ManHua

MK7L-40 Residual Current Circuit Breaker with Overcurrent Protection

General

RCBO is applicable to electric circuits with rated voltage 230V AC,frequency 50/60Hz and rated current up to 40 Amp.The RCBO provides indirect protection to the operator□s body under such situation that the exposed live parts should be connected to a proper earth pole,RCBO also provides overcurrent protection to circuits in household,commercial and other similar installations.Moreover,it prevents potential fire danger caused by earth fault current in case overcurrent protection device fails.

Special tips:

1.RCBO with rated sensitivity up to 30mA could be used as supplementary protecting device in case other protecting device fails its protection against electric shock.

2.RCBO designed for household installation and other similar application, is for non-professional operation, and no maintenance is required.

3.RCBO provides no protection against electric shock resulted from direct contacts of both protected lines, or leakage current between these two lines.

4.Particular devices such as surge protective devices, surge arrester etc are recommended to install at upstream line to RCBO as precaution against potential against potential surge voltage and current occurring at its power input side.

5.Satisfying conditions and applications as mentioned above, RCCB with ON-OFF indicating device is considered suitable for isolation function.

6. RCBO overcurrent protection value is fixed and is not subject to further adjustment.

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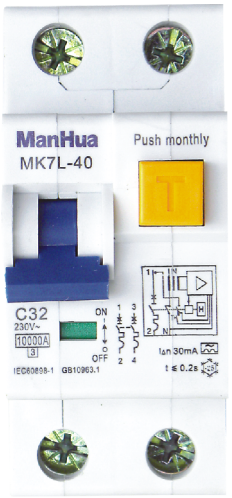

Functions

- Switching and isolation function
- Protection against overload and short-circuit currents
- Protection against the effects of sinusoidal alternating earth fault currents
- Protection against indirect contacts and additional protection against fire hazard caused by insulation faults
- Used in residential building

Instruction of type code

MK7L | A | C | 025 | 100

- 100 — Rated residual current(mA):30,100,300
- 025 — Rated current(A):6,10,16,20,25,32,40
- C — Tripping characteristic type:B,C
- A — Residual trip characteristic type:AC,A
- MK7L — Series code

Technical specifications

- Standard:IEC61009-1
- Approvals:CB,CE,VDE(applying)
- Type(wave form of the earth leakage sensed):AC,A
- Rated current In(A):6,10,16,20,25,32,40
- Number of poles:1P+N
- Rated voltage Ue(AC):230V
- Rated insulation voltage(AC):500V
- Rated frequency(Hz):50/60
- Rated residual currents I△n(mA):30,100,300
- Rated breaking capacity acc.to IEC61009 ultimate Icn (KA):6
- Rated impulse withstand voltage(1.2/50)Uimp(kV):8
- Dielectric test voltage at ind.freq.for 1 min.(kV):2.5
- Surge current resistance(wave 8/20)(A):3000
- Tripping characteristic:B,C
  Characteristic curve B(In):3-5
  Characteristic curve C(In):5-10
- Electrical life(0-C):4,000
- Mechanical life(0-C):10,000
- Degree of protection:IP40(top),IP20(terminal),with connected conductors
- Mounting position:any
- Conductor cross-sections
- Terminal could use for busbar connection thickness (mm):0.8-2, wiring(mm^2):1-25
- Terminals
- Terminal tightening torque(N.m):2.5-3
- The relatative humidity is max95% when ambient temperature(℃): 55
- Storage temperature(℃)：-40~+70
- Altitude Max.(meters):2000

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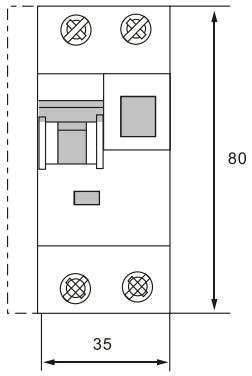
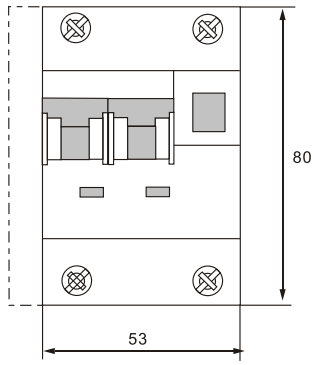
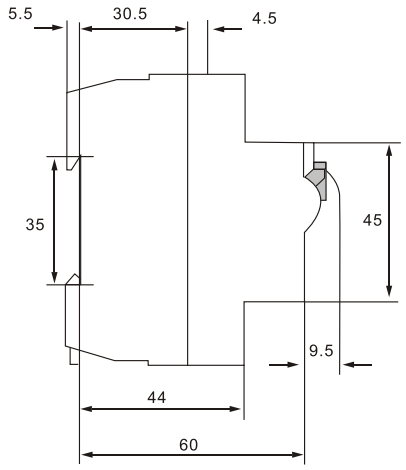
Outline and Installation dimensions

1P+N



2P





Types

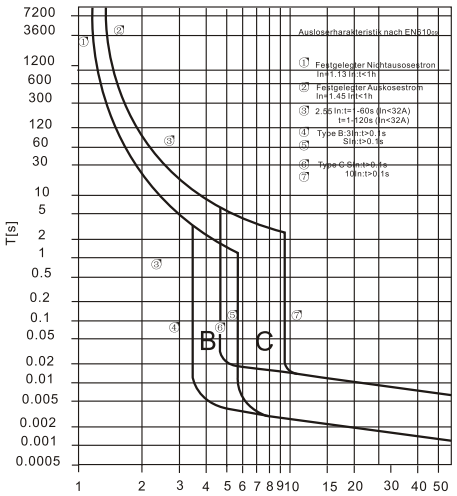
Both RCCBs and RCBOs are divided into types depending on the operating function:

- Type AC ⏦ :For which tripping is ensured for residual sinusoidal alternating currents,whether suddenly applied or slowly rising.
- Type A ⏦ :For which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents,whether suddenly applied or slowly rising.

Tripping sensitivity data

- RCD with a rated residual current of maximum 30mA are used for personnel, material and fire protection,as well as for protection against direct contact.
- RCD with a rated residual current of maximum 300 mA are used as preventative fire protection in case of insulation faults.

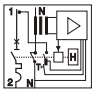
Tripping Characteristic curve



The influence of ambient temperature change to the load

	Ambient Temperature T【。C】								
I_n [A]	-25	-20	-10	0	10	20	30	35	40
2	2.5	2.4	2.3	2.2	2.2	2.1	2.0	2.0	1.9
4	4.9	4.8	4.7	4.5	4.3	4.2	4.0	3.9	3.9
5	6.2	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.8
6	7.4	7.2	7.0	6.7	6.5	6.3	6.0	5.9	5.8
8	9.9	9.6	9.3	9.0	8.7	8.4	8.0	7.9	7.7
10	12	12	12	11	11	10	10	9.9	9.7
12	15	14	14	13	13	13	12	12	12
13	16	16	15	15	14	14	13	13	13
15	19	18	17	17	16	16	15	15	15
16	20	19	19	18	17	17	16	16	15
20	25	24	23	22	22	21	20	20	19
25	31	30	29	28	27	26	25	25	24
32	40	38	37	36	35	33	32	32	31
40	49	48	45	45	43	42	40	39	39

Selection and ordering data

Type AC	Number of poles	Rated residual current I△n(mA)	Rated current In(A)	Curve B Order code	Curve C Order code
	1P+N 	30	6	MK7LAC B06/030	MK7LAC C06/030
			10	MK7LAC B10/030	MK7LAC C10/030
			16	MK7LAC B16/030	MK7LAC C16/030
			20	MK7LAC B20/030	MK7LAC C20/030
			25	MK7LAC B25/030	MK7LAC C25/030
			32	MK7LAC B32/030	MK7LAC C32/030
			40	MK7LAC B40/030	MK7LAC C40/030
	1P+N 	100	6	MK7LAC B06/100	MK7LAC C06/100
			10	MK7LAC B10/100	MK7LAC C10/100
			16	MK7LAC B16/100	MK7LAC C16/100
			20	MK7LAC B20/100	MK7LAC C20/100
			25	MK7LAC B25/100	MK7LAC C25/100
			32	MK7LAC B32/100	MK7LAC C32/100
			40	MK7LAC B40/100	MK7LAC C40/100
	1P+N 	300	6	MK7LAC B06/300	MK7LAC C06/300
			10	MK7LAC B10/300	MK7LAC C10/300
			16	MK7LAC B16/300	MK7LAC C16/300
			20	MK7LAC B20/300	MK7LAC C20/300
			25	MK7LAC B25/300	MK7LAC C25/300
			32	MK7LAC B32/300	MK7LAC C32/300
			40	MK7LAC B40/300	MK7LAC C40/300
Type A					
	1P+N 	30	6	MK7LA B06/030	MK7LA C06/030
			10	MK7LA B10/030	MK7LA C10/030
			16	MK7LA B16/030	MK7LA C16/030
			20	MK7LA B20/030	MK7LA C20/030
			25	MK7LA B25/030	MK7LA C25/030
			32	MK7LA B32/030	MK7LA C32/030
			40	MK7LA B40/030	MK7LA C40/030
	1P+N 	100	6	MK7LA B06/100	MK7LA C06/100
			10	MK7LA B10/100	MK7LA C10/100
			16	MK7LA B16/100	MK7LA C16/100
			20	MK7LA B20/100	MK7LA C20/100
			25	MK7LA B25/100	MK7LA C25/100
			32	MK7LA B32/100	MK7LA C32/100
			40	MK7LA B40/100	MK7LA C40/100
	1P+N 	300	6	MK7LA B06/300	MK7LA C06/300
			10	MK7LA B10/300	MK7LA C10/300
			16	MK7LA B16/300	MK7LA C16/300
			20	MK7LA B20/300	MK7LA C20/300
			25	MK7LA B25/300	MK7LA C25/300
			32	MK7LA B32/300	MK7LA C32/300
			40	MK7LA B40/300	MK7LA C40/300