



# KNC1

## SERIES AC CONTACTOR

### 1. Model and meaning



### 2. Sphere of application

The series KNC1 AC contactor is applicable at the line of AC 50/60 Hz, rated voltage up to 660V and rated current up to 95A for remote switch, breaking and frequent starting, controlling the AC motor. Moreover, the contactor can act as the time-delay contactor, reversible contactor, star/delta starter by the accessories addition such as addition of modular auxiliary contact set. Air timedelay head, mechanical interlock mechanism, etc. Moreover, it could act as the electromagnetic starter by the direct plug of the thermal relay.

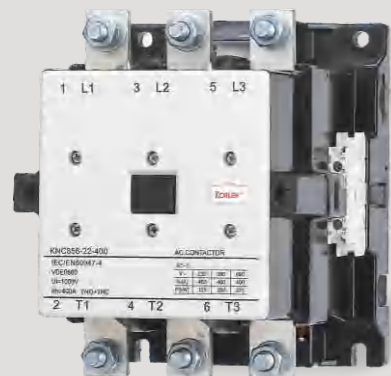
This product conforms to the requirement of IEC60947-4-1& GB14048.4 standards.

### 3. Technical parameter

Type	Rated insulation voltage(V)	Conventional thermal current(A)	Rated operation current(A)	Control power(kw)					No .of contacts	Remark
				220V	380V	415V	440V	660V		
KNC1-0911	660	20	9	2.2	4	4	4	5.5	3P+NO+NC	Installation method 1.with two screws 2.35mm din rail
KNC1-1211		20	12	3	5.5	5.5	5.5	7.5		
KNC1-1811		32	18	4	7.5	9	9	9		
KNC1-2511		40	25	5.5	11	11	11	15		
KNC1-3211		50	32	7.5	15	15	15	18.5		
KNC1-4011		60	40	11	18.5	22	22	30		Installation method 1.with three screws 2.75mm or 35mm din rail
KNC1-5011		80	50	15	22	25	30	33		
KNC1-6511		80	65	18.5	30	37	37	37		
KNC1-8011		125	80	22	37	45	45	45		
KNC1-9511		125	95	25	45	45	45	45		

### 4. Coil parameters

Type	KNC1-09	KNC1-12	KNC1-18	KNC1-25	KNC1-32	KNC1-40	KNC1-50	KNC1-65	KNC1-80	KNC1-95	
Pick-up voltage 50/60Hz(V)	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	(0.85~1.1)Us	
Release voltage 50/60Hz(v)	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	(0.2~0.75)Us	
Coil power											
	50 Hz	Pick-up(VA)	70	70	110	110	110	200	200	200	200
		Holding(VA)	8	8	11	11	11	20	20	20	20
	60 Hz	Pick-up(VA)	80	80	115	115	115	200	200	200	200
Holding(VA)		8	8	11	11	11	20	20	20	20	
Power consumption (W)	1.8~2.7	1.8~2.7	3~4	3~4	3~4	6~10	6~10	6~10	6~10	6~10	



# KNC8

## SERIES AC CONTACTOR

### 1. Model and meaning

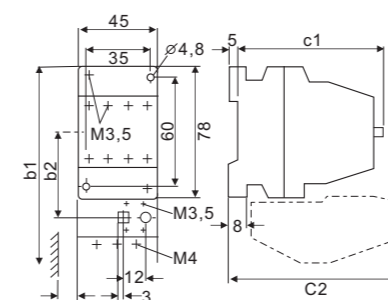


The series KNC8 AC contactor is suitable for 50/60Hz, rated insulation voltage is 690-1000V, Rated current is 9A-400A at rated operational voltage 380V under the utilization category AC-3. It mainly used for making or breaking circuit at a long distance, suitable for controlling starting/stopping/reversing of ac motor. According with IEC60947 VED0660 Gb14048 standards.

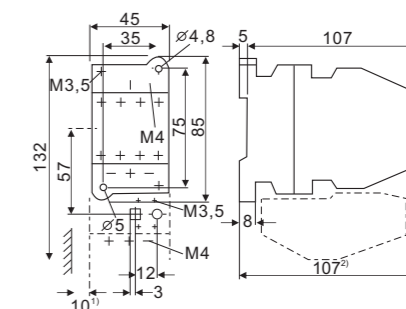
### 2. Sphere of application

1. Good safety, induction parts are inside.
2. Small volume, light weight, material of air chute not easily to break and good arc capability.
3. Air chamber is sealing type, distance of arcover is small, can reduce the measurement of electric box body.
4. unique system frame of main contact group, contact abrasion reduce, increase the electro-life.
5. electromagnet works reliably, abrasion is more less, low noise, having high mechanical intensity.
6. Frequency operation and controlling capacity are all very high.
7. It's convenient for connection, fastness, high touch reliability, strong vibration resistance, good safety precaution.

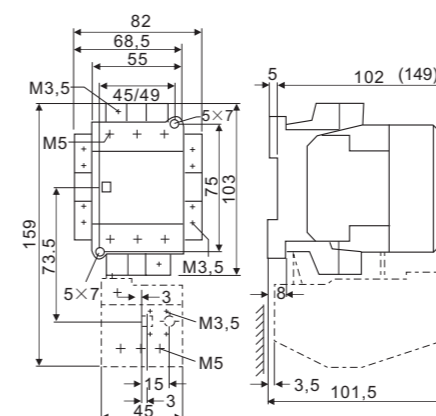
### 2. Technical parameter



KNC8-40, 41



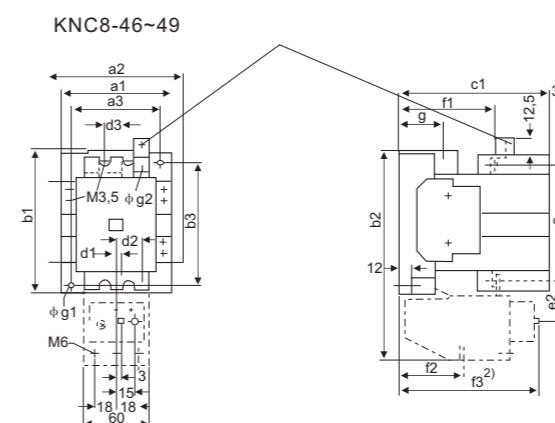
KNC8-44, 45



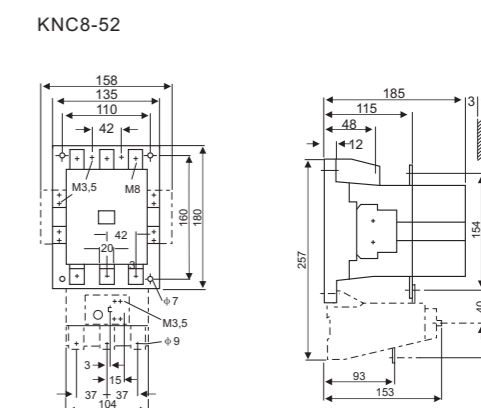
KNC8-42, 43

Type	b1	b2	C1	(c1) <sup>3</sup>	c2
1ONor1NC	125	55	81	(115) <sup>3</sup>	108
1NO+1NC Or 2NO+2NC	130	60	97	(130) <sup>3</sup>	100

### 3. Dimension



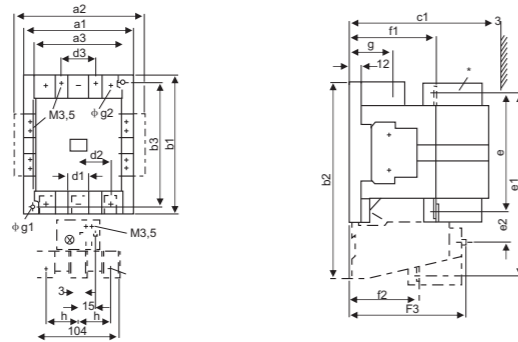
KNC8-46-49



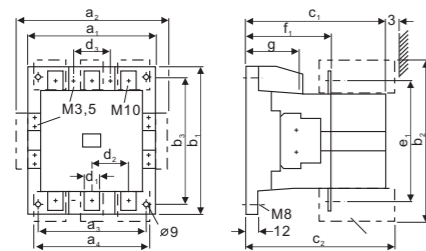
KNC8-52

Size	Type	a1	a2	a3	a1	b2	b3	c1	(c1) <sup>1</sup>	d1	d2	d3	e	e2	f1	f2	f3	g	φg1	φg2
3	KNC8-45, 47	90	113	70	117	175	100	123	123	8	26.5	25	94	34	80	63	122	28	4.8	6.1(m6)
4	KNC8-48	100	123	80	133	194	110	140	140	8	26.5	25	107	36	89	63	122	39	5.5	6.1(m6)
4	KNC8-49	100	123	80	133	194	100	140	140	10.5	26.5	25	116	31.5	89	63	122	39	5.5	6.1(m6)

KNC8-50, 51



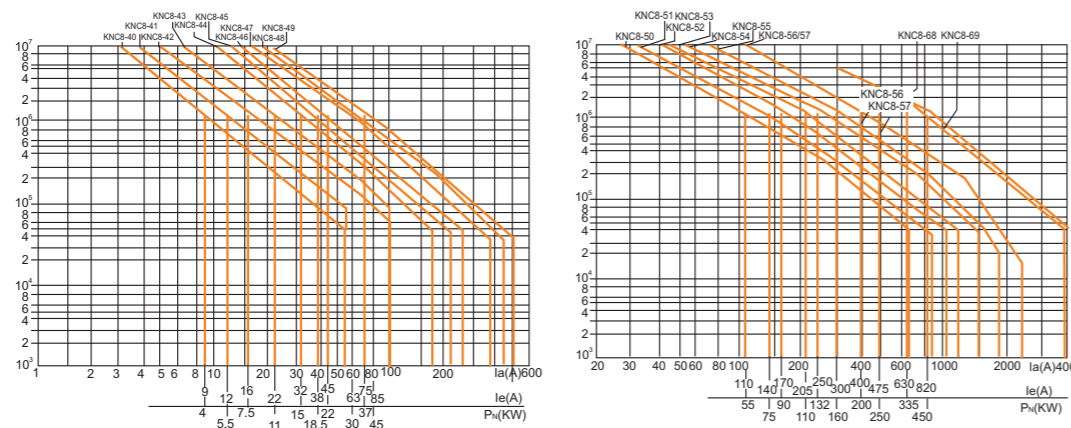
Type	a1	a2	a3	b1	b2	b3	c1	(c1)1	d1	d2	d3	e	e1	e2	f1	f2	f3	g	φg1	φg2
KNC8-50	120	143	100	150	232	130	150	150	15	37	37	130	213	40	93	80	146	45	6.3	6.1(m6)
KNC8-51	120	143	100	150	232	130	150	150	20	42	37	139	21.5	40.5	93	80	146	45	6.3	9(m8)



Type	a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	b <sub>1</sub>	b <sub>2</sub>	c <sub>1</sub>
KNC8-53	135	158	110	180	160	185
KNC8-54, KNC8-55	145	168	120	200	180	198
KNC8-56	160	130	130	200	180	222

Type	(c <sub>1</sub> )	e <sub>1</sub>	f <sub>1</sub>	g	d <sub>1</sub>	d <sub>2</sub>	φg <sub>1</sub>
KNC8-53	185	159	115	48	25	48	7
KNC8-54, KNC8-55	198	168	132	58	25	48	9
KNC8-56	222	178	150	65	25	48	9

**4. Characteristics curve**



**5. Technical parameter**

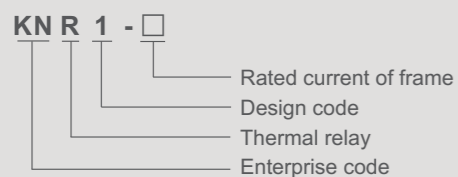
Type	KNC8-40	KNC8-41	KNC8-44	KNC8-46	KNC8-47	KNC8-48	KNC8-49	KNC8-50	KNC8-52	KNC8-54	KNC8-56	
Rated insulation voltage(V)	690	690	690	1000	1000	1000	1000	1000	1000	1000	1000	
Rated operational current(380V)	AC-3	9	12	32	45	63	75	85	110	170	250	
	AC-4	3.3	3.3	15.5	24	28	34	42	54	75	110	
Rated outputs of three-phase motors at 50Hz	AC-3 AC-4	230/220V	2.4	2.4	8.5	15	18.5	22	26	37	55	78
		400/380V	4	4	15	22	30	37	45	55	90	132
		500V	5.5	5.5	21	30	41	50	59	76	118	178
		690/660V	5.5	5.5	23	39	55	67	67	100	159	235
		1000V	-	-	-	-	-	39	39	65	90	132
	400/380V	1.48/1.4	1.48/1.4	7.5	12.6/12	14.7/14	17.9/17	22/21	28.4/27	40/38	61/58	85/81
690/660V	2.54/2.4	2.54/2.4	13	21.8/20.8	25.4/24.3	30.9/29.5	38/36	49/46.9	69/66	105/100	147/140	
Mechanical endurance(×10 <sup>6</sup> )	(0.8-1.1)Us											
Electrical endurance(×10 <sup>6</sup> )	AC-3	10	10	10	10	10	10	10	10	10	10	
	AC-4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Switching frequency	AC-3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
	AC-4	1000	1000	750	1200	1000	1000	850	1000	700	700	
Coil voltage tolerance	250	250	250	400	300	300	250	300	200	200	150	
Power consumption of coil(50Hz)	Closed(VA)	10	10	12.1	17	17	32	32	39	58	84	
	p.f.	0.29	0.29	0.28	0.29	0.29	0.23	0.23	0.24	0.26	0.24	
	Colsing(VA)	6.8	6.8	101	183	183	330	330	550	910	1430	
	p.f.	0.82	0.82	0.83	0.6	0.6	0.5	0.5	0.45	0.38	0.34	
Conventional thermal current	20	20	55	80	90	100	100	160	210	300	400	
Conventional thermal current of auxiliary contacts	10	10	10	10	10	10	10	10	10	10	10	
Rated operational current of auxiliary contacts	AC-15 380/220V	6/10	6/10	4/6	4/6	4/6	4/6	4/6	4/6	4/6	4/6	



# KNR1

## THERMAL RELAY

### 1. Model and meaning



### 2. Sphere of application

KNR1 series thermal relay can be used in the circuit of 50Hz or 60Hz, rated insulation voltage 660V, rated current 0.1-93A for protecting the phase break when the electric motor is overload.

The relay has different mechanism and temperature compensation& can be plugged in KNC1 series AC contact.

### 3. Feature

#### A. Fundamental parameter of the main circuit

- Rated insulation voltage 660V;
- Rated working current 25,36,93A separately;
- The regulator seal of rate setting current and setting.
- Current of the thermal component

#### B. Auxiliary circuit

- There is a pair of NO and NC contact with electric insulation;
- Rated insulation voltage 500V;
- Rated frequency 50-60Hz;
- Use group, rated working voltage, appoint thermal current and rated current.

### 4. Technical parameter

Type	Rated working current of thermal relay	Thermal component Scale of rated current(A)	
KNR1-13	25	1301	0.10-0.16
		1302	0.16-0.25
		1303	0.25-0.40
		1304	0.40-0.63
		1305	0.63-1.0
		1306	1.0-1.6
		13X6	1.25-2.0
		1307	1.6-2.5
		1308	2.5-4.0
		1310	4.0-6.0
		1312	5.5-8.0
		1314	7.0-10.0
		1316	9.0-13.0
KNR1-23	36	1321	12.0-18.0
		1322	17.0-25.0
KNR1-33	93	2353	23.0-32.0
		2355	28.0-36.0
		3353	23.0-32.0
		3355	30.0-40.0
		3357	37.0-50.0
		3359	48.0-65.0
		3361	55.0-70.0
		3363	63.0-80.0
		3365	80.0-93.0

**5. Technical parameter**

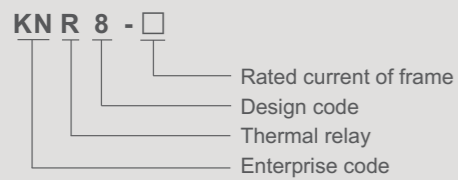
Type	Sphere of setting current(A)	Fuse specification (A)		
		IEC947-4		
		"1"	"2"	
KNR8-50	0.1-0.16	35	0.5	
	0.16-0.25		1	
	0.25-0.4		1.6	
	0.4-0.63		2	
	0.63-1		4	
	0.8-1.25		4	
	1-1.6		6	
	1.25-2		6	
	1.6-2.0		6	
	2-3.2		10	
	2.5-4		10	
	3.2-5		16	
	4-6.3		16	
	5-8		20	
	6.3-10		25	
8-12.5	25			
10-14.5	25			
KNR8-52	0.1-0.16	63	0.5	
	0.16-0.25		1	
	0.25-0.4		1.6	
	0.4-0.63		2	
	0.63-1		4	
	0.8-1.25		4	
	1-1.6		6	
	1.25-2		6	
	1.6-2.0		6	
	2-3.2		10	
	2.5-4		10	
	3.2-5		16	
	4-6.3		16	
	5-8		20	
	6.3-10		25	
8-12.5	25			
10-16	35			
12.5-20	35			
16-25	50			
KNR8-55	1-1.6	100	6	
	1.25-2		6	
	1.6-2.0		6	
	2-3.2		10	
	2.5-4		10	
	3.2-5		16	
	4-6.3		16	
	5-8		20	
	6.3-10		25	
	8-12.5		25	
	10-16		35	
	12.5-20		50	
	16-25		50	
	20-32		80	
	25-36		80	
32-40	80			
36-45	80			
KNR8-58	12.5-20	160	50	
	16-25		50	
	20-32		63	
	25-40		80	
	32-50		100	
	40-57		100	
	50-63		100	
	57-70		125	
	63-80		160	
	70-88		160	
	55-80		250	
	63-90		250	
	80-110		315	
	90-120		315	
	110-135		315	
KNR8-60	55-80	250	160	
	63-90		160	
	80-110		200	
	90-120		224	
	110-135		224	
	55-80		250	
	63-90		250	
	80-110		315	
	90-120		315	
	110-135		315	
	120-150		315	
	0.1-0.16		25	0.5
	0.16-0.25			1
	0.25-0.4			1.6
	0.4-0.63			2
0.63-1	4			
0.8-1.25	4			
1-1.6	6			
1.25-2	6			
1.6-2.5	6			
2-3.2	10			
2.5-4	10			
3.2-5	16			
4-6.3	16			
5-8	20			
6.3-10	25			
8-12.5	35			
10-16	35			
12.5-20	63			
16-25	63			
20-32	80			
25-40	125			
32-40	160			
40-57	160			
50-63	160			
55-80	250			
63-90	250			
80-110	315			
KNR8-62	90-120	315	224	
	110-135			
	120-150			
	135-160			
	150-180			
	80-125			355
KNR8-66	80-125	500	250	
	125-200		315	
	160-250		400	
	200-320		400	
	250-400		800	



# KNR8

## THERMAL RELAY

**1. Model and meaning**



**2. Working condition**

- The altitude should not be higher than 2000m;
- The ambient temperature:-25℃~55℃;
- The relative humidity: when +25℃,the relative humidity of air should be no more than 90%.

**3. Structure feature**

- Series overload relay of thermal metal mode ,tripping class is 10A;
- Setting current continuous adjustable device;
- trip indicator;
- test button;
- reset button by hand operation and automatic reset button;
- have a pair of No and Nc insulation contact in electricity;
- mode of installation :install independently or can plug in the AC contactor.

**4. Sphere of application**

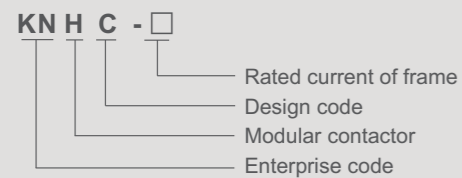
KNR8 series overload relay is suitable for 50Hz/60Hz, rated voltage up 690~1000V, rated current 0.1~400A in main circuit of long time working. It is used to protect AC three-phase asynchronous motor against overload and open phase. This products conformity with IEC947-4, VDE0660,GB14048.4 standards .



# KNHC

## MODULAR CONTACTOR

### 1. Model and meaning



### 2. Sphere of application

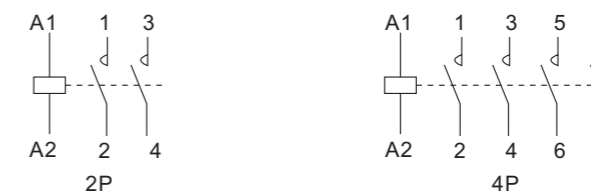
The KNHC modular contactor (hereinafter referred to as contactor) is mainly suitable for AC 50Hz (or 60Hz), rated working voltage to 400V and rated current operation in the circuit up to 100A, it can control the low-inductance and low-inductance load of household appliances and similar purposes; it can also be used to control the load of household motors. The power should be reduced accordingly.

The KHHC contactors according to standard IEC/EN61095 , IEC60947-4-1and are used mainly in buildings for switching and controlling lighting, heating, ventilation and pumps. They are part of the complete range of Din rail products and can be integrated easily in dedicated panels.

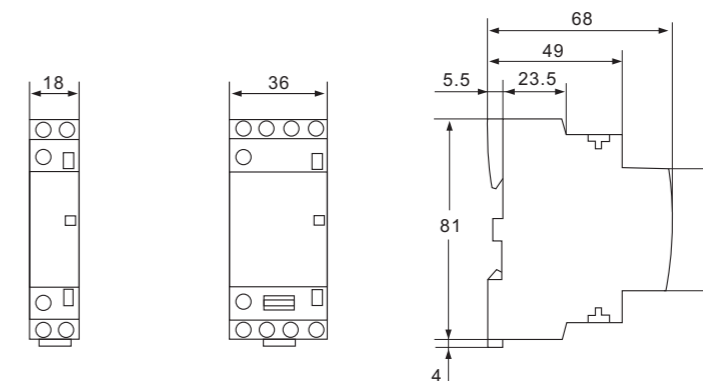
### 3. Basic Specification And Main Parameters

AC 2P,1modules	AC 4P,2modules
le Rating AC-7a	16A , 20A , 25A
le Rating AC-7b	6A , 7A , 9A
Uc (V AC)(50Hz)	24 , 110 , 240
AC 2P,2modules	AC 4P,3modules
le Rating AC-7a	32A , 40A , 63A(4P)
le Rating AC-7b	12A , 18A , 25A(4P)
Uc (V AC)(50Hz)	24 , 110 , 240

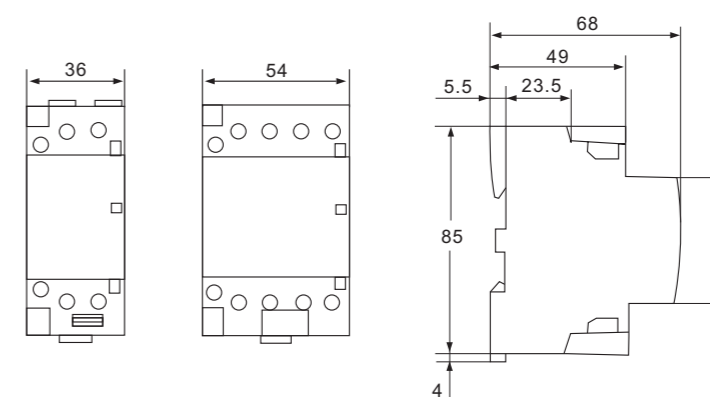
### 4. Operation principle



### 5. Dimensions(mm)



KNHC-16/20/25A



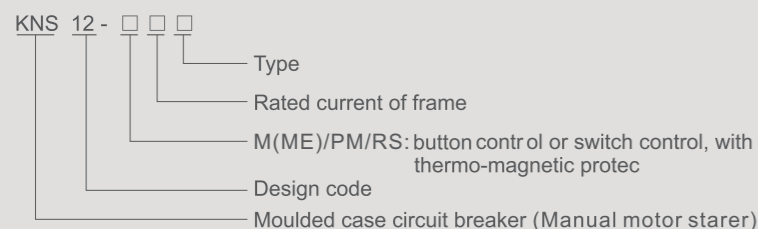
KNHC-32/40/63A



# KNS12

## SERIES MANUAL MOTOR STARTER

### 1. Model and meaning



KNS12-32 Series Manual motor starter can replace GV2 Series product

KNS12-80 Series Manual motor starter can replace GV3 Series product

### 2. General Specification

KNS12 Series meet below international standard

IEC 60947.1

IEC 60947.2

IEC 90647.4.1

KNS12 has certificate of CE and so on.

### 3. Ambient temperature

KNS12 can be used between -5 to +40 if in a higher or lower temperature, the customer should consult the manufacturer.

### 4. Sphere of application

KNS12 is applied to AC 690V, 0.1A~80A. Serve as three-phase squirrel-cage asynchronous motor over-loader, phase-losing and short circuit protector, infrequent start-controller, KNS12 can protect distribution line and load transfer infrequently. Also can be used as isolation.

### 5. Technical parameter

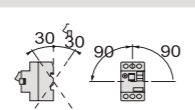

KNS12-M32 Manual motor starter with thermo-magnetic protection								
Button control or switch control								
50/60HZ, AC-3 type, three-phase motor rated power				Thermal tripping setting range	Magnetic tripping current	I <sub>th</sub> the current with case	Type (button control)	Weight
230V	400V	415V	440V					
kW	kW	kW	kW	A	A	A		kg
-	-	-	-	0.1...0.16	1.5	0.16	KNS12-M3201	0.260
-	-	-	-	0.16...0.25	2.4	0.25	KNS12-M3202	0.260
-	-	-	-	0.25...0.40	5	0.40	KNS12-M3203	0.260
-	-	-	-	0.40...0.63	8	0.63	KNS12-M3204	0.260
-	-	-	0.37	0.63...1	13	1	KNS12-M3205	0.260
-	0.37	-	0.55	1...1.6	22.5	1.6	KNS12-M3206	0.260
0.37	0.75	0.75	1.1	1.6...2.5	33.5	2.5	KNS12-M3207	0.260
0.75	1.5	1.5	1.5	2.5...4	51	4	KNS12-M3208	0.260
1.1	2.2	2.2	3	4...6.3	78	6.3	KNS12-M3210	0.260
2.2	4	4	4	6...10	138	9	KNS12-M3214	0.260
3	5.5	5.5	7.5	9...14	170	13	KNS12-M3216	0.260
4	7.5	9	9	13...18	223	17	KNS12-M3220	0.260
5.5	11	11	11	17...23	327	21	KNS12-M3221	0.260
5.5	11	11	11	20...25	327	23	KNS12-M3222	0.260
7.5	15	15	15	24...32	416	24	KNS12-M3232	0.260

KNS12-ME32 same as KNS12-M32

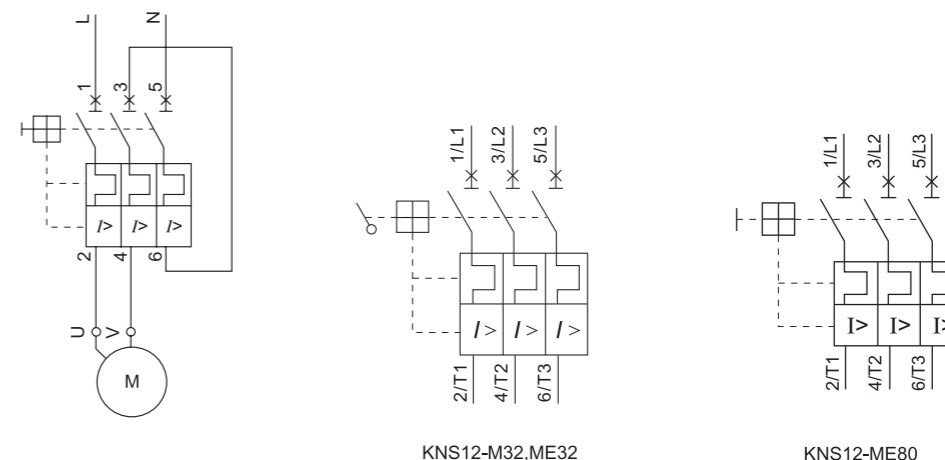
### KNS12-M80 Manual motor starter with thermo-magnetic protection

Button control								
50/60HZ, AC-3 type, three-phase motor rated power				Thermal tripping setting range	Magnetic tripping current I <sub>d</sub> ± 20%	Type (button control)	Weight	
230V	400V	415V	440V					
kW	kW	kW	kW	A	A		kg	
-	0.37	-	0.55	1 to 1.6	19.2	KNS12-M8006	0.600	
0.37	0.75	1.1	1.1	1.6 to 2.5	30	KNS12-M8007	0.600	
0.75	1.5	1.5	1.5	2.5 to 4	48	KNS12-M8008	0.600	
1.1	2.2	2.2	3	4 to 6	72	KNS12-M8010	0.600	
2.2	4	4	4	6 to 10	120	KNS12-M8014	0.600	
4	7.5	7.5	7.5	10 to 16	192	KNS12-M8020	0.600	
5.5	11	11	11	16 to 25	300	KNS12-M8025	0.600	
1	18.5	22	22	25 to 40	480	KNS12-M8040	0.700	
15	30	33	33	40 to 63	756	KNS12-M8063	0.700	
22	40	45	45	56 to 80	960	KNS12-M8080	0.700	

KNS12-ME80 same as KNS12-M80

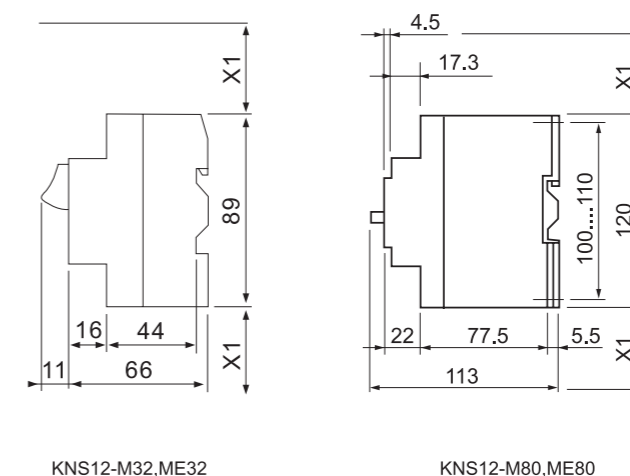
Type		KNS12-M32,ME32	KNS12-M80,ME80			
standard		EN 60 947-1,947-2, 947-4-1				
protection treatment		heat-moisture treatment	TC treatment			
Impact resistance (accord with IEC 68-2-27)		30g	22g			
Vibration Resistance (accord with IEC 68-2-6)		5 g(5~150Hz)	2.5g (0...2.5Hz)			
Ambient temperature storage condition	°C	- 40....+80	- 40....+80			
working condition	°C	- 20....+60	- 20....+60			
Temperature compensation	°C	- 20....+60	- 20....+60			
Flammability (accord with IEC695-2-1)	°C	960	960			
Maximum working altitude	m	2000	3000			
Working position			it's better to use vertically			
Quantity and sectional area of conductors		MAX	MIN	MAX	MIN	
	Conductor wire	mm <sup>2</sup>	2×6	2×1	1×35	1×2.5
	Flexible conductor without terminal	mm <sup>2</sup>	2×6	2×1.5	2×16	1×2.5
	Flexible conductor with terminal	mm <sup>2</sup>	2×4	2×1	2×16	1×2.5
						
Used as isolation or not (accord with IEC947-1 7-1-6 )		Applicable			-	
Torque tightening	Nm	1.7	5			
Mechanical shock resistance	J	0.5	0.5			
		With Enclosure:6				
Utilization category (accord with IEC947-2 IEC947-4-1)		A	A			
		AC-3	-			
Rated operational voltage (accord with IEC947-2)	V	690	690			
Rated insulation voltage (accord with IEC947-2)	V	690	690			
Rated working Frequency (accord with IEC947-2)	Hz	50/60	50/60			
Rated resistance to pulse voltage (accord with IEC947-2)	kV	6	6			
Total dissipation energy for one pole	W	2.5	KNS12- 8025And bellow 3	KNS12- 8040,8063 6	KNS12- 8080 8	
Mechanical life (C.O.: off, on)	C.O.	100 000	60000	50000	50000	
Electrical Life (to AC-3 overload)	C.O.	100 000	60000	50000	50000	
Overload level(in Max Operation Frequency)	C.O./h	25	25			
Rated overload (accord with IEC947-4-1)		Overload continuously	Overload continuously			

## 6. Wiring diagram



Single-phase or DC motor  
KNS12-M32, ME32  
KNS12-M80, ME80

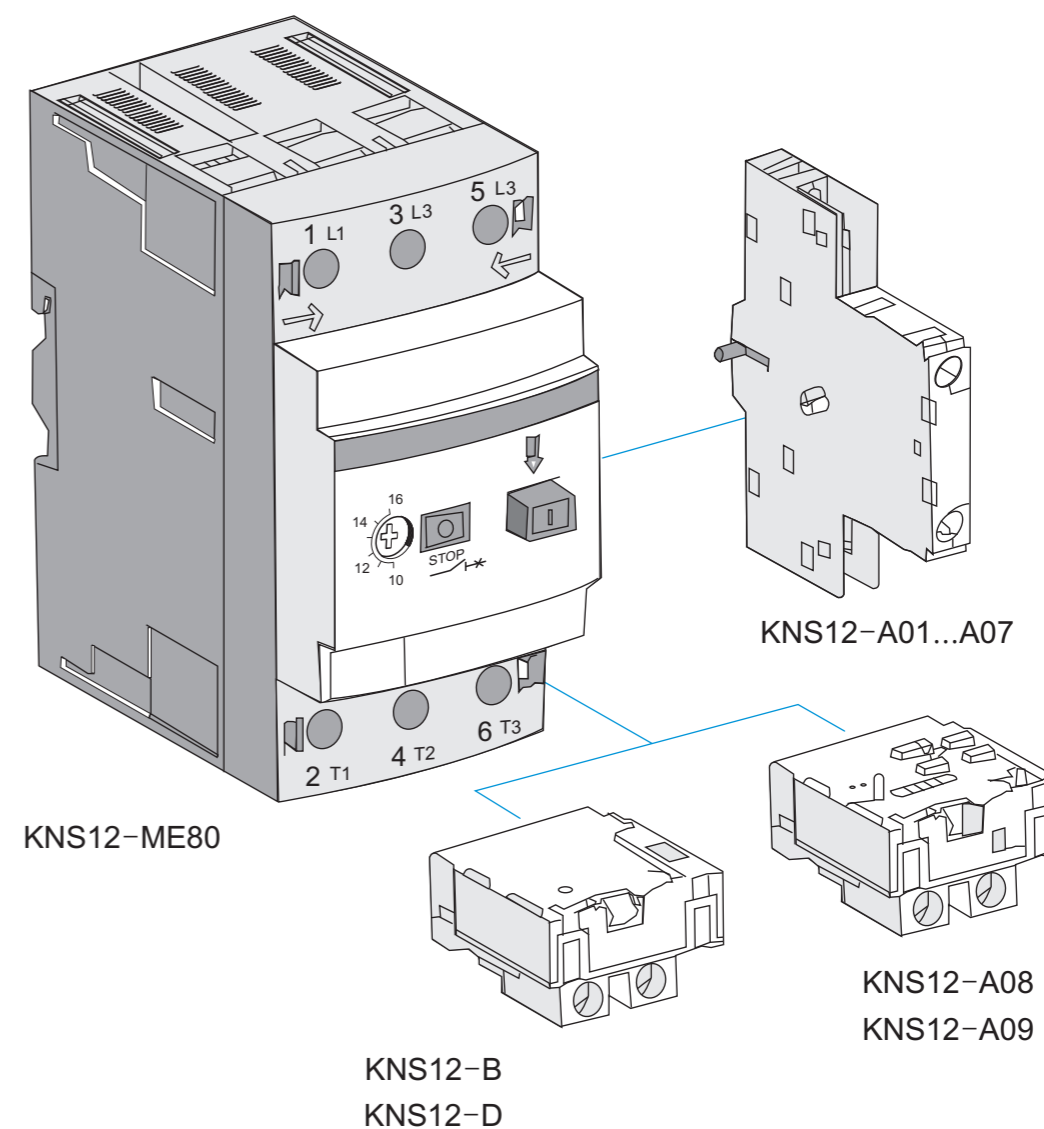
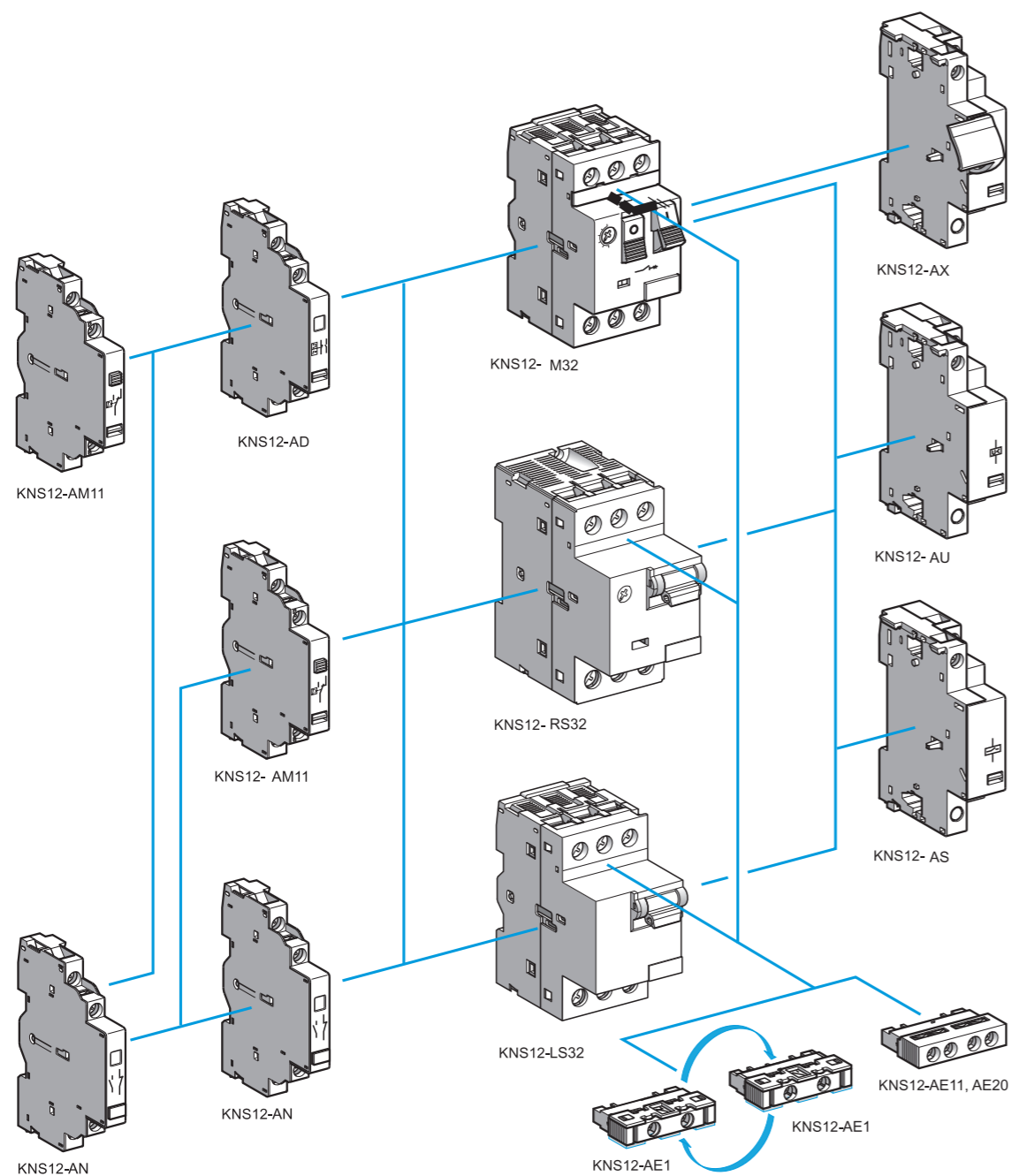
## 7. Dimensions

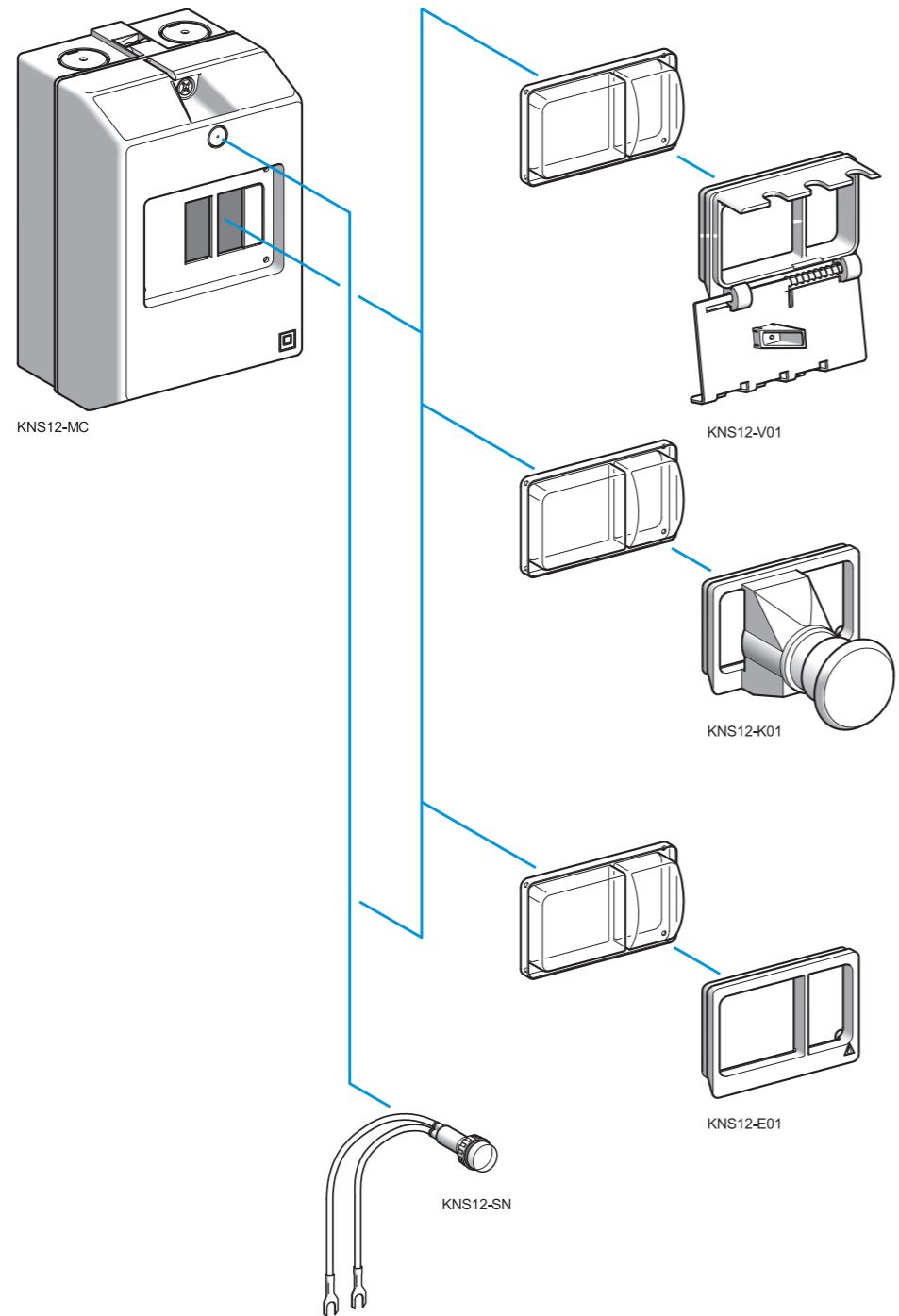


KNS12-M32,ME32

KNS12-M80,ME80

8. Electrical accessories





**9. Technical Parameter Breaking capacity table**

Type of motor starter			KNS12-M32, ME32										
			01~06	07	08	10	14	16	18	21	22	32	
Rated Value			A	0.1~0.6	4	4	6.3	10	14	14	23	25	32
Breaking Capacity according IEC947-2	230V 240V	Icu	kA	★	★	★	★	★	30	30	30	30	30
		Ics% (1)		★	★	★	★	★	100	100	100	100	100
	400V 415V	Icu	kA	30	30	30	30	10	10	10	10	10	10
		Ics% (1)		50	50	50	50	50	50	50	40	40	50
	440V	Icu	kA	20	20	20	20	8	8	8	6	6	6
		Ics% (1)		50	50	50	50	50	50	50	50	50	50
	500V	Icu	kA	10	10	10	10	6	6	6	4	4	4
		Ics% (1)		75	75	75	75	75	75	75	75	75	75
	690V	Icu	kA	3	3	3	3	3	3	3	3	3	3
		Ics% (1)		75	75	75	75	75	75	75	75	75	75

Type of motor starter			KNS12-M80, ME80										
			06	07	08	10	14	20	25	40	63	80	
Rated Value			A	1.6	2.5	4	6	10	16	25	40	63	80
Breaking Capacity according IEC947-2	230V 240V	Icu	kA	★	★	★	★	★	75	75	75	75	75
		Ics% (1)		★	★	★	★	★	75	75	75	75	75
	400V 415V	Icu	kA	60	60	60	60	60	35	35	30	30	12
		Ics% (1)		50	50	50	50	50	50	50	50	50	50
	440V	Icu	kA	60	60	60	60	60	25	25	25	25	10
		Ics% (1)		50	50	50	50	50	50	50	50	50	50
	500V	Icu	kA	20	20	20	20	20	10	8	8	8	4
		Ics% (1)		75	75	75	75	75	75	75	75	75	75
	690V	Icu	kA	3	3	3	3	3	4	4	4	4	2
		Ics% (1)		75	75	75	75	75	75	75	75	75	75

**10. Technical Parameter KNS12-M32 M32 auxiliary contact**

Type of contact		Magnetic auxiliary contact KNS12-AN/KNS12-AD	Fault signal contact KNS12-AD/KNS12-AM11	Magnetic auxiliary contact KNS12-AE	
Rated insulation voltage(Ui) Accord with IEC947-1	V	690	690	250 (Main circuit 690)	
Rated thermal current(Ith) Accord with IEC947-5-1	A	6	2.5	2.5	
Mechanical life	C.O.	100000	1000	10 000	
Working power and current Accord with IEC947-5-1 AC operation	V	AC-15/100000C.O.			
Rated working voltage(Ue)		48 110 230 380 440 500 690	24 48 110 230	24 48 110 230	
Working power under normal condition	VA	300 500 720 850 650 500 400	36 48 72 72	48 60 120 120	
close /open capacity under un-normal condition	VA	3000 7000 13000 15000 13000 12000 9000	220 300 450 450	480 600 1270 2400	
Rated working current(Ie)	A	6 4.5 3.3 2.2 1.5 1 0.6	1.5 1 0.5 0.3	2 1.25 1 0.5	
Working power and current Accord with IEC947-5-1 AC operation	V	DC-13/100000C.O.			
Rated working voltage(Ue)		24 48 60 110 220 - -	24 48 60 -	24 48 60 -	
Working power under normal condition	W	140 240 180 140 120 - -	24 15 9 -	24 15 9 -	
close /open capacity under un-normal condition	W	240 360 240 210 180 - -	100 50 50 -	100 50 50 -	
Rated working current(Ie)	A	6 5 3 1.3 0.5 - -	1 0.3 0.15 -	1 0.3 0.15 -	
Working condition DC	V	17			
	mA	5			
Connection		1 or 2 pcs wires			
Hard wire	mm <sup>2</sup>	1...2.5			
Soft connection without connect terminal	mm <sup>2</sup>	0.75...2.5			
Soft connection have connect terminal	mm <sup>2</sup>	0.75...1.5			
Torque tightening	Nm	1.4 MAX			

**11. Technical Parameter KNS12-M80 ME80 auxiliary contact**

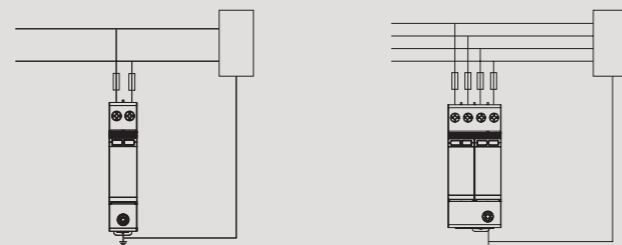
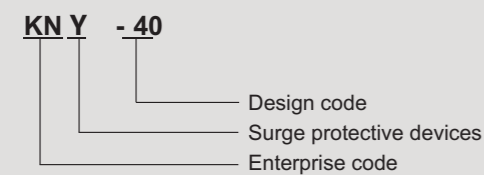
Type of contact		Magnetic auxiliary contact KNS12-A01~A07	Fault signal contact KNS12-A08~A09
Rated insulation voltageUi (accord with IEC947-1 standard) (accord with CSAC22-2n° 14.UL508 standard)	V	690	690
Conventional thermal current(Ith) (accord with IEC947-5-1 standard) (accord with CSAC22-2n° 14.UL508 standard)	A	6	6
Mechanical life	C.O.	100 000	1000
Working power and current (accord with IEC947-5-1 standard)	V	110 220 380	110 220 380
AC electrify		48 127 240 415 440 500 690	48 127 240 415 440 500 690
Working power		AC-11/100000C.O.(close/open)	
Accidental close/open capacity	VA	350 500 800 850 700 700 400	240 460 800 850 450 450 200
Working current(Ie)	A	6 4.5 3.5 2.2 1.5 1.5 0.6	5 3.6 3.5 2.2 1 1 0.3
Working power and current accord with IEC947-5-1 standard	V	24 48 60 110	24 48 60 110
DC power supply		AC-11/100000C.O.(close/open)	
Working power	W	180 240 180 140	120 120 90 70
Accidental close/open capacity	W	240 360 240 210	180 180 135 105
Working current(Ie)	A	6 5 3 1.3	5 2.5 1.5 0.7
Equipped with wires	Number of wires	1 2	1 2
	Hard wire	mm <sup>2</sup> 1...2.5	1...2.5
	Soft wire without connection terminal	mm <sup>2</sup> 0.75...2.5	0.75...2.5
	Soft wire with connection terminal	mm <sup>2</sup> 0.75...1.5	0.75...1.5



# KNY-40

## PV SURGE PROTECTIVE DEVICES

### 1. Model and meaning



### 2. Sphere of application

The surge protection device belongs to T2 AC power surge protector, which is installed between the power supply network and the equipment to drain, suppress and reduce the overcurrent and overvoltage caused by induced lightning strikes or the power grid system, so as to reduce the harm to the electrical equipment

### 3. Characteristic

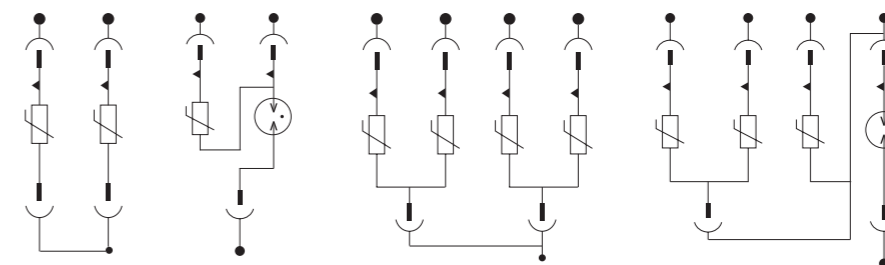
Location of Use: sub-distribution cabinet, JP cabinet etc.  
Network Systems: TN-S, TN-C, TT  
Mode of Protection: L-PE, N-PE, L-N  
Protective Elements: High Energy MOV

Chinese Standard: GB/T 18802.11-2020  
IEC standard: IEC 61643-11: 2011  
European standard: EN 61643-11: 2012  
Certificates: CB, CE

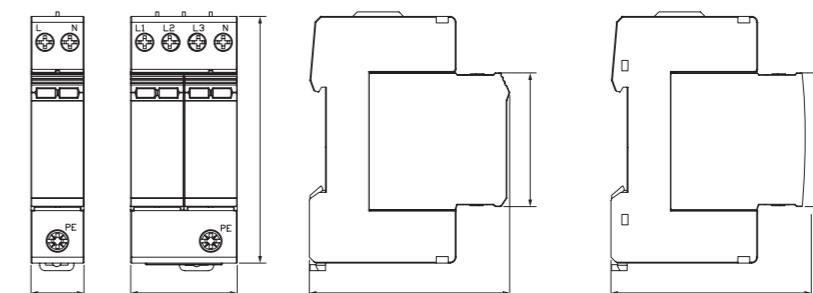
### 4. Basic Specification And Main Parameters

Technical Data				
Max Continuous Operating Voltage	(AC) Uc	275V	320V	385V
Rated Voltage	(AC) Un	220V	220V	220V
Nominal discharge current (T2)	In	20kA	20kA	20kA
Maximum discharge current	Imax	40kA	40kA	40kA
Protection level	Up(L-N)	1.5kV	1.5kV	1.8kV
Protection level	Up(N-PE)	1.2kV	1.2kV	1.2kV
Follow Current Interrupt Rating	I <sub>fi</sub>	100A(N-PE)		
Response Time	t <sub>a</sub>	25ns		
SPD Special disconnecter	Recommend	LT-SSD40		
TOV	N-PE	1200V		
Residual current-Leakage current at	I <sub>pe</sub>	NONE		
Admissible short-circuit current	I <sub>sc</sub>	25000A		
Remote communication		With		
Remote communication connection		14 11:NO, 11 12:NC		
Remote contact rated current		220V/0.5A		
Associated disconnectors				
Thermal		disconnecter internal		
Mechanical characteristics				
Connection By screw terminals		4-16 mm <sup>2</sup>		
Terminal Screw Torque		The upper 1.2Nm, The bottom 2.0 Nm		
Recommended Cable cross Section		≥ 10mm <sup>2</sup>		
Insert wire length		The upper 12mm, The bottom 15mm		
Mounting DIN rail		35mm (EN60715)		
Degree of Protection		IP20		
Housing		PBT/PA		
Flame retardant grade		UL94 V0		
Operating temperature		-40°C ~ +70°C		
Operating relative humidity		5%-95%		
Working atmospheric pressure		70kPa ~ 106kPa		

### 5. Schematic diagram



### 6. Dimensions(mm)



**AC CONTACTORS AND ACCESSORIES**

professional  
dedicated  
---ELECTRIC



KNC1-M



KNC1-K



KNC19



KNC-F5



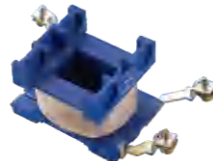
KNCF1-22



KNCF1-11



KNX1-D2



KNX1-D6



KNX1-D4

**BELLS , INDICATORS AND SPD**



KND



KNI



KNY1

**AUTOMATIC RECLOSER**



KT53AI



KT51RA

