MX MCCB Type EN

Electronic type release

User Instruction

Danger, installtion and use by electricians only

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Table 1, Protection for power distribution

TYPE EN		250	630	1600
Over-load long-time delay protection	Setting current $I_r=I_n$ x	0,4-0,5-0,6-0,7-0,8-0,9-0,95-1,0		
	$6I_r$ Tripping time T_{sd}(s)	3-6-12-18, Accuracy ±10%		
Short circuit short-time delay	Setting current $I_{sd}=I_r$ x	1,5-2-3-4-6-8-10, OFF, Accuracy ±15%		
	Tripping time T_{sd}(s)	0,1-0,2-0,3-0,4, Accuracy ±20% or ±40ms (higher value will be selected)		
Short circuit instantaneous protection	Setting current $I_i=I_n$ x	2-3-4-6-8-10-12, OFF, Accuracy ±15%		
	Max. tripping time (ms)	60		
Neutral line protection	Setting current	I_{rN}= (0,5;1) x_{In}, OFF; I_{sdN}= (1,5-2-3-4-6-8-10) I_{rN} I_{iN}= (2-3-4-6-8-10-12) I_{rN}		
	Tripping time (s)	The same with the other three-phase poles		

Overload protection and tripping time setting

-The current value I_r can be adjusted according to the user's needs. The tripping time T_r is at the status of $6I_r$.

Short circuit short-time delay protection and trip time setting

-The current value I_{sd} can be adjusted according to the user's needs. Tripping time T_{sd} is the short-circuit short time-delay tripping time, which can be adjusted according to user needs.

Short circuit instantaneous protection characteristics setting

-The current value I_i can be adjusted according to the user's needs.

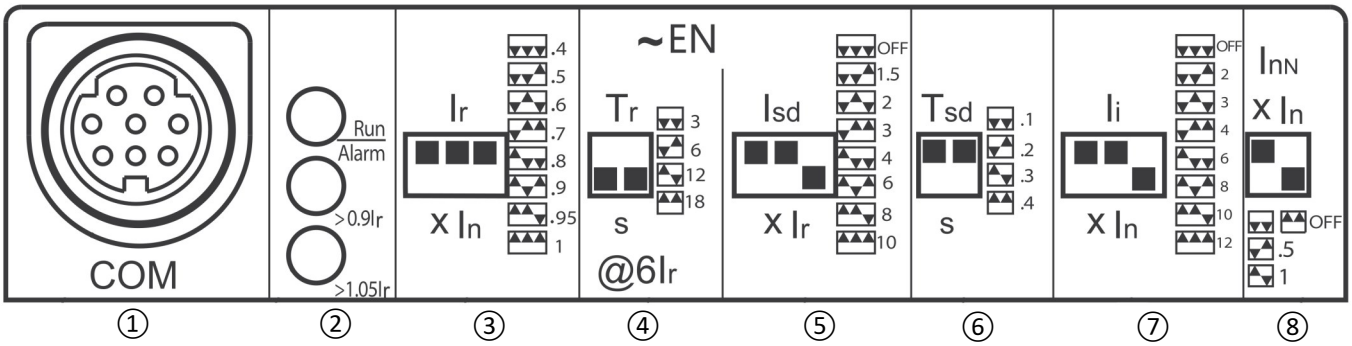
Neutral line protection feature setting

-The four-pole circuit breaker N-pole protection current value can be adjusted according to user needs. The N-pole tripping time is the same with the other three-phase poles.

Table 2, Electronic type rated current

Rame size rated current I_n A	Rated current I_n A
250	32, 63,100, 160, 250
400	250, 400
630	250, 400, 630
800	630, 800
1600	800, 1000, 1250, 1600

Diagram 1. MX2 type EN(Power distribution) Controller interface



① Communication test interface: external communication modular or dedicated handheld test equipment.

② Statusindicator: Under normal working status, the green working status indicator flashes. When the actual current I≥90%I_r, the yellow warning light is on, and when I<90%I_r, the yellow warning light is off. When the actual current I≥105%I_r, the red overload warning light is on, when I <105%I_r, the overload warning light is off.

③ Long-time delay current setting dial switch: long-time delay mutiple setting, including (0.4-1)In, with a total of 8 gears.

④ Long-time delay time setting dial switch: long– time delay time setting, including (3-15)s in total of 4 gears.

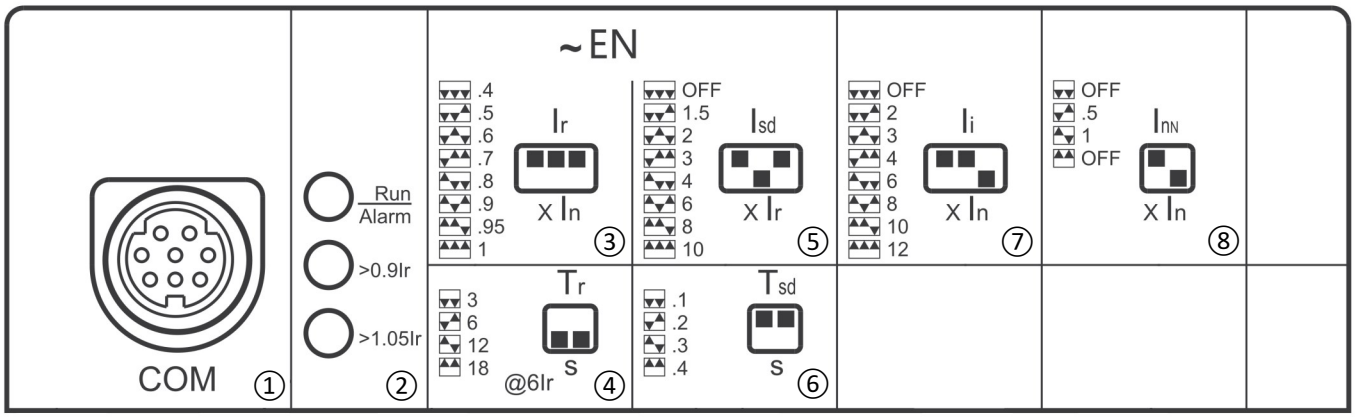
⑤ Short –time delay current setting dial switch: short-time delay multiple setting, including (1.5-10) Ir+OFF in total of 8 gears.

⑥ Short-time delay time setting dial switch: short delay time setting, including (100-400)ms in total of 4 grars.

⑦ Instantaneous current setting dial switch: instantaneous multiple setting, including (2-12)In+OFF in total of 8 gears.

⑧ N-pole setting dial switch: Neutral line multiple setting, including OFF+(0.5, 1)In+OFF a total of 4 gears. 3 pole products have no neutral line protection function and corresponding dial switch;

Diagram 2. MX3 (Power distribution) Controller interface



① Communication test interface: external communication module or dedicated handheld test equipment

② Status indicator: Under normal working status, the green working status indicator flashes. When the actual current I≥90%Ir, the yellow warning light is on, and when I <90%Ir the yellow warning light is off. When the actual current I≥105%Ir, the red overload warning light is on, when I<105 %Ir, the overload warning light is off.

③ Long -time delay current setting dial switch: long-time delay multiple setting, including (0.4-1) In, with a total 8 gears.

④ Long -time delay time setting dial switch: long-time delay time setting, including (3-18) s in total of 4 gears

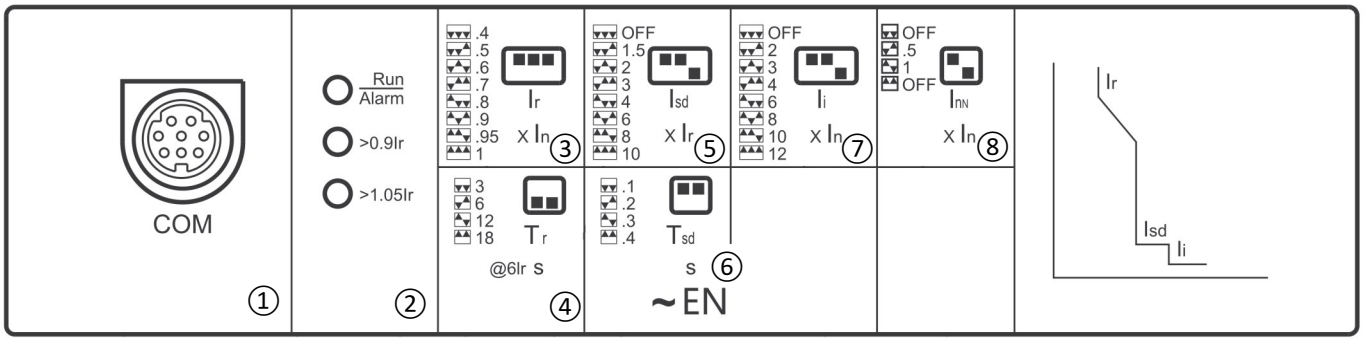
⑤ Short -time delay current setting dial switch: short-time delay multiple setting, including (1.5-10) Ir+OFF in total of 8 gears

⑥ Drehschalter für die Einstellung der Kurzzeitverzögerungszeit: Einstellung der Kurzzeitverzögerungszeit, einschließlich (100-400) ms in insgesamt 4 Gängen

⑦ Short -time delay time setting dial switch: short-time delay time setting, including (100-400) ms in total of 4 gears

⑧ N-pole setting dial switch: Neutral line multiple setting, including OFF+(0 .5, I) In+OFF a total of 4 gears. 3P products have no neutral line protection function and corresponding dial switch.

Diagram 3. MX4 (Power distribution) Controller interface



① Communication test interface: externally connect the battery box to supply power to adjust the controller parameters; external communication module or dedicated handheld test equipment

② Status indicator: Under normal working status, the green working status indicator flashes. When the actual current I≥90% 1r, the yellow warning light is on, and when I<90%Ir, the yellow warning light is off. When the actual current I≥105%Ir, the red overload warning light is on, when I<105%Ir, the overload warning light is off.

③ Long-time delay current setting dial switch: long-time delay multiple setting, including (0.4-1) In, with a total 8 gears

④ Long-time delay time setting dial switch: long-time delay time setting, including (3-18) s in total of 4 gears

⑤ Short-time delay current setting dial switch: short-time delay multiple setting, including (1.5-10) Ir+OFF in total of 8 gears

⑥ Short-time delay time setting dial switch: short-time delay time setting, including (100-400) ms in total of 4 gears

⑦ Instantaneous current setting dial switch: instantaneous multiple setting, including (2-12) In+OFF in total of 8 gears

⑧ N-pole setting dial switch: Neutral line multiple setting, including OFF+(0.5, 1) In+OFF a total of 4 gears. 3P products have no neutral line protection function and corresponding dial switch.

Dealing function adjustment example

Power-distribution type electronic moulded case circuit breaker MX2

③ Long-time delay current setting code switch

Neutral short circuit instantaneous protection I_i (N)=15xI_nN=3750A

I_n 250A ↓

I_r	0,4	0,5	0,6	0,7	0,8	0,9	0,95	1,0

↓

I_r=0,6x250A(I_n)=150A

④ Long-time delay time setting code switch: long delay time setting, including (3-6-12-18) s a total of 4 gears.

I	≤1,05I_r	1,3I_r	1,5I_r(s)				2I_r(s)				6I_r(s)			
T_r	>2h non-tripping	<1h tripping	3x16	6x16	12x16	18x16	3x9	6x9	12x9	18x9	3x1	6x1	12x1	18x1

⑤ Short time delay current setting code switch

I_r=0,6I_n=150A ↓

I_{sd}	OFF	1,5	2	3	4	6	8	10

↓

I_i=4x150A(I_n)=600A

⑥ Short-time delay time setting code switch: short-time delay time setting, including (100-400) ms a total of 4 gears

⑦ Instantaneous current setting code switch

I_n 250A ↓

I_r	OFF	2	3	4	6	8	10	12

↓

I_i=6x250A(I_n)=1500A

⑧ Neutral current setting switch

I_n=250A, I_{sd}=4I_r, I_i=6I_n ↓

I_nN	OFF	0,5	1	OFF

↓

I_nN=1,0x250A(I_n)=250A

Neutral line overload long delay protection Ir(N)=InN=250A
Neutral short circuit short delay protection Isd(N)=4XInN=1000A
Neutral short circuit transient protection Ii(N)=6XInN=1500A