选型与订货数据 Selection and ordering data

3UA60	订货号 Order No.	整定电流范围(A) Setting range	熔断器规格(A) Fuse links IEC947 - 4 “1”	”2”	相配的接触器型号 For contactor	重量 Weight kg
	3UA60 40 - 2H	55 - 80	250	160	3TE48[1)] 3TF49[1)] 3TF50 3TE50 3TD50[1)] 3TB50	0.7
	3UA60 40 - 2W	63 - 90	250	160		
	3UA60 40 - 2X	80 - 110	315	200		
	3UA60 40 - 3H	90 - 120	315	224		0.7
	3UA60 40 - 3J	110 - 135	315	224		

3UA61	订货号 Order No.	整定电流范围(A) Setting range	熔断器规格(A) Fuse links IEC947 - 4 “1”	”2”	相配的接触器型号 For contactor	重量 Weight kg
	3UA61 40 - 2H	55 - 80	250	160	3TF51	0.7
	3UA61 40 - 2W	63 - 90	250	160		
	3UA61 40 - 2X	80 - 110	315	200		
	3UA61 40 - 3H	90 - 120	315	224		0.7
	3UA61 40 - 3J	110 - 135	315	224		
	3UA61 40 - 3K	120 - 150	315	224		

3UA59	订货号 Order No.	整定电流范围(A) Setting range	熔断器规格(A) Fuse links IEC947 - 4 “1”	”2”	相配的接触器型号 For contactor	重量 Weight kg
	3UA59 40 - 0A	0.1 - 0.16	25	0.5	单独安装使用 mounting seperatly	0.28
	3UA59 40 - 0C	0.16 - 0.25	25	1		
	3UA59 40 - 0E	0.25 - 0.4	25	1.6		
	3UA59 40 - 0G	0.4 - 0.63	25	2		0.28
	3UA59 40 - 0J	0.63 - 1	25	4		
	3UA59 40 - 0K	0.8 - 1.25	25	4		
	3UA59 40 - 1A	1 - 1.6	25	6		0.28
	3UA59 40 - 1B	1.25 - 2	25	6		
	3UA59 40 - 1C	1.6 - 2.5	25	6		
	3UA59 40 - 1D	2 - 3.2	25	10		0.28
	3UA59 40 - 1E	2.5 - 4	25	10		
	3UA59 40 - 1F	3.2 - 5	25	16		
	3UA59 40 - 1G	4 - 6.3	25	16		0.28
	3UA59 40 - 1H	5 - 8	25	16		
	3UA59 40 - 1J	6.3 - 10	25	16		
	3UA59 40 - 1K	8 - 12.5	35	25		0.28
	3UA59 40 - 2A	10 - 16	63	35		
	3UA59 40 - 2B	12.5 - 20	63	50		
	3UA59 40 - 2C	16 - 25	63	50		0.28
	3UA59 40 - 2D	20 - 32	80	63		
	3UA59 40 - 2E	25 - 40	125	80		
	3UA59 40 - 2M	32 - 45	160	100		0.28
	3UA59 40 - 2T	40 - 57	160	125		
	3UA59 40 - 2P	50 - 63	160	125		

3UA 热过载继电器
3UA Overload Relays

技术数据 Technical data

			3UA50 3UA52	3UA54 3UA55	3UA59	3UA58	3UA60	3UA61	3UA62	3UA66
额定工作电流(A) Rated operational current			14.5 25	36 45	63	88	135	150	180	400
额定绝缘电压(V) Rated insulation voltage			690	690	690	1000	1000	1000	1000	1000
额定工作电压(V) Rated operational voltage			690	690	690	1000	1000	1000	1000	1000
电流类型及频率 Type of current, frequency			直流；交流至 400Hz DC; AC up to 400Hz							交流50~400Hz AC 50 to 400Hz
环境温度(ºC) Ambient temperature			-25~+55	-25~+55	-25~+55	-25~+55	-25~+55	-25~+55	-25~+55	-25~+55
断相保护 Phase - failure protection			有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes
手动与自动复位 Manual/Auto reset			有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes
温度补偿(-25~+55ºC) Temperature compensation			有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes
脱扣指示 Switch position indicator			有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes
测试按钮 Test button			有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes	有 Yes
连接接触器线圈接线端子 Terminal for contactor coil			有 Yes	有 Yes	无 No	无 No	无 No	无 No	无 No	无 No
辅助触头 Auxiliary contacts			1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC	1常开+1常闭 1NO+1NC
通断能力(380V) AC - 15 Switching capacity			1.1A	1.1A	1.1A	1.1A	1.1A	1.1A	1.1A	1.1A
安装方式 Mounting			接插式 Plug - in	接插式 Plug - in	独立式 as a single unit	接插式 Plug - in	独立式 as a single unit	独立式 as a single unit	独立式 as a single unit	独立式 as a single unit
导线截面积(mm^2) Conductor cross-section (mm^2)	主回路 Main circuit	单芯或绞合线 Solid or stranded conductor	2.5~6	1.5~25	1.5~25	2.5~35	25~70	50~120	50~120	≤ 200A 185 > 200A 240
		细绞线带端子套管 Finely stranded conductor with end sleeve	1.5~4	1~16	1~16	1.5~25	25~50	25~95 铜排 20 × 3 Flat bars	25~95 铜排 20 × 3 Flat bars	铜排 20 × 3/ 2 × 30 × 5 Flat bars
		接线螺钉 Terminal screw	M4	M5	M5	M5	M6	M8	M8	M8/M10
	辅助回路 Auxiliary circuit	单芯或绞合线 Single core or stranded conductor	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)
		细绞线带端子套管 Finely stranded conductor with end sleeve	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)	2 × (0.5~1)
		接线螺钉 Terminal screw	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5

保护特性 Protection characteristics

项目 Item No.	整定电流倍数 Times the setting current	动作时间 Release time	试验条件 Test condition
1	1.05	>2 小时 >2h [1])	冷态 Cold state
2	1.20	<2 小时 <2h [1])	热态 Hot state
3	1.50	<2 分钟 <2min [1])	以 1 倍整定电流预热 2 小时 pre - heated for 2 hours with 1 time setting current
4	7.2	2s<Tp ≤10s, 10A 级 / Class 10A	冷态 Cold state
	热态即指继电器以项 1 电流加热至稳定状态。 Hot state means heat the overload relay into steady state with the current as shown in “Item 1.”		

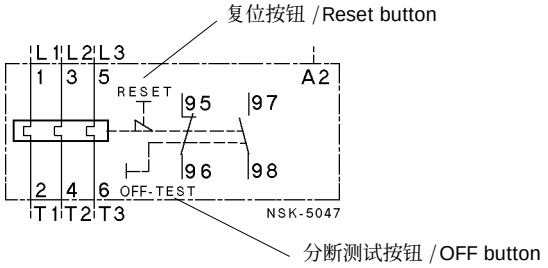
项目 Item No.	整定电流倍数 Times the setting current		动作时间 Release time	试验条件 Test condition
	任意二相 Any two phases	另一相 Another phase		
5	1.0	0.9	>2 小时 >2h [2])	冷态 Cold state
6	1.15	0	<2 小时 <2h [2])	热态 Hot state
	热态即指继电器以项 1 电流加热至稳定状态。 Hot state means heat the overload relay into steady state with the current as shown in “Item 1.”			

[1]) 在环境温度为 +20ºC 和三相负载平衡时的动作时间 / Release time with 3-pole symmetrical load at ambient termperature +20ºC

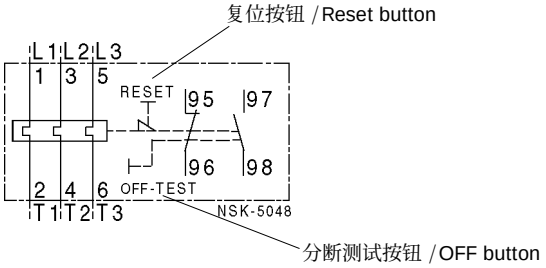
[2]) 在环境温度为 +20ºC 和三相负载不平衡(断相)时的动作时间 / Release time with 3-pole unsymmetrical load (phase-failure) at ambient termperature +20ºC

技术数据 Technical data							
整定电流范围 Setting range (A)	连接导线截面积 Conductor corss-sections (mm^2)	整定电流倍数($\times I_e$) Times the setting current					
		3	4	5	6	7	8
3UA58					脱扣时间：秒 Release time: (in sec.)		
16-25	4	34	19.5	13.2	9.7	7.6	6.2
20-32	6	33	18.5	12.8	9.4	7.4	6
25-40	10	30	17	11.5	8.4	6.5	5.3
32-50	10	29	16.6	11	8	6.2	5
40-57	16	35	19.4	12.3	8.7	6.6	5.3
50-63	16	37	20.5	13.3	9.6	7.3	5.8
57-70	25	40	21.5	14	9.8	7.4	5.8
63-80	25	40	21.5	13.8	9.7	7.3	5.8
70-88	35	33.9	17.6	11.8	8	6.5	4.9
3UA59					脱扣时间：秒 Release time: (in sec.)		
0.1-0.16	1	16.7	10.3	7.5	5.9	4.8	4.1
0.16-0.25	1	20.5	12.8	9.5	7.5	6.3	5.4
0.25-0.4	1	18	11.2	8.2	6.5	5.4	4.6
0.4-0.63	1	20.8	12.8	9.5	7.6	6.3	5.4
0.63-1	1	23.3	14.4	10.5	8.3	6.8	5.8
0.8-1.25	1	28	17.5	12.7	9.8	8.1	6.8
1-1.6	1	22.6	14.3	10.4	8.3	6.8	5.9
1.25-2	1	22.3	14	10.3	8.4	6.9	6.0
1.6-2.5	1	24.5	15.5	11.5	9	7.5	6.4
2-3.2	1	23.8	15	11	8.8	7.3	6.3
2.5-4	1	24.4	15.6	11.4	9.1	7.6	6.5
3.2-5	1	27.5	17	12.2	9.5	7.8	6.5
4-6.3	1	23.4	14.4	10.4	8	6.5	5.5
5-8	1	22.5	13.5	9.5	7.2	5.7	4.7
6.3-10	1.5	24	13.9	9.3	6.8	5.3	4.3
8-12.5	2.5	31	17	11	7.7	5.8	4.6
10-16	2.5	16.1	9.5	6.6	5.1	3.9	3.3
12.5-20	2.5	17.3	10.1	7	5.2	4.2	3.4
16-25	4	16.7	9.8	6.7	5.1	3.9	3.2
20-32	6	17.5	10	6.8	5.1	4	3.3
25-40	10	17.3	10.1	7	5.2	4.2	3.4
32-45	10	16.7	9.8	6.7	5.1	3.9	3.2
40-57	16	17.5	10	6.8	5.1	4	3.3
50-63	16	17	9.7	6.7	5.1	4	3.3
3UA60, 3UA61, 3UA62					脱扣时间：秒 Release time: (in sec.)		
55-80	25	36	21	13.5	9.8	7.5	6.1
63-90	35	44	24	15.5	11	8.5	6.7
80-110	35	43	22	14	10	7.7	6.1
90-120	50	40	21.8	14	10	7.5	5.9
110-135	50	32	18	11.7	8.4	6.4	5.1
120-150	50	35	19.5	12.8	9.4	7.2	5.8
135-160	70	38	20.6	13.8	10	7.6	6.2
150-180	95	37	20.5	13.5	9.7	7.4	6.0
3UA66					脱扣时间：秒 Release time: (in sec.)		
80-125	50	25	16.8	13.1	11.1	9.9	9.1
125-200	95	24.4	16.1	11.9	9.8	8.4	7.4
160-250	120	23.8	13.9	10.3	8.5	7.3	6.5
200-320	185	25.6	15.5	10.9	8.5	7	6.4
250-400	240	25	15	10.5	8.5	7	6.2

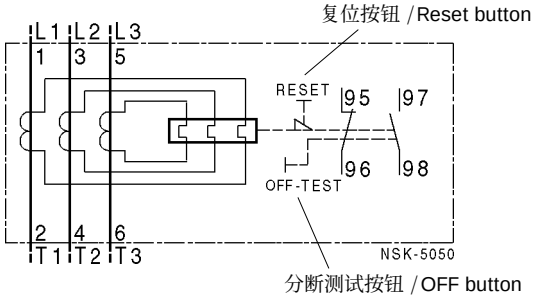
内部接线图 Internal connection diagrams



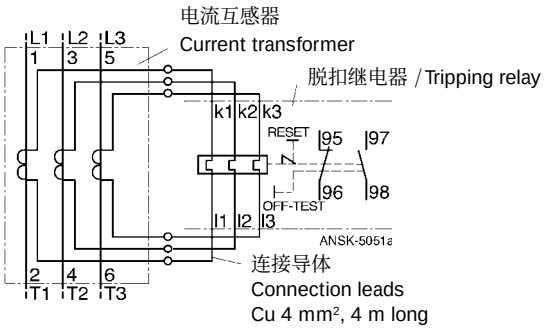
3UA50, 3UA52, 3UA54, 3UA55



3UA58, 3UA59, 3UA60, 3UA61, 3UA62



3UA66, 3UA68



3UA66, 3UA68 的电流互感器与脱扣器分离安装
3UA66, 3UA68 separate mounting of current transformer and release relay

辅助触头技术参数 Technical date of auxiliary contacts

1.约定发热电流 I_{th}=6A (在 35ºC 时)
2.额定绝缘电压 U_i 的有效值



非等电位(NO+NC)
Unequal potential (NO+NC)
400V



等电位(NO+NC 连接成转换触头)
Equal potential (NO+NC connected as changeover contact)
690V

3.通断能力

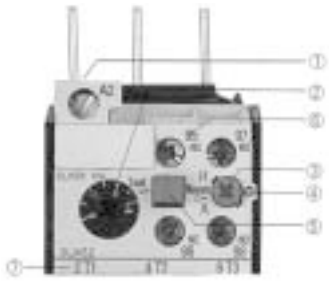
1. Conventional thermal current (at 35ºC) I_{th}=6A
2. Rated insulation voltage U_i

3. Switching capacity

AC-15		DC-13	
U_e (V)	I_e (A)	U_e (V)	I_e (A)
24	2		
60	1.5	24	2
125	1.25	60	0.5
230	1.15	110	0.3
400	1.1	220	0.2
500	1		
690	0.8		

安装使用说明 Specification of installation

1. 3UA 热继电器面罩标识

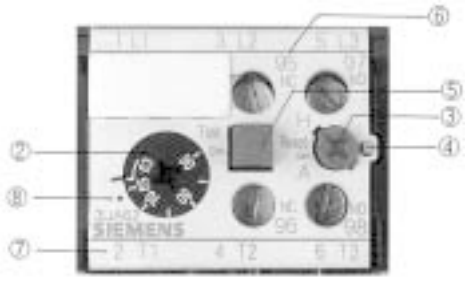


3UA50 3UA52 3UA54 3UA55 的面罩
Panel of 3UA50 3UA52 3UA54 3UA55

① 接线端子 A2, (用于将接触器线圈的接线端子 A2 引出)。
② 整定电流调节盘。
③ 复位按扭(蓝色)
H:手动复位
A:自动复位
④ 脱扣指示(绿色)。
当手动复位时，脱扣后指示杆顶出，在自动复位时无脱扣指示.
⑤ 测试按钮(红色)
⑥ 95、96、97、98 为辅助触头接线端子号，95、96 为常闭触头，97、98 为常开触头。
⑦ 主回路接线端子号，使用时必须与接触器的接线端子号相一致。
⑧ 3UA6 分离安装时电流设置以 " . " 标记为基准。

2. 应根据电机的额定工作电流的大小将调节盘转到相应的电流刻度。
3. 复位按钮指向"H"时为手动复位。继电器脱扣, 如要继电器重新工作, 必须手动按下复位按钮。
若在手动复位状态下配上软轴式复位线，不打开电器箱门也可实现复位(详见附件表)
如要将手动复位转成自动复位只须将复位按钮按下并逆时针方向旋转从"H" 到 "A" 即可。
4. 当按下测试按钮后，常开触头闭合，常闭触头打开可实现对控制回路的测试（模拟过载脱扣)。在手动复位状态，再按下蓝色复位按扭时，继电器复位；在自动复位状态，当放开此按扭后继电器即自动复位。
5. 继电器应按图所示位置按装使用。

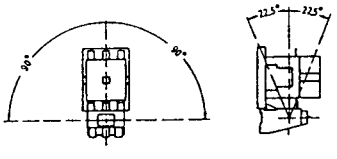
1. Marks on panel of 3UA.



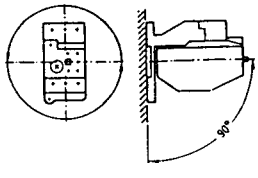
3UA58 3UA59 3AU60 3UA61 3UA62 3UA66 的面罩。
Panel of 3UA58 3UA59 3AU60 3UA61 3UA62 3UA66

① Terminal for contactor coil A2.
② Setting current adjusting scale
③ Reset button (blue)
H-manual
A-automatic
④ Switch position indicator (green)
Tripping of a manual-resetting relay is indicated by a pin projecting from the front-plate.
⑤ Test button (red)
⑥ Auxiliary contact terminals shown in 95.96.97.98.NC contacts and NO contacts are shown in positions 95.96 and 97.98 respectively.
⑦ Main circuit connection terminal No. It must correspond with terminal No. of contactor.
⑧ In case of separate mounting of 3UA6, the set current must be set on the scale against the reference mark.

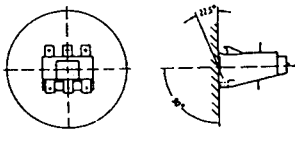
2. Set the scale to the rated current of the load.
3. If the reset button points to H (manual) and the relay has been tripped, pressing the button puts the relay in operation again.
With the door of panel closed, manual reset can be performed by means of the cable release which can be ordered (see accessories in detail).
Changing to automatic reset by pressing and turning the button anti-clock wise from H to A.
4. When the test button is actuated, the NC contact opens and the NO contact closes, therefore the auxililary circuit (simulation of overload tripping) can be tested.
In the "manual" position, the relay is resetted when the blue reset button is pressed. In the "Automatic" postion, the relay is reset automatically when the button is released.
5. Mounting and operating position, the relays are shown in drawings.



热继电器与相应 3TF、3TB 接触组合安装
Overload relays with 3TF or 3TB contactors

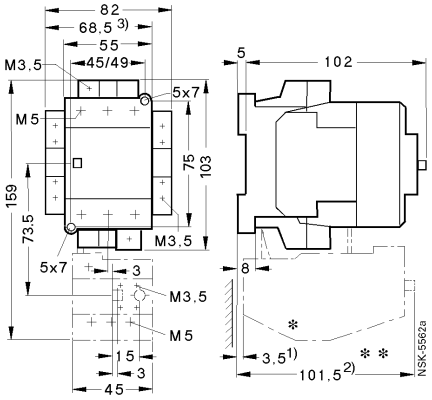


热继电器配用 3UX14 连接支座独立安装
Overload relay with 3UX14 terminal brackets as a single unit



热继电器独立安装
tripping relay installed as a single unit

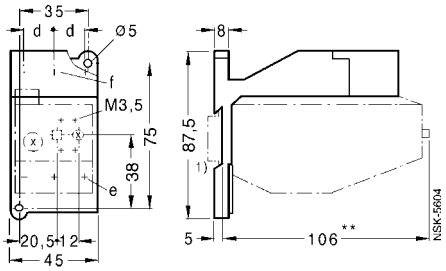
外型及安装尺寸 Dimension drawings



3UA55 与 3TF44/45 接触器接插安装。
3UA55+3TF44/45 contactor

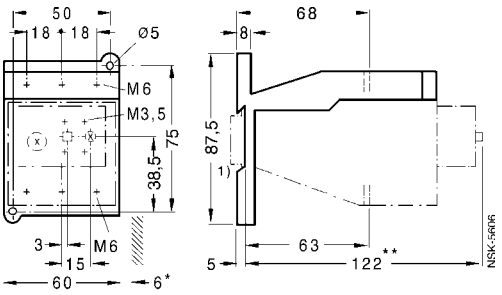
注： ＊) 至接地部件的间隙。
＊＊) 到方形试验按钮(行程 3mm)的距离。
到圆形复位按钮(行程 2.5mm)的距离要小 2.5mm。
1) 用于 35mm 标准导轨(DIN EN 50 022)。

Note: ＊) The distance to earthed part.
＊＊) The distance to square OFF-button (stroke 3mm)
The distance to round RESET-button (stroke 2.5mm)less 2.5mm
1) For 35mm standard mounting rail (DIN EN 50 022).

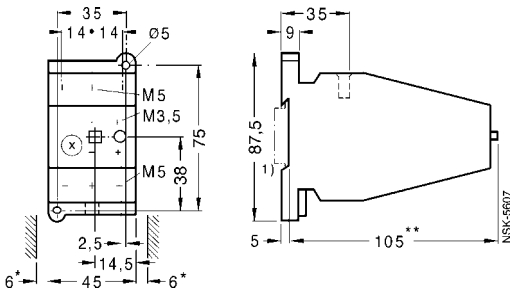


热过载继电器带连接支座 Overload relays with terminal brackets	d	e	f
3UA50 with 3UX1 418	10	M4	M3.5
3UA52 with 3UX1 420	14.3	M4	M4
3UA54 with 3UX1 420	14.3	M4	M4

3UA50, 3UA52, 3UA54 与 3UX14 连接支座组成独立安装单元。
3UA50, 3UA52, 3UA54 relays with terminal bracket as a single unit.



3UA58 与 3UX1421 连接支座组成独立安装单元。
3UA58+3UX1421 terminal bracket as a single unit.



3UA59 独立安装。
3UA59 for installing as a single unit.