## **SIEMENS**

Data sheet 3RF3403-1BD24



Solid-state contactor 3-phase 3RF3 AC 53 / 3.8 A / 40  $^{\circ}\text{C}$  48-480 V / 110-230 V AC Reversing circuit Instantaneous switching screw terminal

product brand name	SIRIUS
product designation	solid-state reversing contactor
design of the product	two-phase controlled
product type designation	3RF34
manufacturer's article number	
<ul><li>_1 of the accessories that can be ordered</li></ul>	3RA2921-1BA00
<ul><li>_2 of the accessories that can be ordered</li></ul>	3RF3900-0QA88
product designation	
<ul><li>_1 of the accessories that can be ordered</li></ul>	Link module
<ul> <li>_2 of the accessories that can be ordered</li> </ul>	Connection adapter
General technical data	
product function	instantaneous switching
power loss [W] for rated value of the current at AC in hot operating state	7 W
• per pole	2.33 W
power loss [W] for rated value of the current without load current share typical	3.5 W
insulation voltage rated value	600 V
type of voltage of the control supply voltage	AC
surge voltage resistance of main circuit rated value	6 kV
shock resistance acc. to IEC 60068-2-27	15g / 11 ms
vibration resistance acc. to IEC 60068-2-6	2g
certificate of suitability	CE / UL / CSA / CCC / C-Tick (RCM)
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	28.05.2009 00:00:00
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	2
number of NC contacts for main contacts	0
operating voltage at AC	
at 50 Hz rated value	48 480 V
at 60 Hz rated value	48 480 V
operating frequency rated value	50 60 Hz
relative symmetrical tolerance of the operating frequency	10 %
operating range relative to the operating voltage at AC	
● at 50 Hz	40 506 V
● at 60 Hz	40 506 V
operational current	
at AC-3 at 400 V rated value	3.8 A

** air A-2-3s at 400 V stamborit (ethiperature 40 Coperation accurrent minimum Coperating power       ** air A-2-3 at 400 V ratio value       ** air A-2-3 at 400	■ at AC-53a at 400 V at ambient temperature 40 °C	3.8 A
operational current minimum operating power  • at AC-3 at 400 V rated value rate of voltage rise at the thyristor for main contacts maximum permissible reverse current of the thyristor derating temperature surge current resistance rated value 800 A R2 Value maximum Control circuit Centrol Vype of voltage of the control supply voltage • at 60 Hz • at 60 Hz • at 60 Hz • at 60 Hz thill-scale value for signal-02 recognition • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value for signal-12 recognition • at 60 Hz full-scale value • at 61 Hz full-scale value • at 62 61 Hz • at 60 Hz •	<ul> <li>at AC-53a at 400 V at ambient temperature 40 °C rated value</li> </ul>	3.0 A
operating power  **al AC-2 atl 40 V rated value  **1000 V/µs  **anximum permissible  **provines current of the thyristor for main contacts maximum permissible  **provines current of the thyristor  **derating temperature  **al Control supply voltage for the control supply voltage  **al Control supply voltage of the control supply voltage  **al Control supply voltage of the control supply voltage  **al Control supply voltage frequency  **al rated value  **al Control supply voltage frequency  **al rated value  **al Control supply voltage for the contro		500 mA
* at AC-3 at 400 V related value rate of voltage rise at the thyristor for main contacts maximum permissible blocking voltage at the thyristor for main contacts maximum permissible blocking voltage at the thyristor for main contacts maximum permissible  10 mA derating temperature 40 °C surge current resistance rated value 800 A 812 value maximum 1 800 A²-s  Control circuit/ Control yps of voltage of the control supply voltage control supply voltage 1 at AC • at 50 Hz 110 230 V • at 60 Hz • at 60 Hz • 2 rated value • 2 rated value • 2 rated value • 2 rated value • 350 Hz full-scale value for signal-0- recognition • at 50 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value for signal-0- recognition • at 60 Hz full-scale value • at AC intil scale value • at AC intil scale value		000
rate of voltage rise at the thyristor for main contacts maximum permissible blocking voltage at the thyristor for main contacts maximum permissible reverse current of the thyristor derating temperature 40 °C surge current resistance rated value 800 A Rt value maximum 1 800 A*s  Centrol circuit Gontrol Uppe of voltage of the control supply voltage at 60 Hz 110230 V  at 60 Hz 110230 V  at 60 Hz 110230 V  outrol supply voltage frequency 4 °C resistance resistance of the control supply voltage frequency 4 °C resistance of the control supply 4 °C resistance of the control supply voltage frequency 5 °C retrol supply voltage frequency 4 °C retrol supply 5 °C retrol supply voltage frequency 5 °C retrol supply voltage at AC  at 60 Hz 6 °C retrol supply voltage frequency 6 °C retrol supply 6 °C retrol supply 6 °C retrol supply 7 °C retrol supply voltage requency 6 °C retrol supply 6 °C retrol supply 7 °C retrol supply 8 °C retro		1.5 kW
maximum permissible blocking votage at the tryristor for main contacts maximum permissible reverse current of the thyristor    derating temperature		1 000 V/us
maximum permissible  derating temperature  surge current resistance rated value  Et value maximum  1800 A²-s  Control circuit/ Control  1800 A²-s  Control supply voltage of the control supply voltage  at 60 Hz  at 60 Hz  110 230 V  at 60 Hz  110 230 V  at 60 Hz  at 60 Hz  control supply voltage 1 at AC  at 50 Hz  at 60 Hz  control supply voltage frequency  at 60 Hz  at 60 Hz  control supply voltage frequency  at 60 Hz  at 60		
reverse current of the thyristor derating temperature surge current resistance rated value 800 A 12t value maximum 18to A2*s  Control circuit/ Control  1ype of voltage of the control supply voltage 40°C  at 50 Hz 110230 V  at 50 Hz 110230 V  10 %		1 200 V
derating temperature surge current resistance rated value Et value maximum 1800 A <sup>5</sup> a  Control supply voltage of the control supply voltage AC control supply voltage 1 at AC • at 50 Hz • at 60 Hz 110 230 V • at 60 Hz control supply voltage frequency • 1 rated value • 2 rated value • 2 rated value • 2 rated value • 10 Hz • at 50 Hz • at 60		404
surge current resistance rated value  R2 value maximum  1 800 A**s  1 800 A**s  Control clurcuit Control  Type of voltage of the control supply voltage  of to other control supply voltage frequency  • 1 at 60 Hz  • at 60 Hz  • 1 at 60 Hz  • 1 at 60 Hz  relative symmetrical tolerance of the control supply voltage frequency  • 1 rated value  • 2 rated value  • 2 rated value  • 30 Hz  • 1 50 Hz full-scale value for signal-Co- recognition  • at 50 Hz full-scale value for signal-Co- recognition  • at 50 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value for signal-Co- recognition  • at 60 Hz full-scale value  • at 61 at 61 Bz full-scale value  • at 61 at 61 Bz full-scale value  • at 61 at 60 Hz  • initial value  • full-scale value  • at 60 Hz  • initial value  • full-scale value  • at 60 Hz  • initial value  • full-scale value  • at 60 Hz  • initial value  • init		
1800 A*s		_ , , , ,
Control circuit/ Control       type of voltage of the control supply voltage     AC       control supply voltage flequency     110 230 V       • 1 rated value     50 Hz       • 2 rated value     60 Hz       relative symmetrical tolorance of the control supply voltage frequency     10 %       control supply voltage at AC     60 Hz       • at 50 Hz full-scale value for signal <0> recognition     40 V       • at 50 Hz full-scale value for signal <1> detection     40 V       control supply voltage     • at AC initial value for signal <1> detection     90 V       symmetrical line frequency tolerance     90 V       operating range factor control supply voltage rated value at AC at 50 Hz     1.1       • initial value     0.82       • initial value     0.82       • initial value     0.82       • initial value     1.1       • initial value     1.2       • initial value     1.3       • initial value     1		
type of voltage of the control supply voltage control supply voltage † at AC		1 800 AS
control supply voltage 1 at AC  at 50 Hz  at 60 Hz  110 230 V  at 60 Hz  1110 230 V  11 rated value  2 rated value  3 rated value  4 relative symmetrical tolerance of the control supply voltage frequency  4 rated value  50 Hz  60 Hz  70 W  10 %  voltage frequency  control supply voltage at AC  at 50 Hz full-scale value for signal<0> recognition  at 60 Hz full-scale value for signal<1> detection  symmetrical line frequency tolerance  operating range factor control supply voltage rated  value at AC at 50 Hz  initial value  at AC initial value  initial value  initial value  at AC  control current at minimum control supply voltage  at AC  control current at AC rated value  15 mA  ON-delay time  20 ms  OF-delay time  20 ms  OF-delay time  20 ms  OF-delay time  10 ms; additionally max, one half-wave  switchover delay of reversing contactor  funumber of NC contacts for auxiliary contacts  number of NC contacts for auxiliary contacts  number of CO cont		A.O.
e at 50 Hz ot 60 Hz 110 230 V e at 60 Hz 110 230 V e at 60 Hz 17 ated value 50 Hz 60 Hz 60 Hz 70 Hz 60 Hz 60 Hz 70 Hz 60 Hz		AC
e at 60 Hz  control supply voltage frequency e1 rated value 50 Hz 60 Hz  relative symmetrical tolerance of the control supply voltage frequency control supply voltage at AC e1 st 60 Hz full-scale value for signal<0> recognition e1 t60 Hz full-scale value for signal<0> recognition control supply voltage e1 t60 Intial value for signal<1> detection 90 V symmetrical line frequency tolerance operating range factor control supply voltage rated value at AC at 50 Hz e1 intial value e1 full-scale value e1 full-scale value 0.82 e1 full-scale value 0.82 e1 full-scale value 1.1 control current at minimum control supply voltage e1 tAC control current at AC rated value 20 ms ON-dolay time 0 Fet-delay time 20 ms ON-dolay time 10 ms; additionally max. one half-wave switchover delay of reversing contactor 50 100 ms  Auxiliary circuit number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of NC contacts for auxiliary contacts 0 number of CO contacts for auxiliary contacts 0 number of NC contacts for auxiliary contacts 0 instaliation/ mounting/ dimensions mounting position 40 V e3 deb-y-side mounting e upwards 70 mm edothor directive 113.8 mm required spacing with side-by-side mounting e upwards commercial for auxiliary and control circuit 70 mm control cortent 70 mm control cortent 70 mm control cortent 70 mm control circuit 70 mm control cortent 70 mm control circuit 70 mm		440 220 V
control supply voltage frequency  1 rated value 2 rated value 10 Me 10 M		
e 1 rated value e 2 rated value felative symmetrical tolerance of the control supply voltage frequency control supply voltage at AC e at 50 Hz full-scale value for signal-CD recognition at 60 Hz full-scale value for signal-CD recognition e at 60 Hz full-scale value for signal-CD recognition 40 V at AC initial value for signal <1> detection 90 V symmetrical line frequency tolerance operating range factor control supply voltage rated value at AC at 50 Hz initial value full-scale value operating range factor control supply voltage rated value at AC at 60 Hz initial value full-scale value operating range factor control supply voltage rated value at AC at 60 Hz initial value full-scale value  operating range factor control supply voltage rated value at AC at 60 Hz initial value full-scale value 1.1  control current at minimum control supply voltage at AC 2 mA  control current at MC rated value 15 mA  ON-delay time 20 ms  OFF-delay time 20 ms witchover delay of reversing contactor 50 100 ms  Auxiliary circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of NO contacts for auxilia		110 230 V
e 2 rated value relative symmetrical tolerance of the control supply voltage frequency control supply voltage at AC  e at 50 Hz full-scale value for signal<0> recognition at 60 Hz full-scale value for signal<0> recognition out of 0 Hz full-scale value for signal<0> recognition at 60 Hz full-scale value for signal<0> recognition out out of 1 Hz value for signal<0> recognition out out of 1 Hz value for signal<0> recognition out out out of 1 Hz value for signal<0> recognition symmetrical line frequency tolerance operating range factor control supply voltage rated value at AC at 50 Hz initial value out		50 Hz
relative symmetrical tolerance of the control supply voltage frequency control supply voltage at AC  • at 50 Hz full-scale value for signal<0> recognition 40 V  • at 60 Hz full-scale value for signal<0> recognition 40 V  control supply voltage • at AC initial value for signal<0> detection  symmetrical line frequency tolerance operating range factor control supply voltage rated value at AC at 50 Hz  • initial value • initial va		
voltage frequency control supply voltage at AC		
control supply voltage at AC  • at 50 Hz full-scale value for signal<0> recognition  • at 60 Hz full-scale value for signal<0> recognition  • at 60 Hz full-scale value for signal<0> recognition  control supply voltage  • at AC initial value for signal<1> detection  symmetrical line frequency tolerance  operating range factor control supply voltage rated value at AC at 50 Hz  • initial value  • full-scale value  • at AC  control current at minimum control supply voltage  • at AC  control current at AC rated value  • full-scale value  • full-		10 76
at 16 0 Hz full-scale value for signal<0> recognition control supply voltage     at AC initial value for signal <1> detection     symmetrical line frequency tolerance     operating range factor control supply voltage rated value at AC at 50 Hz     initial value     full-scale value     operating range factor control supply voltage rated value at AC at 60 Hz     initial value     full-scale value     one full-scale value     one full-scale value     one full-scale value     initial value     inal value     initial value     initial value     initial value     initial value		
control supply voltage	<ul> <li>at 50 Hz full-scale value for signal&lt;0&gt; recognition</li> </ul>	40 V
a the AC initial value for signal <1> detection  symmetrical line frequency tolerance operating range factor control supply voltage rated value at AC at 50 Hz  initial value operating range factor control supply voltage rated value at AC at 50 Hz initial value operating range factor control supply voltage rated value at AC at 60 Hz initial value of Ill-scale value  of Ill-scale value  ontrol current at minimum control supply voltage at AC  ontrol current at AC rated value  15 mA  ON-delay time ON-delay time 20 ms  OFF-delay time 10 ms; additionally max. one half-wave switchover delay of reversing contactor  Auxiliary circuit number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts fastening method side-by-side mounting  iside-by-side mounting  vertical fastening method side-by-side mounting  ivertical fastening method side-by-side mounting  vertical fastening method sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting rail  vertical sorew and snap-on mounting onto 35 mm standard mounting onto 35 mm standard mounting rail  vertical	<ul> <li>at 60 Hz full-scale value for signal&lt;0&gt; recognition</li> </ul>	40 V
symmetrical line frequency tolerance operating range factor control supply voltage rated value at AC at 50 Hz  initial value full-scale value operating range factor control supply voltage rated value at AC at 60 Hz initial value operating range factor control supply voltage rated value at AC at 60 Hz initial value of ull-scale value of ull-scale value of ull-scale value other current at minimum control supply voltage at AC control current at AC rated value  ON-delay time 2 ms OFF-delay time 20 ms OFF-delay time 10 ms; additionally max. one half-wave switchover delay of reversing contactor 50 100 ms Auxillary circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of So contacts for auxiliary contacts number of So contacts for auxiliary contacts number of So contacts for auxiliary contacts screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mounting onto 35 mm standard mounting rail screw and snap-on mou	control supply voltage	
operating range factor control supply voltage rated value at AC at 50 Hz  initial value  full-scale value  operating range factor control supply voltage rated value at AC at 50 Hz  initial value  operating range factor control supply voltage rated value at AC at 50 Hz  initial value  outrol current at minimum control supply voltage  at AC  control current at AC rated value  15 mA  ON-delay time  20 ms  OFF-delay time  switchover delay of reversing contactor  Auxillary circuit  number of NC contacts for auxillary contacts  number of NC contacts for auxillary contacts  number of NC contacts for auxillary contacts  number of CO contacts for auxillary contacts  olumber of CO contacts for auxillary contacts  fastening method  side-by-side mounting  height  yes  outrol didensions  mounting position  fastening method  side-by-side mounting  height  depth  113.8 mm  required spacing with side-by-side mounting  outrol control contacts  outrol control contacts  outrol control contacts  outrol control control control supply voltage  1.1  2 mA  2 mA  2 mA  2 mA  2 mA  2 mA  2 ons  10 ms; additionally max. one half-wave  switchoally max. one hal	<ul> <li>at AC initial value for signal &lt;1&gt; detection</li> </ul>	90 V
value at AC at 50 Hz  initial value  full-scale value  1.1  operating range factor control supply voltage rated value at AC at 60 Hz  initial value  full-scale value  0.82  full-scale value  1.1  control current at minimum control supply voltage  at AC  control current at AC rated value  15 mA  ON-delay time  20 ms  OFF-delay time  10 ms; additionally max. one half-wave  switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts  number of NO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  tastening method  screw and snap-on mounting onto 35 mm standard mounting rail  screw and snap-on mounting onto 35 mm standard mounting onto 35 mm standard mounting rail  screw and snap-on mounting onto 35 mm standard mounting onto 35 mm standard mou	symmetrical line frequency tolerance	5 Hz
initial value  initial value  initial value  operating range factor control supply voltage rated value at AC at 60 Hz  initial value  initia		
• full-scale value     operating range factor control supply voltage rated value at AC at 60 Hz     • initial value     • full-scale value     • full-scale value     • full-scale value     • at AC     control current at minimum control supply voltage     • at AC     control current at AC rated value     • at AC     control current at AC rated value     • at AC     control current at AC rated value     • at AC     control current at AC rated value     • at AC     control current at AC rated value      • at AC      •		0.00
operating range factor control supply voltage rated value at AC at 60 Hz  • initial value • full-scale value  • full-scale value  • at AC  control current at minimum control supply voltage • at AC  control current at AC rated value  ON-delay time  OFF-delay time  0FF-delay time  10 ms; additionally max. one half-wave switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts  number of NO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of Co-contacts for auxiliary contacts  number of Service of of Serv		
value at AC at 50 Hz  initial value  full-scale value  control current at minimum control supply voltage  at AC  control current at AC rated value  15 mA  ON-delay time  OFF-delay time  switchover delay of reversing contactor  number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts vertical  installation/ mounting/ dimensions  mounting position  fastening method side-by-side mounting  ieight width depth 113.8 mm  required spacing with side-by-side mounting  upwards downwards  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes  Ves  1.1  1.1  1.1  1.2  2. mA		1.1
full-scale value     control current at minimum control supply voltage     at AC     control current at AC rated value     15 mA     ON-delay time     20 ms     OFF-delay time     10 ms; additionally max. one half-wave     switchover delay of reversing contactor     50 100 ms  Auxiliary circuit  number of NC contacts for auxiliary contacts     number of NO contacts for auxiliary contacts     number of CO contacts for auxiliary contacts     0  Installation/ mounting/ dimensions  mounting position     fastening method         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         stide-by-side mounting         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard mounting rail         vertical         screw and snap-on mounting onto 35 mm standard moun		
control current at Minimum control supply voltage	• initial value	0.82
a ta AC control current at AC rated value  DN-delay time  OF-delay time  10 ms; additionally max. one half-wave switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of SD contacts for auxiliary contacts  vertical fastening method screw and snap-on mounting onto 35 mm standard mounting rail side-by-side mounting  yes height yes height yes height 113.8 mm required spacing with side-by-side mounting  upwards downwards 50 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes	• full-scale value	1.1
a ta AC control current at AC rated value  DN-delay time  OF-delay time  10 ms; additionally max. one half-wave switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of SD contacts for auxiliary contacts  vertical fastening method screw and snap-on mounting onto 35 mm standard mounting rail side-by-side mounting  yes height yes height yes height 113.8 mm required spacing with side-by-side mounting  upwards downwards 50 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes	control current at minimum control supply voltage	
ON-delay time OFF-delay time 10 ms; additionally max. one half-wave switchover delay of reversing contactor 50 100 ms  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts 0 number of CO contacts for auxiliary contacts 0 installation/ mounting/ dimensions mounting position fastening method side-by-side mounting ves height 95 mm width 45 mm depth 113.8 mm required spacing with side-by-side mounting • upwards • downwards  Connections/ Terminals product component removable terminal for auxiliary and control circuit  20 ms domination max. one half-wave 50 100 ms  vertical screw and snap-on mounting onto 35 mm standard mounting rail yes		2 mA
OFF-delay time switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of NO contacts for auxiliary and control circuit  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  yes  number of NO contacts for auxiliary and control circuit  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  yes  number of NO contacts for auxiliary and control circuit  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  yes	control current at AC rated value	15 mA
OFF-delay time switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of NO contacts for auxiliary and control circuit  number of NC contacts for auxiliary and control circuit  10 ms; additionally max. one half-wave  50 100 ms  venture  venture  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  yes  number of NO contacts for auxiliary and control circuit  113.8 mm  113.8 mm  Yes	ON-delay time	20 ms
switchover delay of reversing contactor  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts    No contacts for auxiliary contacts		10 ms; additionally max. one half-wave
number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of NO contacts fo	switchover delay of reversing contactor	50 100 ms
number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  number of NO contacts fo	Auxiliary circuit	
number of NO contacts for auxiliary contacts  number of CO contacts		0
number of CO contacts for auxiliary contacts  Installation/ mounting/ dimensions  mounting position  fastening method		0
mounting position       vertical         fastening method       screw and snap-on mounting onto 35 mm standard mounting rail         ◆ side-by-side mounting       Yes         height       95 mm         width       45 mm         depth       113.8 mm         required spacing with side-by-side mounting       70 mm         ◆ upwards       70 mm         ◆ downwards       50 mm         Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes		0
mounting position       vertical         fastening method       screw and snap-on mounting onto 35 mm standard mounting rail         ◆ side-by-side mounting       Yes         height       95 mm         width       45 mm         depth       113.8 mm         required spacing with side-by-side mounting       70 mm         ◆ upwards       70 mm         ◆ downwards       50 mm         Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes	Installation/ mounting/ dimensions	
fastening method		vertical
● side-by-side mounting    height		screw and snap-on mounting onto 35 mm standard mounting rail
height       95 mm         width       45 mm         depth       113.8 mm         required spacing with side-by-side mounting       70 mm         ● upwards       70 mm         ● downwards       50 mm         Connections/ Terminals         product component removable terminal for auxiliary and control circuit       Yes		
width 45 mm  depth 113.8 mm  required spacing with side-by-side mounting  • upwards 70 mm  • downwards 50 mm  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes		95 mm
required spacing with side-by-side mounting  • upwards • downwards  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes		45 mm
<ul> <li>upwards 70 mm</li> <li>downwards 50 mm</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary and control circuit</li> </ul> Yes	depth	113.8 mm
downwards  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes	required spacing with side-by-side mounting	
Connections/ Terminals  product component removable terminal for auxiliary and control circuit  Yes	• upwards	70 mm
product component removable terminal for auxiliary and control circuit  Yes	<ul><li>downwards</li></ul>	50 mm
control circuit	Connections/ Terminals	
control circuit	product component removable terminal for auxiliary and	Yes
type of electrical connection	control circuit	
	type of electrical connection	

• for auxiliary and control circuit      type of connectable conductor cross-sections         • for main contacts
of main contacts         — solid         — finely stranded with core end processing     of auxiliary and control contacts     of at AWG cables for main contacts     of a wild and ontrol contacts     of a wild ary and control contacts      of a wilding torque     of or auxiliary and control contacts      of or main contacts      of or main contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals     of or auxiliary and control contacts with screw-type terminals
- solid - finely stranded with core end processing • at AWG cables for main contacts  • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary and control contacts  - solid - finely stranded with core end processing - finely stranded without core end processing - finely stranded with core end processing - x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - x (AWG 20 12) - x
- finely stranded with core end processing  • at AWG cables for main contacts  connectable conductor cross-section for main contacts  • solid or stranded • finely stranded with core end processing  - solid - finely stranded with core end processing - finely stranded without core end processing - finely stranded with core end processing - solid - finely stranded with core end processing - finely stranded with core end processing - solid - 1 10 mm²  1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)  1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (0.5 2.5 mm²), 2x
at AWG cables for main contacts      a solid or stranded     a finely stranded with core end processing     a for auxiliary and control contacts     a finely stranded with core end processing     a finely stranded without core end processing     a finely stranded with core end
at AWG cables for main contacts      a solid or stranded     a finely stranded with core end processing     a for auxiliary and control contacts     a finely stranded with core end processing     a finely stranded without core end processing     a finely stranded with core end
connectable conductor cross-section for main contacts  • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections • for auxiliary and control contacts  — solid — finely stranded with core end processing — finely stranded with core end processing — finely stranded without core end processing — finely stranded with core end processing — 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)  1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)  1x (AWG 20 12)  1x (AWG 20 12)  1x 10  1x 10  1x (AWG 20 12)  1x 10  1x 10  1x 10  1x (AWG 20 12)  1x 10  1x 10  1x (AWG 20 12)  1x 10  1x 10  1x (AWG 20 12)  1x 10  1x (AWG 20 12)  1x 10  1x 10  1x (AWG 20 12)  1x 10  1x 10  1x (AWG 20 12)  1x 10  1x (AWG 20 12)  1x 10  1x (AWG 20 12)  1x 10  1
type of connectable conductor cross-sections  • for auxiliary and control contacts  — solid — finely stranded with core end processing — finely stranded with core end processing — finely stranded without core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts  AWG number as coded connectable conductor cross section for main contacts  tightening torque  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf·in] • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals
type of connectable conductor cross-sections  • for auxiliary and control contacts  — solid — finely stranded with core end processing — finely stranded without core end processing • at AWG cables for auxiliary and control contacts  AWG number as coded connectable conductor cross section for main contacts  tightening torque  • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals
<ul> <li>for auxiliary and control contacts  — solid  — finely stranded with core end processing  — finely stranded without core end processing  — at AWG cables for auxiliary and control contacts  AWG number as coded connectable conductor cross section for main contacts  tightening torque  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw</li> </ul>
<ul> <li>for auxiliary and control contacts  — solid  — finely stranded with core end processing  — finely stranded without core end processing  — at AWG cables for auxiliary and control contacts  AWG number as coded connectable conductor cross section for main contacts  tightening torque  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw</li> </ul>
- solid - finely stranded with core end processing - finely stranded without core end processing - finely stranded with core end processing - finely stranded with core end processing - 1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²) - 1x (AWG 20 12) - 1x (AWG 20 12) - 14 10 - 14 10 - 15 10 - for main contacts with screw-type terminals - for auxiliary and control contacts with screw-type - terminals - for auxiliary and control contacts with screw-type - terminals - for auxiliary and control contacts with screw-type - terminals - for auxiliary and control contacts with screw-type - f
- finely stranded with core end processing - finely stranded without core end processing - finely stranded without core end processing  • at AWG cables for auxiliary and control contacts  AWG number as coded connectable conductor cross section for main contacts  tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in] • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for the thread of the connection screw
<ul> <li>— finely stranded without core end processing <ul> <li>at AWG cables for auxiliary and control contacts</li> </ul> </li> <li>AWG number as coded connectable conductor cross section for main contacts</li> <li>tightening torque <ul> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> </ul> </li> <li>tightening torque [lbf·in] <ul> <li>for main contacts with screw-type terminals</li> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>for the thread of the connection screw</li> </ul> </li> <li>1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)  1x (AWG 20 12)  14 10  2 2.5 N·m  0.5 0.6 N·m  18 22 lbf·in  7.5 5.3 lbf·in  18 22 lbf·in  7.5 5.3 lbf·in</li> </ul>
<ul> <li>at AWG cables for auxiliary and control contacts</li> <li>AWG number as coded connectable conductor cross section for main contacts</li> <li>tightening torque</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>tightening torque [lbf·in]</li> <li>for main contacts with screw-type terminals</li> <li>tightening torque [lbf·in]</li> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>
AWG number as coded connectable conductor cross section for main contacts  tightening torque  • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf·in] • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw
tightening torque  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals
• for main contacts with screw-type terminals     • for auxiliary and control contacts with screw-type terminals  tightening torque [lbf-in]     • for main contacts with screw-type terminals     • for auxiliary and control contacts with screw-type terminals  o for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw  2 2.5 N·m  0.5 0.6 N·m  18 22 lbf·in  7.5 5.3 lbf·in
• for auxiliary and control contacts with screw-type terminals  tightening torque [lbf·in]      • for main contacts with screw-type terminals      • for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw  0.5 0.6 N·m  18 22 lbf·in  7.5 5.3 lbf·in
tightening torque [lbf-in]  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw
<ul> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>design of the thread of the connection screw</li> </ul> 18 22 lbf·in  7.5 5.3 lbf·in
• for auxiliary and control contacts with screw-type terminals  design of the thread of the connection screw
terminals  design of the thread of the connection screw
• for main contacts M4
<ul> <li>of the auxiliary and control contacts</li> <li>M3</li> </ul>
stripped length of the cable
• for main contacts 10 mm
• for auxiliary and control contacts 7 mm
UL/CSA ratings
full-load current (FLA) for 3-phase AC motor
• at 480 V rated value 3.4 A
yielded mechanical performance [hp] for 3-phase AC motor
• at 200/208 V rated value 0.5 hp
• at 220/230 V rated value 0.75 hp
• at 460/480 V rated value 2 hp
Safety related data
proportion of dangerous failures with high demand rate acc. to SN 31920
MTTF with high demand rate 39 y
T1 value for proof test interval or service life acc. to IEC 61508
protection class IP on the front acc. to IEC 60529 IP20
touch protection on the front acc. to IEC 60529 finger-safe, for vertical contact from the front
Ambient conditions
installation altitude at height above sea level maximum 1 000 m
ambient temperature
• during operation -25 +60 °C
• during storage -55 +80 °C
Electromagnetic compatibility
conducted interference
• due to burst acc. to IEC 61000-4-4 2 kV / 5 kHz behavior criterion 2
• due to conductor-earth surge acc. to IEC 61000-4-5 2 kV behavior criterion 2
<ul> <li>due to conductor-conductor surge acc. to IEC</li> <li>61000-4-5</li> <li>1 kV behavior criterion 2</li> </ul>
• due to high-frequency radiation acc. to IEC 61000- 4-6

electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharging / 8 kV air discharging, behavior criterion 2
conducted HF interference emissions acc. to CISPR11	Class A for industrial environment
field-bound HF interference emission acc. to CISPR11	Class A for industrial environment
Short-circuit protection, design of the fuse link	
manufacturer's article number	
<ul> <li>of full range R fuse link for semiconductor protection at NH design usable</li> </ul>	<u>3NE1813-0</u>
<ul> <li>of full range R fuse link for semiconductor protection at cylindrical design usable</li> </ul>	<u>5SE1335</u>
<ul> <li>of back-up R fuse link for semiconductor protection at NH design usable</li> </ul>	<u>3NE8015-1</u>
<ul> <li>of back-up R fuse link for semiconductor protection at cylindrical design 10 x 38 mm usable</li> </ul>	3NC1020
<ul> <li>of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable</li> </ul>	<u>3NC1415</u>
<ul> <li>of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable</li> </ul>	3NC2220
manufacturer's article number of the gG fuse	
<ul> <li>at NH design usable</li> </ul>	3NA3801-6
<ul> <li>at cylindrical design 10 x 38 mm usable</li> </ul>	<u>3NW6001-1</u>
at cylindrical design 14 x 51 mm usable	<u>3NW6101-1</u>
manufacturer's article number	
<ul> <li>of DIAZED fuse usable</li> </ul>	<u>5SB171</u>
Certificates/ approvals	

Certificates/ approvals

## **General Product Approval**

**EMC** 

Declaration of Conformity













**Test Certificates** 

other

Type Test Certificates/Test Report

Confirmation

## Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF3403-1BD24

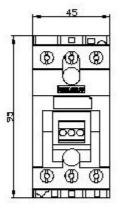
Cax online generator

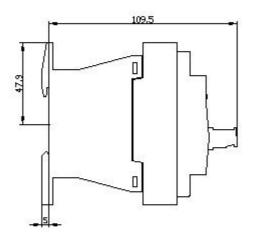
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF3403-1BD24

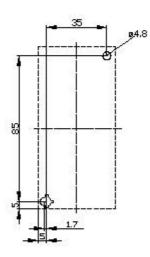
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RF3403-1BD24">https://support.industry.siemens.com/cs/ww/en/ps/3RF3403-1BD24</a>

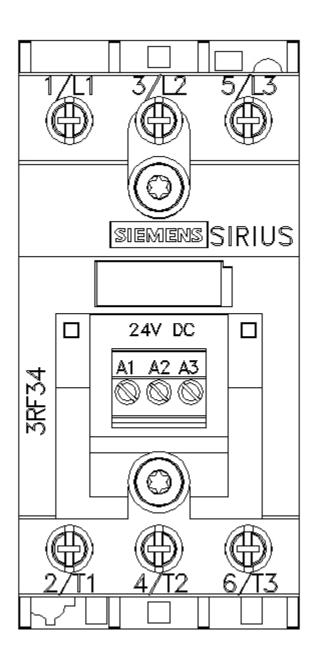
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

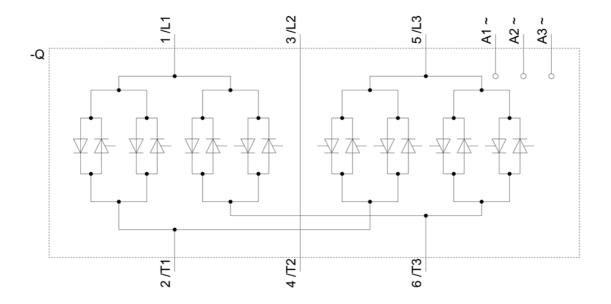
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RF3403-1BD24&lang=en











last modified: 3/11/2021 🖸