



LKM2 100



LKM2 250



LKM2 400



LKM2 630

LKM2 Series Moulded Case Circuit Breaker

1. Application

LKM2 series moulded case circuit breaker is one of breakers 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 non-frequent 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 mouseage motor's non-frequent start, breaking during working, protecting motor from overload, short circuit & under voltage, the product conforms to IEC60947-2 standard.

2. Main Technical Specification

Table 1

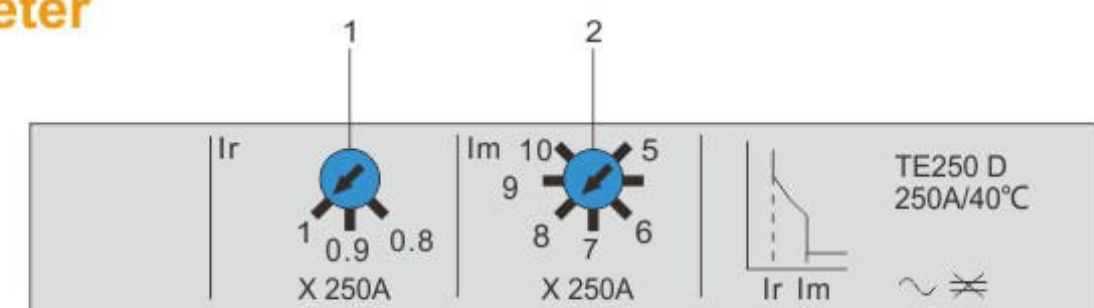
Type	Poles	Rated insulating voltage U_i (V)	Rated operating voltage U_e (V)	Rated ultimate short circuit breaking capacity I_{cu} (KA) at 380/415V	Rated service short circuit breaking capacity I_{cs} (KA) at 380/415V	Operation performance		Utilization category			
						ON	OFF				
LKM2-100N	3,4 Pole	750	690 or below	25	25	1500	8500	A			
LKM2-100H				70	70						
LKM2-100L				150	150						
LKM2-160N				36	36	1000	7000				
LKM2-160H				70	70						
LKM2-160L				150	150						
LKM2-250N				36	36	1000	7000				
LKM2-250H				70	70						
LKM2-250L				150	150						
LKM2-400N				3 Pole	750	690 or below	45		45	1000	4000
LKM2-400H							70		70		
LKM2-400L							150		150		
LKM2-630N	45	45	1000				4000				
LKM2-630H	70	70									
LKM2-630L	150	150									
LKM2-1250N	3 Pole	750	690 or below	50	37.5	1000	4000				
LKM2-1600N				50	37.5						

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

2. The type of thermal magnetic for LKM2-400/630 has no four poles.

3. Trip Units Main Technical Parameter

- Thermal magnetic release



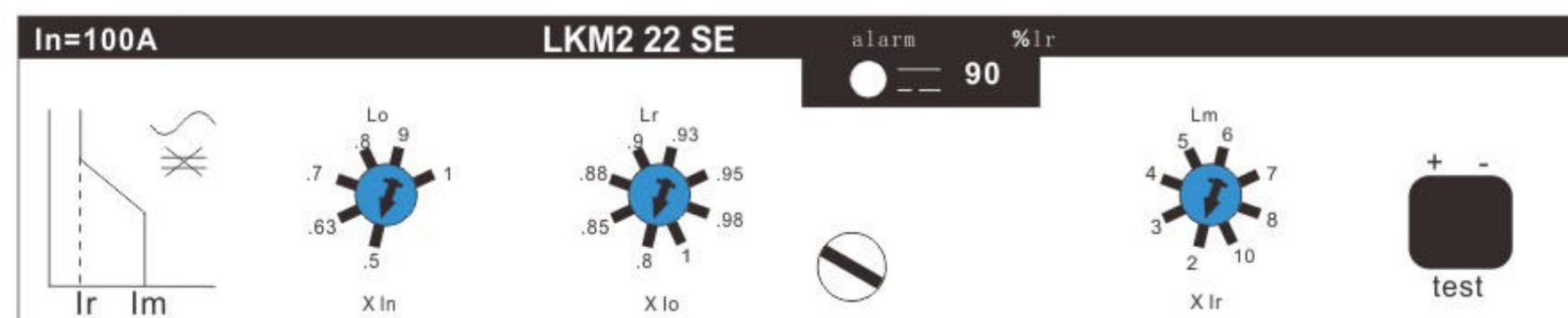
Type	Rated current I_n (A)	Note
LKM2-100	12.5, 16, 20, 25, 32, 40, 50, 63, 80, 100	T adjustable (0.8~1In) M adjustable (5~10In)
LKM2-160	16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160	
LKM2-250	160, 180, 200, 225, 250	
LKM2-400	315, 350, 400	
LKM2-630	400, 500, 630	
LKM2-1250	800, 1000, 1250	T adjustable (0.8~1In) M fixed
LKM2-1600	1000, 1250, 1600	

• **Electronic release**

LKM2 -22SE: protection of low-voltage distribution networks for LKM2-100/160/250



LKM2-250 4P



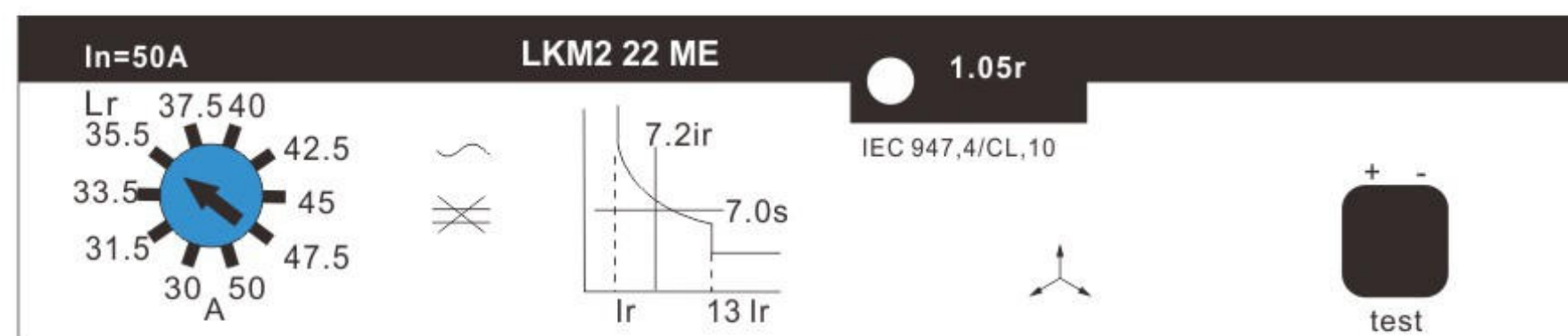
1. Overload protection with adjustable threshold
2. Short-circuit protection with adjustable threshold
3. Load indication: light at 90% of Ir setting threshold;
Flashing at 105% or more of Ir setting threshold

Type	Rated current In(A)	Note
LKM2-100	40,100	Ir=0.4...1 x In(adjustable 48 setting) Tripping between 1.05---1.3 x Ir (IEC60947-2) (Long-time overload protection) Im=2-3-4-5-6-7-8-10 x Ir (Short-circuit protection)
LKM2-160	40,100,160	
LKM2-250	40,100,160,250	



LKM2-630 4P

LKM2-22ME: protection of motor for LKM2-100/160/250



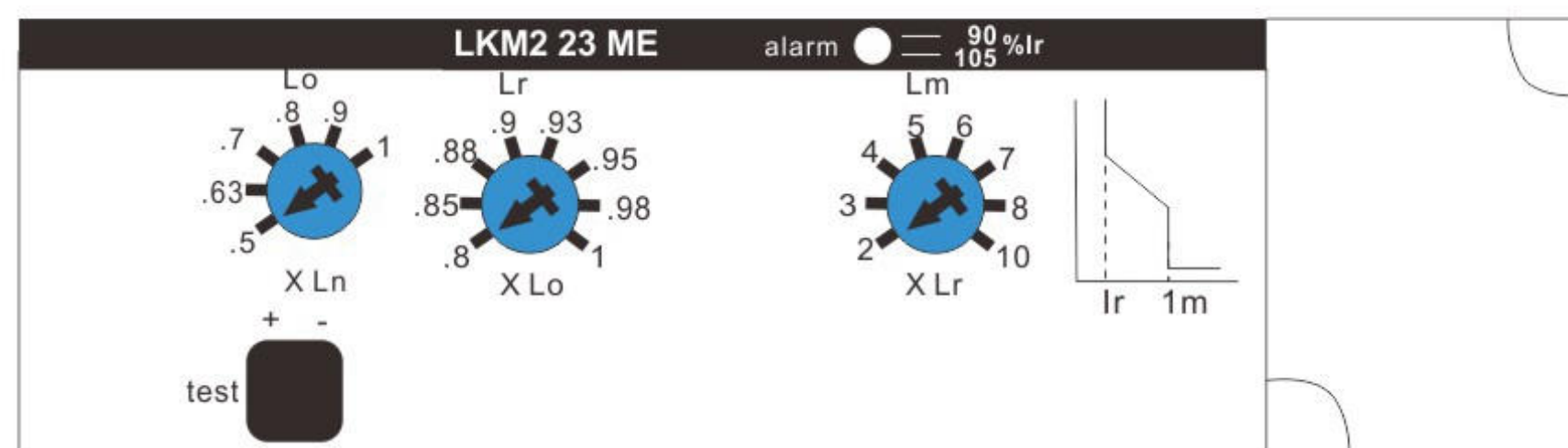
1. Overload protection with adjustable threshold, as defined by IEC60947-4 (2) tripping class 10
2. Short-circuit protection with fixed threshold (13xIr)
3. phase failure protection (tripping time delay between 3.5s-6s)
4. Load indication : dark less than 105% of Ir setting threshold;
Flashing at 105% or more of Ir setting threshold

Type	Rated current In(A)	Note
LKM2-100	40,50,80,100	$I_r = 0.6 - 0.63 - 0.67 - 0.71 - 0.75 - 0.80 - 0.85 - 0.90 - 0.95 - 1 = I_n$
LKM2-160	40,50,80,100,150	
LKM2-250	40,50,80,100,150,220	

LKM2 23SE: protection of low-voltage distribution networks for LKM2-400/630



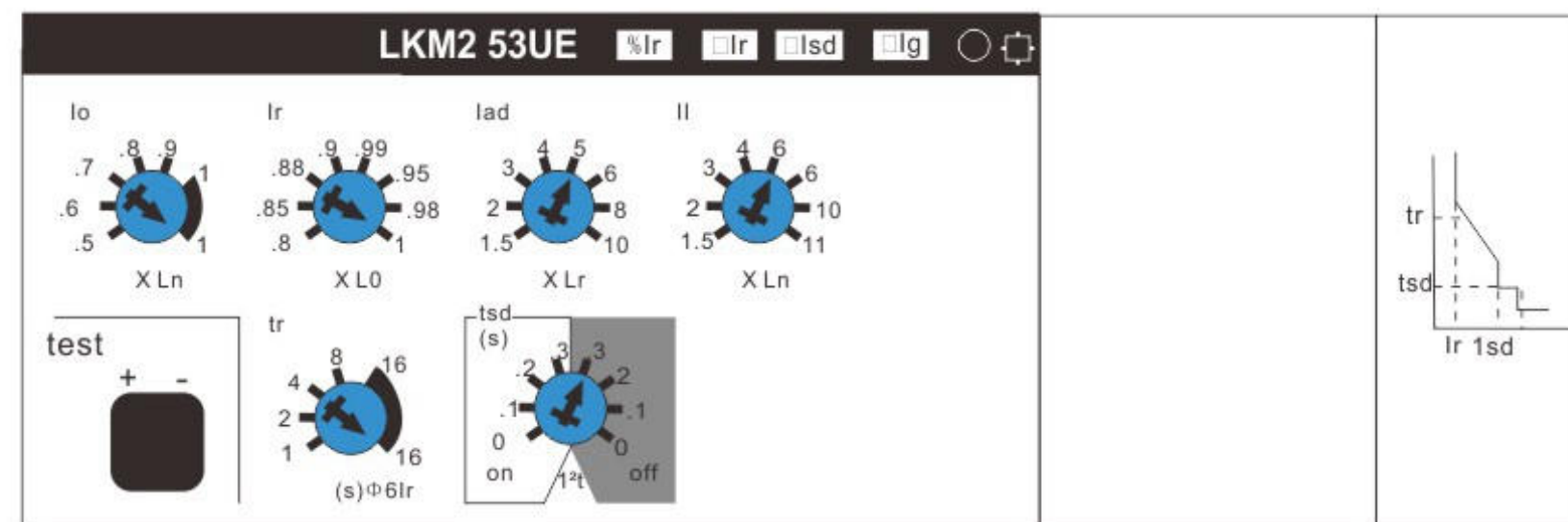
LKM2-1600



1. Overload protection with adjustable threshold
2. Short-circuit protection with adjustable threshold
3. Load indication: light at 90% of Ir setting threshold;
Flashing at 105% or more of Ir setting threshold

Type	Rated current In(A)	Note
LKM2-400	400	$I_r=0.4\text{---}1 \times I_n$ (adjustable 48 setting) Tripping between $1.05\text{---}1.3 \times I_r$ (IEC60947-2) (Long-time overload protection) $I_m=2\text{---}3\text{---}4\text{---}5\text{---}6\text{---}7\text{---}8\text{---}10 \times I_r$ (Short-circuit protection)
LKM2-630	630	

LKM2 53UE: protection of low-voltage distribution networks for LKM2-400/630



1. Overload protection with adjustable threshold, as defined by IEC60947-2
2. Short-circuit protection with adjustable threshold
3. Instantaneous short-circuit protection
4. Earth fault protection with adjustable threshold
5. Load indication : light at 90% of I_r setting threshold;
Flashing more than I_r setting threshold
6. Fault indication

LEDs indicates the type of fault that caused tripping

Overload (LT protection) or abnormal component temperature ($>I_r$);

Short-circuit (ST or instantaneous protection)($>I_m$);

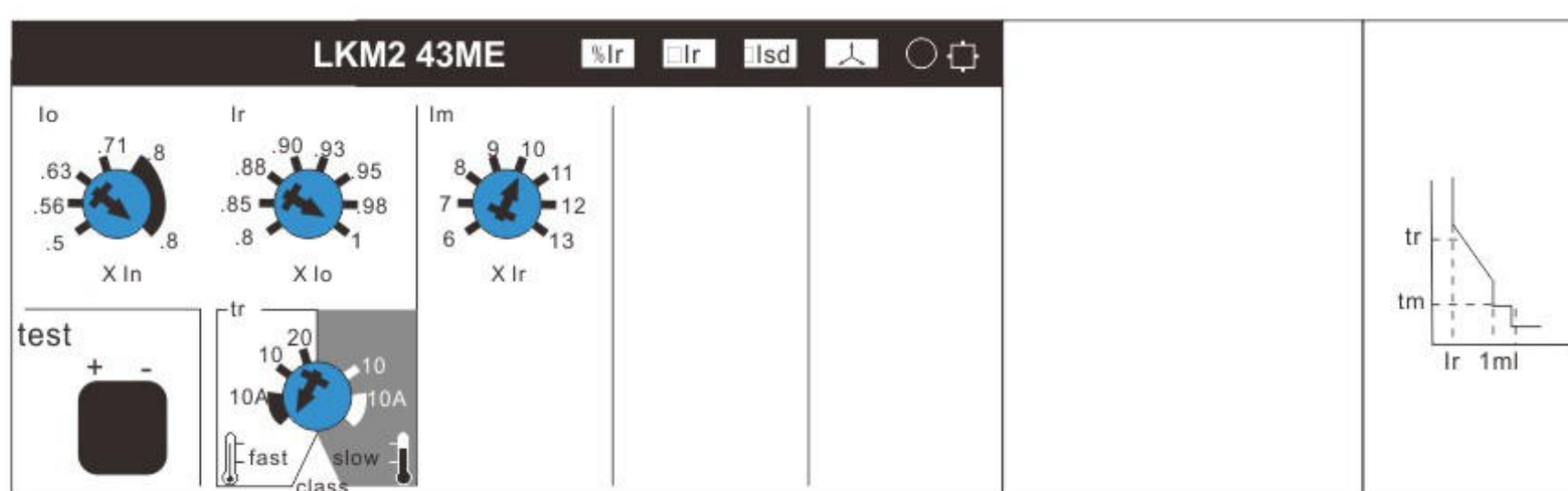
Earth fault (if earth fault protection option is present)(I_g);

Microprocessor malfunction (both ($>I_r$) and ($>I_m$) LEDs go on ,plus the (I_g) LEDs if earth fault protection option is present)

Battery powered. Spare battery are supplied in an adapter box. When a fault occurs , the LED indicating the type of fault ,lights for about 10 minutes . The information is however stored in memory . The LED can be illuminated by pressing the test pushbutton. The LED automatically goes off and the memory is cleared when the circuit breaker is reset .

Type	Rated current In(A)	Note
LKM2-400	400	$I_r=0.4\text{---}1 \times I_n$ (adjustable 48 setting) Tripping between $1.05\text{---}1.3 \times I_r$ (IEC60947-2) at $6 \times I_r$ Trip time: 1s, 2s, 4s, 8s, 16s(adjustable) (Long-time overload protection) $I_{sd}=1.5\text{---}2\text{---}3\text{---}4\text{---}5\text{---}6\text{---}7\text{---}8\text{---}10 \times I_r$ Trip time: 0s, 0.15, 0.2s, 0.3s adjustable+ 2t (Short-circuit short time delay protection) $I_i=1.5\text{---}2\text{---}3\text{---}4\text{---}6\text{---}7\text{---}8\text{---}10\text{---}11 \times I_r$ (Instantaneous short-circuit protection) $I_g=0.1\text{---}0.2\text{---}0.3\text{---}0.4\text{---}0.5\text{---}0.6\text{---}0.7\text{---}0.8\text{---}1 \times I_r$ Trip time: 0.1s, 0.2s, 0.3s, 0.4s adjustable+ *t (Earth fault protection) (If option is present)
LKM2-630	630	

LKM2 43ME: protection of motor for LKM2-400/630



1. Overload protection with adjustable threshold, as defined by IEC60947-4 (2) tripping class 10A, 10 and 20
2. Short-circuit protection with adjustable threshold (6...13xIr)
3. Phase failure protection (built-in electronic release: operates unbalanced single-phase current at 40% and more than) (tripping time delay 4s+10%), as defined by IEC60947-4.1
4. Load indication : Flashing more than Ir setting threshold
5. Fault indication

LEDs indicates the type of fault that caused tripping

Overload (LT protection) or abnormal component temperature (>Ir);

Short-circuit (ST or instantaneous protection) (>Im);

Phase failure (right LED);

Microprocessor malfunction ((>Ir) (>Im) and phase failure LEDs all go on)

Battery powered. Spare battery are supplied in an adapter box. When a fault occurs ,the LED indicating the type of fault ,lights for about 10 minutes . The information is however stored in memory . The LED can be illuminated by pressing the test push button. The LED automatically goes off and the memory is cleared when the circuit breaker is reset .

Type	Rated current In(A)	Note
LKM2-400	400	Ir=0.4---1 x In(adjustable 48 setting) Trip degree :class 10A,10,20 (IEC60947-4) (Long-time overload protection) Im=6-7-8-10-11-12-13 x Ir (Short-circuit protection)
LKM2-630	630	



Under-voltage release
Shunt release

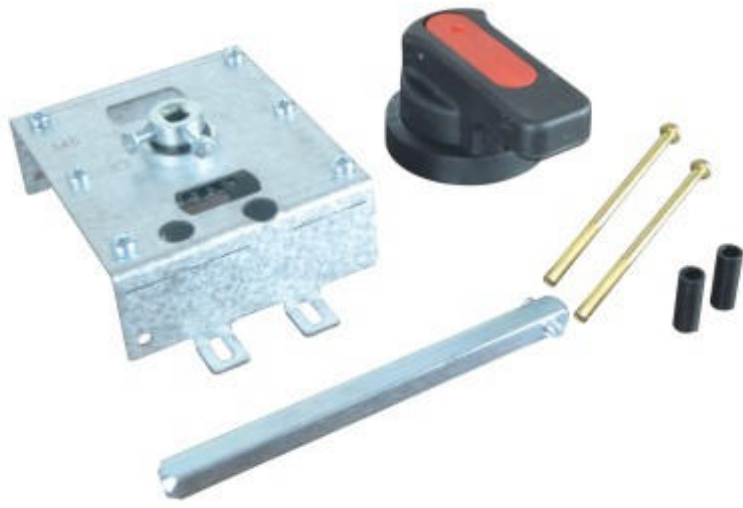


Auxiliary contact
Alarm contact

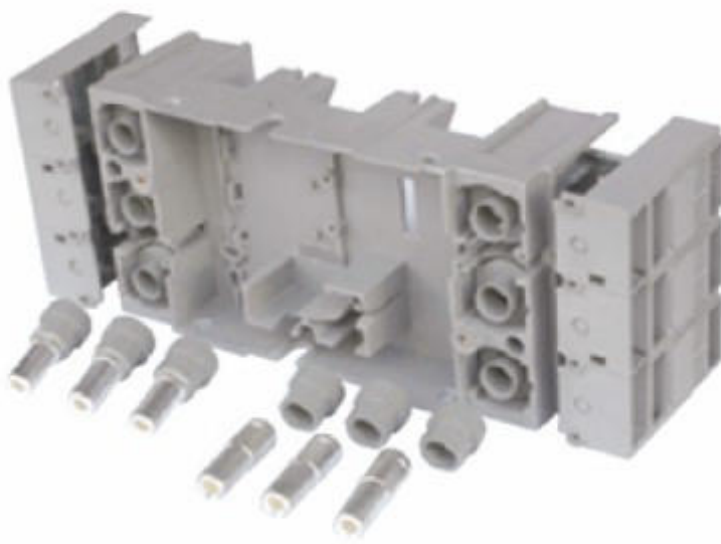
4. Accessories

Accessories	Rated Operating voltage	Consumption		For Type
		Pick up	Seal-in	
Shunt release (MX)	24V	<10VA	<5VA	LKM2-100~630
	100V			
Under-voltage release(UN)	220/230V	<10VA	<5VA	LKM2-100~630
	380/400V			

Accessories	Rated Operating voltage	Rated operating current		For Type
		AC12	AC15	
Auxiliary contact (OF)	380/400V	6	3	LKM2-100~630
Alarm contact (AL)	380/400V	6	3	



Rotary handle



Plug-in base

Rotary handle

- Direct rotary handle

Degree of protection: IP40

Function: 1) suitability for isolation

2) indication of three positions O(off) I(on) and tripped

3) press "push to trip" button, can trip-free

4) visibility of and access to trip unit settings

5) the circuit breaker can be locked in the off position by one to three padlocks ,

- Extended rotary handle

Degree of protection: IP55

Function: 1) Suitability for isolation

2) Indication of three positions O(off) I(on) and tripped

3) Visibility of and access to trip unit settings when the door is open

4) Door opening prevented when circuit breaker is on

5) The circuit breaker can be locked in the off position by one to three padlocks ,

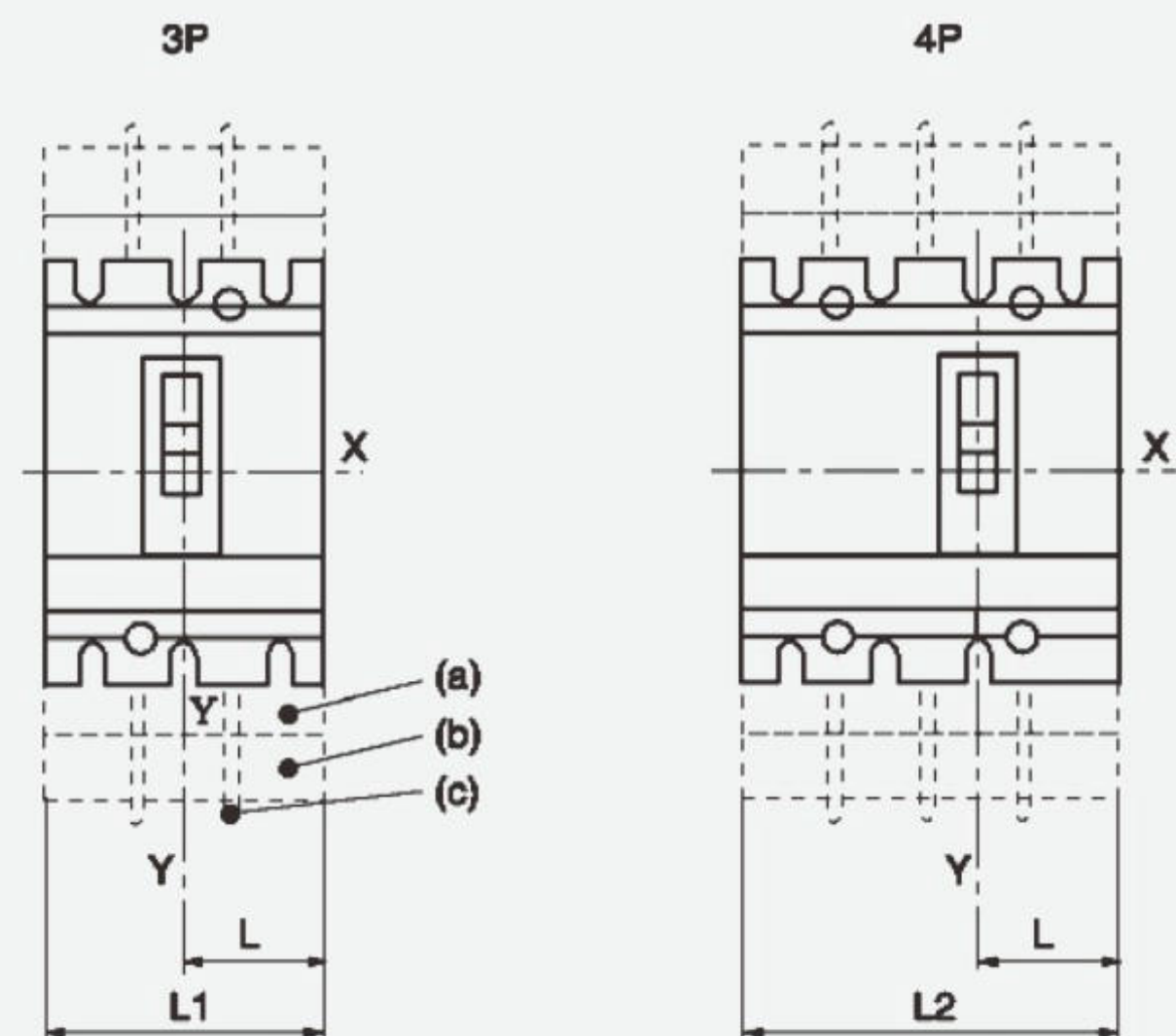
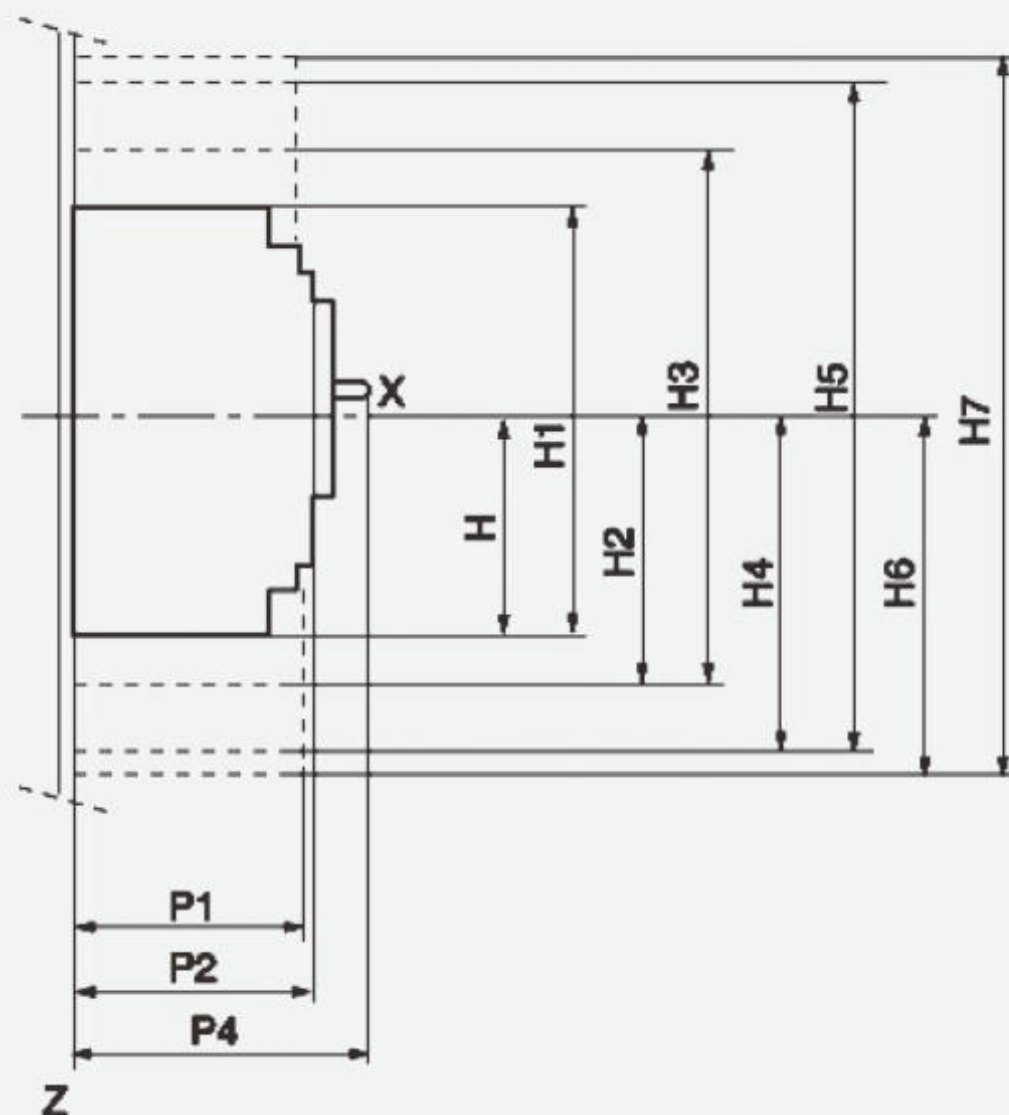
diameter 5 to 8mm(not supplied). Locking prevents opening of the switchboard door

5.Installation: Circuit breaker may be mounted vertically, horizontally or flat on their back without any derating of characteristics.

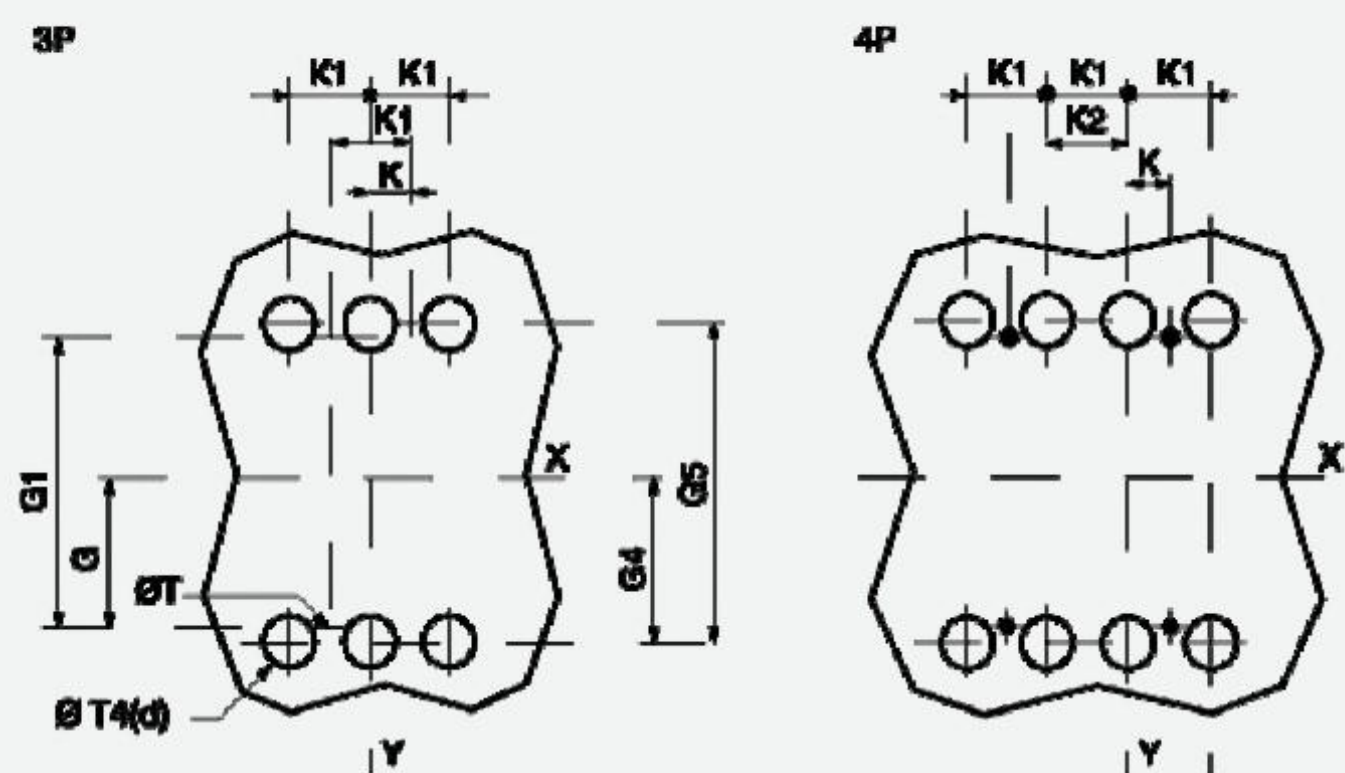
6.Fix: Mounting on backplate , mounting on rails

7.Connection: Front panel connection , back panel connection , plug-in connection

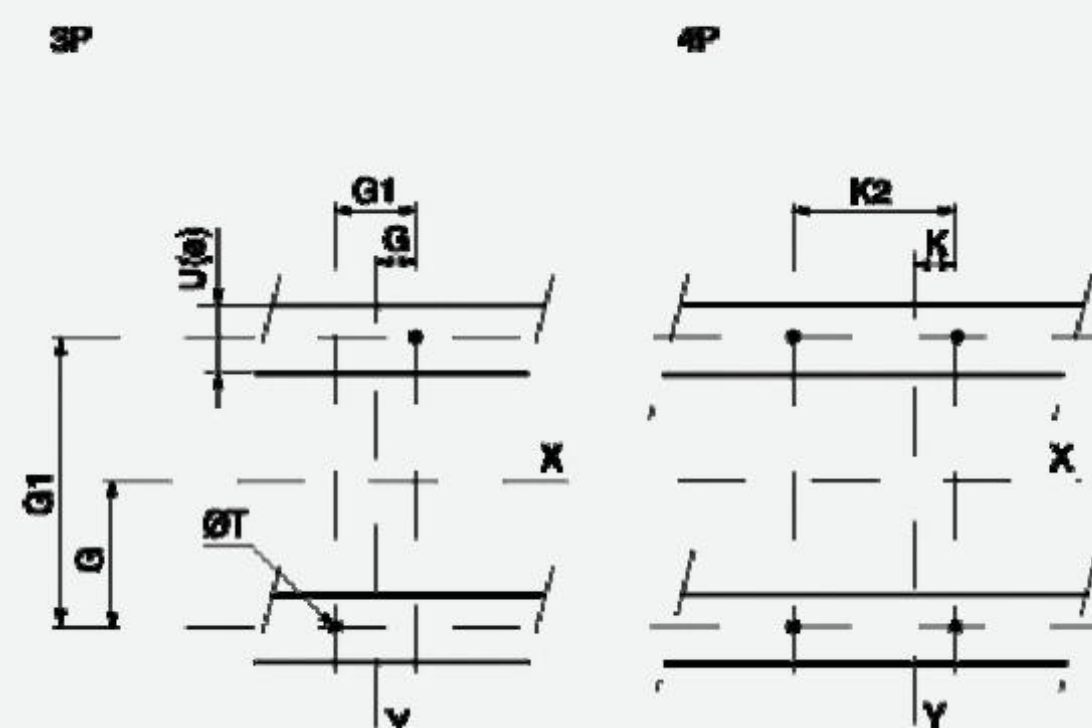
8. Outline and Installation Dimension



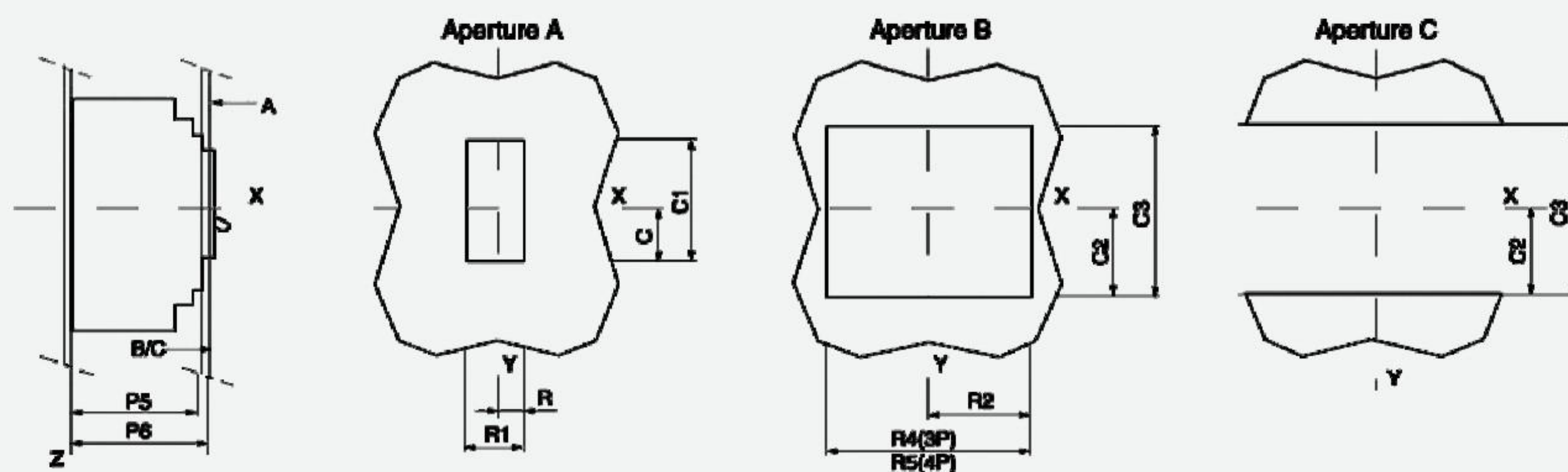
Mounting on the backplate



Mounting on rails



Aperture on a front panel
Fitting to fixes and plug-in circuit breaker



LKM2-100~630

mm	c	C1	C2	C3	G	G1	G4	G5	H	H1	H2
LKM2 100/160/250N/H/L	29	76	54	108	62.5	125	70	140	80.5	161	94
LKM2 400/630N/H/L	41.5	116	92.5	184	100	200	113.5	227	127.5	255	142.5
LKM2 1250/1600N									100	255	

mm	H3	H4	H5	H6	H7	K	K1	K2	L	L1	L2	P1	P2	P4	P5
LKM2 100/160/250N/H/L	188	160.5	321	178.5	357	17.5	35	70	52.5	105	140	81	86	111*	83
LKM2 400/630N/H/L	285	240	480	237	474	22.5	45	90	70	140	185	95.5	110	168	107
LKM2 1250/1600N						99.5	199	209	99.5	199	269	107.5		205	

mm	P6	R	R1	R2	R4	R5	ØT	ØT4	(Ue)
LKM2 100/160/250N/H/L	88	14.5	29	54	108	143	66	22	≤32
LKM2 400/630N/H/L	112	31.5	63	71.5	143	188	6.5	32	≤32
LKM2 1250/1600N									

* P4=126 is suitable for LKM2 250N/H/L