

△有限地防止触及带电部件!
防护等级按IEC 60529为IP00级!
触指安全性符合GB 4942.2和 DIN VDE0106 第100部分。
调试维修应由专业人员按本使用说明书进行。

安装
安装尺寸见图 I (单位: mm)
a 3UA60: 配用附件3UX1424单独安装。
b 3UA60: 与3TB50, 3TF50接触器组合安装。
c 3UA61: 与3TF51接触器组合安装。
d 3UA62: 单独安装以及与3TB50接触器组合安装。
e 与3TB50, 3TF50接触器组合安装。
f 3UA62: 与3TB52, 3TF52接触器组合安装。
g 与3TB52, 3TF52接触器组合安装。
注: ¹⁾ 至接地部件的最小距离。

适配的接触器见图 II
a 连接板宽度
b 直接装配
c 当整定电流范围为135~160A, 150~180A的继电器与3TB52/3TF52 接触器连接时应使用软导线3UX1221作为接线端子间的隔离。
3UA60: 与3TB50, 3TF50接触器组合安装以及配用3UX1424单独安装。
3UA61: 与3TF51接触器组合安装及单独安装。
3UA62: 与3TB50, 3TB52, 3TF52接触器组合安装及单独安装。

允许安装位置见图 III
a 热过载继电器与接触器组合安装。
b 热过载继电器单独安装。
应避免剧烈的冲击或长时间的振动。
卡装在35mm标准安装轨 (DIN EN50 022) 上。或用2枚螺钉以及平垫圈和弹簧垫圈紧固在平面上。

接线
允许的导线截面见图 IV
1) 带接线盒的3UA60, 见图Va
2) 不带接线盒的3UA60, 见图Vb
接线图见图 VI
在单相负载的情况下必须将主回路三相串联起来。

调试
参见图 VII
①按照负载的额定电流调整刻度盘
②复位按钮 (蓝色)
在投入运行前和脱扣后, 按一下本按钮使继电器处于待工作状态。
出厂时本按钮被置于“H”即手动复位状态。
若需从“H”手动状态切换到“A”自动复位状态, 按下本按钮并逆时针方向从H转到A即可。
③试验按钮 (红色)
当按下本按钮后, 动断触头打开, 动合触头闭合, 即动断、动合触头的试验功能 (模拟过载脱扣)。
在手动复位状态, 再按下蓝色按钮时继电器复位。
在自动复位状态, 当放开本按钮时继电器即复位。

④脱扣指示件 (绿色)
在手动复位状态, 当继电器脱扣时本指示件将从面罩上伸出, 表示继电器已脱扣, 在自动复位状态则无此显示。

脱扣特性曲线见图 VIII
这些特性曲线符合VDE0165, VDE0170/0171, 适用于增安型电机。所示为三相负载从冷态 (环境温度+20°C) 开始的脱扣时间, 若继电器以1×I_E 电流预热, 脱扣时间将减少大约25%。
I_E: 整定电流
t_A: 脱扣时间 (单位: 秒) (±20%)
① 整定范围
(I: 最小整定电流I_E, II: 最大整定电流I_E)
② 型号和订货号
③ PTB (德国联邦实验室) 试验报告编号

技术参数
主回路
额定绝缘电压 1000V
额定工作电流 55~180A
允许的环境温度 -25°C~+55°C
短路保护 见名牌

辅助回路
额定绝缘电压
400V 不同电位
690V 同电位
额定工作电流
AC-15/U_e V 24 60 125 230 400 500 690
AC-15/I_e A 2 1.5 1.25 1.15 1.1 1 0.8
DC-13/U_e V 24 60 110 220
DC-13/I_e A 2 0.5 0.3 0.2
短路保护
NH、NEOZED或DIAZED熔断器 6AgG或10A 快速
微型断路器 3A (C特性)

工作条件环境温度>55°C时, 必须
1. 降低热过载继电器的负载电流。
2. 为避免电动机在额定电流下发生脱扣, 可适当调高整定电流值修正系数:

环境温度	负载电流折合成刻度盘值	整定电流校准值
55°C	1	1
60°C	0.94	1.08
65°C	0.88	1.09
70°C	0.82	1.1

例如: 电动机负载电流: 60 A
环境温度: 70°C
热过载继电器采用: 55~80 A
第一步: 确定允许负载电流值:
最大负载电流: 80 A × 0.82 = 65.6 A
环境温度70°C时电动机负载电流为60 A 是允许的。
第二步: 计算整定电流:
电动机整定电流: 60 A
整定电流校准值: 60 A × 1.1 = 66 A所以设定热继电器为66A。

进一步的数据和附件请查阅产品样本。

Instructions

Order No.: 4NEB 606 0020-30 *5

English

⚠ Limited protection against contact with live parts.
Commissioning and maintenance by qualified personnel only.
Follow the operating instruction!

	WARNING
	Hazardous voltage can cause electrical shock and burns. Disconnect power before proceeding with any work on this equipment.

Installation

Dimension drawings (dimensions in mm): **Fig. I**

- a 3UA60: for individual mounting with assembly kit 3UX14 24
- b 3UA60: for mounting on contactor 3TB50, 3TF50
- c 3UA61: for mounting on contactor 3TF51
- d 3UA62: for individual mounting and mounting on contactor 3TB50
- e mounting on contactor 3TB50, 3TF50
- f 3UA62: mounting on contactor 3TB52, 3TF52
- g mounting on contactor 3TB50, 3TF52
- ¹⁾ Minimum distance from earthed components

Can be fitted to contactor: **Fig. II**

- a Width of connection angle
- b Direct fitting
- c For linking 3TB52/3TF52 in setting ranges 135 to 160A and 150 to 180A use flexible connectors 3UX12 21 for thermal isolation.

3UA60: Mounting on contactors 3TB50, 3TF50;

Individual mounting possible with assembly kit 3UX14 24

3UA61: Mounting on contactors 3TF51 and individual mounting possible

3UA62: Mounting on contactors 3TB50, 3TB52, 3TF52 and individual mounting possible

Permissible installed positions: **Fig. III**

- a Overload relay with contactor
- b Overload relay for individual mounting

Do not subject to sudden shocks or long-term vibrations.

Snap-on mounting on a standard sectional rail (35mm) to EN 50 022 or bolting on a plane surface by two bolts to be secured by washers and spring washers.

Connection

Permissible cable cross-sections: **Fig. IV**

- 1) 3UA60 with box terminal **Fig. Va**
- 2) 3UA60 without box terminal **Fig. Vb**

Equipment circuit diagram: **Fig. VI**

In the case of several single-phase loads, the three main circuits must be connected in series.

Commissioning

Instructions: **Fig. VII**

- ① Set the scale to the rated current of load.
Push this button before commissioning and after tripping to make relay ready for operation.
In the as-delivered condition, the auxiliary contact is set to H = Manual resetting.
To change from H = Manual to A = Automatic, press and turn the button counter-clockwise from H to A.
- ③ Test button (red)
When this button is actuated, the NC contact opens and the NO contact closes, i.e. a test function for NC and NO contacts (simulation of overload tripping).
In the "Manual" position, the relay is reset when the blue button is pressed.
In the "Automatic" position, the relay is reset automatically when the red button is released.
- ④ TRIPPED indication (green)
In the H setting, a green pin protrudes from the front plate to indicate the TRIPPED condition. In the A setting, this condition is not indicated.

Tripping characteristics: Fig. VIII

The characteristics conform to VDE0165, VDE 0170/0171 for machines with type of protection E Ex e.

Tripping times are shown for a three-phase load from the cold state (ambient temperature +20°C). In the case of hot relays, preloaded with 1×I_e, the tripping times decrease by approx. 25%.

I_e Current setting

t_A Tripping time in seconds (±20%)

① Setting range

(I = lowest value of current setting I_e, II = highest value of current setting I_e)

② Type designation/Order No.

③ PTB (Federal testing Laboratories) Test Report No.

Technical data

Main circuit

Rated insulation voltage	1000V
Rated operational current	55 to 180 A
Permissible ambient air temperature	-25 °C to +55 °C
Degree of protection	IP 00 (IEC 60529)
Short-circuit protection	see nameplate

Auxiliary circuit

Rated operational currents

AC-15/Ue	V	24	60	125	230	400	500	690
AC-15/Ie	A	2	1.5	1.25	1.15	1.1	1	0.8
DC-13/Ue	V	24	60	110	220			
DC-13/Ie	A	2	0.5	0.3	0.2			

Rated insulation voltage:



Short-circuit protection:

NH, NEOZED or DIAZED fuses 6A gG or 10A, fast
 Miniature circuit-breaker 3A (C-characteristic)

Operating conditions at ambient temperatures > 55 °C

At ambient temperatures > 55 °C, you must

1. Reduce the current loading for the overload relay
2. Upwardly correct the setting current to prevent tripping at motor rated current.

Correction factors:

Ambient temperature	Perm. Current loading referred to end-of-scale value	Setting current correction
55 °C	1	1
60 °C	0.94	1.08
65 °C	0.88	1.09
70 °C	0.82	1.1

Calculation example:

Motor rated current: 60 A
 Ambient temperature: 70 °C
 Overload relay fitted: 55 to 80 A

1st Step: Determine the permissible current loading:

Max. Current loading: 80 A × 0.82 = 65.6 A

Loading with motor rated current 60 A at 70 °C ambient temperature is permissible.

2nd Step: Calculate the setting current:

Motor rated current: 60 A

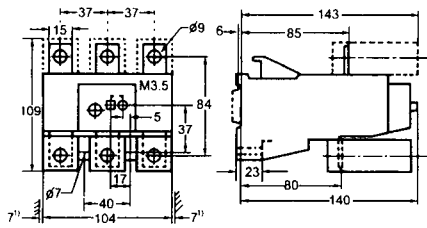
Setting current correction: 60 A × 1.1 = 66 A

You must set the overload relay to 66 A.

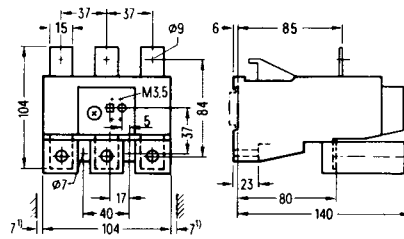
For further information and accessories, see Catalog.

I

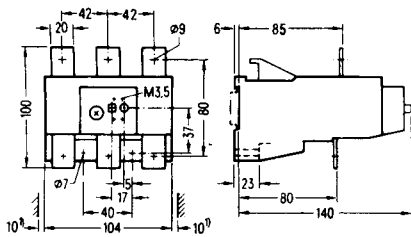
a 3UA60



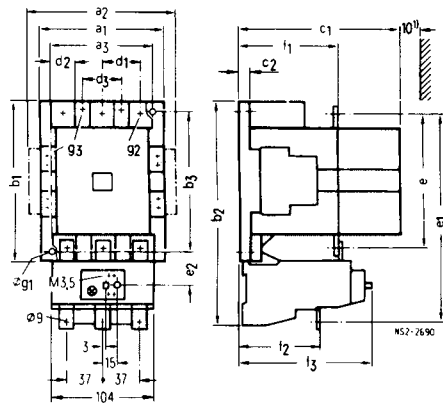
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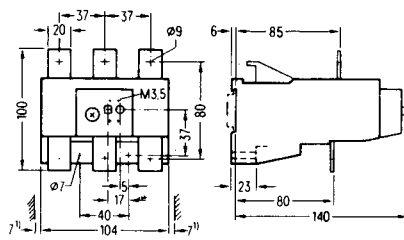
c 3UA61



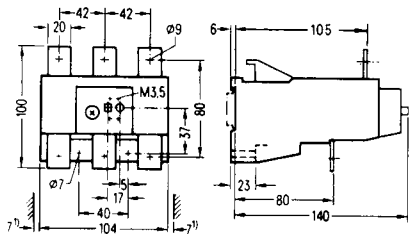
d 3UA62



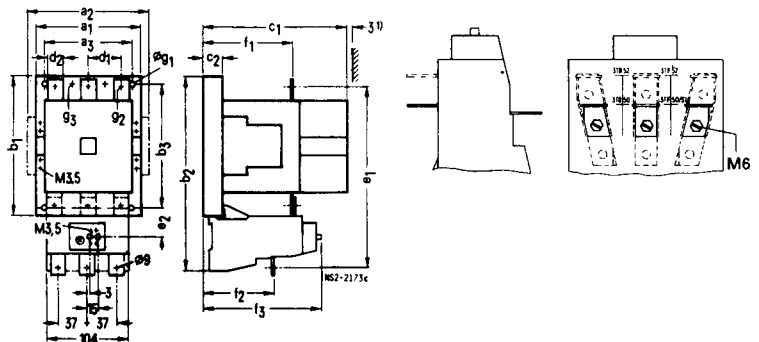
e



f 3UA62



g



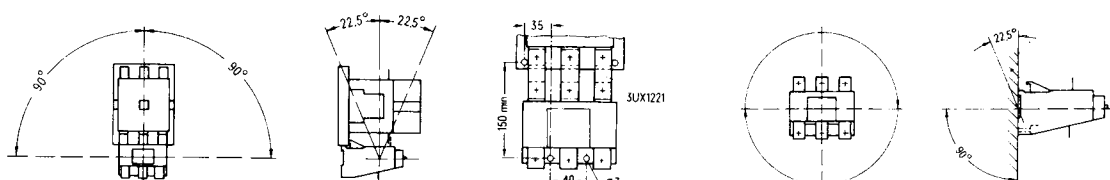
	a ₁	a ₂	a ₃	b ₁	b ₂	b ₃	c ₁	c ₂	d ₁	d ₂	e	e ₁	e ₂	f ₁	f ₂	f ₃	φg ₁	g ₂	g ₃
3TB50	120	147	100	150	232	130	150	22.5	37	15		213	43	90	89	149	7	M6	M3.5
3TF51	120	147	100	150	232	130	150	12	42	20		213	43	92	91	151	6.3	M8	M3.5
3TB52	135	162	110	180	257	160	185	28	42	20		234	38	115	93	153	7	M8	M4
3TF50	120	147	100	150	232	130	150	12	37	15	129	213	43	92	91	151	6.3	6.6	M3.5
3TF52	135	162	110	185	257	160	185	12	42	20	154	234	38	115	93	153	7	M8	M3.5

II

	a	3TF50	3TB50	3TF51	3TB52/3TF52
3UA60	15mm	b	b	–	–
3UA61	20mm	–	–	b	–
3UA6240 – 2H, – 2W, – 2X,		–	b	–	b
3UA6240-3H, – 3J, – 3K		–	b	–	b
3UA6240-3L, – 3M		–	–	–	c

III a

b

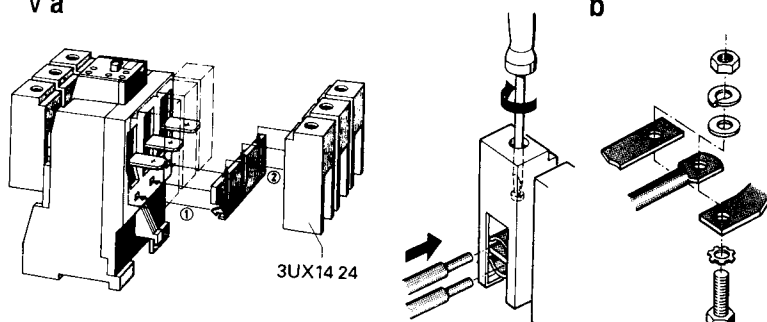


IV

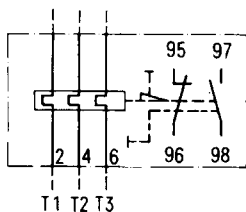
		3UA60					3UA61/62					NO/NC
		L1	L2	L3/T1	T2	T3	L1	L2	L3/T1	T2	T3	
	Nm lb in	6...8 52...70					10...14 7...124					0.8...1.4 7...12
		M6					M8					–
	mm ²	25...70: max. 2 × 70 ¹⁾					–					–
	mm ²	25...50: max. 2 × 50 ¹⁾					–					–
	mm ²	25...70 ²⁾					50...120					–
	mm ²	16...70 ²⁾					35...95					–
AWG		3...2/0. max. 2 × 2/0 ¹⁾ 3...2/0 ²⁾					1/0...250MCM					2 × 18...12
	mm ²	–					–					2 × 0.5...1 2 × 1...2.5
	mm ²	–					–					2 × 0.5...1 2 × 0.75...2.5
	mm inch	22...25 1					–					10

V a

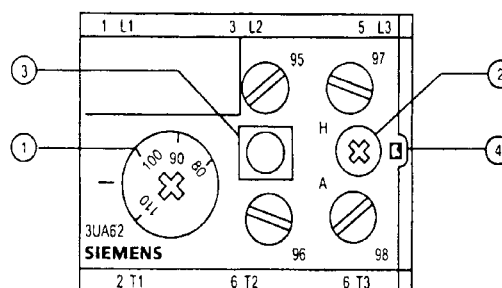
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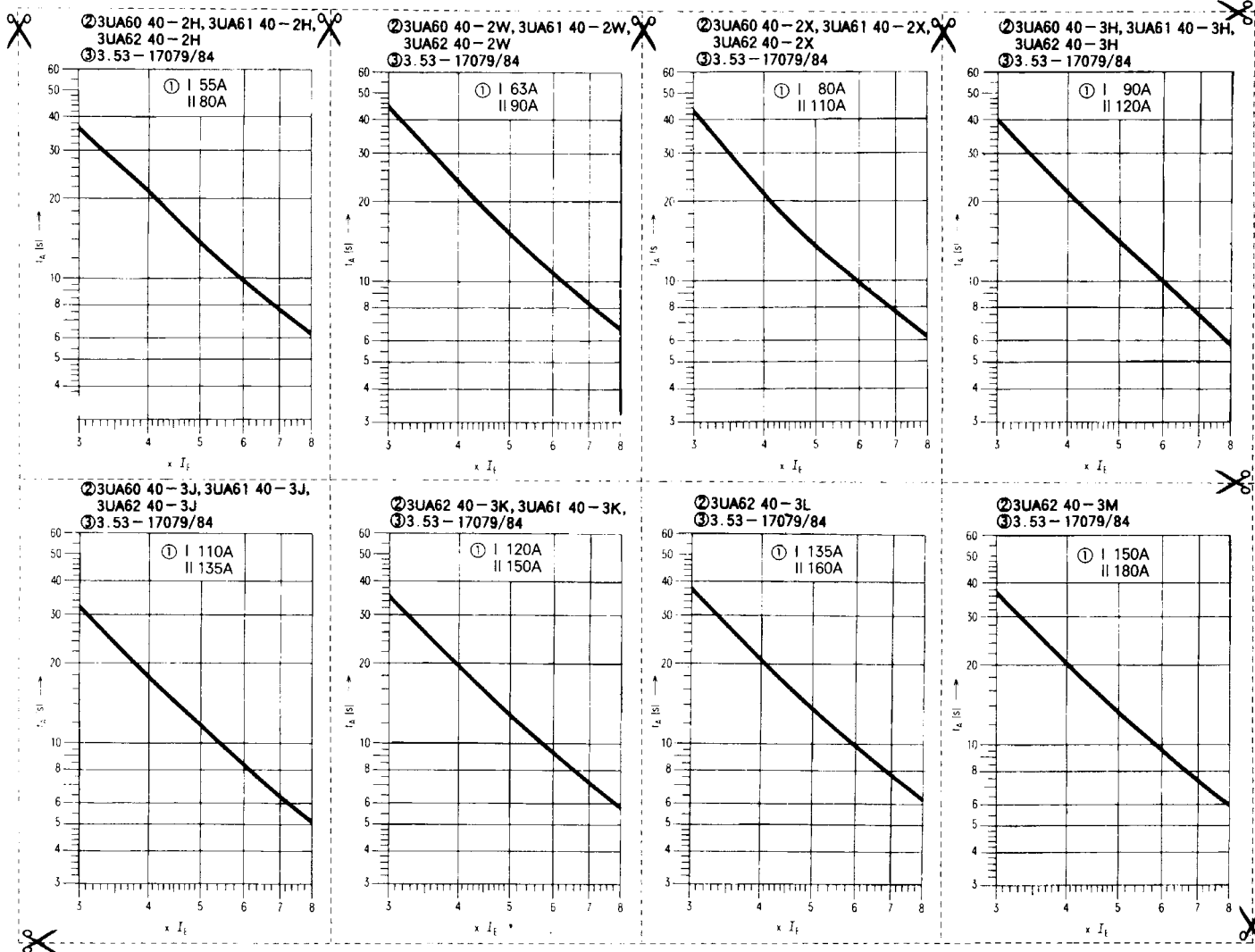
VI



VII



VIII



资料如有更改，恕不另行通知

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http://www.ad.siemens.com.cn/about_us/jv/seal.asp