

Indstilling af maximal afbryder - MCCB

Når en maximal afbryder skal indstilles findes der nærmeste større bryder.

Eks. På en indstilling

$$IB = 232 A$$

$$Ik_{min} = 1855 A$$

$$I_{start} = 6 * IB$$

$$Io = 250A$$

$$Ir = \frac{IB}{Io} = \frac{232A}{250A} = 0,928 \approx 0,93$$

$$In = Ir \cdot Io = 0,93 \cdot 250A = 232,5A$$

$$Isd_{start} = \frac{I_{start} \cdot 1,1}{In} = \frac{6 \cdot 232A \cdot 1,1}{232,5A} = \frac{1531,2A}{232,5A} = 6,59$$

$$Isd_{Ik_{min}} = \frac{Ik_{min} \cdot 0,9}{In} = \frac{1855A \cdot 0,9}{232,5A} = \frac{1669,5A}{232,5A} = 7,187$$

$$Isd_{indstilling} = 7 \rightarrow 7 \cdot 232,5A = 1627,5A$$

Maximal afbryderen skal indstilles på

$$Io = 250A \quad Ir = 0,93 \rightarrow In = 232,5A$$

$$Isd = 7 \rightarrow 1627,5A$$

MicroLogic 2

The diagram shows a log scale with three points: I_r (long-time pickup), I_{sd} (short-time pickup), and I_i (instantaneous pickup). I_r is the highest, followed by I_{sd} , and then I_i . Arrows indicate the direction of increasing current.

Ratings (A)	In at 40 °C [1]	40	100	160	250	400	630
Circuit breaker	ComPact NSX100	●	●	-	-	-	-
	ComPact NSX160	●	●	●	-	-	-
	ComPact NSX250	●	●	●	●	-	-
	ComPact NSX400	-	-	-	●	●	-
	ComPact NSX630	-	-	-	●	●	●

L Long-time protection

Pick-up (A)	I_o	value depending on trip unit rating (I_n) and setting on dial								
tripping between 1.05 and 1.20 I_r	$I_n = 40$ A	$I_o = 18$	18	20	23	25	28	32	36	40
	$I_n = 100$ A	$I_o = 40$	45	50	55	63	70	80	90	100
	$I_n = 160$ A	$I_o = 63$	70	80	90	100	110	125	150	160
	$I_n = 250$ A (NSX250)	$I_o = 100$	110	125	140	160	175	200	225	250
	$I_n = 250$ A (NSX400)	$I_o = 70$	100	125	140	160	175	200	225	250
	$I_n = 400$ A	$I_o = 160$	180	200	230	250	280	320	360	400
	$I_n = 630$ A	$I_o = 250$	280	320	350	400	450	500	570	630
$I_r = I_o \times \dots$		9 fine adjustment settings from 0.9 to 1 (0.9 - 0.92 - 0.93 - 0.94 - 0.95 - 0.96 - 0.97 - 0.98 - 1) for each value of I_o								

Time delay (s)	t_r	non-adjustable
accuracy 0 to -20%		1.5 x I_r 400
		6 x I_r 16
		7.2 x I_r 11

Thermal memory 20 minutes before and after tripping

S Short-time protection with fixed time delay

Pick-up (A)	$I_{sd} = I_r \times \dots$	1.5	2	3	4	5	6	7	8	10
accuracy ± 10 %										
Time delay (ms)	t_{sd}	non-adjustable								
	Non-tripping time	20								
	Maximum break time	80								

I Instantaneous protection

Pick-up (A)	I_i non-adjustable	600	1500	2400	3000	4800	6900
accuracy ± 15 %	Non-tripping time	10 ms					
	Maximum break time	50 ms					

[1] If the trip units are used in high-temperature environments, the MicroLogic setting must take into account the thermal limitations of the circuit breaker. See the temperature derating table.