SIEMENS

Data sheet

3RU2116-1KB0



Overload relay 9.0...12.5 A Thermal For motor protection Size S00, Class 10 Contactor mounting Main circuit: Screw Auxiliary circuit: Screw Manual-Automatic-Reset

and had been diverse.	
product brand name	SIRIUS
product designation	thermal overload relay
product type designation	3RU2
General technical data	
size of overload relay	S00
size of contactor can be combined company-specific	S00
power loss [W] for rated value of the current at AC in hot operating state	6.6 W
• per pole	2.2 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
 in networks with ungrounded star point between auxiliary and auxiliary circuit 	440 V
 in networks with grounded star point between auxiliary and auxiliary circuit 	440 V
 in networks with ungrounded star point between main and auxiliary circuit 	440 V
 in networks with grounded star point between main and auxiliary circuit 	440 V
shock resistance according to IEC 60068-2-27	8g / 11 ms
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Weight	0.154 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-40 +70 °C
during storage	-55 +80 °C
during transport	-55 +80 °C
temperature compensation	-40 +60 °C
relative humidity during operation	10 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	9 12.5 A
operating voltage	
rated value	690 V
 at AC-3e rated value maximum 	690 V
operating frequency rated value	50 60 Hz
operational current rated value	12.5 A
• •	

operational current at AC-3e at 400 V rated value	12.5 A
operating power	
• at AC-3	
— at 400 V rated value	5.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
• at AC-3e	7.5 KW
— at 400 V rated value	5.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
Auxiliary circuit	
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
• note	for contactor disconnection
number of NO contacts for auxiliary contacts	1
• note	for message "Tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
• at 24 V	3 A
• at 24 V	3A
• at 120 V	3 A 2 A
• at 125 V	3 A
• at 230 V	2 A
• at 400 V	1 A
• at 690 V	0.75 A
operational current of auxiliary contacts at DC-13	
• at 24 V	2 A
• at 60 V	0.3 A
● at 110 V	0.22 A
• at 125 V	0.22 A
• at 220 V	0.11 A
contact rating of auxiliary contacts according to UL	B600 / R300
Protective and monitoring functions	
Protective and monitoring functions trip class	CLASS 10
trip class	CLASS 10
trip class design of the overload release	CLASS 10 thermal
trip class design of the overload release UL/CSA ratings	
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor	thermal
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value	thermal 12.5 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	thermal
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection	thermal 12.5 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link	thermal 12.5 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required	thermal 12.5 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link	thermal 12.5 A 12.5 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required	thermal 12.5 A 12.5 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions	thermal 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position	thermal 12.5 A 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method	thermal 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width	thermal 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth	thermal 12.5 A 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and	thermal 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit	thermal 12.5 A 12.5 A 12.5 A any Contactor mounting 76 mm 45 mm 70 mm
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection	thermal 12.5 A 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit	thermal 12.5 A 12.5 A 12.5 A 12.5 A any Contactor mounting 76 mm 45 mm 70 mm No No
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit	thermal 12.5 A 12.5 A 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No Screw-type terminals screw-type terminals
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit	thermal 12.5 A 12.5 A 12.5 A 12.5 A any Contactor mounting 76 mm 45 mm 70 mm No No
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections	thermal 12.5 A 12.5 A 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No screw-type terminals screw-type terminals
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts	thermal 12.5 A 12.5 A 12.5 A any Contactor mounting 76 mm 45 mm 70 mm No Screw-type terminals screw-type terminals Top and bottom
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit • for auxiliary and control circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded	thermal 12.5 A 12.5 A 12.5 A 12.5 A fuse gG: 6 A, quick: 10 A any Contactor mounting 76 mm 45 mm 70 mm No No Screw-type terminals screw-type terminals Top and bottom 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
trip class design of the overload release UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value Short-circuit protection design of the fuse link • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method height width depth Connections/ Terminals product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts	thermal 12.5 A 12.5 A 12.5 A any Contactor mounting 76 mm 45 mm 70 mm No Screw-type terminals screw-type terminals Top and bottom

• for main contacts with screw-type terminals 0.8 1.2 N·m • for auxiliary contacts with screw-type terminals 0.8 1.2 N·m design of screwdriver shaft Diameter 5 6 mm size of the screwdriver tip Pozidriv PZ 2 design of the thread of the connection screw • for main contacts • for main contacts M3 afety related data failure rate [FIT] with low demand rate according to SN 31920 MTTF with high demand rate 2 280 a IEC 61508 20 a F1 value • for proof test interval or service life according to IEC 61508 Electrical Safety 20 a protection class IP on the front according to IEC 60529 IP20 finger-safe, for vertical contact from the front service life according to IEC 60529 finger-safe, for vertical contact from the front service life according to IEC 60529 isplay With protection on the front according to IEC 60529 finger-safe, for vertical contact from the front service life according to IEC 60529 isplay version for switching status Slide switch Slide switch	
- solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)tightening torque2x (20 16), 2x (18 14)• for main contacts with screw-type terminals0.8 1.2 N·m• for auxiliary contacts with screw-type terminals0.8 1.2 N·mdesign of the screwdriver shaftDiameter 5 6 mmsize of the screwdriver tipPozidriv PZ 2design of the thread of the connection screwM3• for main contactsM3• of the auxiliary and control contactsM3atfety related data22 280 aIEC 61508IEC 61508T1 value20 a• for proof test interval or service life according to IEC 60529IP20finger-safe, for vertical contact from the frontInger-safe, for vertical contact from the fronttisplay version for switching statusSilde switchotsplay version for switching statusSilde switch	
finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)tightening torque2x (20 16), 2x (18 14)• for main contacts with screw-type terminals0.8 1.2 N·m• for auxiliary contacts with screw-type terminals0.8 1.2 N·mdesign of screwdriver tipPozidriv PZ 2design of the thread of the connection screwM3• for main contactsM3• of the auxiliary and control contactsM3afety related data50 FITfailure rate [FIT] with low demand rate according to SN 3192050 FITStop of test interval or service life according to IEC 6150820 aT1 value • for proof test interval or service life according to IEC 6150820 aElectrical Safety protection class IP on the front according to IEC 60529IP20fingler-safe, for vertical contact from the front stipalySilde switchgisplay version for switching statusSilde switchprovals CertificatesSilde switch	
• for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) tightening torque	
tightening torque .8 1.2 N·m • for main contacts with screw-type terminals 0.8 1.2 N·m • for auxiliary contacts with screw-type terminals 0.8 1.2 N·m design of screwdriver shaft Diameter 5 6 mm size of the screwdriver tip Pozidriv PZ 2 design of the thread of the connection screw • for main contacts M3 • of the auxiliary and control contacts M3 afoty related data failure rate [FIT] with low demand rate according to SN 31920 50 FIT 31920 for proof test interval or service life according to IEC 61508 20 a Electrical Safety protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front sisplay display version for switching status Slide switch pprovals Certificates Slide switch	
• for main contacts with screw-type terminals 0.8 1.2 N·m • for auxiliary contacts with screw-type terminals 0.8 1.2 N·m design of screwdriver shaft Diameter 5 6 mm size of the screwdriver tip Pozidriv PZ 2 design of the thread of the connection screw M3 • for main contacts M3 • of the auxiliary and control contacts M3 • of the auxiliary and control contacts M3 afety related data 50 FIT failure rate [FIT] with low demand rate according to SN 50 FIT 31920 2280 a EIEC 61508 T1 value • for proof test interval or service life according to IEC 60529 IP20 forcus IP on the front according to IEC 60529 IP20 protection class IP on the front according to IEC 60529 IP20 figelay version for switching status Slide switch opprovals Certificates Slide switch	
• for auxiliary contacts with screw-type terminals 0.8 1.2 N·m design of screwdriver shaft Diameter 5 6 mm size of the screwdriver tip Pozidriv PZ 2 design of the thread of the connection screw • for main contacts • for main contacts M3 • of the auxiliary and control contacts M3 afety related data 50 FIT failure rate [FIT] with low demand rate according to SN 81920 50 FIT MTTF with high demand rate 2 280 a IEC 61508 20 a F1 value • for proof test interval or service life according to IEC 61508 Electrical Safety IP20 protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front splay Slide switch opprovals Certificates Slide switch	
design of screwdriver shaft Diameter 5 6 mm size of the screwdriver tip Pozidriv PZ 2 design of the thread of the connection screw M3 • for main contacts M3 • of the auxiliary and control contacts M3 afety related data 50 FIT failure rate [FIT] with low demand rate according to SN 81920 50 FIT MTTF with high demand rate 2 280 a IEC 61508 20 a F1 value 20 a • for proof test interval or service life according to IEC 61508 20 a Electrical Safety IP20 protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front spiratus splay Slide switch opprovals Certificates Slide switch	
size of the screwdriver tip Pozidriv PZ 2 design of the thread of the connection screw for main contacts M3 for the auxiliary and control contacts M3 for the for the according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front according to IEC 60529 for the for the front for the front according to IEC 60529 for the for the for the front according to IEC 60529 for the for the for the front according to IEC 60529 for the for the for the front according to IEC 60529 for the for the for the front according to IEC 60529 for the for the for the for the for the front for the front for the front for the for	
design of the thread of the connection screw M3 • for main contacts M3 • of the auxiliary and control contacts M3 afety related data 50 FIT failure rate [FIT] with low demand rate according to SN 31920 50 FIT MTTF with high demand rate 2 280 a EEC 61508 21 value • for proof test interval or service life according to IEC 61508 20 a Electrical Safety 20 a protection class IP on the front according to IEC 60529 IP20 fuger-safe, for vertical contact from the front splay display version for switching status Slide switch	
• for main contacts M3 • of the auxiliary and control contacts M3 afety related data M3 failure rate [FIT] with low demand rate according to SN 31920 50 FIT MTTF with high demand rate 2 280 a IEC 61508 2 T1 value 0 • for proof test interval or service life according to IEC 61508 20 a Electrical Safety 20 a protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 Ip20 touch protection for switching status Slide switch splay Slide switch	
• of the auxiliary and control contacts M3 afety related data 50 FIT failure rate [FIT] with low demand rate according to SN 31920 50 FIT MTTF with high demand rate 2 280 a IEC 61508 2 T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety 20 a protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front service life according to IEC 60529 splay Slide switch	
afety related data failure rate [FIT] with low demand rate according to SN 50 FIT 31920 2 280 a MTTF with high demand rate 2 280 a IEC 61508 20 a T1 value 20 a • for proof test interval or service life according to IEC 61508 20 a Electrical Safety 20 a protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front isplay Slide switch	
failure rate [FIT] with low demand rate according to SN 31920 50 FIT MTTF with high demand rate 2 280 a IEC 61508 2 280 a T1 value • for proof test interval or service life according to IEC 61508 Electrical Safety 20 a protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front sisplay display version for switching status Slide switch pprovals Certificates Slide switch	
31920 Image: State S	
EC 61508 Image: Stress of the state interval or service life according to IEC 61508 20 a • for proof test interval or service life according to IEC 61508 20 a Electrical Safety Image: Stress of the stress of	
T1 value 20 a • for proof test interval or service life according to IEC 61508 20 a Electrical Safety IP20 protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front splay splay display version for switching status Slide switch opprovals Certificates Slide switch	
• for proof test interval or service life according to IEC 20 a 61508 20 a Electrical Safety IP20 protection class IP on the front according to IEC 60529 IP20 couch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front splay Slide switch	
protection class IP on the front according to IEC 60529 IP20 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front isplay display version for switching status Slide switch pprovals Certificates Slide switch Slide switch	
touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front isplay display version for switching status Slide switch pprovals Certificates	
isplay display version for switching status Slide switch pprovals Certificates	
display version for switching status Slide switch pprovals Certificates	
pprovals Certificates	
General Product Approval	
Confirmation UK CCC Confirmation	
For use in hazardous locations Test Certificates Marine	/ Shipping
Miscellaneous Special Test Certific- ate Type Test Certific- ates/Test Report	ABS
Marine / Shipping	
BUREAU VERITAS	RMRS
other Railway Environment	
Miscellaneous Confirmation Special Test Certific- Environmental Con-	
ate firmations	
EPD	
Irther information	
Information Informatio Information Information Information Information Informa	
nformation on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875	
	_
Miscellaneous Special Test Certific- Type Test Certific-	/ Shipping

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RU2116-1KB0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KB0

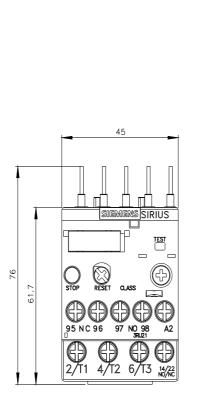
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RU2116-1KB0&lang=en

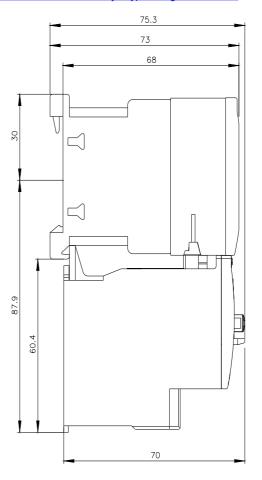
Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RU2116-1KB0/char

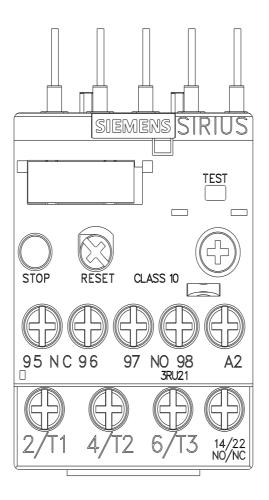
Further characteristics (e.g. electrical endurance, switching frequency)

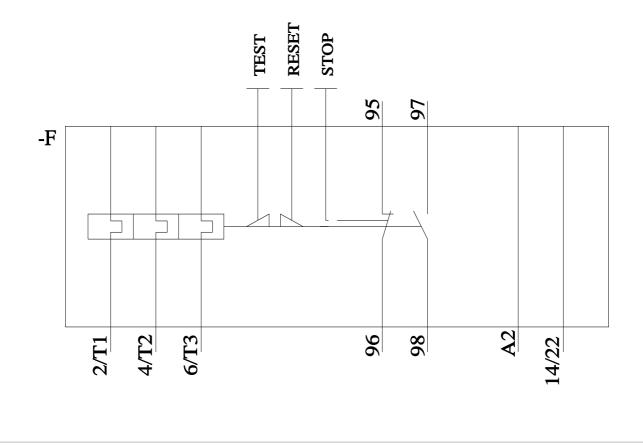
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RU2116-1KB0&objecttype=14&gridview=view1





9/30/2024





last modified:

4/5/2024 🖸