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COMPANY PROFILE

Huanyu High-Tech Co., Ltd. is a high tech enterprise focusing on the development, manufacturing and marketing of low-voltage electrical components. Established on Zhejiang High Tech. Co, Ltd of Huanyu Group in early 2021, we are a joint venture of Huanyu Group, a large national conglomerate company, and Eaton Group, a global power management company.

Our products are widely used in many applications including power grids, network communications, new energy, metallurgy, chemical industry, transportation, manufacturing and construction, serving various well-known customers such as the State Grid, China Southern Power Grid, Evergrande Real Estate, Vanke, Country Garden, Poly Real Estate, R&F Properties, the Three Gorges of the Yangtze River, Daqing Oilfield, Jiangsu Power Grid, Xi'an Jiaotong University, Guangzhou Baiyun Airport, Shanghai Disney, China FAW, China Railway, and China Railway Construction. Now we have 10+ integrated service centers, 30+ sales offices, 600+ terminal image specialty shops, and over 800 sales outlets in mainland China.

We have been awarded the National Contract-honoring and Trustworthy Enterprise, National Customer-satisfied Enterprise, National High-Tech Enterprise, Zhejiang Well-known Trade Name, Zhejiang Green Enterprise, Zhejiang Major Taxpayer, and Wenzhou

Mayor Quality Award. In addition, we have been certified with ISO9001 Quality Management System, ISO14001 Environmental Management System and ISO45001 Occupational Health and Safety Management System, and passed more than 10 international certification including the KEMA standard of Netherlands, UL standard of the United States, CE standard of the European Union, TÜV standard of Germany, FI standard of France, and CB system. We have a national post-doctoral research station, a provincial technology research institute, and a nationally accredited CNAS laboratory. We also have more than 100 national invention patents and utility model patents, and has implemented the National Torch Plan and major provincial scientific research and development projects. Our products have been rated as China Famous Brand Products, National Customer-satisfied Products, and Zhejiang Famous Brand Products. Besides, we have been awarded Zhejiang Manufacturing Quality Certificate and have the right to use Zhejiang "Pin", a word mark meaning quality.

Committed to smart electric to make life better, we will continue to focus on product innovation, talent development, and smart manufacturing, to build a modernized global electrical enterprise.

Safe Exploring, Leading Smart Future



Industrial level design
Quality products



Advanced technical platform
Superior performance,
safe and reliable



Comprehensive product series
Meet different segment
market needs



More compact size
Reduce mounting space
within cabinets



Up to 160A/320A frame size
More reasonable



Complete accessories
Powerful extension functions



Multiple breaking capacity
Up to 100kA



Rated voltage up to 690V
Meet industry needs



Use in severe application
environments Ambient
temperature from -35°C to +70°C



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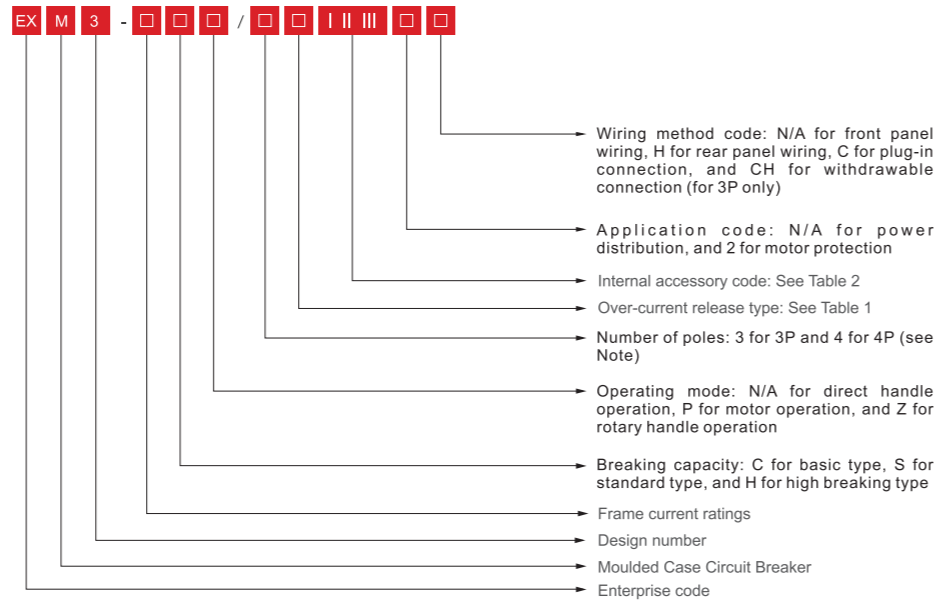


General

The EXM3 moulded case circuit breakers (hereafter as the MCCBs) are suitable for use in electric systems of AC 50Hz/60Hz, with the rated insulation voltage of up to 1000V (800V for 125A and below frames) and rated current up to 800A, to distribute electrical energy, protect circuits and power equipment from hazards due to overload, short-circuit, under-voltage, and other faults, and control infrequent motor operations. The EXM3 MCCBs offer Type C (basic), Type S (standard), and Type H (high breaking) based on its rated ultimate short-circuit breaking capacity, and feature small size, high breaking capacity, and short arcing distance.

The circuit breakers are in accordance with GB/T 14048.2 and IEC 60947-2 standards.

Product Model Description



Note: For 4P devices, two N-pole types are available

Type A: No over-current release is mounted on N-pole, and N-pole is always on without simultaneous opening/closing with the other three poles

Type B: No over-current is mounted on N-pole, and N-pole can be opened/closed simultaneously with the other three poles (first closed, then open for N-pole)

Table 1. Over-current release type

No.	Name	Description
1	Time delay release	Offer over-current inverse time protection characteristics
2	Instantaneous release	Electromagnetic type release, offering over-current instantaneous protection characteristics
3	Bi-function release	Offers both functions described above

Table 2. Internal accessory code

Inm (A)	I		II		III		Remark
	Code	Description	Code	Description	Code	Description	
63、125 160、250 320	0	N/A	0~2	Numbers of auxiliary contact pairs	0~2	Number of alarm contact pairs	
	1	Shunt release	0~1		0~1		
	2	Under-voltage release	0~1		0~1		
400 630	0	N/A	0~5		0~2		II + III ≤ 7
	1	Shunt release	0~3		0~2		II + III ≤ 5
	2	Under-voltage release	0~3		0~2		II + III ≤ 5
800	3	Shunt and under-voltage release	0~1		0~1		II + III ≤ 2
	0	N/A	0~8		0~3		II + III ≤ 11
	1	Shunt release	0~6		0~3		II + III ≤ 8
	2	Under-voltage release	0~6		0~3		II + III ≤ 8
	3	Shunt and under-voltage release	0~3	0~2	II + III ≤ 5		

Operating Conditions

1.Applicable temperature:

Ambient air temperature: -5°C to +40°C, with the average temperature not exceeding +35°C within 24 hours;

Note: The operating ambient temperature can be extended to -35°C ~ +70°C. For uses in special environments - the ambient temperature exceeds -5°C ~ +40°C, follow the instructions or data specified in the product catalogue and instruction manual, or consult the manufacturer;

2.Altitude: ≤2,000m for mounting site (please consult with the manufacturer when above 2,000m);

3.Atmospheric conditions:

Air relative humidity: ≤ 50% at the maximum temperature of +40°C, and a higher relative humidity is allowed when at a lower temperature;

In the wettest month, the average maximum relative humidity is 90% and the average minimum temperature is +25°C, taking into account the condensation on product surface due to temperature changes;

4.Pollution level: Level 3;

5.Mounting type: III for main circuit;

6.Protection degree: IP30 (wiring terminals excluded)

7.Mounting conditions:

In places with no significant shaking, impulse and vibration;

In a medium with no explosive hazards, containing no gas and dust (including conductive dust) sufficient enough to corrode metals and damage insulation; And in places with no rain/snow impact;

8.Storage and transportation conditions: Temperature: -35°C to +70°C for storage and transportation, with the relative humidity not exceeding 90%;

During transportation, handle with care, no upside down, and avoid severe collisions.

Technical data

1. Technical data

Frame size	EXM3-63			EXM3-125			EXM3-160			EXM3-250			EXM3-320			EXM3-400			EXM3-630			EXM3-800				
Product model	C	S	H	C	S	H	C	S	H	C	S	H	C	S	H	C	S	H	C	S	H	C	S			
Rated current In (A)	10, 16, 20, 25, 30, 32, 40, 50, 60, 63			10, 16, 20, 25, 30, 32, 40, 50, 60, 63, 70, 75, 80, 100, 125			16, 20, 25, 30, 32, 40, 50, 60, 63, 65, 70, 75, 80, 90, 100, 110, 125, 140, 150, 160			100, 125, 140, 150, 160, 170, 175, 180, 200, 225, 250			100, 125, 140, 150, 160, 170, 175, 180, 200, 225, 250, 270, 280, 300, 315, 320			250, 280, 300, 315, 320, 350, 380, 400			250, 280, 300, 315, 320, 350, 380, 400, 450, 500, 550, 600, 630			630, 700, 800				
Number of poles	3P/4P											3P/4P														
Rated insulation voltage Ui (V)	AC800						AC1000						AC1000						AC800							
Rated impulse withstand voltage Uimp (kV)	8						12						12						8							
Arcing distance (mm)	≤50											≤50						≤100								
Rated ultimate/operating short-circuit breaking capacity Icu/Ics (kA)	690V	—	—	—	—	—	—	8/4	8/4	10/5	8/5	8/5	10/5	8/5	8/5	10/5	7.5/7.5	10/7.5	15/10	7.5/7.5	10/7.5	15/10	—	—		
	500V	—	—	—	—	—	—	—	—	30/30	—	—	30/30	—	—	30/30	—	—	36/36	—	—	36/36	—	—		
	400/415V	20/10	25/15	50/36	20/10	25/15	50/36	20/10	36/25	50/36	20/15	36/25	50/36	20/15	36/25	50/36	40/30	50/36	70/50	40/30	50/36	70/50	50/35	70/50		
	240V	30/20	40/30	75/50	30/20	40/30	75/50	40/20	50/30	75/50	40/30	50/30	75/50	40/30	50/30	75/50	50/50	75/50	100/75	50/50	75/50	100/75	—	—		
Mechanical life (operations)	Maintenance free	20000											20000						10000						8000	
	Maintenance free	40000											40000						20000						10000	
Electrical life (operations)	AC415V	10000											10000						8000						5000	

2. Current protection characteristics: Refer to Table 4 for electrical distribution and Table 5 for motor protection use.

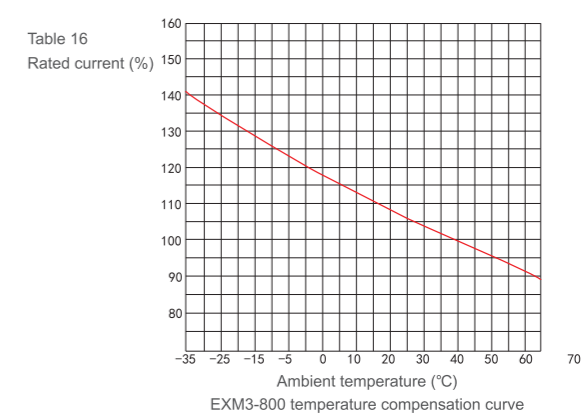
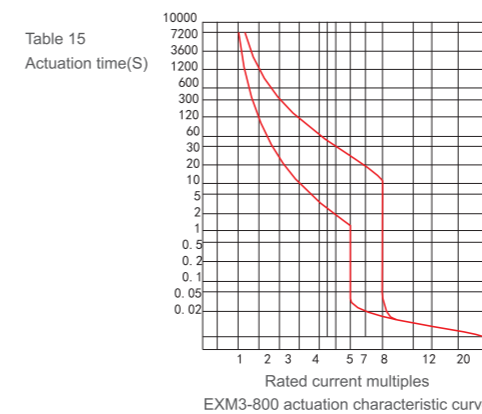
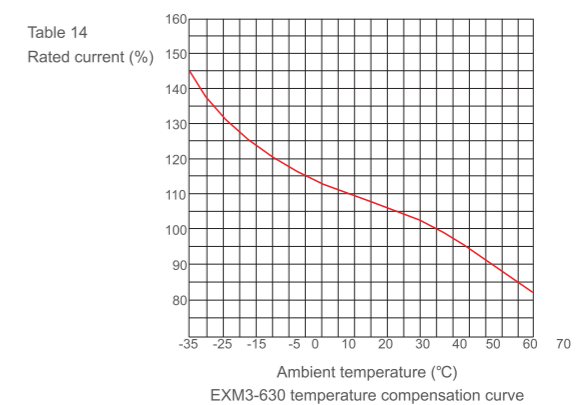
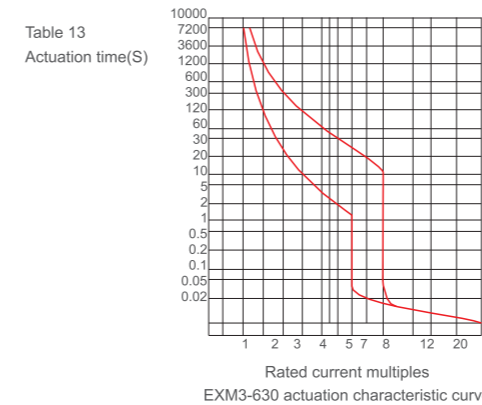
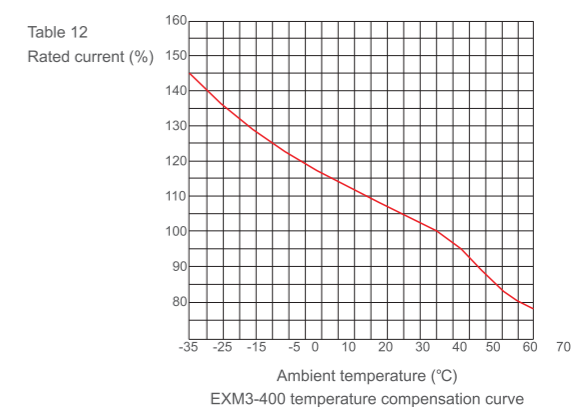
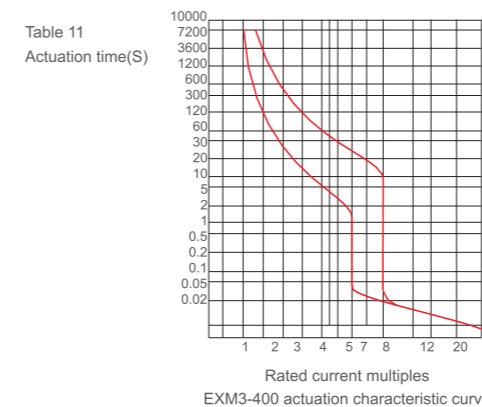
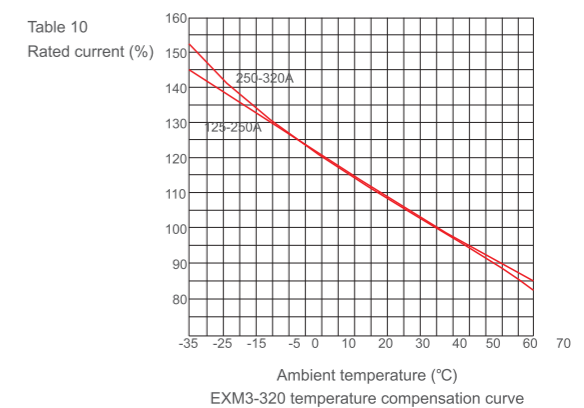
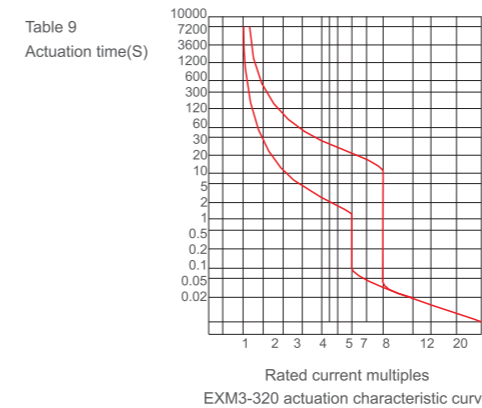
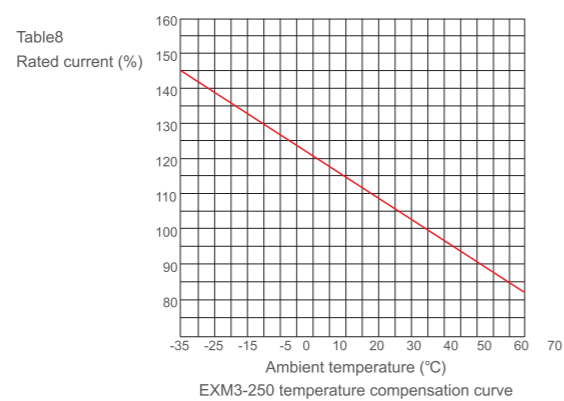
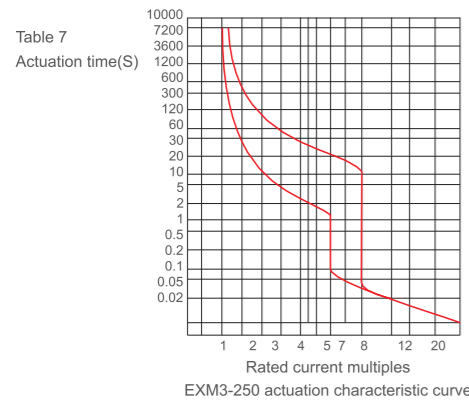
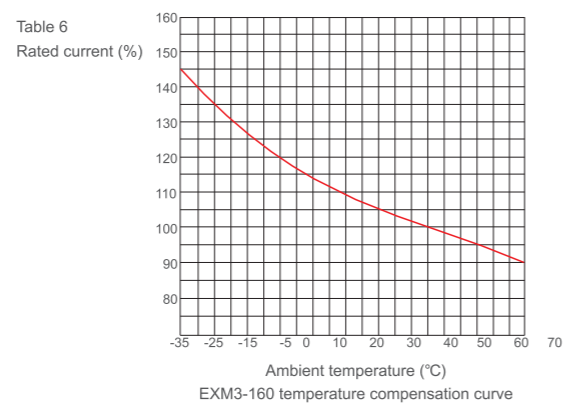
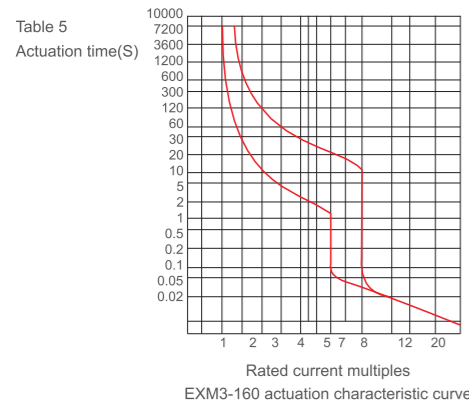
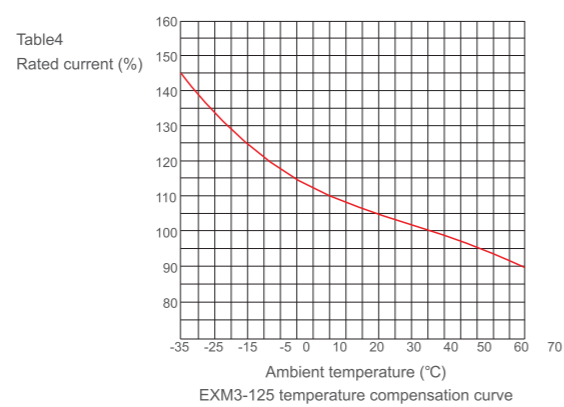
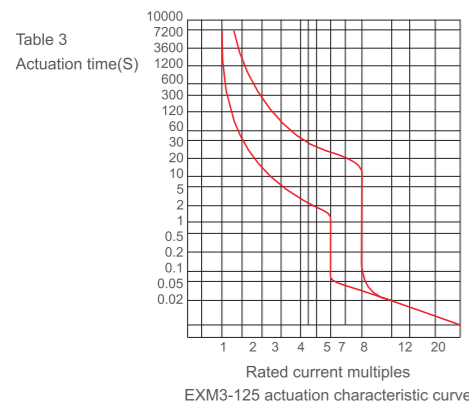
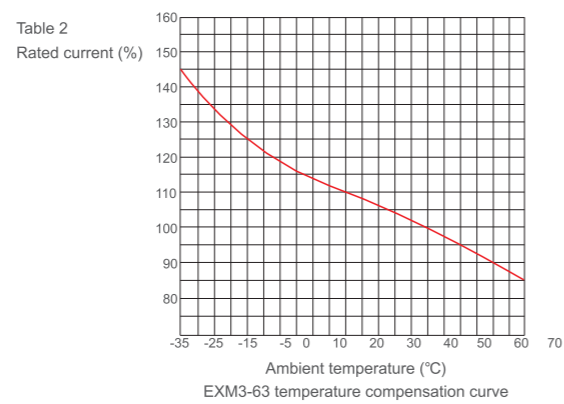
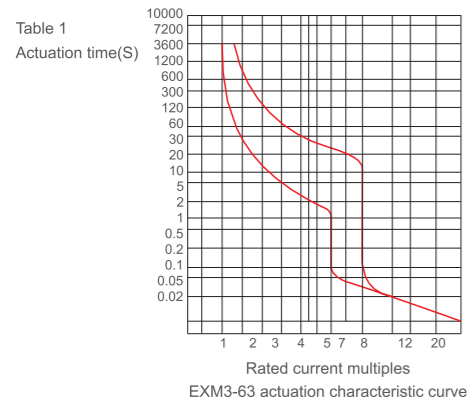
Table 4. Over-current protection characteristics of circuit breakers for electrical distribution use

Rated current In (A)	Thermal release (ambient temperature at +40°C)		Electromagnetic release actuation current (A) (See Note)
	1.05In no actuation time (h) (Start state: cold state)	1.30In actuation time (h) (Start state: thermal state)	
≤63	>1	≤1	(10±2)In
>63	>2	≤2	

Table 5. Over-current protection characteristics of circuit breakers with motor protection use

Rated current In (A)	Thermal release (ambient temperature at +40°C)				Electromagnetic release actuation current (A) (See Note)
	1.0In no actuation time (h) (Start state: cold state)	1.0In no actuation time (h) (Start state: cold state)	1.2In for no actuation time (h) (Start state: thermal state)	1.5In actuation time (min) (Start state: thermal state)	
In≤63	>2	≤2	≤2	2<Tp≤10	(12±2 .4)In
63<In≤250			≤4	4<Tp≤10	
250<In≤800			≤8	6<Tp≤20	

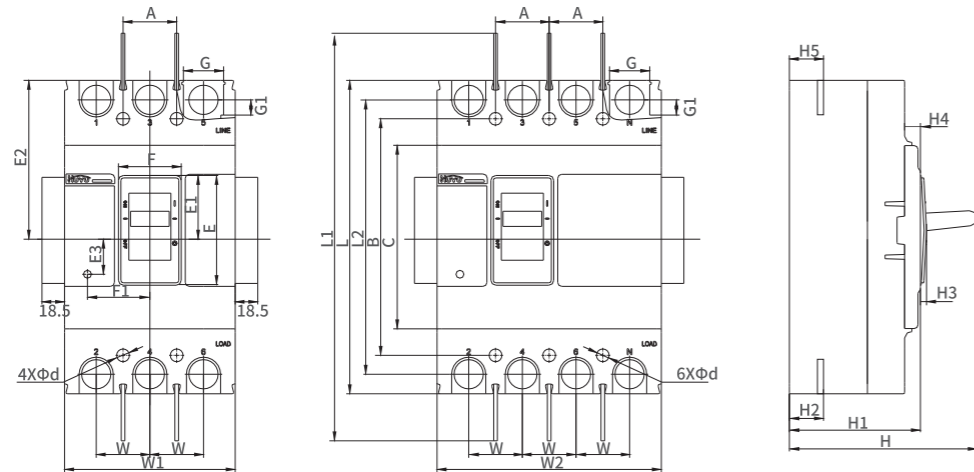
3. See Figure 1 to Figure 14 for inverse time characteristic curves and temperature correction curves



Overall and mounting dimensions

1. See Figure 15 and Table 6 for outlines and mounting dimensions of EXM3-63, 125, 160, 250, 320, 400, 630 and 800 with front panel wiring type

Figure 15



2. See Figure 16 to 19 and Table 7 for outlines and mounting dimensions of EXM3 series circuit breakers rear panel wiring, plug-in type

Figure 16

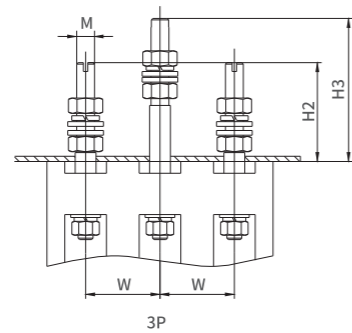


Figure 17

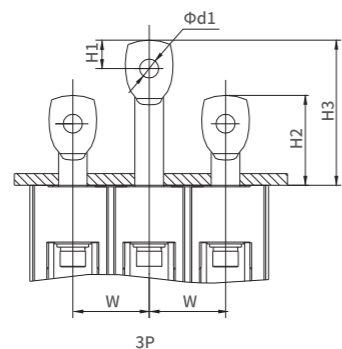


Figure 18. Rear panel wiring cutout diagram

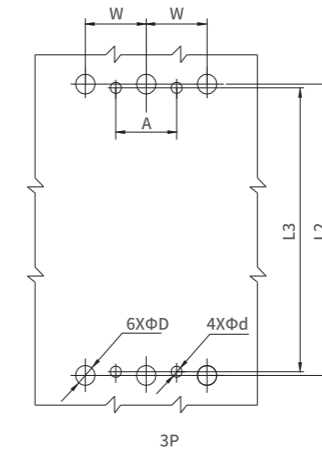
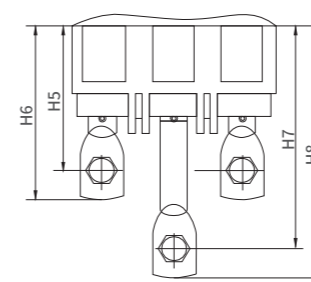
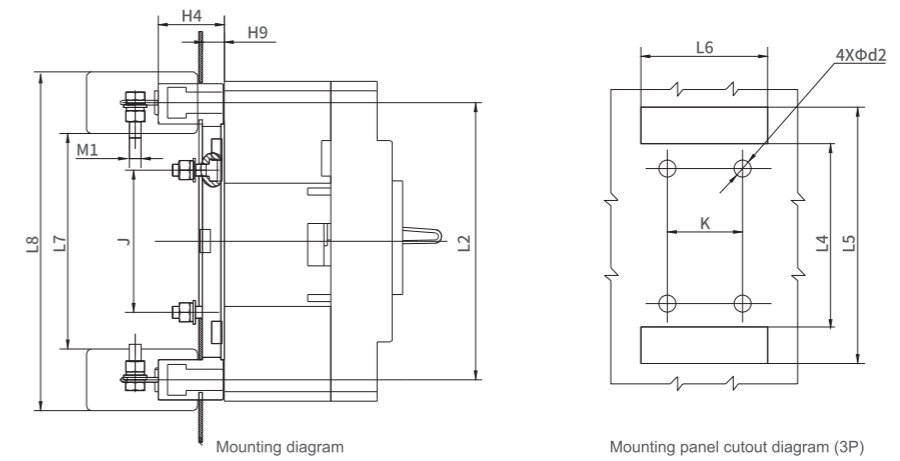
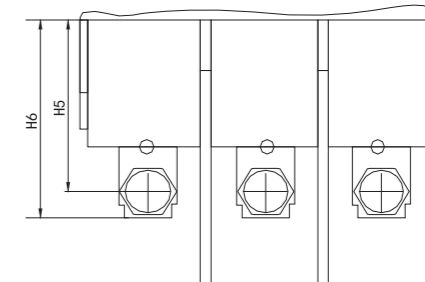


Figure 19. EXM3 series plug-in type outline and mounting dimensions



EXM3-160, 250, 320



EXM3-400, 630, 800

Table 6. Outlines and mounting dimensions for EXM3-63, 125, 160, 250, 320, 400, 630 and 800 front panel wiring type

Category	Dimension code	Product model				
		EXM3-63 EXM3-125	EXM3-160	EXM3-250 EXM3-320	EXM3-400 EXM3-630	EXM3-800
Outline dimensions (mm)	C	83.5	99.5	103	150	211
	E	52.5	48.5	51.5	90	90
	E1	28	26.5	32.5	50.5	44.5
	E2	65	77.5	82.5	128.5	137.5
	E3	20	17	15.5	30.5	30.5
	F	23	27.5	34.8	51.5	51
	F1	19	37	43	51	78.5
	G	17.5	17.5	24.5	33	46
	G1	9.5	7.5	11.5	12.5	14
	H	90.5	91	92.5	155	155
	H1	72	72.5	72.5	107.5	107
	H2	24	23.5	25	29	46(44)
	H3	3	3	4	5	5
	H4	12	12	11.5	13	13
	H5	24	23.5	25	29	46(44)
	L	130	155	165	257	275
	L1	228	253	360	477	487
	L2	115	134	145	225	243
W	25	30	35	44	70	
W1	77	90	105	140	210	
W2	102	120	140	184	280	
Mounting dimensions (mm)	A	25	30	35	44	70
	B	111	132	126	194	243
	Φd	4	5	5	6.5	7

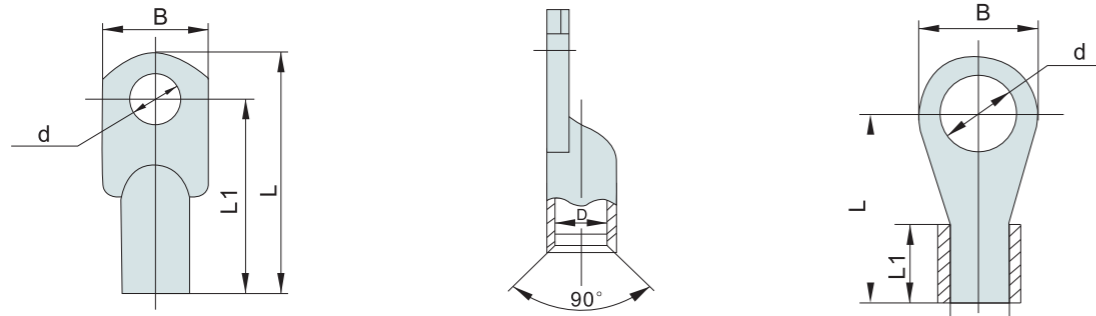
Table 7. Outlines and mounting dimensions for rear panel wiring and plug-in types

Category	Dimension code	Product model			
		EXM3-160	EXM3-250 EXM3-320	EXM3-400 EXM3-630	EXM3-800
Outline dimensions (mm)	W	30	35	44	70
	H1	/	/	23	13.5
	H2	54.5	71.5	86	/
	H3	103	108	130	109
	H4	39	47.5	49	70
	H5	/	76	91	/
	H6	76	94	110	/
	H7	/	132.5	156	136.5
	H8	137	149.5	165	151
	H9	11	13.5	20	17
	M	10	/	/	/
	Φd1	/	Φ10	Φ13	Φ13
	M1	/	M10	M12	M12
	Mounting dimensions (mm)	Φd2	5	5	9
ΦD		10	13	34	48
L2		134	145	226	243
L3		132	126	195	243
L4		98	94	168	185
L5		165	181	279	299
L6		3P:92	3P:107	3P:146	3P:212
L7		/	/	157	/
L8		/	/	288	/
K		3P:60	3P:70	3P:44	3P:140
J		68	70	133	143
A		30	35	44	70
Φd	5	5	6.5	7	

3、Derating is required for special specifications of EXM3 series circuit breakers rear panel wiring and plug-in types. Please see Table 8 for derating-use current comparison table.

Table 8. Derating-use current comparison table for rear panel wiring and plug-in types

Product model	Rated current (A)	Derating current (A) For plug-in type and rear panel wiring	Note
EXM3-125	—	—	No derating is required for rated current unspecified in the table
EXM3-160	160	140	
EXM3-320	300、315、320	280	
EXM3-400	400	400	
EXM3-630	500	450	
	630	520	
EXM3-800	700	650	
	800	720	



Item	Rated current(A)	Cross Section (mm ²)	Terminal type	B	L	L1	D	d	Reamrk
EXM3-63 EXM3-125	10、16、20	2.5	JBC2.5-5	10.4	18.2	9	φ2.6	φ5.2	
	25	4	JBC4-5	11.7	20.2	9	φ2.8	φ5.2	
	32	6	JBC6-5	12.8	22.6	10.3	φ3.5	φ5.2	
	40、50	10	JBC10-5	13.7	25.3	12.2	φ4.2	φ5.2	
	63	16	JBC16-5	12.5	38	31.5	φ6	φ5.2	
	80	25	JBC25-8	14	46	38.5	φ7	φ8.2	
	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125	50	JBC50-8	17	54	45	φ10	φ8.2	
EXM3-160	16、20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2	
	25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2	
	32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2	
	40、50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2	
	63	16	JBC16-8	12.5	41	33.5	φ6	φ8.2	
	80	25	JBC25-8	14	46	38.5	φ7	φ8.2	
	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125、140	50	JBC50-8	17	54	45	φ10	φ8.2	
	150、160	70	JBC70-8	17	54	45	φ10	φ8.2	
EXM3-250 EXM3-320	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125、140	50	JBC50-8	17	54	45	φ10	φ8.2	
	150、160	70	JBC70-8	21.6	61	52	φ11	φ8.2	
	180、200、225、250	95	JBC95-8	22	66	57	φ13	φ8.2	
	270、280、300、315、320	95×2	JBC95-8	22	66	57	φ13	φ8.2	
EXM3-400 EXM3-630	250、280、300	120	DT120-13	28	96	80	φ15	φ13	Front plate+Terminal
	315、320、350	185	DT185-16.5	36	115	96	φ18	φ16.5	Front plate+Terminal
	380、400	240	DT240-16.5	40	120	100	φ20	φ16.5	Front plate+Terminal
	500	150×2	DT150-13	32	103	86	φ16	φ13	Front plate+Terminal
	630	185×2	DT185-16.5	36	115	96	φ18	φ16.5	Front plate+Terminal



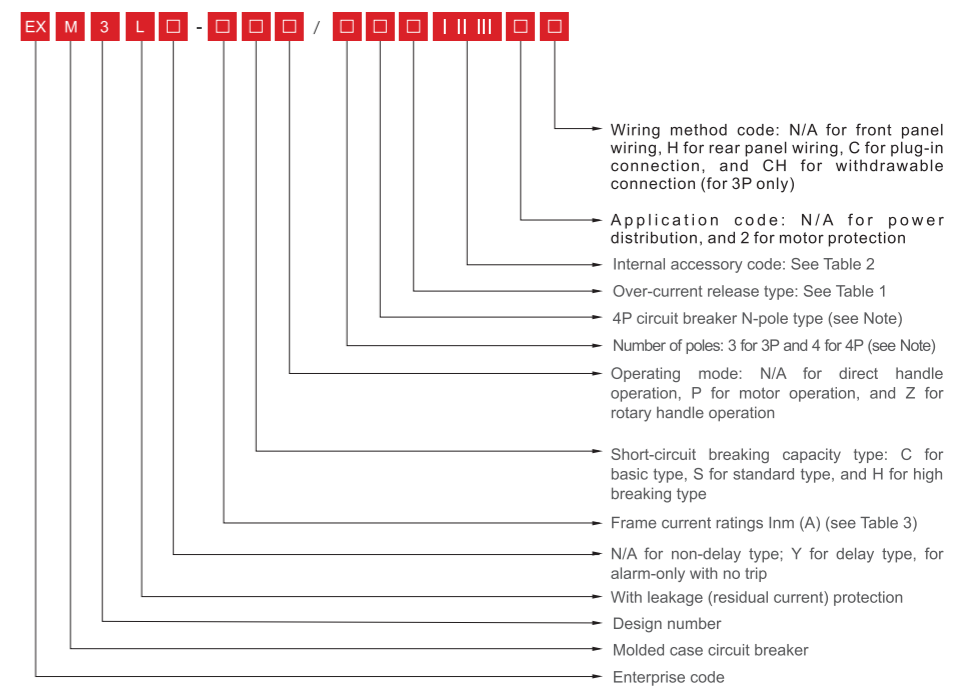
General

The EXM3L series earth leakage circuit breaker (hereafter as the ELCB) are developed with global leading technology, offering reliable performance, powerful technical features, easy maintenance, sleek design, and small size. The RCCBs are suitable for use in electrical systems of AC 50Hz/60Hz, with the rated voltage of up to 415V and rated current of up to 800A, to distribute electrical energy, prevent the electrical systems from hazards due to overload, short-circuit and other faults, and control infrequent motor operations.

The ELCB offer leakage (residual current) protection to provide indirect contact protection against fatal electric shock, and prevent electrical fires caused by long-standing ground fault currents that cannot be detected by over-current protectors. The RCCBs can also be used to provide direct contact protection when the concerned protector fails, with the rated residual operating current set to 30mA (for non-delay type). Be noted that the ELCB does not offer protection against electric shock due to simultaneous contact of two load conductors (two phase wires, or any phase wire and neutral wire).

Both the residual operating current ratings and protection actuation time are adjustable, achieving selectivity protection in the event of residual currents. Two DC component types are available, including Type AC - CBR that ensures tripping caused by residual sinusoidal current with no DC component, whether it is suddenly applied or slowly rising, and Type A - CBR that ensures tripping caused by residual sinusoidal current and residual pulsating DC (with/without specified superimposed DC component), whether it is suddenly applied or slowly rising; The ELCB comply with IEC 60947-2 and GB/T 14048.2 standards.

Product Model Description



Note: For 4P devices, two N-pole types are available
 Type A: No over-current release is mounted on N-pole, and N-pole is always on, without simultaneous opening/closing with the other three poles
 Type B: No over-current is mounted on N-pole, and N-pole can be opened/closed simultaneously with the other three poles (first closed, then open for N-pole)

Table 1. Over-current release type

No.	Name	Description
1	Time delay release	Offer over-current inverse time protection characteristics
2	Instantaneous release	Electromagnetic type release, offering over-current instantaneous protection characteristics
3	Bi-function release	Offer both over-current inverse time protection characteristics, and over-current instantaneous protection characteristics

Table 2. Internal accessory code

Inm (A)	I		II		III		Remark
	Code	Description	Code	Description	Code	Description	
125	0	N/A	0~1	Numbers of auxiliary contact pairs	0~2	Number of alarm contact pairs	
160, 250	1	Shunt release	0~1		0~1		
320	/	/	/		0~1		
400 630	0	N/A	0~3		0~2		II + III ≤ 5
	1	Shunt release	0~1		0~1		II + III ≤ 2
	2	Under-voltage release	0~1		0~1		II + III ≤ 2
800	0	N/A	0~6		0~3		II + III ≤ 9
	1	Shunt release	0~4		0~2		II + III ≤ 6
	2	Under-voltage release	0~4		0~2		II + III ≤ 6

Normal Operating Conditions

1. Applicable temperature: Ambient air temperature: -5°C to +40°C, with the average temperature not exceeding +35°C within 24 hours;

Note: The operating ambient temperature can be extended to -35°C ~ +70°C. When -5°C ~ +40°C is exceeded, follow the instructions or data specified in the product catalogue, or consult the manufacturer;

2. Altitude: ≤ 2,000m for mounting site (please consult with the manufacturer when above 2,000m);

3. Atmospheric conditions:

Air relative humidity: ≤ 50% at the maximum temperature of +40°C, and a higher relative humidity is allowed when at a lower temperature;

In the wettest month, the average maximum relative humidity is up to 90% and the average minimum temperature is up to +25°C, taking into account the condensation on product surface due to temperature changes;

4. Pollution level: Level 3;

5. Mounting type: III for main circuit;

6. Mounting conditions:

In places with no significant shaking, impulse and vibration;

In a medium with no explosive hazards, containing no gas and dust (including conductive dust) sufficient enough to corrode metals and damage insulation;

And in places with no rain/snow impact;

The inclination angle between the mounting and vertical surfaces should not exceed 5°;

7. The external magnetic field close to the mounting site should not exceed 5 times the geomagnetic field in any direction;



8. Storage and transportation conditions:

Storage and transportation conditions:

Temperature range: -35°C to +70°C, with the relative humidity not exceeding 90%;

During transportation, handle with care, no upside down, and avoid severe collisions.

9. Protection degree: IP30 (wiring terminals excluded)

10. Residual current type: Type AC residual current circuit breaker  ; Type A residual current circuit breaker .

Key Technical data

1、Table 3: Key technical data of 125, 160, 250, 320, 400, 630 and 800 frames

Frame size	EXM3L-125			EXM3L-160			EXM3L-250		
Product model	C	S	H	C	S	H	C	S	H
Rated current In (A)	16, 20, 25, 30, 32, 40, 50, 60, 63, 70, 75, 80, 100, 110, 125			16, 20, 25, 30, 32, 40, 50, 60, 63, 65, 70, 75, 80, 90, 100, 110, 125, 140, 150, 160			100, 125, 140, 150, 160, 170, 175, 180, 200, 225, 250		
Number of poles	3P/4P								
Rated insulation voltage Ui (V)	AC1000								
Rated impulse withstand voltage Uimp (kV)	8						12		
Arcing distance (mm)	≤ 50								
Rated ultimate/operating short-circuit breaking capacity Icu/Ics (415V)	20/10	36/25	50/36	20/10	36/25	50/36	20/15	36/25	50/36
Rated residual operating current IΔn	Non-delay type			Three adjustable settings					
	Delay type			30mA (only for non-delay type) / 50mA / 100mA / 200 mA / 300mA / 400mA / 500mA / 600mA / 800mA / 1000mA					
Rated residual no operating current IΔno (mA)	1/2 IΔn								
Rated residual short-circuit making/ breaking capacity IΔm (kA)	1/4 Icu								
Mechanical life (operations)	Maintenance free			20000					
	With maintenance			40000					
Electrical life (operations)	AC415V			10000					

2、Maximum breaking time for non-delay type RCCB. See Table 4.

IΔ	t(s)	Inm(A)	IΔn(mA)	125, 160, 250, 320, 400, 630, 800	
				30	50/100/200/300/400/500/600/800/1000
IΔn				≤ 0.1	≤ 0.3
0.25A				≤ 0.04	—
2IΔn				—	≤ 0.15
5IΔn				—	≤ 0.04
10IΔn				—	≤ 0.04

3、Delay type

The ultimate non-actuation time is specified to 2IΔn for the delay type RCCBs, and see Table 5 for the actuation characteristics

4、See Table 3 for the RCCB's basic parameters

5、Operating reliability due to power supply voltage fault

5.1、At 0.85 Ue and with any phase disconnected to the three-phase power supply, when the residual current IΔ = IΔn, the circuit breaker can still break reliably.

5.2、When the phase line to neutral line voltage of the three-phase power supply drops to 50V, if the residual current IΔ = IΔn, the circuit breaker can still break reliably.

EXM3L-320			EXM3L-400			EXM3L-630			EXM3L-800		
C	S	H	C	S	H	C	S	H	C	S	H
100, 125, 140, 150, 160, 170, 175, 180, 200, 225, 250, 270, 280, 300, 315, 320			250, 280, 300, 315, 320, 350, 380, 400			250, 280, 300, 315, 320, 350, 380, 400, 450, 500, 550, 600, 630			630, 700, 800		
3P/4P											
AC1000											
12											
≤50			≤100								
20/15	36/25	50/36	40/30	50/36	70/50	40/30	50/36	70/50	40/30	50/36	70/50
Three adjustable settings 30mA (only for non-delay type) /50 mA /100 mA /200 mA /300 mA /400 mA /500 mA /600 mA /800 mA /1000 mA											
1/2 IΔn											
1/4 Icu											
20000			10000			10000			10000		
40000			20000			20000			20000		
10000			8000			8000			8000		

Table 5. Actuation characteristics of delay type RCCBs

IΔ	t(s)	Inm(A)	125, 160, 250, 320, 400, 630, 800			
			0.2	0.4	1	2
IΔn			<0.2	<0.6	<1.2	<2.2
2IΔn			>0.1	>0.2	>0.5	>1
5IΔn, 10IΔn			0.1st < 0.15	0.2st < 0.44	0.5st < 1.04	1st < 2.04

Note: tn is time delay setting

6. Residual current operating data

Type AC residual current operating data: The minimum rated residual non-operating current is 0.5 IΔn and the maximum is 1 IΔn;

Type A residual current operating data: See Table 6

Table 6. Residual current action values

Angle a	Tripping current/A	
	Upper limit	Lower limit
0°	0.35IΔn	IΔn ≤ 0.015 A , 0.03A
90°	0.25IΔn	or
135°	0.11IΔn	IΔn > 0.015 A , 1.4IΔn

7. Over-current protection characteristics: See Table 7 for power distribution use and Table 8 for motor use.

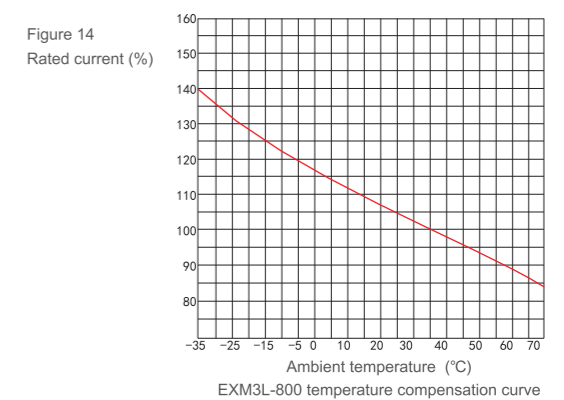
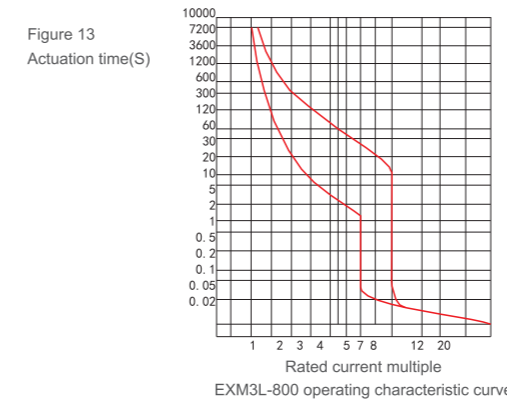
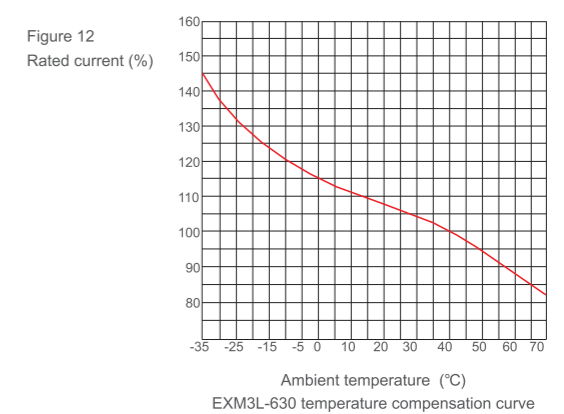
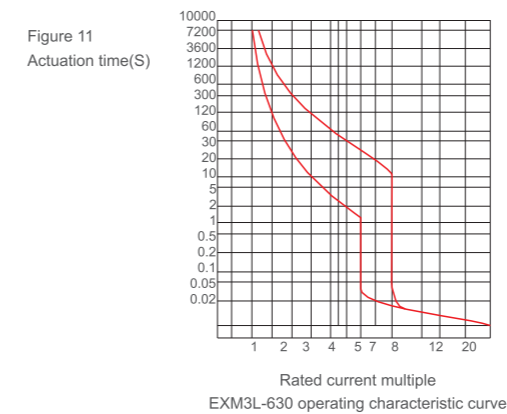
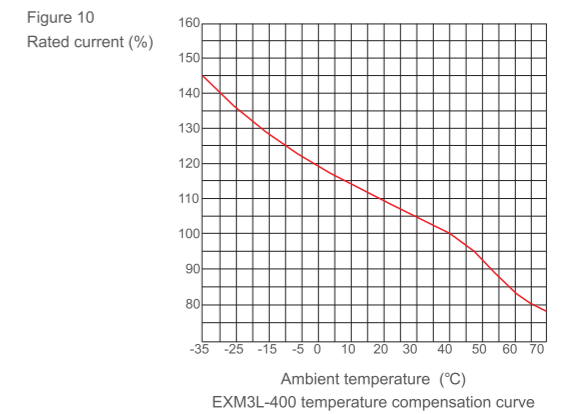
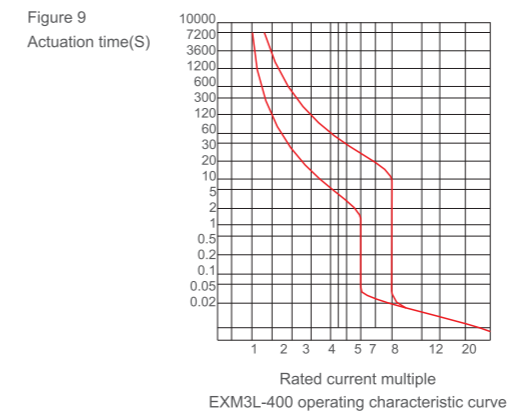
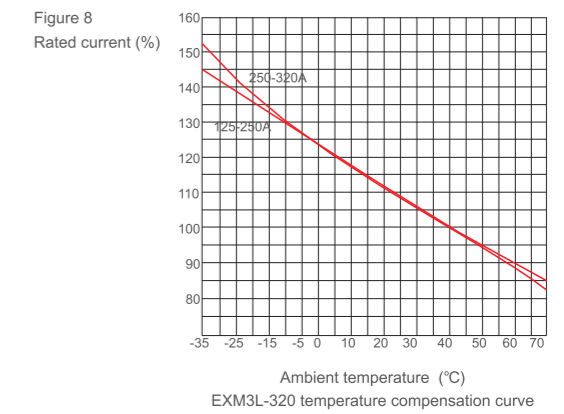
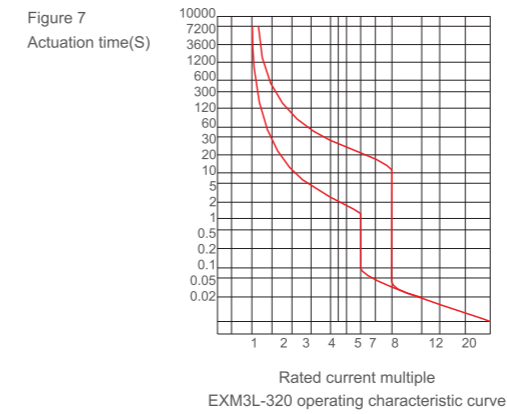
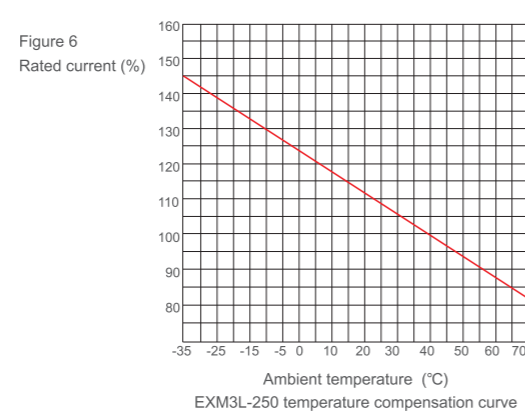
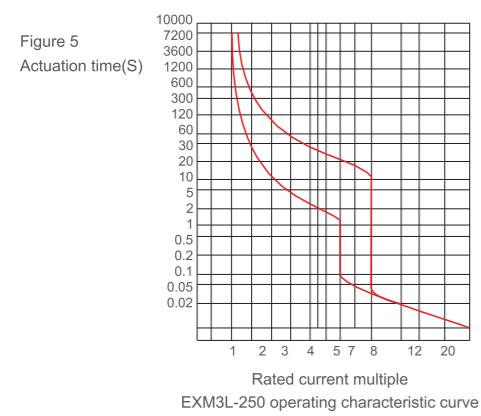
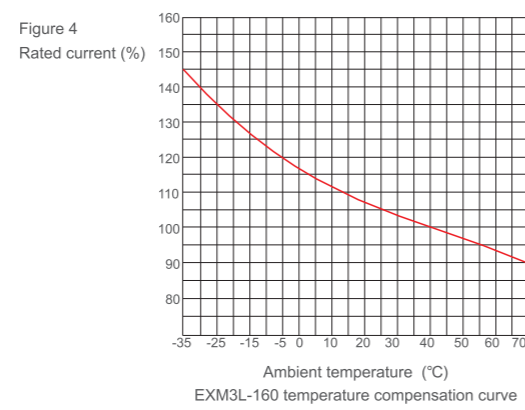
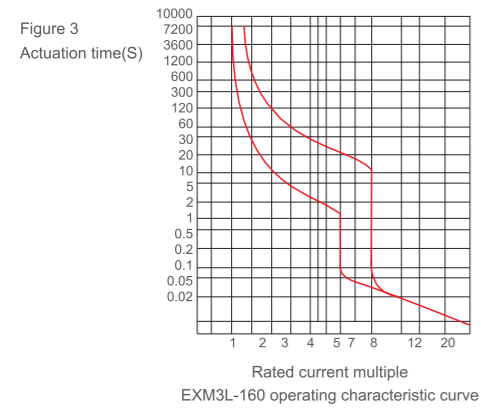
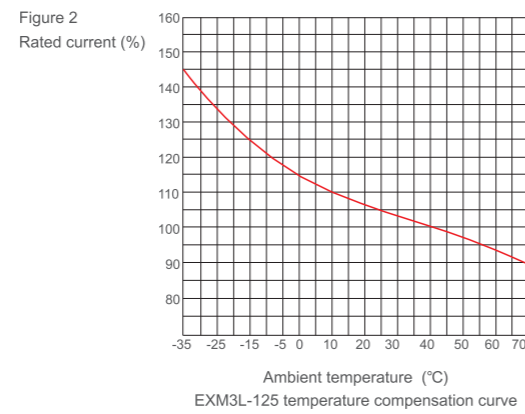
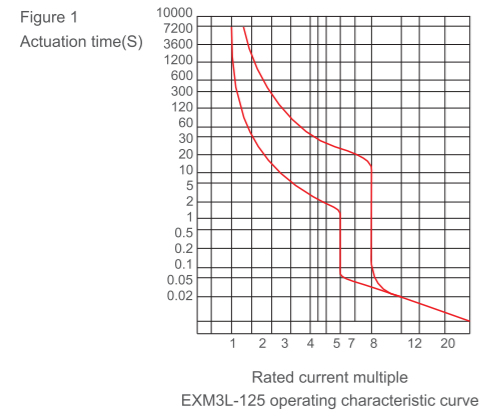
Table 7. Over-current protection characteristics of the power distribution use RCCBs

Rated current In (A)	Thermal release (ambient temperature +40°C)		Electromagnetic release operating current (A) (Note)
	1.05In non-operating time (h) (Start state: Cold state)	1.30In operating time (h) (Start state: Thermal state)	
≤63	>1	≤1	(10±2)In
>63	>2	≤2	

Table 8. Over-current protection characteristics of the motor use RCCBs.

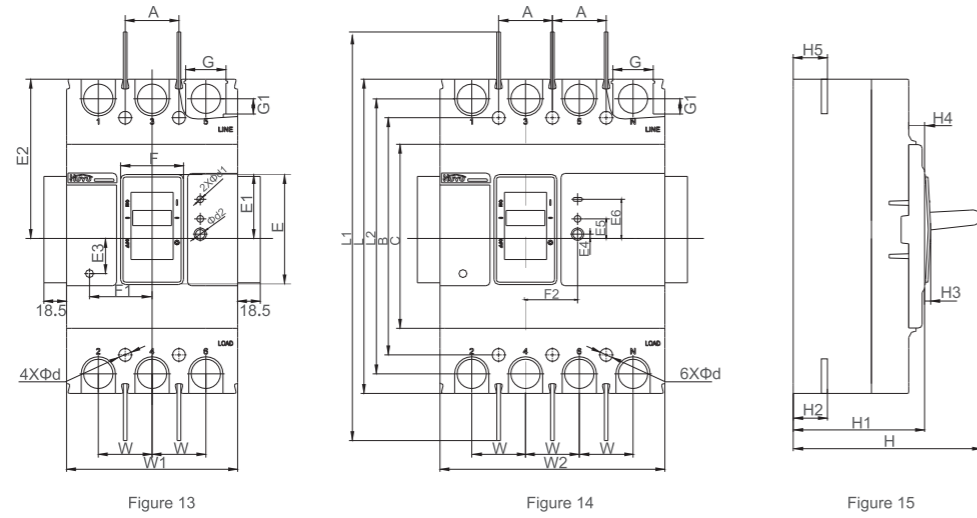
Rated current In (A)	Thermal release (ambient temperature +40°C)				Electromagnetic release operating current (A) (Note)
	1.05In non-operating time (h) (Start state: Cold state)	1.2In operating time (h) (Start state: Thermal state)	1.5In operating time (min) (Start state: Thermal state)	7.2In operating time (s) (Start state: Thermal state)	
In ≤ 63	>2	≤2	≤2	2 < Tp ≤ 10	(12±2.4)In
63 < In ≤ 250			≤4	4 < Tp ≤ 10	
250 < In ≤ 800			≤8	6 < Tp ≤ 20	

8. See Figure 1 to Figure 12 for the RCCB's inverse time characteristic curves and temperature correction curves



Overall and mounting dimensions

1. See Figure 13 to 15 and Table 9 for EXM3L-125, 160, 250, 320, 400 and 630 front panel wiring outlines and mounting dimensions



2. See Figure 16 to 19 and Table 10 for EXM3L series circuit breaker rear panel wiring and plug-in type outlines and mounting dimensions

Figure 16

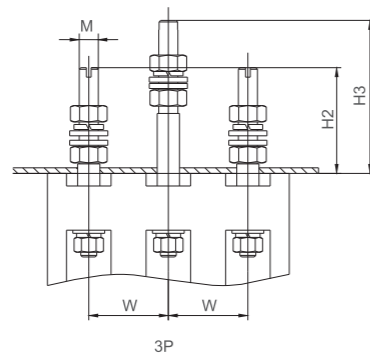
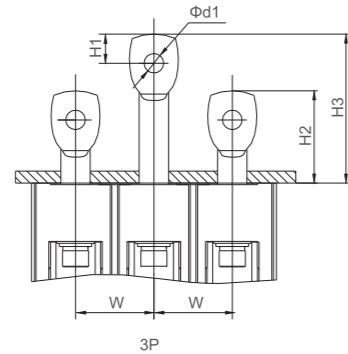


Figure 17



Rear panel wiring cutout diagram

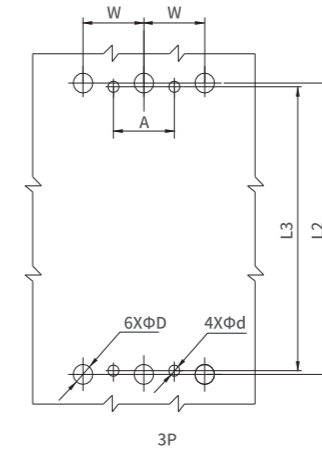
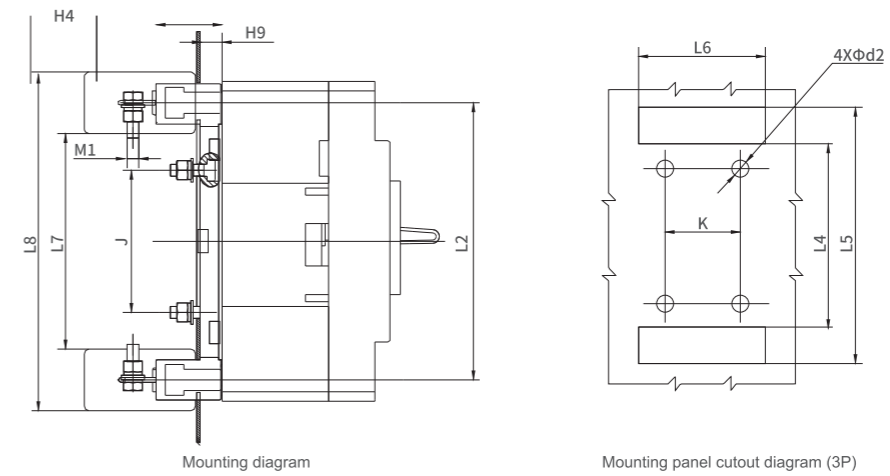


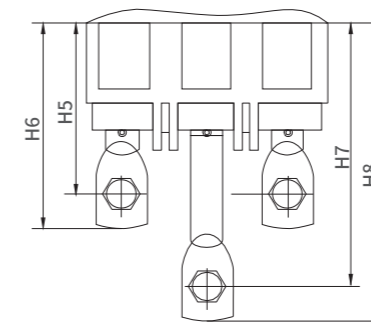
Figure 18

Figure 19: EXM3L series plug-in outlines and mounting dimensions

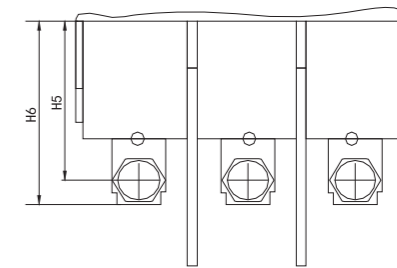


Mounting diagram

Mounting panel cutout diagram (3P)



EXM3L-125, 160, 250, 320



EXM3L-400, 630

3、 EXM3L-125, 160, 250, 320, 400, and 630 front panel wiring outlines and mounting dimensions

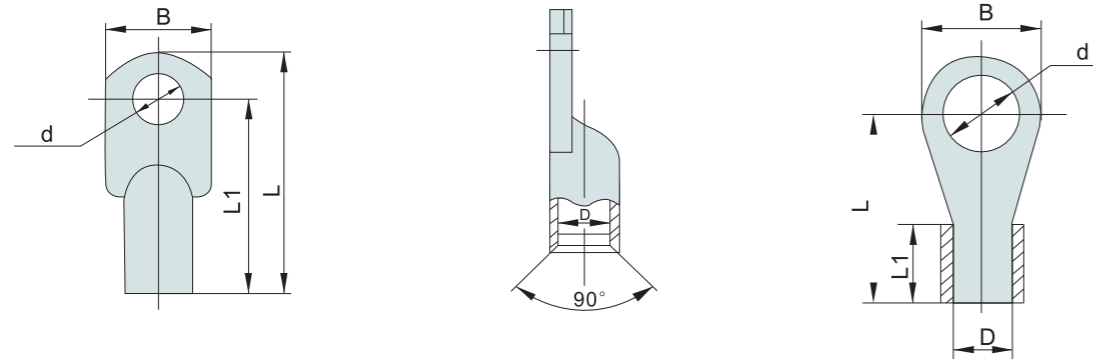
Table 9

Category	Dimension Code	Product model			
		EXM3L-125 EXM3L-160	EXM3L-250 EXM3L-320	EXM3L-400 EXM3L-630	EXM3L-800
Outline dimensions (mm)	C	99.5	103	150	207
	E	48.5	51.5	90	90
	E1	26.5	32.5	50.5	50.5
	E2	77.5	82.5	128.5	140.5
	E3	17	15.5	30.5	24.4
	E4	18.8	15.5	2.1	3P:21.5/4P:21
	E5	7.3	4	13.6	3P:9.7/4P:9.2
	E6	9.7	13	30.6	3P:6.8/4P:7.3
	F	27.5	34.8	51.5	63.5
	F1	37	43	51	52.7
	F2	32	37.5	44	3P:79.3/4P:80.3
	G	17.5	24.5	33	45
	G1	7.5	11.5	12.5	9.5
	H	91	92.5	155	157.5
	H1	72.5	72.5	107.5	115
	H2	23.5	25	29	42
	H3	3	4	5	8.2
	H4	12	11.5	13	11.7
	H5	23.5	25	29	41
	L	155	165	257	281
	L1	253	360	477	487
	L2	134	145	225	243
	W	30	35	44	70
	W1	90	105	140	210
	W2	120	140	184	280
	N1	4	4	4	4
N2	9	9	9	10.2	
Φd2	9.5	9.5	10	8	
Mounting dimensions (mm)	A	30	35	44	70
	B	132	126	194	243
	Φd	5	5	6.5	7.5

4、 Rear panel wiring and plug-in type outlines and mounting dimensions

Table 10

Category	Dimension code	Product model			
		EXM3L-125 EXM3L-160	EXM3L-250 EXM3L-320	EXM3L-400 EXM3L-630	EXM3L-800
Outline dimensions (mm)	W	30	35	44	70
	H1	/	/	23	/
	H2	54.5	71.5	86	/
	H3	103	108	130	/
	H4	39	47.5	49	87
	H5	/	76	91	/
	H6	76	94	110	/
	H7	/	132.5	156	/
	H8	137	149.5	165	/
	H9	11	13.5	20	27
	M	10	/	/	/
	Φd1	/	Φ10	Φ13	/
	M1	/	M10	M12	M14(T)
	Φd2	5	5	9	11
	ΦD	10	13	34	42
	Mounting dimensions (mm)	L2	134	145	226
L3		132	126	195	243
L4		98	94	168	171
L5		165	181	279	315
L6		3P:92	3P:107	3P:146	3P:220
L7		/	/	157	181
L8		/	/	288	305
K		3P:60	3P:70	3P:44	3P:90
J		68	70	133	146
A		30	35	44	70
Φd		4	5	6.5	7.5



Item	Rated current(A)	Cross Section (mm ²)	Terminal type	B	L	L1	D	d	Reamrk
EXM3L-63 EXM3L-125	10、16、20	2.5	JBC2.5-5	10.4	18.2	9	φ2.6	φ5.2	
	25	4	JBC4-5	11.7	20.2	9	φ2.8	φ5.2	
	32	6	JBC6-5	12.8	22.6	10.3	φ3.5	φ5.2	
	40、50	10	JBC10-5	13.7	25.3	12.2	φ4.2	φ5.2	
	63	16	JBC16-5	12.5	38	31.5	φ6	φ5.2	
	80	25	JBC25-8	14	46	38.5	φ7	φ8.2	
	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125	50	JBC50-8	17	54	45	φ10	φ8.2	
EXM3L-160	16、20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2	
	25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2	
	32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2	
	40、50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2	
	63	16	JBC16-8	12.5	41	33.5	φ6	φ8.2	
	80	25	JBC25-8	14	46	38.5	φ7	φ8.2	
	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
		125、140	50	JBC50-8	17	54	45	φ10	φ8.2
	150、160	70	JBC70-8	17	54	45	φ10	φ8.2	
EXM3L-250 EXM3L-320	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125、140	50	JBC50-8	17	54	45	φ10	φ8.2	
	150、160	70	JBC70-8	21.6	61	52	φ11	φ8.2	
	180、200、225、250	95	JBC95-8	22	66	57	φ13	φ8.2	
	270、280、300、315、320	95×2	JBC95-8	22	66	57	φ13	φ8.2	
EXM3L-400 EXM3L-630	250、280、300	120	DT120-13	28	96	80	φ15	φ13	Front plate+Terminal
	315、320、350	185	DT185-16.5	36	115	96	φ18	φ16.5	Front plate+Terminal
	380、400	240	DT240-16.5	40	120	100	φ20	φ16.5	Front plate+Terminal
	500	150×2	DT150-13	32	103	86	φ16	φ13	Front plate+Terminal
	630	185×2	DT185-16.5	36	115	96	φ18	φ16.5	Front plate+Terminal



General

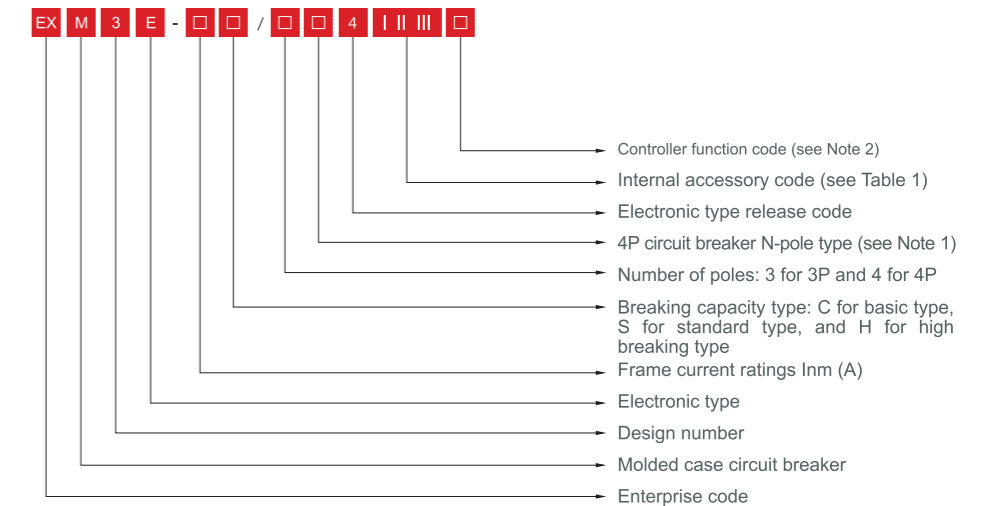
The EXM3E electronic-type moulded case circuit breakers (hereafter as the MCCBs) are developed with global leading technology, featuring advanced design, offering reliable performance, powerful technical features, easy maintenance, sleek design, and small size.

The EXM3E MCCBs are suitable for use in electric systems of AC 50Hz/60Hz, with the rated insulation voltage of up to 1,000V and rated current of up to 1250A, to distribute electrical energy, protect circuits and power equipment from hazards due to overload, short-circuit, under-voltage, and other faults, and control infrequent motor operations.

The EXM3E MCCBs offer Type C (basic), Type S (standard), and Type H (high breaking) based on the rated ultimate short-circuit breaking capacity.

The circuit breakers are in accordance with GB/T 14048.2 and IEC 60947-2 standards.

Product Model Description



Note: For 4P devices, two N-pole types are available

-Type A: N-pole is always on, without simultaneous opening/closing with the other three poles

-Type B: N-pole can be opened/closed simultaneously with the other three poles

-Note 2: Basic type: N/A; Extended type: E1; Communication type: E2

Table 1. Internal accessory code

Inm (A)	I		II		III		Remark
	Code	Description	Code	Description	Code	Description	
125、160 250、320	0	N/A	0~2	Numbers of auxiliary contact pairs	0~2	Number of alarm contact pairs	
	1	Shunt release	0~1		0~1		
	2	Under-voltage release	0~1		0~1		
400 630	0	N/A	0~5		0~2		II + III ≤ 7
	1	Shunt release	0~3		0~2		II + III ≤ 5
	2	Under-voltage release	0~3		0~2		II + III ≤ 5
800	3	Shunt and under-voltage release	0~1		0~1		II + III ≤ 2
	0	N/A	0~8		0~3		II + III ≤ 11
	1	Shunt release	0~6		0~3		II + III ≤ 8
1000 1250	2	Under-voltage release	0~6		0~3		II + III ≤ 8
	3	Shunt and under-voltage release	0~3	0~2	II + III ≤ 5		
	0	N/A	0~4	0~1	II + III ≤ 4		
	1	Shunt release	0~2	0~1	II + III ≤ 2		

Normal Operating Conditions

1.Applicable temperature:

Ambient air temperature: -5℃to +40℃, with the average temperature not exceeding +35℃ within 24 hours;

Note: The operating ambient temperature can be extended to 35℃ ~ -5℃ or +40℃ ~ +70℃. Please follow the instructions or data specified in the product catalogue and instruction manual, or consult the manufacturer;

2.Altitude: ≤2,000m for mounting site (please consult with the manufacturer when above 2,000m);

3.Atmospheric conditions:

Air relative humidity: ≤ 50% at the maximum temperature of +40℃, and a higher relative humidity is allowed when at a lower temperature;

In the wettest month, the average maximum relative humidity is 90% and the average minimum temperature is +25℃, taking into account the condensation on product surface due to temperature changes;

4.Pollution level: Level 3;

5.Mounting type: III for main circuit;

6.Protection degree: IP30 (wiring terminals excluded)

7.Mounting conditions:

In places with no significant shaking, impulse and vibration;

In a medium with no explosive hazards, containing no gas and dust (including conductive dust) sufficient enough to corrode metals and damage insulation;

And in places with no rain/snow impact;

8.Storage and transportation conditions:

Temperature: -35℃to +70℃ for storage and transportation, with the relative humidity not exceeding 90%;

During transportation, handle with care, no upside down, and avoid severe collisions.

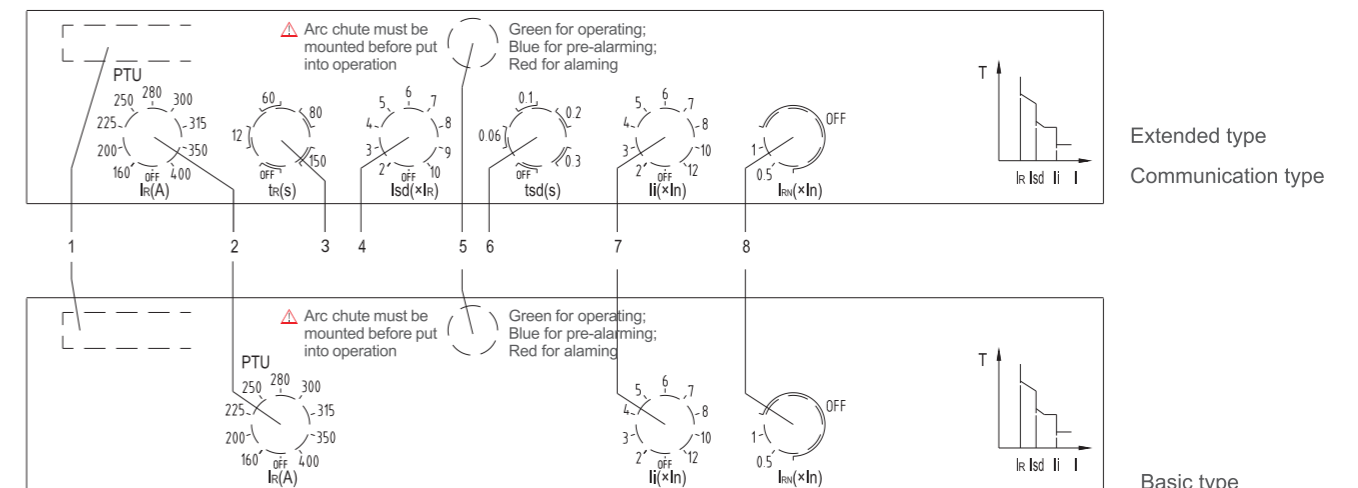
Technical data

1、Table 2:technical data

Frame size	EXM3E-125			EXM3E-160			EXM3E-250			EXM3E-320			EXM3E-400			
Product model	C	S	H	C	S	H	C	S	H	C	S	H	C	S	H	
Rated current In (A)	125			160			250			320			400			
Number of poles	3P/4P															
Rated insulation voltage Ui (V)	AC1000															
Rated impulse withstand voltage Uimp (kV)	8						12									
Arcing distance (mm)	≤50												≤100			
Rated ultimate/ operating short-circuit breaking capacity Icu/Ics (kA)	690V	8/4	8/4	10/5	8/4	8/4	10/5	8/5	8/5	10/5	8/5	8/5	10/5	10/10	10/10	15/10
	500V	-	-	30/30	-	-	30/30	-	-	30/30	-	-	30/30	-	-	36/36
	400/415V	20/10	36/20	50/36	20/10	36/20	50/36	20/15	36/20	50/36	20/15	36/20	50/36	40/30	50/36	70/50
	240V	40/20	50/30	75/50	40/20	50/30	75/50	40/30	50/30	75/50	40/30	50/30	75/50	50/50	75/50	100/75
Rated short-time withstand current Icw (kA/1s)	AC415V	-			-			5								
Mechanical life (operations)	Maintenance free	20000												10000		
	With maintenance	40000												20000		
Electrical life (operations)	AC415V	10000												8000		

2、Electronic type release

Figure 1



- ①. Hand-held test unit interface;
- ②. Over-load long delay current setting;
- ③. Overload long delay time setting;
- ④. Short-circuit short delay current setting;
- ⑤. Operating pre-alarm and over-current indicator;
- ⑥. Short-circuit short delay time setting;
- ⑦. Short-circuit instantaneous current setting;
- ⑧. N-pole protection setting (not available for 3P devices)

Table 3:technical data

Frame size	EXM3E-630			EXM3E-800	EXM3E-1000		EXM3E-1250		
Product model	C	S	H	S	S	H	S	H	
Rated current In (A)	630			800	1000		1250		
Number of poles	3P/4P								
Rated insulation voltage Ui (V)	AC1000								
Rated impulse withstand voltage Uimp (kV)	12								
Arcing distance (mm)	≤100								
Rated ultimate/ operating short-circuit breaking capacity Icu/Ics (kA)	690V	10/10	10/10	15/10	15/15	20/10	30/20	20/10	30/20
	500V	—	—	36/36	—	—	—	—	—
	400/415V	40/30	50/36	70/50	70/70(AC400V)	50/36	70/50	50/36	70/50
	240V	40/20	50/30	100/75	—	75/50	100/75	75/50	100/75
Rated short-time withstand current Icw (kA/1s)	AC415V	10			10(AC400V)	20			
Mechanical life (operations)	Maintenance free	10000			8000	5000			
	With maintenance	20000			10000	10000			
Electrical life (operations)	AC415V	8000			5000	2500			

2.1 EXM3E control panel description

- ① Hand-held test unit interface (PTU): The hand-held test unit is used for controller testing and parameter reading and setting;
- ② Over-load long delay current (IR)setting: Can be adjusted by users with tools. See Table 3 for detailed settings;
- ③ Overload long delay time (tR) setting: Can be adjusted by users with tools. See Table 4 for detailed settings;
- ④ Short-circuit short delay current (I_{sd}) setting: Can be adjusted by users with tools, including 10 settings with I_{sd}=(2, 3, 4, 5, 6, 7, 8, 9, 10)×I_R+OFF;
- ⑤ Operating pre-alarm and over-current indicator: Turn green after powered up; blue with the operating current at 0.9*IR, and red when at 1.05 times IR.The indicator will be off when the device trips;
- ⑥ Short-circuit short delay time t_{sd} setting: Can be adjusted by users with tools. See Table 5 for detailed settings;
- ⑦ Short-circuit instantaneous current I_i setting: : Can be adjusted by users with tools, including 10 settings with I_i=(2, 3, 4, 5, 6, 7, 8, 9, 10, 12)×I_n + OFF;
- ⑧ N-pole protection setting (for 4P devices): Can be adjusted by users with tools. See Table 6 for detailed settings

Table 3. Rated current adjustment table

Inm (A)	In (A)	Setting current IR (A)
125	125	40-50-63-70-80-90-100-110-125
160	160	63-80-90-100-110-125-140-150-160
250	250	100-125-140-150-160-180-200-225-250
320	320	140-160-180-200-225-250-280-300-320
400	400	160-200-225-250-280-300-315-350-400
630	630	350-400-450-480-500-530-560-600-630
800	800	320-400-480-560-640-720-800
1000	1000	630-680-720-780-820-900-950-1000
1250	1250	630-700-800-900-1000-1100-1200-1250

Table 4. Rated current adjustment table

Test current description	Test current	Conventional duration (S)				
		TR settings				
		12	60	80	100	150
Conventional non-tripping current	1.05I _R	2h				
Conventional tripping current	1.2I _R	<1h				
	1.5I _R	212	107	142	178	267
	2.0I _R	12	60	80	100	120
	7.2I _R	0.9	4.6	6.2	7.7	11.6

Note: When Inm ≤320A, the delay actuation time can be adjustable among 12s-60s-80s-100s
When Inm ≥400A, the delay actuation time can be adjustable among 12s-60s-80s-150s

Table 5. Circuit breaker short-circuit short delay setting table

Fixed time and inverse time	Current		Basic type (fixed)	Extended type (adjustable with four settings)			
	I > 8I _R	I ≤ 8I _R		0.3±0.06	0.06±0.02	0.1±0.03	0.2±0.04
Fixed time	t _{sd}		0.3±0.06	0.06±0.02	0.1±0.03	0.2±0.04	0.3±0.06
Inverse time + fixed time (It2 ON)	If I > 8I _R	Delay time (s)	0.3±0.06	0.06±0.02	0.1±0.03	0.2±0.04	0.3±0.06
	If I ≤ 8I _R	Inverse time delay (s)	T=(8I _R ²)×t _{sd} ² /I				
		Accuracy	±10%				

2.2 Additional description of common features of electronic type release

2.2.1 Basic data and key performance indicators of the electronic release (see Table 6)

Table 6. Release current settings and error of the release

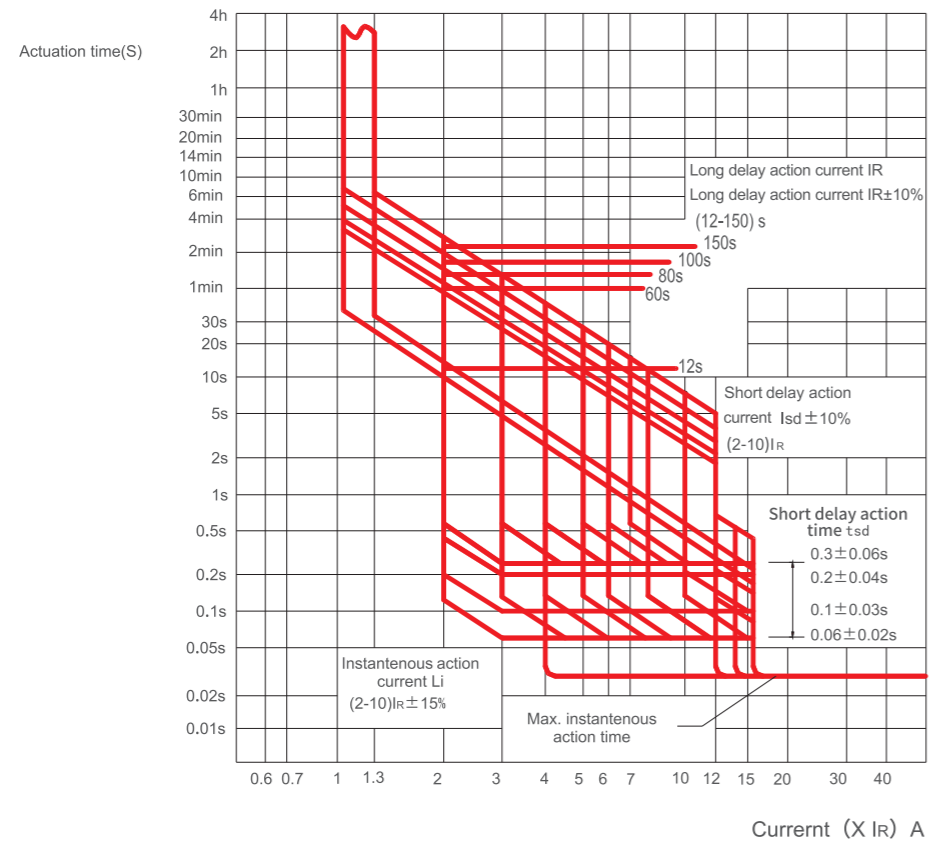
Long delay		Short delay		Instantaneous		N-pole protection	
I_R	Error	I_{sd}	Error	I_i	Error	I_n	Error
See Table 3	$\pm 10\%$	(2, 3, 4, 5, 6, 7, 8, 9, 10) $\times I_R + OFF$	$\pm 10\%$	(2, 3, 4, 5, 6, 7, 8, 10, 12) $\times I_n + OFF$	$\pm 15\%$	(0.5, 1) $\times I_n + OFF$	$\pm 10\%$

2.2.2 Factory default settings of the release (when without customer requirements)

- a) The overload long delay I_R is set to the maximum current setting position, and t_R to "12" position.
- b) The short-circuit short delay I_{sd} is set to "OFF" position for 125, 160, 250, 320 frames and to "8" position for other Frame sizes.
- c) The short-circuit short delay t_{sd} is set to 0.3s position.
- d) The short-circuit instantaneous I_i is set to "12" position
- e) The neutral pole protection is set to the "OFF" position.

3. Circuit breaker's protection characteristic curves

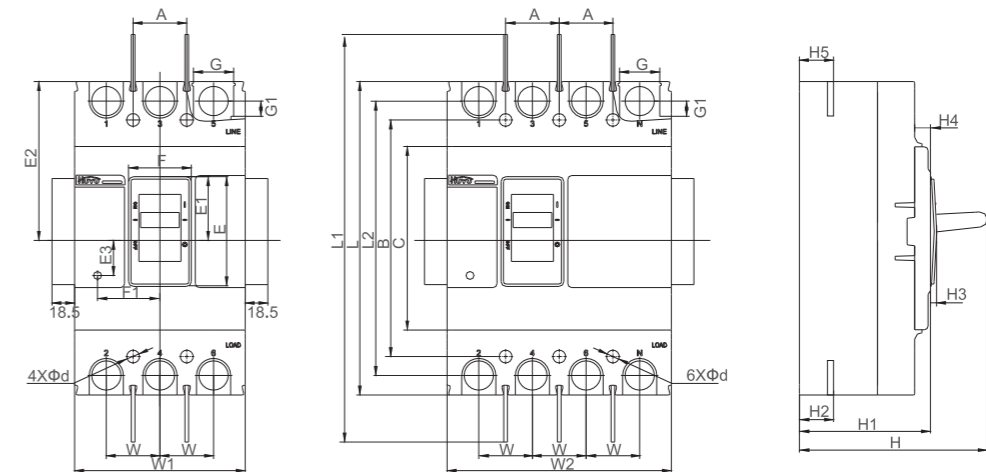
Figure 2.



Overall and mounting dimensions

1、 See Figure 3 and Table 7 for front panel wiring outlines and mounting dimensions

Figure 3



2、 See Figure 4 to 7 and Table 8 for EXM3E series circuit breaker rear panel wiring and plug-in type outlines and mounting dimensions

Figure 4. EXM3E-125 and 160 rear panel wiring outline and mounting dimensions

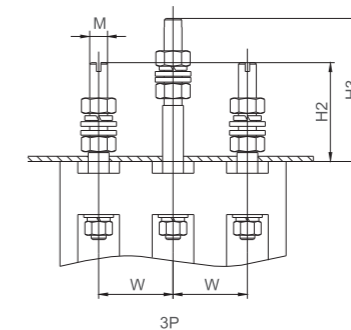


Figure 5. EXM3E-250 to 800 rear panel wiring outline and mounting dimensions

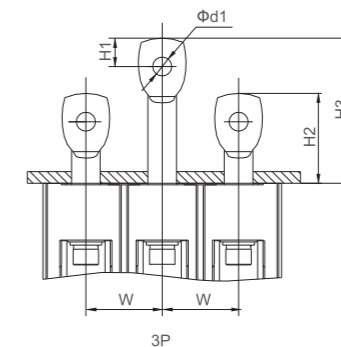


Figure 6. Rear panel wiring cutout diagram

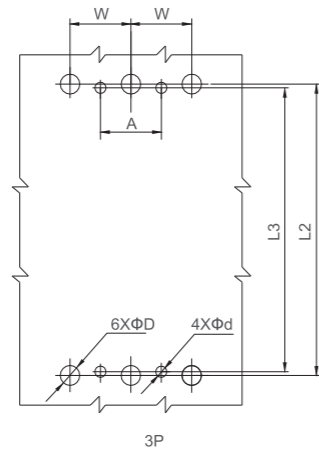


Figure 7. EXM3E series plug-in type outline and mounting dimensions

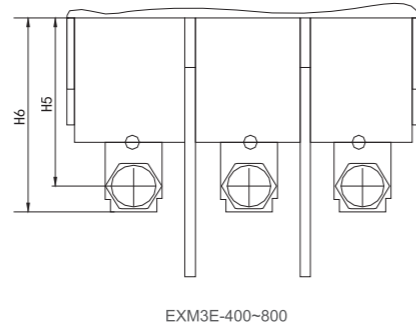
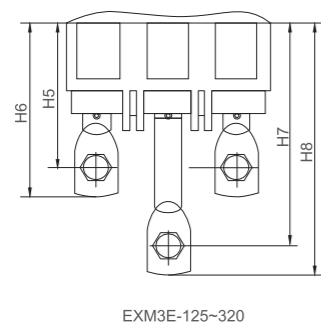
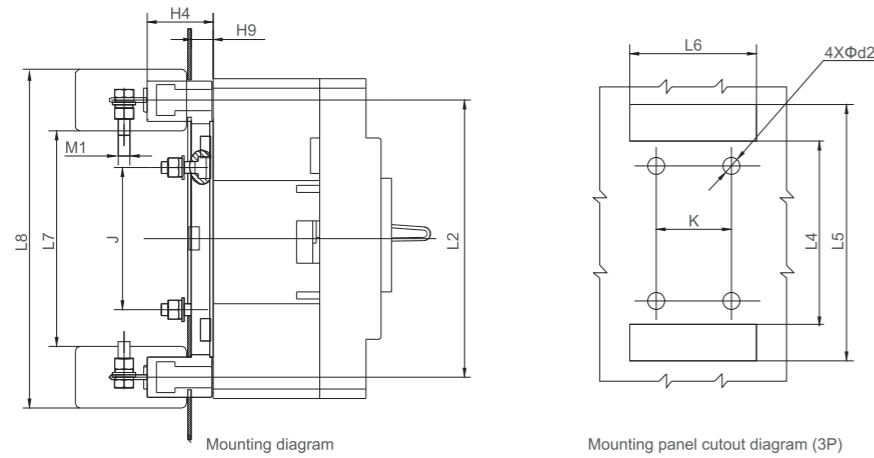


Table 7. EXM3E-125, 160, 250, 320, 400, and 630 front panel wiring outlines and mounting dimensions

Category	Dimension code	Product model				
		EXM3E-125 EXM3E-160	EXM3E-250 EXM3E-320	EXM3E-400 EXM3E-630	EXM3E-800	EXM3E-1000 EXM3E-1250
Outline dimensions (mm)	C	99.5	103	150	211	179
	E	48.5	51.5	90	90	99
	E1	26.5	32.5	50.5	44.5	54.5
	E2	77.5	82.5	128.5	137.5	165
	E3	17	15.5	30.5	30.5	89.5
	F	27.5	34.8	51.5	51	77
	F1	37	43	51	78	30.5
	G	17.5	24.5	33	46	46.5
	G1	7.5	11.5	12.5	14	/
	H	91	92.5	155	155	192
	H1	72.5	72.5	107.5	107	147
	H2	23.5	25	29	46(44)	58
	H3	3	4	5	5	7
	H4	12	11.5	13	10	9
	H5	23.5	25	29	46(44)	42.5
	L	155	165	257	257	330
	L1	253	360	477	487	/
L2	134	145	225	243	/	
W	30	35	44	70	70	
W1	90	105	140	210	210	
W2	120	140	184	280	280	
Mounting dimensions (mm)	A	30	35	44	70	70
	B	132	126	194	243	299
	Φd	5	5	6.5	7	9

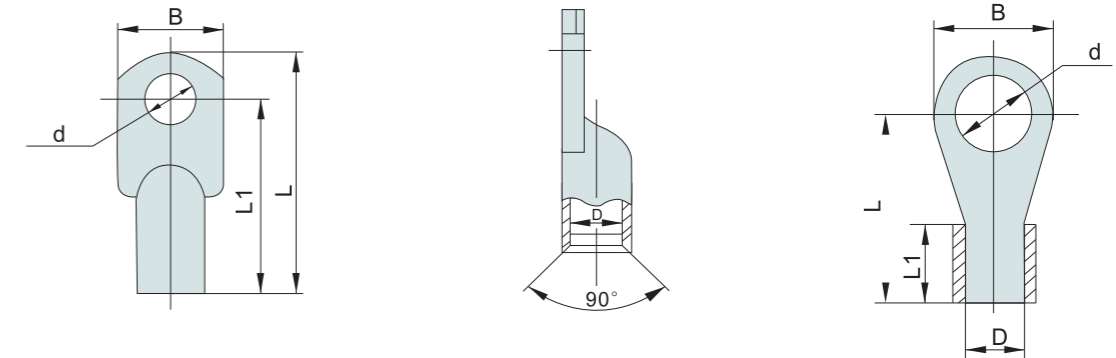
Table 8. Rear panel wiring and plug-in type outlines and mounting dimensions

Category	Dimension code	Product model			
		EXM3E-125 EXM3E-160	EXM3E-250 EXM3E-320	EXM3E-400 EXM3E-630	EXM3E-800
Outline dimensions (mm)	W	30	35	44	70
	H1	/	/	23	13.5
	H2	54.5	71.5	86	/
	H3	103	108	130	109
	H4	39	47.5	49	70
	H5	/	76	91	/
	H6	76	94	110	/
	H7	/	132.5	156	136.5
	H8	137	149.5	165	151
	H9	11	13.5	20	17
	M	10	/	/	/
	Φd1	/	Φ10	Φ13	Φ13
	M1	/	M10	M12	M12
Mounting dimensions (mm)	Φd2	5	5	9	9
	ΦD	10	13	34	48
	L2	134	145	226	243
	L3	132	126	195	243
	L4	98	94	168	185
	L5	165	181	279	299
	L6	3P:92	3P:107	3P:146	3P:212
	L7	/	/	157	/
	L8	/	/	288	/
	K	3P:60	3P:70	3P:44	3P:140
	J	68	70	133	143
	A	30	35	44	70
	Φd	5	5	6.5	7

3. Derating is required for special specifications of EXM3 series circuit breakers rear panel wiring and plug-in types. Please see Table 9 for derating-use current comparison table.

Table9. Derating-use current comparison table for rear panel wiring and plug-in types

Product model	Rated current (A)	Derating use current for plug-in and rear panel wiring types (A)	Remark
EXM3-160	160	140	Derating is not needed for current ratings not specified in the table
EXM3-320	320	280	
EXM3-630	500	450	
	630	520	
EXM3-800	700	650	
	800	720	



Item	Rated current(A)	Cross Section (mm ²)	Terminal type	B	L	L1	D	d	Remark
EXM3E-63 EXM3E-125	10、16、20	2.5	JBC2.5-5	10.4	18.2	9	φ2.6	φ5.2	
	25	4	JBC4-5	11.7	20.2	9	φ2.8	φ5.2	
	32	6	JBC6-5	12.8	22.6	10.3	φ3.5	φ5.2	
	40、50	10	JBC10-5	13.7	25.3	12.2	φ4.2	φ5.2	
	63	16	JBC16-5	12.5	38	31.5	φ6	φ5.2	
	80	25	JBC25-8	14	46	38.5	φ7	φ8.2	
	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125	50	JBC50-8	17	54	45	φ10	φ8.2	
EXM3E-160	16、20	2.5	JBC2.5-8	15	24.5	8.5	φ2.6	φ8.2	
	25	4	JBC4-8	13.4	20.4	9.2	φ2.8	φ8.2	
	32	6	JBC6-8	15	24.5	10	φ3.5	φ8.2	
	40、50	10	JBC10-8	15	24.5	11	φ4.5	φ8.2	
	63	16	JBC16-8	12.5	41	33.5	φ6	φ8.2	
	80	25	JBC25-8	14	46	38.5	φ7	φ8.2	
	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125、140	50	JBC50-8	17	54	45	φ10	φ8.2	
	150、160	70	JBC70-8	17	54	45	φ10	φ8.2	
EXM3E-250 EXM3E-320	100	35	JBC35-8	15.5	52	44.5	φ8	φ8.2	
	125、140	50	JBC50-8	17	54	45	φ10	φ8.2	
	150、160	70	JBC70-8	21.6	61	52	φ11	φ8.2	
	180、200、225、250	95	JBC95-8	22	66	57	φ13	φ8.2	
EXM3E-400 EXM3E-630	270、280、300、315、320	95×2	JBC95-8	22	66	57	φ13	φ8.2	
	250、280、300	120	DT120-13	28	96	80	φ15	φ13	Front plate+Terminal
	315、320、350	185	DT185-16.5	36	115	96	φ18	φ16.5	Front plate+Terminal
	380、400	240	DT240-16.5	40	120	100	φ20	φ16.5	Front plate+Terminal
	500	150×2	DT150-13	32	103	86	φ16	φ13	Front plate+Terminal
	630	185×2	DT185-16.5	36	115	96	φ18	φ16.5	Front plate+Terminal

Accessories for Explore MCCB

Accessories for Explore MCCB series

1、Table 1.ory model summary table

Frame rated current Inm (A)		EXM3-63/125	EXM3-160 EXM3L-125/160 EXM3E-125/160	EXM3-250/320 EXM3L-250/320 EXM3E-250/320	EXM3-400/630 EXM3L-400/630 EXM3E-400/630	EXM3-800 EXM3E-800	EXM3L-800	EXM3E-1000 EXM3E-1250
Internal accessory	Alarm contact	B1	B2	B3	B4	B4	B5	B5
	Auxiliary contact	F1	F2	F3	F4	F4	F5	F5
	Shunt release	FL1	FL2	FL3	FL4	FL4	FL5	FL5
	Under-voltage release	QY1	QY2	QY3	QY4	QY4	QY5	/
	Accessory wiring terminal	JX						/
External accessory	Rotary operating handle	CS1-63	CS1-100	CS1-250	CS1-400	CS1-800	CS1-800	/
	Motor operator	MDX0	MDX1	MDX2	MDX3	MDX4	MDX4	/
	Residual current alarm	LB(only for residual current devices)						/
	Mechanical interlocking	3P	N1-3	N2-3	N3-3	N4-3	N5-3	/
	4P	—	N2-4	N3-4	N4-4	N5-4	/	

2、Ory contact and alarm contact ratings



Conventional thermal current I_{th}=6A

Rated operating current I_e=0.79A (230V AC), 0.47A (380V AC/400V AC/415V AC), 0.15A (110V DC/220V DC/250V DC)

3、Release data



Rated voltage U_s:

AC: 110V, 230V, 400V, and input capacity: 180VA;

DC: 24V, 48V, 110V, and input capacity: 60W

At 70% to 110% of U_s, the circuit breaker can perform reliable breaking, with actuation time of 10ms to 30ms.

The maximum length of the copper wire should meet the requirements set in Table 2, when the control power voltage of the shunt release is 24V DC.

Table 2. Maximum Length of the copper wire

Rated control power voltage U _c (DC24V)	Wire area	1.5mm ²	2.5mm ²
	100% U _c		150m
85% U _c		100m	160m

The schematic diagram of the shunt release is shown in the dashed box below

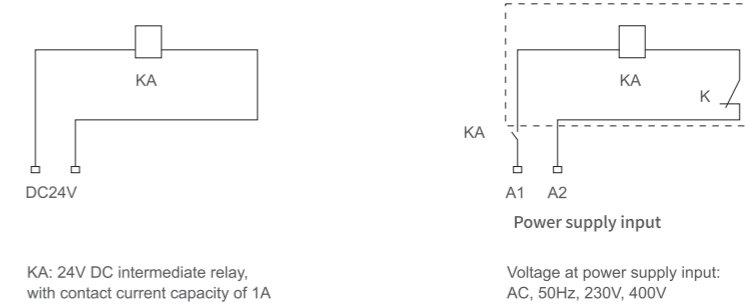


Figure 1. Shunt release control circuit design

4、Shunt release data



Rated voltage U_e: 110V AC, 230V AC, 400V AC, 24V DC, 48V DC, 110V DC

When the power supply is at 35% to 70% of U_e, the circuit breaker can perform reliable breaking with actuation time of 10ms to 30ms.

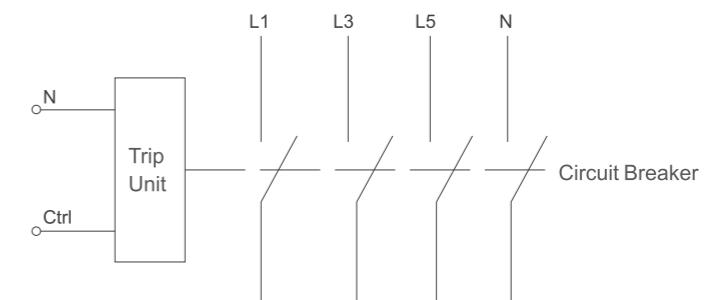
When the power supply is below 35% of U_e, the circuit breaker can be prevented from closing;

When the power supply is equal to or above 85% U_e, the circuit breaker can be closed reliably

5、Dedicated release for pre-paid ammeter

Rated operating voltage U_e: AC230V, AC240V, with 50Hz; when at 65% to 110% of U_e, the release can work normally.

When the Ctrl terminal is switched off, the circuit breaker will open with a time delay of 1s to 2s. The wiring diagram is shown in Figure 2.



Note: The naught line of the power supply is connected to the N-pole, and the Ctrl is connected to the control signal terminal of the prepaid ammeter, with the voltage U_e of AC230V, AC400V under 50Hz

Figure 2. Pre-paid ammeter dedicated trip unit wiring diagram

6、 LB type residual current alarm module

The LB type residual current alarm module should be mounted on the right side of the HYM3LB type residual current circuit breaker. Its wiring terminals P1-P2 are connected externally to an 400V AC or 230V AC power supply.

In the event of residual current fault in the circuit breaker's main circuit, and when $I_{\Delta} \geq I_{\Delta n}$, the circuit breaker will not trip, the relay within the alarm module will then act, and the wiring terminals S1-S2, S3-S4 will be connected internally to the relay contacts to send out an alarm signal.

See Figure 3 for the wiring diagram and Figure 4 for the module outline diagram.

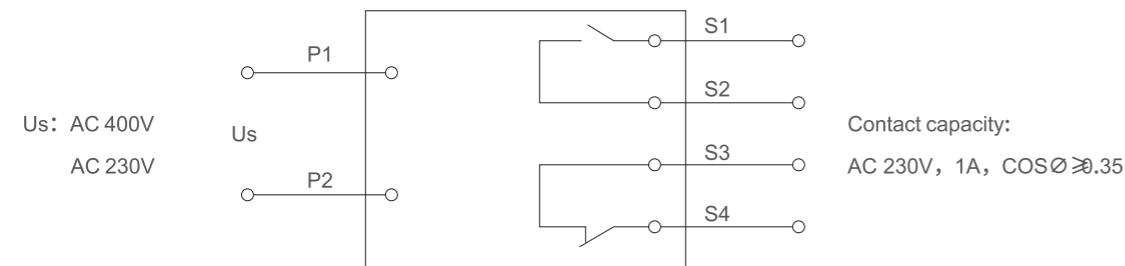


Figure 3. LB type residual current alarm module wiring diagram

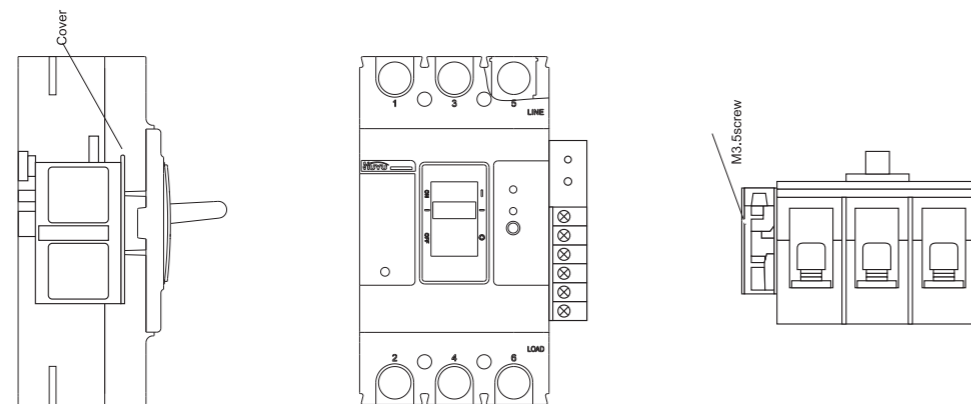


Figure 4. Lb type residual current alarm module outline diagram

7、 See Table 3 for the data of the motor operator, and Figure 6 and Table 4 for its mounting dimensions.

Table 3. Key technical data for MDX type motor operator

Product model	EXM3-63/125	EXM3-160 EXM3L-125/160 EXM3E-125/160	EXM3-250/320 EXM3L-250/320 EXM3E-250/320	EXM3-400/630 EXM3L-400/630 EXM3E-400/630	EXM3-800 EXM3L-800 EXM3E-800
	MDX0	MDX1	MDX2	MDX3	MDX4
Rated operating voltage Ue (V)	AC 110V ~ 230V, 50Hz; DC 110V ~ 220V				
Starting current (A)	0.5 ≤			≤ 2	
Actuation time (s)	≤ 0.8				
Rated operating frequency (operations/h)	180			120	
Mechanical life (Operations)	15000	9000	5000	3000	

The motor operator should have a power supply capacity large enough to ensure that the voltage applied to the motor operator under the starting current is not lower than 85% of Ue.

8、 8. See Figure 5 for the wiring diagram of the motor operator

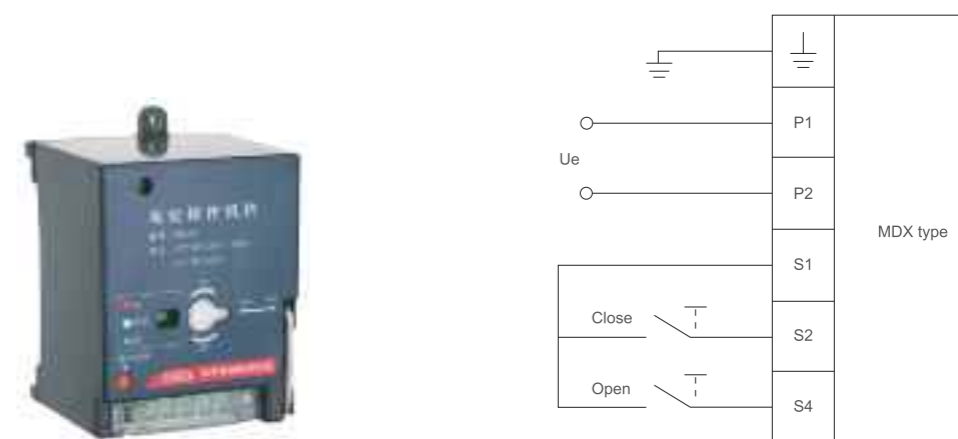


Figure 5. Wiring diagram of the MDX type motor operator

9. See Figure 7 and Table 5 for the manual operator

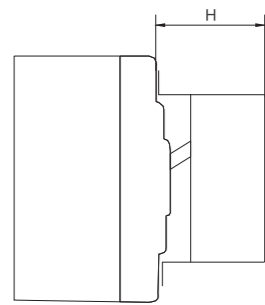


Figure 6. Mounting dimensions of the motor operator

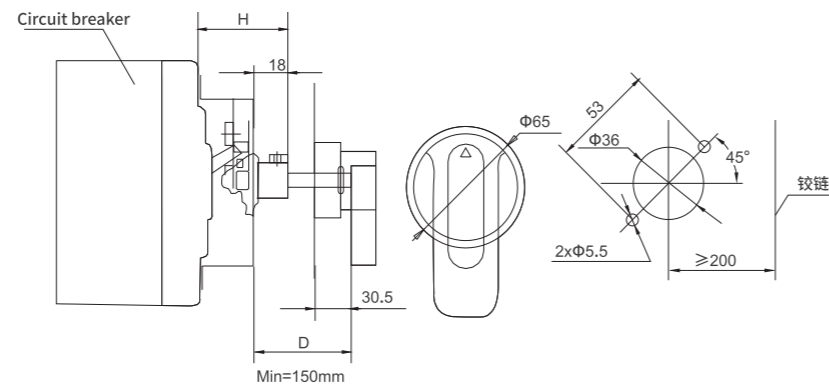


Figure 7. Mounting dimensions of the manual operator

Table 4. Mounting dimensions of the motor operator

Model	EXM3-63/125	EXM3-160 EXM3L-125/160 EXM3E-125/160	EXM3-250/320 EXM3L-250/320 EXM3E-250/320	EXM3-400/630 EXM3L-400/630 EXM3E-400/630	EXM3-800 EXM3E-800
Mounting dimensions H (mm)	96	90	92	154	154

Table 5. Mounting dimensions of the manual operator

Model	EXM3-63/125	EXM3-160 EXM3L-125/160 EXM3E-125/160	EXM3-250/320 EXM3L-250/320 EXM3E-250/320	EXM3-400/630 EXM3L-400/630 EXM3E-400/630	EXM3-800 EXM3E-800
Mounting dimensions H (mm)	59	57	60	98	100