Description

3TH Series Contactor Relays are suitable for control circuits with frequency of 50/60Hz, rated AC voltage up to 660V and rated DC Voltage up to 600V. They can control all kinds of magnetic coils to amplify and transfer signals. They comply with IEC947, VDE0660, GB14048.

Operating Conditions

- The altitude of the site of installation does not exceed 2000 meters above sea levels.
- The ambient air temperature: -25 ~ +55°C.
- Relative humidity does not exceed 90% at +25°C.
- Atmospheric conditions: the air does not contain any explosive medium, corrosive gases and conductive dust.
- Never be shocked and vibrated obviously.
- Never be wetted by rain and snow.

Features

- The relays consist of core in the form of letter “E” and a straight motion mechanism having a bridge double - breaking system. It operates reliably.
- 3TH40, 80 have 4 pairs of contacts to be arranged.
  3TH42, 82 have 8 pairs of contacts to be arranged.
  3TH30 can plug in auxiliary contacts (3TX4), and can be arranged freely.
- Designed compactly and sensitively, the relays are easy to handle and manually check. Impurities and dust can be prevented from coming into moving parts of the relays. All terminals and other alive parts are covered with insulators to ensure safety use.
- The overall size of the relays and their installation area are small. They can be mounted by screws or snapped on 35mm top-hat, standard rail. This will save much time and labour costs.
- Contact system has a bridge double - breaking structure. Because all contacts are made of silver alloy which provides excellent electrical performance, they have advantages of long endurance and good contact reliability. The arc chute is enclosed and can prevent the arc from spraying out by fire - resistant material to ensure personal and adjacent apparatus’ safety.
- The magnetic system of the relays acts reliably with little loss and noise, but highest mechanical strength. A marked plate of voltage dated with a given color according to different voltage levels is fixed at the terminal of the coil. This clear marked plate is helpful to connecting operation and can prevent coil from burning out due to maloperation at false voltage values.

Selection and ordering data

AC operation		 3TH80	 3TH82	 3TH40	 3TH42	 3TH30
Order No.		3TH80 40 - 0X 3TH80 31 - 0X 3TH80 22 - 0X 3TH80 13 - 0X 3TH80 04 - 0X	3TH82 80 - 0X 3TH82 71 - 0X 3TH82 62 - 0X 3TH82 53 - 0X 3TH82 44 - 0X	3TH40 40 - 0X 3TH40 31 - 0X 3TH40 22 - 0X 3TH40 13 - 0X 3TH40 04 - 0X	3TH42 80 - 0X 3TH42 71 - 0X 3TH42 62 - 0X 3TH42 53 - 0X 3TH42 44 - 0X	3TH30 40 - 0X 3TH30 31 - 0X 3TH30 22 - 0X
Rated insulation voltage		660	660	690	690	690
Rated operational current (380V)	AC - 15 (AC - 11)	6	6	6	6	6
	DC - 13 (DC - 11)	0.25	0.25	0.25	0.25	0.25
Mechanical endurance ($x10^6$)		15	15	30	30	30
Electrical endurance ($x10^6$)	AC - 15 (AC - 11)	1.2	1.2	1.2	1.2	1.2
Switching frequency (1/h)	AC - 3	1000	1000	1000	1000	1000
	AC - 15 DC - 13	3600	3600	3600	3600	3600
Coil voltage tolerance (AC)		$(0.8\sim1.1)U_s$				

Order No. suffixes for rated control voltages for coils

3TH3···-0X□□
3TH4···-0X□□
3TH8···-0X□□

Coils for 50Hz			Coils for 60Hz			Coils for 50/60Hz	
50Hz	60Hz		60Hz	50Hz			
24V	29V	B0	24V	20V	C1	24V	C2
32V	38V	C0	110V	92V	G1	42V	D2
36V	42V	G0	115V	96V	J1	110V	G2
42V	50V	D0	120V	100V	K1	115V	J2
48V	58V	H0	208V	173V	M1	120V	K2
60V	72V	E0	220V	183V	N1	208V	M2
110V	132V	F0	230V	192V	L1	220V	N2
125/127V	150/152V	L0	240V	200V	P1	230V	L2
220V	264V	M0	440V	367V	R1	240V	P2
230V	277V	P0	575V	480V	S1	440V	R2
240V	288V	U0				575V	S2
380V	460V	Q0					
400V	480V	V0					
415V	500V	R0					
500V	600V	S0					

Power consumption of coil (50Hz)						
	Closed	10	10	10	10	10
	p.f.	0.29	0.29	0.29	0.29	0.29
	Closing	68	68	68	68	69
	p.f.	0.82	0.82	0.82	0.82	0.82
Conventional thermal current (A)						

Selection and ordering data

DC operation		 3TH40	 3TH42	 3TH30
Order No.		3TH40 40 - 1X 3TH40 31 - 1X 3TH40 22 - 1X 3TH40 13 - 1X 3TH40 04 - 1X	3TH42 80 - 1X 3TH42 71 - 1X 3TH42 62 - 1X 3TH42 53 - 1X 3TH42 44 - 1X	3TH30 40 - 1X 3TH30 31 - 1X 3TH30 22 - 1X
Rated insulation voltage		690	690	690
Rated operational current (A) (380V)	AC - 15 (AC - 11)	6	6	6
	DC - 13 (DC - 11)	0.25	0.25	0.25
Mechanical endurance ($x10^6$)		30	30	30
Electrical endurance ($x10^6$)	AC - 15 (AC - 11)	See technical data on 6/4.		
Switching frequency (1/h)	AC - 3	1000	1000	1000
	AC - 15 DC - 13	3600	3600	3600
Coil voltage tolerance (AC)		$(0.8\sim1.1)U_s$		
Order No. suffixes for rated control voltages for coils 3TH3····1X□□ 3TH4····1X□□		Rated control voltage: V DC 12 21.5 24 30 36 42 48 60 110 125 180 220 230 240 250		
		Order No. suffix A4 U4 B4 C4 V4 D4 W4 E4 F4 G4 K4 M4 P4 Q4 N4		
Power consumption of coil (50Hz)	Closing and closed (W)	6.2	6.2	6.2
Conventional thermal current (A)		16	16	16

Auxiliary contact blocks

When additional contacts are needed 3TX4 type auxiliary contacts can be selected.
(Please pay attention to: only 3TH30 can use 3TX4).
Up to 4 auxiliary contact blocks can be plugged onto the 3TH30 basic unit. For detail of 3TX4, refer to chapter 3TF AC contactors.

Type	Order No.	NO	NC
 3TX4	3TX40 10 - 2A	1	-
	3TX40 01 - 2A	-	1
	3TX40 10 - 3A*	1	-

* 3TX4010 - 3A with switch position indicator.

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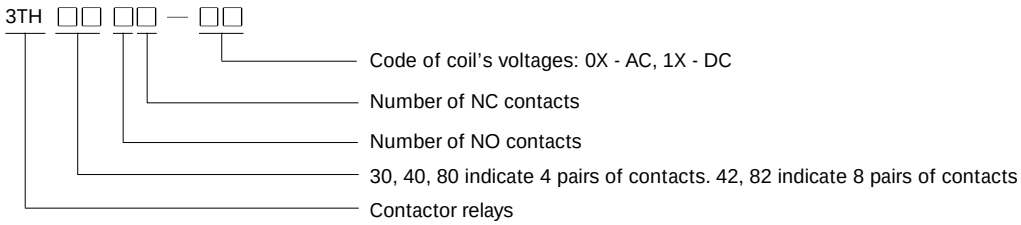
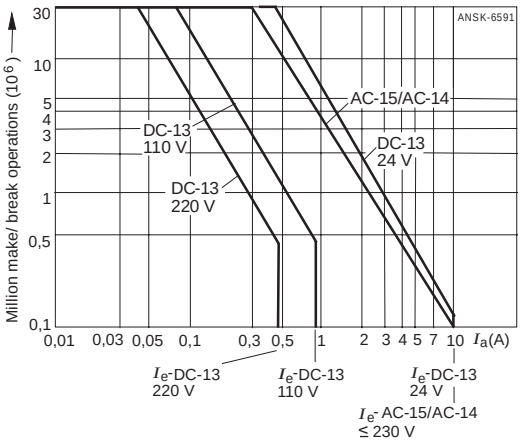
Contact arrangements

Type		Structure	NO	NC
3TH40 04	3TH80 04	One tier	0	4
3TH40 13	3TH80 13		1	3
3TH40 22	3TH80 22		2	2
3TH40 31	3TH80 31		3	1
3TH40 40	3TH80 40		4	0
3TH42 44	3TH82 44	Two tier	4	4
3TH42 53	3TH82 53		5	3
3TH42 62	3TH82 62		6	2
3TH42 71	3TH82 71		7	1
3TH42 80	3TH82 80		8	0
3TH30 40		One tier	4	0
3TH30 31			3	1
3TH30 22			2	2

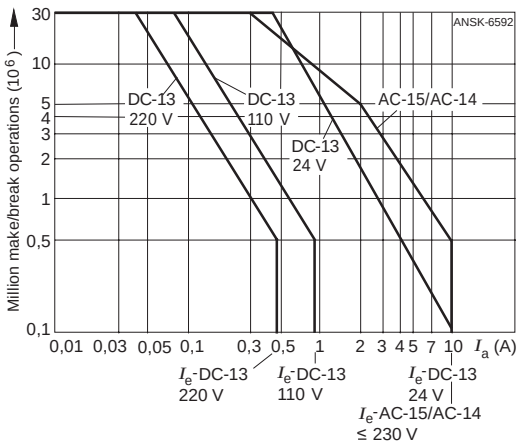
Explanation of MLFB



Technical data

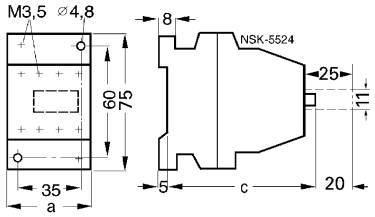


3TH3

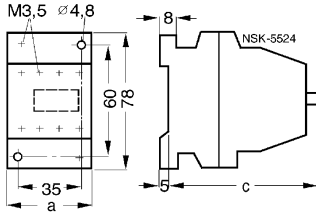


3TH4

Dimension drawings (mm)

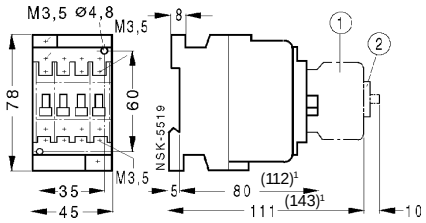


Type	a	c	(c)[1]
3TH80	45	80	(115)
3TH82	45	95	(130)



Type	a	c	(c)[1]
3TH40	45	81	(115)
3TH42	45	97	(130)

( )[1] DC operation

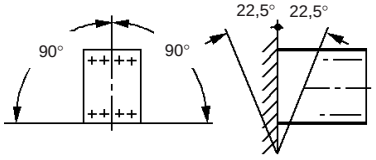


3TH30
① Auxiliary block with switch position indicator.
② 3TX label

Permissible mounting positions

The contactor relays are designed for operation on a vertical mounting surface.

AC operation



DC operation

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