which closing and opening with the other poles.

Type C: With current trip-release which closing and opening with the other three poles.

Type D: With current trip-release which making all the time not closing and opening with the other three poles.

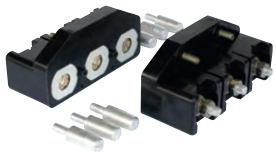
3. Protection Characteristic

The thermodynamic release of a circuit breaker provides the feature of inverse time-delay, while the magnetic release is the instantaneous operation as shown on table 2(distribution circuit breaker) and table 3 (motor protection circuit breaker).

AM1-225L/3P

AM1-400L/3P

Back panel connection



Plug-in connection

Electromagnetic operation device

Motor-driven operation device

Table 2

Rated current of release (A)	Thermodynamic release(ambient temperature land +40°C marine +45°C)		Operating current of magnetic release (A)
	1.05In(cold state) Inoperative time(h)	1.30In(heat state) Operative time(h)	
10 ⩽ In ⩽ 63	⩾ 1	< 1	10In±20%
63 < In ⩽ 100	⩾ 2	< 2	
100 < In ⩽ 800	⩾ 2	< 2	5In±20% 10In±20%

Table 3

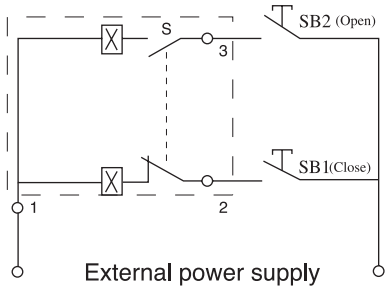
Rated current of release (A)	Thermodynamic release (ambient temperature land +40°C marine +45°C)				Operating current of magnetic release (A)
	1.0In(cold state) non-trip time(h)	1.20In(heat state) trip time (h)	1.50In(heat state) trip time (h)	7.2In(cold state) trip time(h)	
10 ⩽ In ⩽ 225	⩾ 2	< 2	⩽ 4min	4s < Tp ⩽ 10s	12In±20%
225 < In ⩽ 630			⩽ 8min	6s < Tp ⩽ 20s	

4. Accessories of Circuit Breaker

4.1 The external accessories of the breaker

● **Motor-driven operation device**

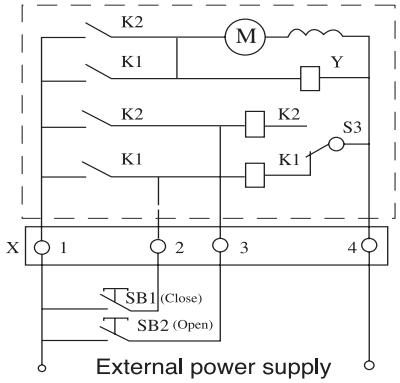
1) Wiring diagram of type CDM electromagnetic operation device(fitting AM1-63,100,225) see the following drawing (wiring diagram of the external accessories of the breaker in the dotted frame)



Code description: SB_1、SB_2 stand for push button.(provided by users themselves)
Number “1”、“2”、“3” stand for number of wiring terminals.

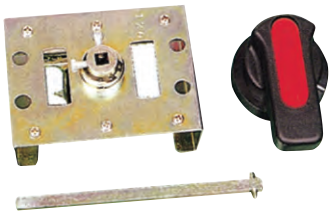
Voltage rating: AC50/60Hz 230V 400V, DC 220V

2) Wiring diagram of type CD Electromagnetic operation device and motor-driven operation device (fitting AM1-400、630、800) see belows (wiring diagram of the external accessories of the breaker in the dotted frame)



Code description: SB_1、SB_2 stand for push button. (provided by users themselves)
“X” stands for line connection terminals

Voltage rating: AC50/60Hz 230V 400V, DC220V

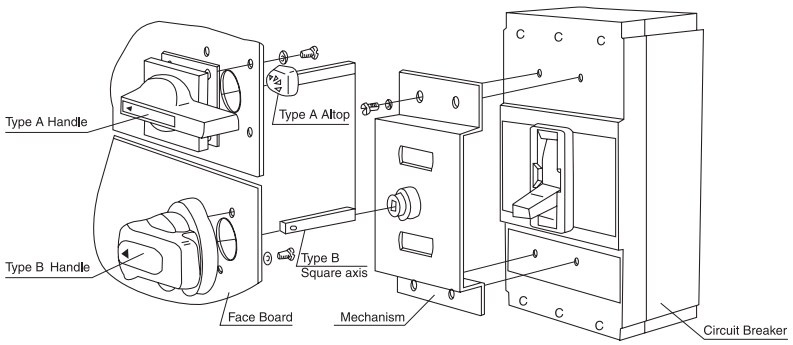


Rotary handle operation device

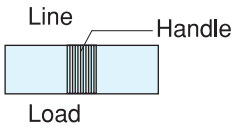
● **Rotary handle operation device**

The mechanism is used with moulded case circuit breaker to operate the draw-out panel. Power distribution panel and supply box outside the panel by turning the handle ,and to ensure the door of panel would not be openned when the breaker being on.

The hand-drive mechanism can be equiped with two types of operation, one is “A” model square handle , the other is “B” model round handle.



4.2 Release pattern and accessories code



UVR: Under-voltage release; SHT: Shunt release;
AL: Alarm contact AX: Auxiliary contact;

Release pattern and accessories code	Name / Type	AM1-63, 100, 225	AM1-400	AM1-630	AM1-800
200, 300	Without accessories	200: magnetic release (only short circuit protection) 300: thermal magnetic release(both overload and short circuit protection)			
208, 308	Alarm contact	AL	AL	AL	AL
210, 310	Shunt release	SHT	SHT	SHT	SHT
220, 320	Auxiliary contact	AX	AX	AX	AX
230, 330	Under-voltage release	UVR	UVR	UVR	UVR
240, 340	Shunt release Auxiliary contact	SHT AX	SHT AX	SHT AX	AX SHT
250, 350	Shunt release Under-voltage release	SHT UVR	SHT UVR	SHT UVR	UVR SHT
260, 360	Two group of auxiliary contact	AX AX	AX AX	AX AX	AX AX
270,370	Under-voltage release Auxiliary contact	AX UVR	AX UVR	AX UVR	UVR AX
218, 318	Shunt release Alarm contact	AL SHT	SHT AL	AL SHT	AL SHT
228, 328	Alarm contact Auxiliary contact	AL AX	AL AX	AL AX	AL AX
238, 338	Under-voltage release Alarm contact	AL UVR	AL UVR	AL UVR	AL UVR
248, 348	Shunt release, Alarm contact, Auxiliary contact	AL AX SHT	SHT AL AX	AL AX SHT	AL AX SHT
268, 368	Two group of auxiliary contact, Alarm contact	AL AX AX	AL AX AX	AL AX AX	AL AX AX
278, 378	Shunt release, Alarm contact, Under-voltage release	AL AX UVR	AL AX UVR	AL AX UVR	AL UVR AX

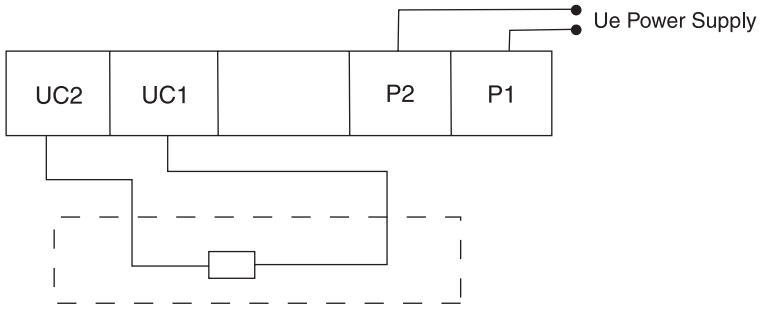
According to user's demands, accessories could lead to direct wire outcoming or line wiring terminals could be added(please mark out in case of placing order).

Under-voltage release

● **Under-voltage release**

Wring diagram of the under-voltage release connected externally (the internal accessories in the dotted frame)

Ue: AC50/60Hz 230V, 400V

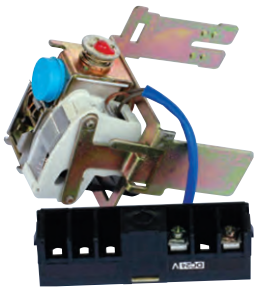


When the operation voltage is 35%~70% of the rated voltage, the under-voltage release should make the breaker trip correctly.

When the operation voltage is 85%~110% of the rated voltage, the under-voltage release should make the breaker close.

In case of the operation voltage less than 35% of the rated voltage, the under-voltage should prevent the breaker from closing.

Note: Only the under-voltage release should be energized in advance, the breaker could be recramped and turned-on, otherwise the breaker will be damaged.

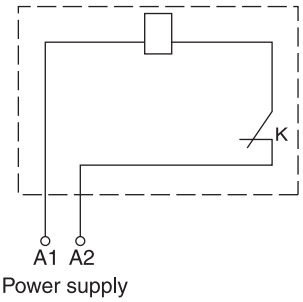


Shunt release

● **Shunt release**

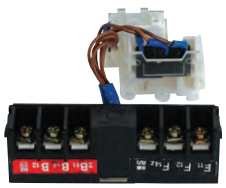
Wring deagram of the shunt release(the internal accessories in the dotted frame)

"K" is the slow motion switch normal-close contact connect the coil in series in the shunt release. It turns-on or turns-off automatically as soon as the breaker on or off.



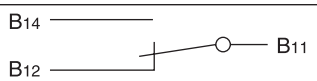
Voltage rating: AC50/60Hz 230V 400V, DC 110V 220V

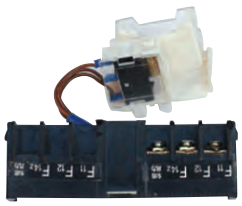
The shunt release should make the breaker trip reliably when the operation voltage is 70%~110% of the rated control voltage.



Alarm contact

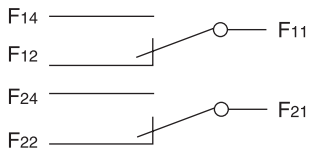
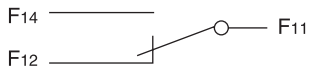
● **Alarm contact**

The position of the breaker in "off" or "on"	
The position of the breaker in "free trip" (alarm)	B_{11} and B_{12} switch from "close" to "open", status of B_{11} and B_{14} switch from "open" to "close"



Auxiliary Contact

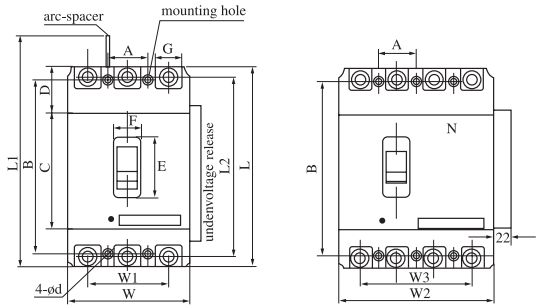
● **Auxiliary Contact**

When the breaker is in "off"		For the breaker with frame current 400A and above
		For the breaker with frame current 225A and below
When the breaker is in "on"	When the breaker is in "off", the contacts switch from "close" to "open". When the breaker is in "off", the contacts switch from "open"to close"	

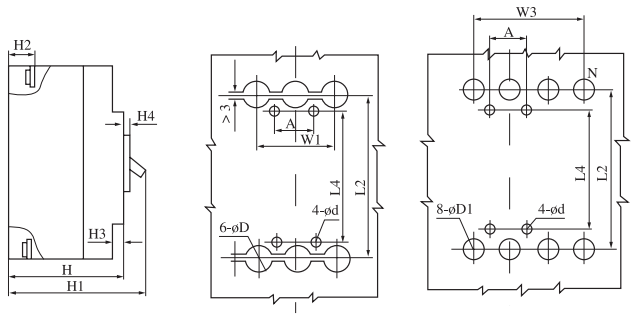
5. Outline and Installation Dimensions

Type	Outline Dimensions(mm)																														Installation Dimensions		
	Front panel connection																	Back panel connection				Plug-in connection												
	W	W1	L	L1	L2	H	H1	H2	H3	H4	C	D	E	F	G	W2	W3	L4	H5	H6	ØD	ØD1	L5	L6	H7	H8	H9	H10	J	K	Ød1	M	A	B	Ød
AM1-63L	76	50	135	170	117	74	92	20	7	4	85	28.5	48	22	14	100	75	117	44	66	8	8							60.7				25	117	3.5
AM1-63M	76	50	135	170	117	82	98.5	28	7	4	85	28.5	48	22	14	100	75	117	44	66	8	8							62				25	117	3.5
AM1-100L	92	60	150	185	132	68	86	24	7	4	88	35.5	50	22	17.5	122	90	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-100M	92	60	150	185	132	86	104	24	7	4	88	35.5	50	22	17.5	122	90	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-100H	92	60	150	185	132	86	104	24	7	4	88	35.5	50	22	17.5	122	90	129	68	108	26	16	92	168	50	62	74	17.5	56	60	6.5	M8	30	129	4.5
AM1-225L	107	70	165	215	144	86	110	24	5	4	102	31.5	50	22	17	142	105	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-225M	107	70	165	215	144	103	127	24	5	4	102	31.5	50	22	17	142	105	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-225H	107	70	165	215	144	103	127	24	5	4	102	31.5	50	22	17	142	105	126	66	110	20	20	94	183	50	69.5	84.5	17.5	54	70	6.5	M8	35	126	5
AM1-400L	150	96	257	357	224	105	155	38	8	6	128	64.5	89	65	ø26	198	144	194	60	120	33	33	169	279	60	83.5	106.5	21	129	60	8.5	M10	44	194	7
AM1-400M	182	116	270	370	234	110	160	43	8	6	134	70	89	65	ø29	198	144	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630L	182	116	270	370	234	110	160	43	8	6	134	70	89	65	ø29	240	174	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630M	182	116	270	370	234	110	160	43	8	6	134	70	89	65	ø29	240	174	200	65	125	36	36	169	299	60	92	110	21	123	100	8.5	M12	58	200	7
AM1-630H	210	140	280	380	243	106	145	33	30	128									128														70	243	7.2
AM1-800M	210	140	280	380	243	106	145	33	30	128									128														70	243	7.2
AM1-800H	210	140	280	380	243	106	145-	33	30	128									128														70	243	7.2
AM1-1250M	210	140	393			200																													
AM1-1250H	210	140	393			200																													
AM1-1600M	210	140	393			200																													

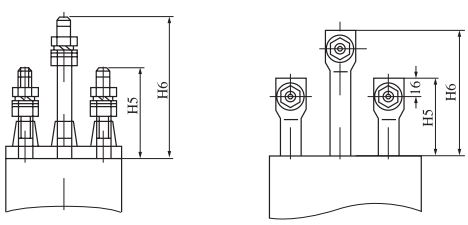
Front panel connection



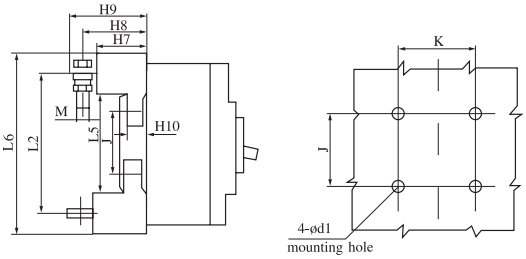
Back panel connection



Back panel connection



Plug-in connection



AM2 Series Moulded Case Circuit Breaker

AM2-100N/3P

1. Application

AM2 series moulded case circuit breaker is one of breaker which adopts international advanced design, manufacture technology to develop. The rated insulating voltage is 750V, suitable for AC 50/60Hz,rated working voltage 690V or below, rated working current is 12.5A to 1600A of circuit and used in distributing electric energy, and infrequent breaking in the normal conditions , protecting the circuit & equipment from overload & under voltage, circuit breaker with rated frame current 400A or below,can be used in mousecage motor's infrequent start, breaking during working, protecting motor from overload, short circuit & undervoltage,the product conforms to IEC60947-2 standard.

AM2-250N/3P

2. Main Technical Specifications

Table 1

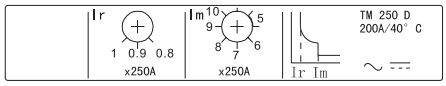
Type	Pole	Rated insulating voltage (V)	Rated operating voltage (V)	Rated ultimate short circuit breaking capacity Icu (kA) at 380/415V	Rated service short circuit breaking capacity Ics at 380/415V(kA)	Operation performance		Utilization category
						ON	OFF	
AM2-100N	3, 4 pole	750	690 or below	25	25	1500	8500	A
AM2-100H				70	70			
AM2-100L				150	150			
AM2-160N				36	36	1000	7000	
AM2-160H				70	70			
AM2-160L				150	150			
AM2-250N				36	36	1000	7000	
AM2-250H				70	70			
AM2-250L				150	150			
AM2-400N				45	45	1000	4000	
AM2-400H				70	70			
AM2-400L				150	150			
AM2-630N				45	45	1000	4000	
AM2-630H				70	70			
AM2-630L				150	150			
AM2-1250N	3 pole			50	37.5	1000	4000	
AM2-1600N				50	37.5			

Note:1. The N-pole breaker which closing and opening with the other three poles no protection.

AM2-400N/3P

3 Main Technical Parameter of Trip Units

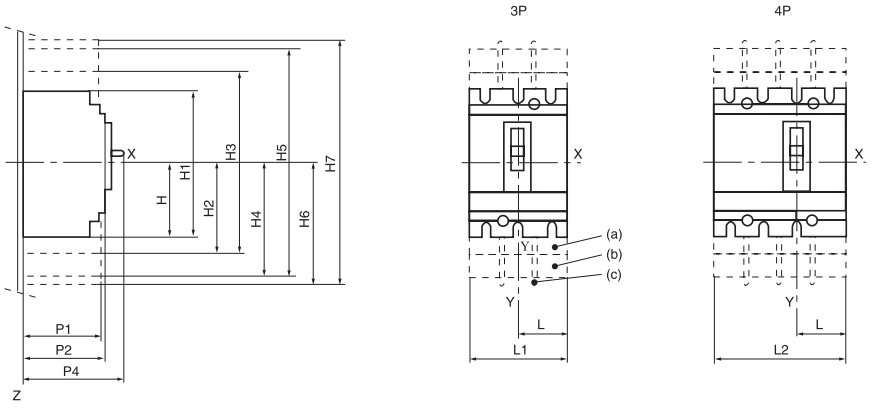
Thermal magnetic release



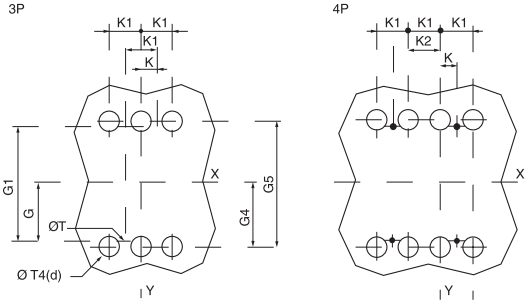
AM2-630N/3P

Type	Rated current In(A)	Note
AM2-100	12.5,16,20,25,32,40,50,63,80,100	T adjustable (0.8~1In) M adjustable (5~10In)
AM2-160	16,20,25,32,40,50,63,80,100,125,160	
AM2-250	160、180、200、225、250	
AM2-400	315、350、400	
AM2-630	400、500、630	
AM2-1250	800、1000、1250	T adjustable (0.8~1In) M fixed
AM2-1600	1000、1250、1600	

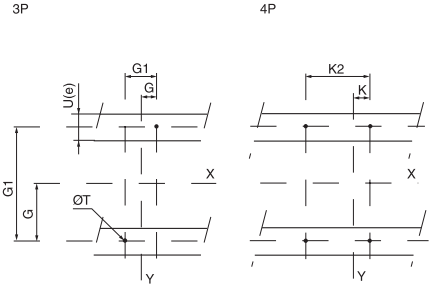
4. Outline and Installation Dimension



Mounting on backplate

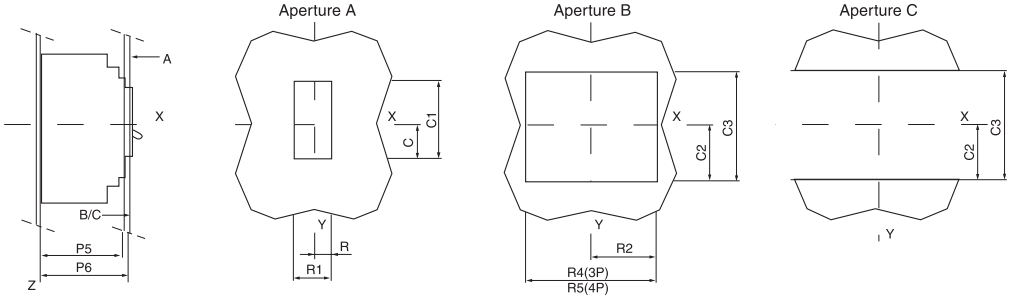


Mounting on rails



Aperture on a front panel

Fitting to fixed and plug-in circuit breaker



AM2-100~630

mm	C	C1	C2	C3	G	G1	G4	G5	H	H1	H2
AM2 100/160/250N/H/L	29	76	54	108	62.5	125	70	140	80.5	161	94
AM2 400/630N/H/L	41.5	116	92.5	184	100	200	113.5	227	127.5	255	142.5
AM2 1250/1600N									100	255	

mm	H3	H4	H5	H6	H7	K	K1	K2	L	L1	L2	P1	P2	P4	P5
AM2 100/160/250N/H/L	188	160.5	321	178.5	357	17.5	35	70	52.5	105	140	81	86	111*	83
AM2 400/630N/H/L	285	240	480	237	474	22.5	45	90	70	140	185	95.5	110	168	107
AM2 1250/1600N						99.5	199	209	99.5	199	269	107.5		205	

mm	P6	R	R1	R2	R4	R5	ØT	ØT4	(Ue)
AM2 100/160/250N/H/L	88	14.5	29	54	108	143	6	22	⩽ 32
AM2 400/630N/H/L	112	31.5	63	71.5	143	188	6	32	⩽ 32
AM2 1250/1600N							6.5		

* P4=126 is suitable for AM2 250N/H/L

AM3 Series Moulded Case Circuit Breaker

AM3-125L/3P

1. Application

AM3 series moulded case circuit breaker , it's applicable circuit of AC 50/60Hz,rated insulation voltage 690V(AM3-125 500V),rated operating voltage AC 690V or below ,rated operating current 12.5-1600A, for distribute energy of electric and infrequent making and breaking circuit in normal condition. The circuit-breakers are provided with the function of the protection against overload and short circuit and under-voltage. The circuit breakers comply with standard of IEC60947-2.The circuit-breakers are double insulating (Inm=250A or above), the control circuit of the accessories is set apart with the main circuit , and doesn't need to open the cover of the circuit breaker when install the accessories.

AM3-250L/3P

AM3-250L

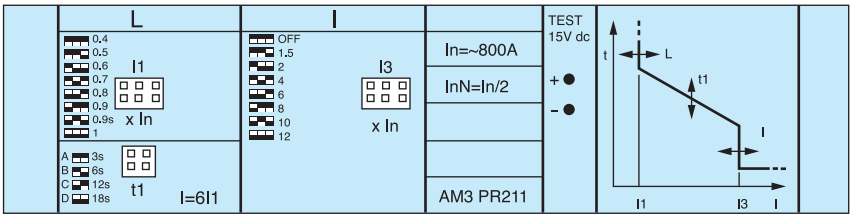
AM3-400L

2. Specification

Table 1

Type	Pole number	Rated insulating voltage (V)	Rated operating voltage (V)	Ultimate short circuit breaking capacity Icu(kA)		Rated short-circuit service breaking capacity Ics(%Icu)	Utilization category
				AC380V (400)	AC660V (690)		
AM3-125L	1,2, 3,4	500	500	25	-	50%	A
AM3-160L	3, 4	690	690 and below	35	8	75%	
AM3-160M				50	10	75%	
AM3-250L		800		35	14	100%	
AM3-250M				65	18	75%	
AM3-250H				85	20	75%	
AM3-400L				35	18	100%	
AM3-400M				65	22	100%	
AM3-400H				100	30	75%	
AM3-630L				35	20	100%	
AM3-630M				50	22	100%	
AM3-630H				65	25	100%	
AM3-800L				35	20	100%	
AM3-800M				50	22	100%	
AM3-800H				65	25	100%	
AM3-1250L	3			50	20	100%	
AM3-1600L							

3. Main Technical Parameter of Trip Units (See Table 2)



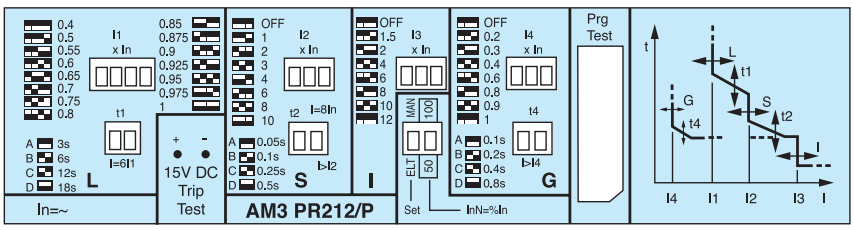
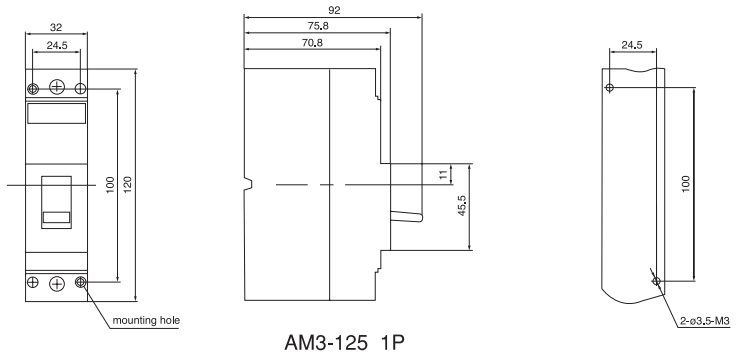


Table 2

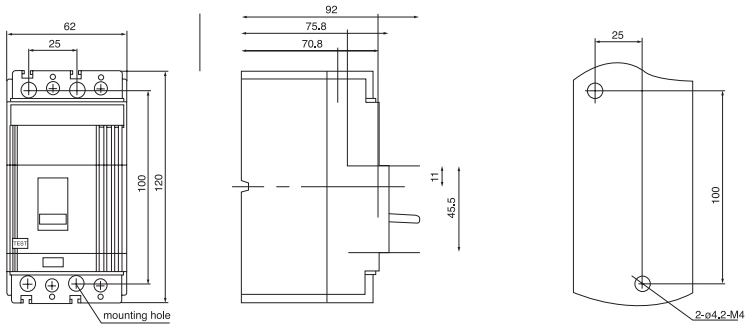
Type	Thermal magnetic release		Electronic release	
	Rated current In(A)	Note	Rated current In(A)	Note
AM3-125	12.5,16,20,25,32,40, 50,63,80,100,125	T fixed M fixed	-	
AM3-160	16,20,25,32,40,50, 63,80,100,125,160	T adjustable (0.7~1In) M fixed	-	
AM3-250	100,125,160,180, 225,250	T adjustable (0.7~1In) M fixed	-	
AM3-400	225,250,315, 350,400	T fixed or adjustable (0.7~1In) M fixed	320,400	I1=0.4…1 × In AM3 PR211(L-LI) I1=0.4…1 × In AM3 PR212(LSI-LSIG) Tripping between 1.05…1.3 × I1 (IEC60947-2) I²t=constant (**Long-time overload protection**) I2=1-2-3-4-6-8-10 × In t2=0.05s, 0.1s, 0.25s, 0.5s adjustable (**Short-circuit short time delay protection**) I3=1.5-2-4-6-8-10-12 × In (**Instantaneous short-circuit protection**) I4=0.2-0.3-0.4-0.6-0.8-0.9-1 × In t4= 0.1s, 0.2s, 0.4s, 0.8s adjustable (**Earth fault protection**)
AM3-630	400,500,630	T fixed M fixed	630	
AM3-800	630,700,800	T fixed M fixed	800	
AM3-1250	-	-	800,1000, 1250	
AM3-1600	-	-	1000,1250, 1600	

Note: T-thermal M-magnetic L-long time S-short time relay I-instantaneous G-earth fault
AM3-125/160 In=12.5,16,20,32,40 magnetic protection that is fixed at 500A.

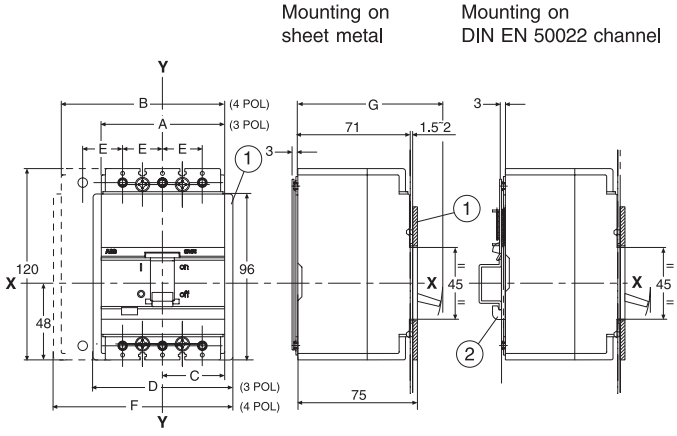
4. Outline and Installation Dimension



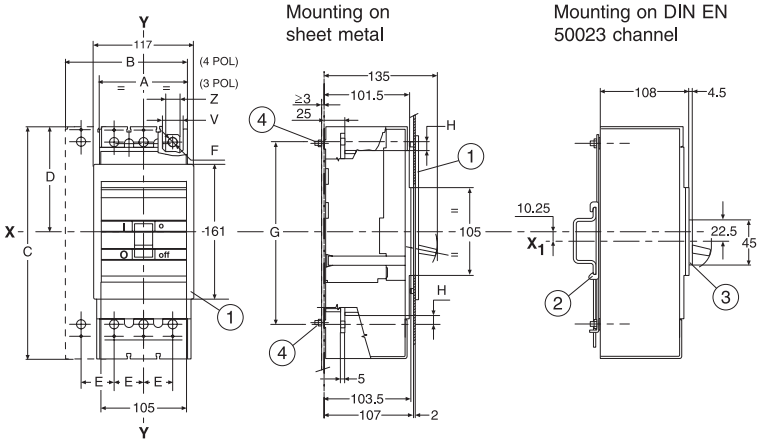
AM3-125 1P



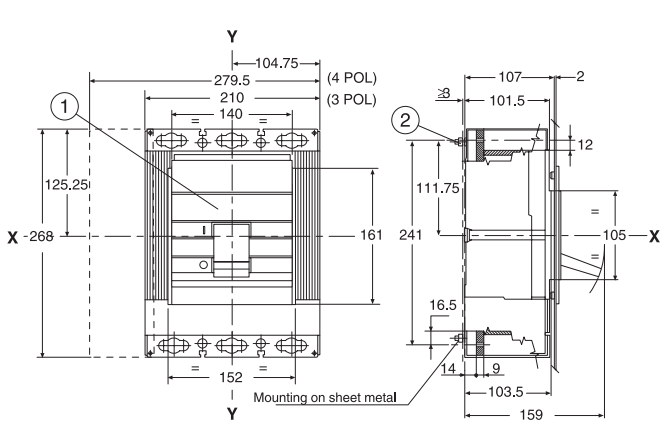
AM3-125 2P



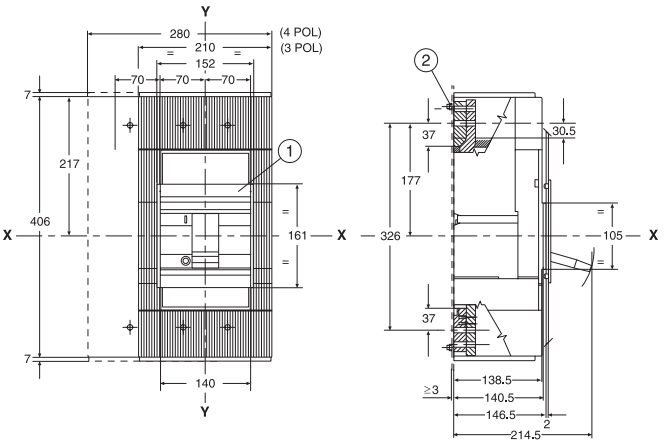
	A	B	C	D	E	F	G
AM3-125	78	103	39	91	25	116	91
AM3-160	90	120	45	103	30	133	93



	A	B	C	D	E	F	G	H
AM3-250	105	140	170	87.25	35	ø8	143	10
AM3-400	140	183.75	254	125.25	143.75	ø10	218	12



AM3-630/AM3-800



AM3-1250/AM3-1600

AW45 Intelligent Circuit Breaker

1. Application

AW45-2000

AW45 series intelligent circuit breaker (hereinafter referred to as breaker) is suitable for the circuit of AC 50/60Hz with rated voltage 400V, 690V and rated current up to 6300A .It is mainly used to distribute electric energy and protect circuit and power supply equipment from overload, under-voltage short-circuit ,and single-phase earthing .With intelligent and selective protection functions, the breaker can improve the reliability of power supply, and avoid unnecessary power failure . The breaker is applicable for power stations, factories , mines(for 690V) and modern high-building, especially for the distribution system of intelligent building.

The breaker conforms to IEC60947-2. The whole series have past CCC certification and CE certification.

2. Environment Conditions for Operation

Temperature condition: -5℃~+40℃; the average value within 24h not exceed +35℃.

Elevation: altitude of installation place shall not exceed 2000m.

Atmosphere condition: relative humidity at +40℃shall not exceed 50%. Higher humidity is permissible at lower temperature condition. When the higher monthly average relative humidity is 90% in the humiddest month , the lowest monthly average temperature of this month is +25℃. And consider the influence of dew on product surface due to temperature changes.

Pollution grade: gradeIII.

The breaker should be installed according to the requirement on the instruction manual: the vertical inclination degree shall not exceed 5°.

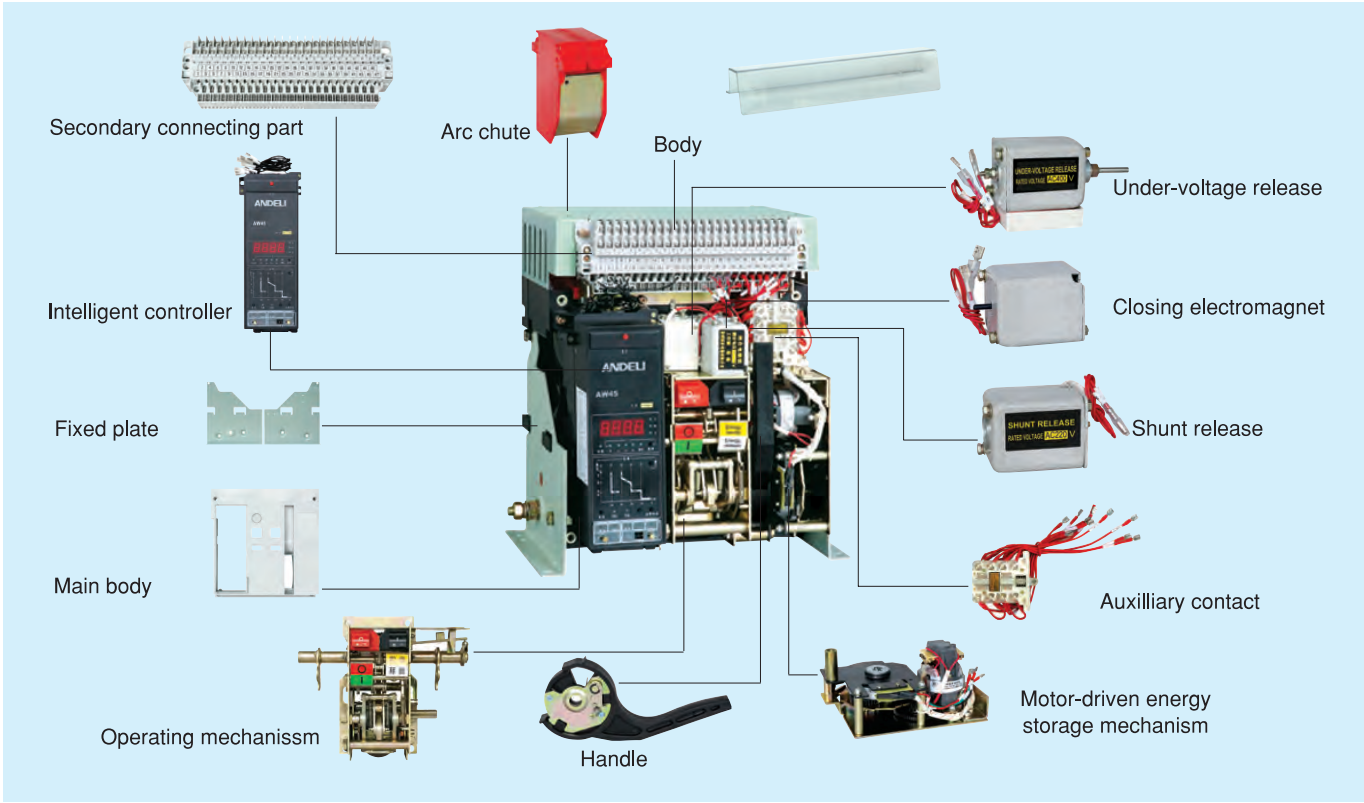
AW45-3200

3. Specification

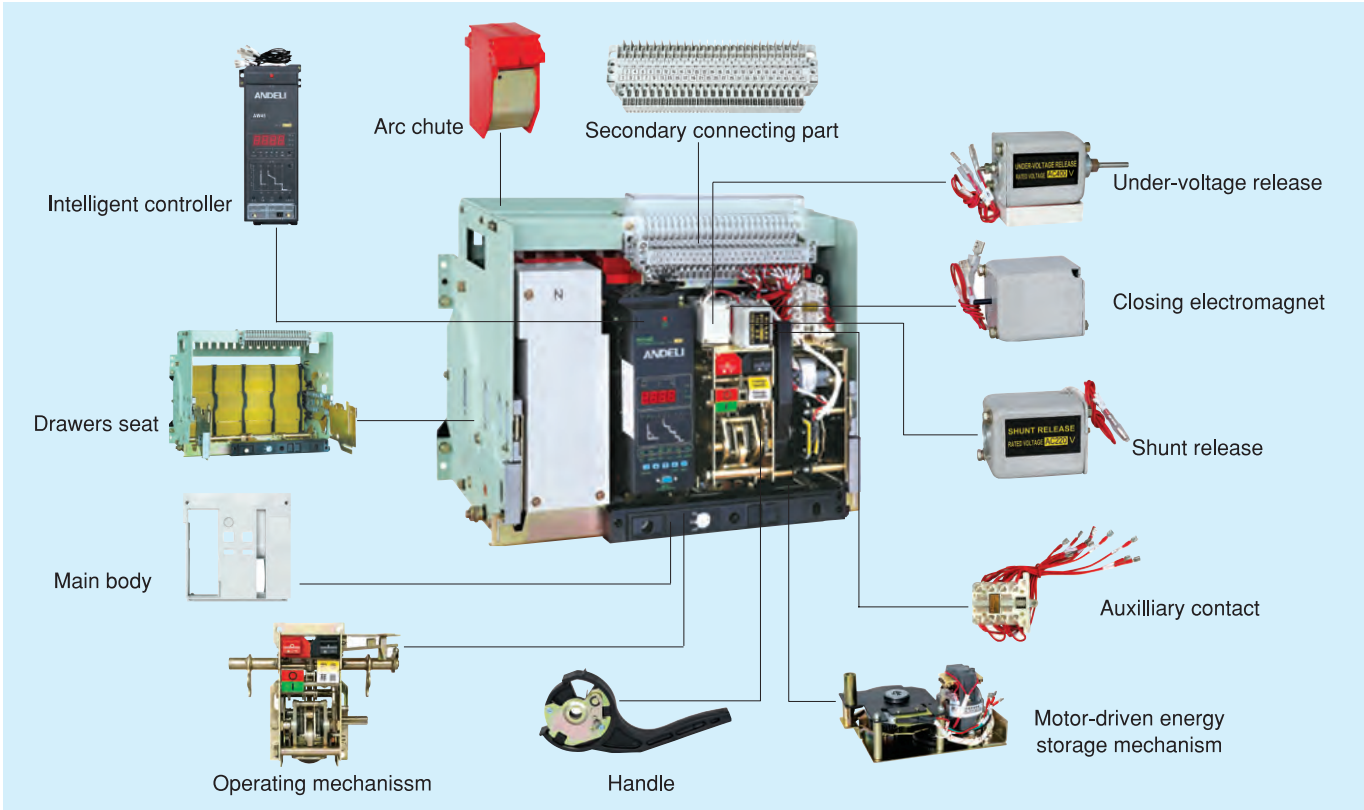
Type		AW45-2000	AW45-3200	AW45-4000	AW45-6300
Frame rated current Inm (A)		2000	3200	4000	6300
Number of poles		3,4	3,4	3,4	3,4
Rated current In (A)		630,800,1000, 1250,1600,2000	2000,2500, 3200	2000,2500, 3200,4000	4000,5000, 6300
Icu (kA)	400V	80	100	100	120
	690V	50	65	65	80
Ics = Icw (kA)	400V	50	80	80	100
	690V	40	50	50	65
Rated current at N-pole In (A)		50%In, 100%In			
Inherent making & breaking time		23-32ms			
Operational performance (operations)	Electric life	500			
	Mechanical life	Maintenance-free2500 Maintenance 10000			
Mounting mode		Fixed withdrawable			
Arcing distance(mm)		0			
Intelligent controller		Standard type(M) telecommunication type (H)			

AW45-6300

Fixed Type Structure Explosion



Drawer Type Structure Explosion



AMQ5 Dual Power Automatic Transfer Switch

AMQ5-100/4P

1. Application

AMQ5 Series automatic transfer switch (transfer switch) is developed successfully with the help of the most advanced ATS technology in the world. This kind of transfer switch and intelligent display mated with it are mainly applied in the occasions required uninterrupted power supply like building, posts and telecommunications, mine industry, shipping and military industry. Under the necessary trend of urban power service increasing, it can meet the higher requirements of the reliable power service. This product has many features like reliable performance, small volume and simple operating etc.

2. Main function

With safe and reliable interlocking function, when the breaker is under closing state, the breaker cannot be glugged in or drawn out, you must open the breaker first to plug in or pull out. With function of reliable making and breaking main circuit and secondary circuit, besides, the device possesses self-locking function.

When you draw out the breaker, the device has safe insulating isolation (your finger will not touch with the charged parts).

The breaker can be mounted with various rotating manual operating mechanism and motor operating mechanism.

AMQ5-250/4P

3. Specification

Type				AMQ5										
Type AMQ5(Three-step type)				AMQ5-100			AMQ5-250			AMQ5-400			AMQ5-630	AMQ5-800
Rated voltage				AC690V DC125V										
Rated current				100A			250A			400A			630A	800A
Number of cutting in				Double cut-in										
Connecting * mode				In front of panel and at back of panel (Non standard * product)										
Operating current	DC110V (A)			3	3	4	3	4	5	5	5	7	6	6	6
	AC100V/110V (A)			3	3	4	3	4	5	5	5	7	6	6	6
	AC200V/220V (A)			1.5	1.5	2	1.5	2	2.5	2.5	2.5	3.5	3	3	3
Trip current	DC110V			1A						1.5A			2A	
	AC100V/110V			1A						1.5A			2A	
	AC200V/220V			0.5A						0.7A			1A	
Performance	Short-time withstanding current			5kA			10kA			12kA			15kA	
	Rated conditional short-circuit current			12.5kA			25kA			30kA			37.5kA	
	Making and breaking capacity			AC-33B(10Ie making 8Ie opening) cosØ=0.35 DC-33B 1.1Ie making 1.1Ie opening L/R=1ms										
	Changeover time	A power side	Cut in	55ms			55ms			60ms			100ms	
			Cut off	20ms			20ms			25ms			30ms	
		B power side	Cut in	80ms			80ms			90ms			135ms	
			Cut off	20ms			20ms			25ms			30ms	
	Service life			With 2500 times of electric life with 10000 times(120 times/hour) of mechanical life										
	Operation circle time			120 time/hour										
Auxiliary switch				A source 1C B source 1C switch capacity AC100V5A AC200V2.5A DC100V0.5A										
Accessory				Protective cover breakthough absorber manual handle										

Type				AMQ5													
Tyep AMQ5 (Three-step type)				AMQ5-1000			AMQ5-1250			AMQ5-1600			AMQ5-2000			AMQ5-3150			AMQ5-4000
Rated voltage				AC690V DC125V									AC690V						
Rated current				1000A			1250A			1600A			2000A			3150A			4000A
Number of cutting in				Double cut-in															
Connecting * mode				At the back of panel in the front of panel									At the back of panel						
Number of pole				2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P	3P
Weight(kg)				30(40)	39(54)	49(64)	31(45)	40(56)	51(66)	36(50)	47(62)	59(74)	95	115	135	110	150	190	207
Operating current	DC110V (A)			6	6	8	6	6	8	7	8	9	8	10	12	10	12	14	16
	AC100V/110V (A)			6	6	8	6	6	8	7	8	9	8	10	12	10	12	14	16
	AC200V/220V (A)			3	3	4	3	3	4	3.5	4	4.5	4	5	6	7	8	7	8
Trip current	DC110V			2A									4A						
	AC100V/110V			2A									4A						
	AC200V/220V			1A									1A						
Performance	Short-time withstanding current			22kA						25kA			35kA			50kA			50kA
	Rated conditional short-circuit current			50kA						55kA			55kA			80kA			100kA
	Making and breaking capacity			AC-33B(10Ie making 8Ie opening) cosØ=0.35 DC-33B 1.1Ie making 1.1Ie openingL/R=1ms									AC2(Ie making Ie opening) cosØ=0.65						
	Changeover time	A power side	Cut in	115ms						115ms			180ms			140ms			200ms(190)
			Cut off	25ms						25ms			25ms			30ms			30ms(30)
		B power side	Cut in	145ms						150ms			220ms			190ms			220ms(240)
			Cut off	25ms						25ms			25ms			30ms			30ms(30)
	Service life																		
	Operation circle time			120 times/hour									30 times/hour						
Auxiliary switch				A source 1C B source 1C switch capacity AC100V5A AC200V2.5A DC100V0.5A															
Accessory				Protective cover breakthough absorber manual handle															

Note: At DC operating occasion, the construction of circuit is almost same. Please operate according to DC operating order.

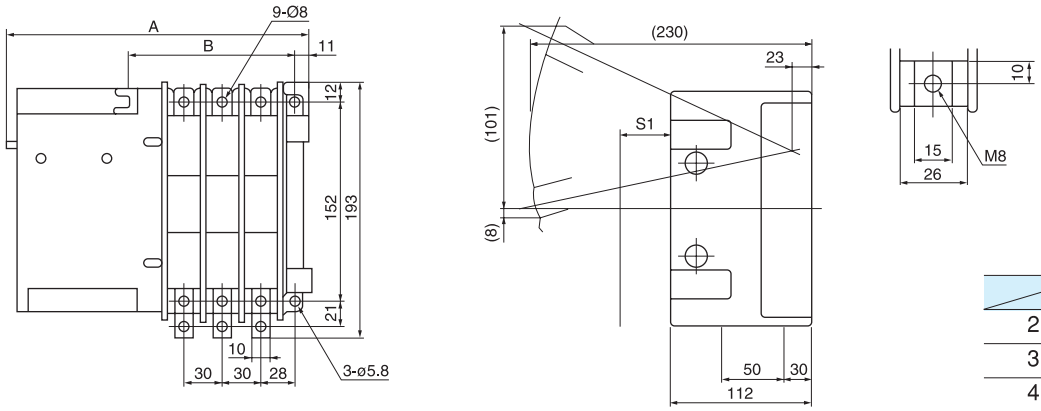
1. The weight in the bracket is stuck on the product surface.
2. The capacity of N pole contact is 2000A for product with 4000A and 4P.

Main technical index of AMQ5 with two steps

Type				AMQ5								
Tyep AMQ5 (Two-step type)				AMQ5-125			AMQ5-250			AMQ5-400		
Rated voltage				AC690V DC125V								
Rated current				40A,63A,100A,125A			160A,200A,225A,250A			350A,400A		
Number of cutting in				Double cut-in								
Connecting * mode				In front of panel and at back of panel								
Operating current	DC110V (A)			3	3	4	3	4	5	5	5	7
	AC100V/110V (A)			3	3	4	3	4	5	5	5	7
	AC200V/220V (A)			1.5	1.5	2	1.5	2	2.5	2.5	2.5	3.5
Trip current	DC110V			1A						1.5A		
	AC100V/110V			1A						1.5A		
	AC200V/220V			0.5A						0.7A		
Performance	Short-time withstanding current			5kA			10kA			12kA		
	Rated conditional short-circuit current			12.5kA			25kA			30kA		
	Making and breaking capacity			AC-33B(10Ie making 8Ie opening) cosØ=0.35 DC-33B 1.1Ie making 1.1Ie openingL/R=1ms								
	Changeover time	A power side	Cut in	55ms			55ms			60ms		
			Cut off	20ms			20ms			25ms		
		B power side	Cut in	80ms			80ms			90ms		
			Cut off	20ms			20ms			25ms		
	Service life											
	Operation circle time			120 times/hour								
Auxiliary switch				A source 1C B source 1C switch capacity AC100V5A AC200V2.5A DC100V0.5A								
Accessory												

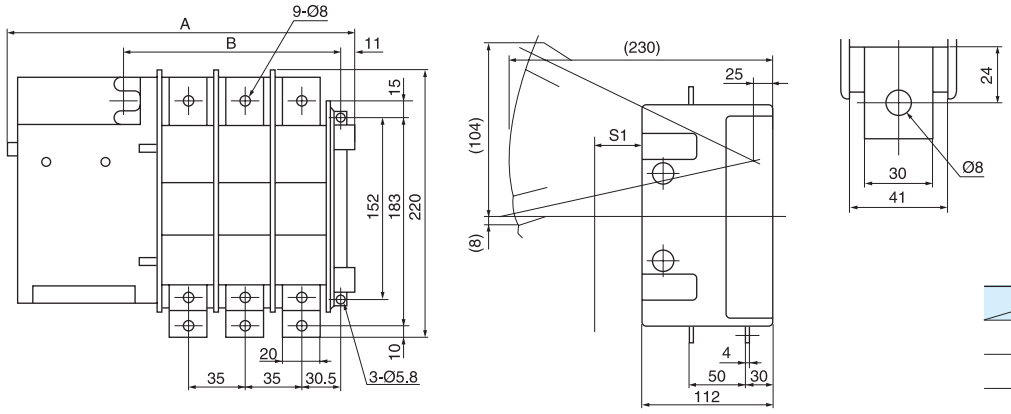
Note: The occasion for DC operation has the same circuit, only little different. Please operate it according to Dc operation direction.
The two-step type belongs to an economic type, and
The outline size of 100A and 125A grades has the same size with three-step.
The outline size of 160A,200A,225A and 250A grades has the same sie with three-step.
The outline size of 350A amd 400A grades has the same size with three-step.

4. Outline and Installation Dimensions



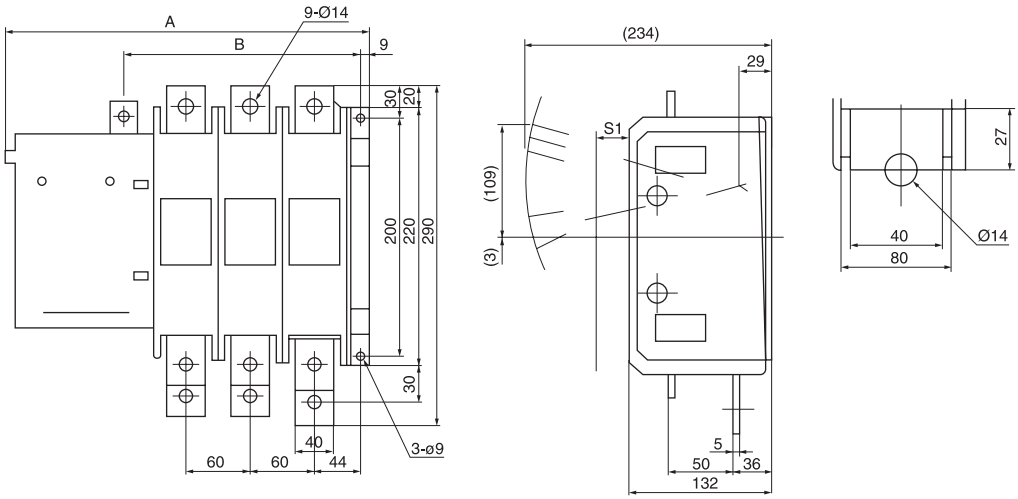
	A	B
2P	209	103
3P	239	133
4P	269	163

AMQ5-100A



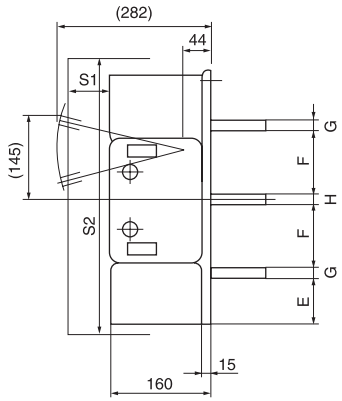
	A	B
2P	219	113
3P	254	148
4P	289	183

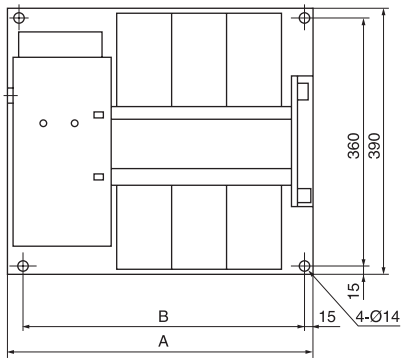
AMQ5-250A



	A	B
2P	280	164
3P	340	224
4P	400	284

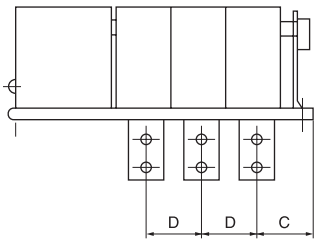
AMQ5-400A

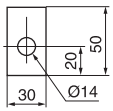


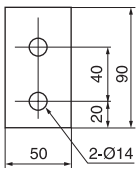


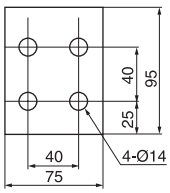
S1: 45mm(400V), 90mm(690V)
A2: 430mm(400V), 450mm(690V)

Type		630A,800A	1000A,1250A	1600A
A	2P	340	370	410
	3P	405	450	510
	4P	470	530	610
B	2P	310	340	380
	3P	375	420	480
	4P	440	500	580
C		80	88	97.5
D		65	80	100
E		60	60	57
F			117.5	
G		10/15	12/15	15
H			15	







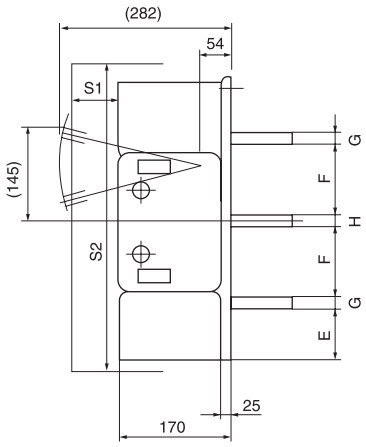


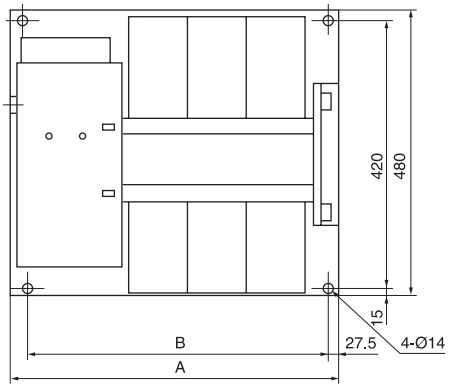
630A
800A

1000A
1250A

1600A

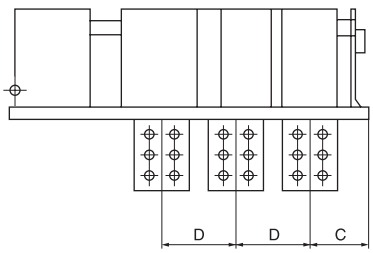
AMQ5-630~1600A

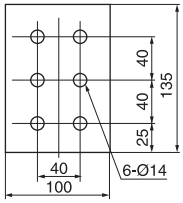


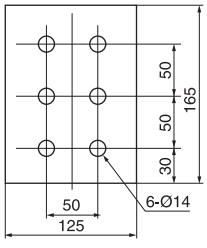


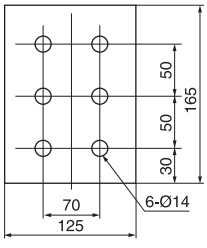
S1: 50mm(400V), 100mm(690V)
A2: 560mm(400V), 600mm(690V)

Type		2000A	2500A	3150A	4000A
A	2P	540	540	640	
	3P	650	650	915	915
	4P	845	850	1155	1155
B	2P	500	500	600	
	3P	595	585	860	860
	4P	790	790	1100	1100
C		130	130	135	135
D		135	135	240	240
E		75	75	75	75
F		117.5	117.5	117.5	117.5
G		15	20	20	20
H		15	20	20	20









2000A

3150A

4000A

AMQ5-2000~4000A

GV Motor Protection Circuit Breaker

GV series motor protection circuit breaker are mainly used fo the overload and short circuit protection of the motor in AC 50/60Hz, up to 660V, 0.1-80A power circuit, as a full-voltage starter to start and cut off the motor, under the AC3 load or for the overload and short circuit protection of the circuit and power equipment in the power distribution network.

GV2

GV2-N

GV3

GV3-N

Specification

Type	Standard power ratings of 3-phase motors 50/60Hz in category AC-3						Current setting range (A)
	220V	380V	415V	440V	500V	660V	
	kW	kW	kW	kW	kW	kW	
GV1-M01	--	--	--	--	--	--	0.1-0.16
GV1-M02	--	--	--	--	--	--	0.16-0.25
GV1-M03	--	--	--	--	--	--	0.25-04
GV1-M04	--	--	--	--	--	0.37	0.4-0.63
GV1-M05	--	--	--	0.37	0.37	0.55	0.63-1
GV1-M06	--	0.37	--	0.55	0.75	1.1	1-1.6
GV1-M07	0.37	0.75	1.1	1.1	1.1	1.5	1.6-2.5
GV1-M08	0.75	1.5	1.5	1.5	2.2	3	2.5-4
GV1-M10	1.1	2.2	2.2	3	3.7	4	4-6
GV1-M14	2.2	4	4	4	5.5	7.5	6-10
GV1-M20	4	7.5	7.5	7.5	10	11	10-16
GV1-M21	5.5	10	9	9	11	15	16-20
GV1-M22	5.5	11	11	11	15	18.5	20-25
GV2-M01	--	--	--	--	--	--	0.1-0.16
GV2-M02	--	--	--	--	--	--	0.16-0.25
GV2-M03	--	--	--	--	--	--	0.25-0.4
GV2-M04	--	--	--	--	--	0.37	0.4-0.63
GV2-M05	--	--	--	0.37	0.37	0.55	0.63-1
GV2-M06	--	0.37	--	0.55	0.75	1.1	1-1.6
GV2-M07	0.37	0.75	0.75	1.1	1.1	1.5	1.6-2.5
GV2-M08	0.75	1.5	1.5	1.5	2.2	3	2.5-4
GV2-M10	1.1	2.2	2.2	3	3.7	4	4-6.3
GV2-M14	2.2	4	4	4	5.5	7.5	6-10
GV2-M16	3	5.5	5.5	7.5	7.5	9	9-14
GV2-M20	4	7.5	9	9	9	11	13-18
GV2-M21	5.5	11	11	11	11	15	17-23
GV2-M22	5.5	11	11	11	15	18.5	20-25
GV2-M32	7.5	15	15	15	18.5	26	24-32
GV3-M06	--	0.37	--	0.55	0.75	1.1	1-1.6
GV3-M07	0.37	0.75	1.1	1.1	1.1	1.5	1.6-2.5
GV3-M08	0.75	1.5	1.5	1.5	2.2	3	2.5-4
GV3-M10	1.1	2.2	2.2	3	3.7	4	4-6
GV3-M14	2.2	4	4	4	5.5	7.5	6-10
GV3-M20	4	7.5	7.5	7.5	10	11	10-16
GV3-M25	5.5	11	11	11	15	18.5	16-25
GV3-M40	11	18.5	22	22	25	33	25-40
GV3-M63	15	30	33	33	40	55	40-63
GV3-M80	22	40	45	45	55	63	56-80