## SIEMENS

## Data sheet

## 3RT2038-3KB44-3MA0



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 24 V DC, 0.8-1.2\* Us, with integrated varistor, auxiliary contacts: 2 NO + 2 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S2, suitable for PLC outputs, captive auxiliary switch

product brain dname         SIRUS           product designation         Coupling contactor           product designation         SIRT2           Central technical data         Size of contactor           size of contractor         Size           of instactor         Size           • auxilary switch         No           • auxilary switch         No           • at AC in hot operating state         17.1 W           • at AC in hot operating state per pole         5.7 W           • without load current share typical         1 W           Insulator voitage         690 V           • of auxilary circuit with degree of pollution 3 rated value         690 V           • of auxilary circuit rated value         680 V           • of auxilary circuit rated value         6 kV           • of contactor keistance at rectangular impulse         6 kV           • at DC         6.1g / 5 ms. 3.7g / 10 ms           shock resistance with side detectonically optimized         5 000 000           • of the contactor kine addet auxilary switch block typical         10 0000 000           • of the		
product type designation         3RT2           Ceneral technical data	•	
General lechnical data           size of contactor         S2           product extension         No           • function module for communication         No           • auxiliary switch         No           power loss [W] for rated value of the current         5.7 W           • at AC in hot operating state per pole         5.7 W           • without load current share typical         1W           insultation voltage         680 V           • of auxiliary circuit with degree of pollution 3 rated value         690 V           • of main circuit with degree of pollution 3 rated value         690 V           • of main circuit with degree of pollution 3 rated value         64 V           • of auxiliary circuit with degree of pollution 3 rated value         64 V           • of main circuit rated value         64 V           • of main circuit rated value         64 V           • of auxiliary circuit with degree of pollution 3 rated value         600 V           • of contactor with rated value         64 V           • of main circuit rated value         64 V           • of auxiliary circuit may be compositive outige for protective separation between coll and main contactor with sine pulse         6.1g / 5 ms, 3.7g / 10 ms           • at DC         9.6g / 5 ms, 5.8g / 10 ms         0000000           • of the con	· · · · · · · · · · · · · · · · · · ·	
size of contactor     S2       product extension     No       • unction module for communication     No       • auxiliary switch     No       power loss [W] for rated value of the current     17.1 W       • at AC in hot operating state     17.1 W       • at AC in hot operating state     5.7 W       • without load current share typical     1 W       insulation voltage     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of main circuit with degree of pollution 3 rated value     600 V       • of main circuit ated value     6 kV       • of main circuit rated value     6 kV       • of auxiliary circuit rated value     6 kV       • of contactor score for protective separation between     6.1g / 5 ms, 3.7g / 10 ms       machancel service life (operating cycles)     10 000 vo       • of contactor typical     10 000 000       • of contactor typical     10 000 000       • of the contactor typical     10 000 000       • of the contactor typical state-2     0       Substance Prohibitance (Date)     10001/2014 </td <td></td> <td>3RT2</td>		3RT2
product extension     No       • function module for communication     No       • auxiliary switch     No       • auxiliary switch     No       • ext AC in hot operating state     17.1 W       • at AC in hot operating state prole     5.7 W       • without load current share typical     1 W       Insulation voltage     690 V       • of main circuit white degree of pollution 3 rated value     690 V       • of main circuit trade value     690 V       • of auxiliary circuit white degree of pollution 3 rated value     690 V       • of auxiliary circuit white degree of pollution 3 rated value     690 V       • of auxiliary circuit rated value     6 kV       • of auxiliary circuit rated value     6 kV       • of auxiliary circuit rated value     6 kV       • at DC     9.6g / 5 ms, 3.7g / 10 ms       shock resistance at rectangular impulse     6 .1g / 5 ms, 3.7g / 10 ms       • at DC     9.6g / 5 ms, 5.8g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of the contactor with added electronically optimized     5000 000       • of the contactor with added electronically optimized     5000 000       auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     10/01/2014		
function module for communication     iuxiliary switch     No     iuxiliary switch     No     power loss [W] for rated value of the current         it AC in hot operating state         17.1 W         it AC in hot operating state per pole         57 W         without load current share typical         1W     insultation voltage         of main circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of main circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of main circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of auxiliary circuit with degree of pollution 3 rated value         e of walking viccuit with added auxiliary switch block typical         10 000 000         e of the contactor which added auxiliary switch block typical         10 000 000         e of the contactor with added auxiliary switch block typical         10 000 000         e of the contactor with added auxiliary switch block typical         10 000 000         e of the contactor with added auxiliary switch block typical         10 000	size of contactor	S2
• auxiliary switch         No           power loss [W] for rated value of the current         17.1 W           • at AC in hot operating state per pole         5.7 W           • without load current share typical         1 W           Insulation voltage         600 V           • of auxiliary circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit rated value         61 V           • of auxiliary circuit rated value         100 00 V           • of the contactor typi	product extension	
power loss [W] for rated value of the current <ul> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> <li>5.7 W</li> <li>without bad current share typical</li> <li>1 W</li> </ul> Insulation voltage <ul> <li>of main circuit with degree of pollution 3 rated value</li> <li>690 V</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> <li>690 V</li> <li>surge voltage resistance</li> <li>of main circuit rated value</li> <li>6 kV</li> <li>of auxiliary circuit rated value</li> <li>8 kV</li> <li>of auxiliary circuit rated value</li> <li>8 kV</li> <li>of auxiliary circuit rated value</li> <li>8 kV</li> <li>9 kg / 5 ms, 3.7g / 10 ms</li></ul>	<ul> <li>function module for communication</li> </ul>	No
• at AC in hot operating state       17.1 W         • at AC in hot operating state per pole       5.7 W         • without load current share typical       1 W         Insulation voltage       690 V         • of main circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit rated value       6 kV         • at DC       9.6g / 5 ms, 3.7g / 10 ms         shock resistance with sine pulse       • at DC         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to ElC 60068-2-30	auxiliary switch	No
• at AC in hot operating state per pole       5.7 W         • withbut load current share typical       1 W         insulation voltage       6         • of main circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       690 V         • of main circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6 kV         • of main circuit with degree of pollution 2 rated value       6 kV         • of auxiliary circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coll and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6.1g / 5 ms, 3.7g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81345-2       Q	power loss [W] for rated value of the current	
• without load current share typical       1 W         Insulation voltage       • of main circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       680 V         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • at DC       6.1g / 5 ms, 3.7g / 10 ms         shock resistance with sine pulse       6.1g / 5 ms, 5.8g / 10 ms         • of the contactor with added electronically optimized       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         S	<ul> <li>at AC in hot operating state</li> </ul>	17.1 W
Insulation voltage       600 V         • of main circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       690 V         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6.1g / 5 ms, 3.7g / 10 ms         • at DC       9.8g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         a	<ul> <li>at AC in hot operating state per pole</li> </ul>	5.7 W
• of main circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6kV         • of main circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6.1g / 5 ms, 3.7g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       00 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         95 %       95 %	<ul> <li>without load current share typical</li> </ul>	1 W
• of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6 kV         • of main circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6 .1g / 5 ms, 3.7g / 10 ms         shock resistance at rectangular impulse       6 .1g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         • during operation       -25 +60 °C         • during storage       -55 +80 °C	insulation voltage	
surge voltage resistance <ul> <li>of main circuit rated value</li> <li>of auxiliary circuit rated value</li> <li>of kV</li> </ul> maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1              400 V            shock resistance at rectangular impulse <ul> <li>at DC</li> <li>6.1g / 5 ms, 3.7g / 10 ms</li> </ul> shock resistance with sine pulse <ul> <li>at DC</li> <li>9.6g / 5 ms, 5.8g / 10 ms</li> </ul> mechanical service life (operating cycles) <ul> <li>of contactor typical</li> <li>10 000 000</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>10 000 000</li> </ul> <ul> <li>of the contactor with added auxiliary switch block typical</li> <li>10 000 000</li> </ul> <ul> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>10/01/2014</li> </ul> <ul> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>2000 m</li> <li>ambient temperature             <ul> <li>during operation</li> <li>-25 +60 °C</li> <li>relative humidity minum</li> <li>10 %</li> <li>95 %</li> <!--</td--><td><ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul></td><td>690 V</td></ul></li></ul>	<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
• of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6.1g / 5 ms, 3.7g / 10 ms         • at DC       6.1g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidi	<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
• of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6 kJg / 5 ms, 3.7g / 10 ms         • at DC       6.1g / 5 ms, 3.7g / 10 ms         shock resistance with sine pulse       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         95 %       95 %	surge voltage resistance	
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse <ul> <li>at DC</li> <li>6.1g / 5 ms, 3.7g / 10 ms</li> </ul> shock resistance with sine pulse <ul> <li>at DC</li> <li>9.6g / 5 ms, 5.8g / 10 ms</li> <li>mechanical service life (operating cycles)</li> <li>of contactor typical</li> <li>10 000 000</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>for contactor with added auxiliary switch block typical</li> <li>of othe contactor with added auxiliary switch block typical</li> <li>for 000 000</li> </ul> 10 000 000           reference code according to IEC 81346-2 <ul> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>10/01/2014</li> </ul> Ambient conditions           installation altitude at height above sea level maximum         2 000 m           ambient temperature         -25 +60 °C           • during operation         -25 +80 °C           relative humidity minimum         10 %           95 %           Main circuit	<ul> <li>of main circuit rated value</li> </ul>	6 kV
coil and main contacts according to EN 60947-1       coil and main contacts according to EN 60947-1         shock resistance at rectangular impulse       6.1g / 5 ms, 3.7g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       5 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +80 °C         • relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       55 %	<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
• at DC       6.1g / 5 ms, 3.7g / 10 ms         shock resistance with sine pulse       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       5 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit		400 V
shock resistance with sine pulse       9.6g / 5 ms, 5.8g / 10 ms         • at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit	shock resistance at rectangular impulse	
• at DC       9.6g / 5 ms, 5.8g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       5 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       Main circuit	• at DC	6.1g / 5 ms, 3.7g / 10 ms
mechanical service life (operating cycles)       0         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       5 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         Main circuit       95 %	shock resistance with sine pulse	
• of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       5 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         Main circuit       95 %	• at DC	9.6g / 5 ms, 5.8g / 10 ms
• of the contactor with added electronically optimized auxiliary switch block typical       5 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         Main circuit       95 %	mechanical service life (operating cycles)	
auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	<ul> <li>of contactor typical</li> </ul>	10 000 000
reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2014         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %		5 000 000
Substance Prohibitance (Date)       10/01/2014         Ambient conditions       installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
Ambient conditions         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %         Main circuit	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %         Main circuit	Substance Prohibitance (Date)	10/01/2014
ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %         Main circuit	Ambient conditions	
• during operation     -25 +60 °C       • during storage     -55 +80 °C       relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30 maximum     95 %       Main circuit	installation altitude at height above sea level maximum	2 000 m
• during storage     -55 +80 °C       relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30 maximum     95 %       Main circuit	ambient temperature	
relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       10 %	<ul> <li>during operation</li> </ul>	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       95 %	during storage	-55 +80 °C
maximum       Main circuit	relative humidity minimum	10 %
		95 %
number of poles for main current circuit 3	Main circuit	
	number of poles for main current circuit	3

number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	690 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated	90 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	90 A
— up to 690 V at ambient temperature 60 °C rated	80 A
value	
• at AC-3	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
• at AC-3e	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
at AC-4 at 400 V rated value	55 A
at AC-5a up to 690 V rated value	79.2 A
<ul> <li>at AC-5b up to 400 V rated value</li> <li>at AC-6a</li> </ul>	66.4 A
	70 A
— up to 230 V for current peak value n=20 rated value	
<ul> <li>— up to 400 V for current peak value n=20 rated value</li> <li>— up to 500 V for current peak value n=20 rated value</li> </ul>	70 A 70 A
— up to 500 V for current peak value n=20 rated value	58 A
• at AC-6a	50 A
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	46.7 A
— up to 200 V for current peak value n=30 rated value	46.7 A
— up to 500 V for current peak value n=30 rated value	46.7 A
— up to 690 V for current peak value n=30 rated value	46.7 A
minimum cross-section in main circuit at maximum AC-1 rated	35 mm <sup>2</sup>
value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	30 A
at 690 V rated value	24 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	23 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	55 A
— at 60 V rated value	45 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	

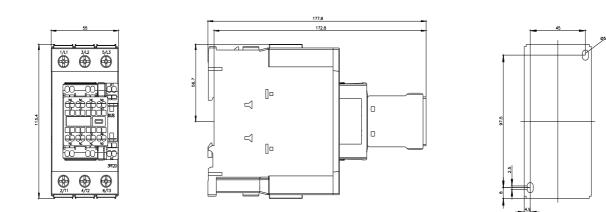
— at 24 V rated value	35 A			
— at 60 V rated value	6 A			
— at 220 V rated value	1 A			
— at 440 V rated value	0.1 A			
— at 600 V rated value	0.06 A			
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>				
— at 24 V rated value	55 A			
— at 60 V rated value	45 A			
— at 110 V rated value	25 A			
— at 220 V rated value	5 A			
— at 440 V rated value	0.27 A			
— at 600 V rated value	0.16 A			
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>				
— at 24 V rated value	55 A			
— at 60 V rated value	55 A			
— at 110 V rated value	55 A			
— at 220 V rated value	25 A			
— at 440 V rated value	0.6 A			
— at 600 V rated value	0.35 A			
operating power				
at AC-2 at 400 V rated value	37 kW			
• at AC-3				
— at 230 V rated value — at 400 V rated value	22 kW 37 kW			
— at 500 V rated value	37 kW			
— at 690 V rated value	45 kW			
• at AC-3e				
— at 230 V rated value	22 kW			
— at 400 V rated value	37 kW			
— at 500 V rated value	37 kW			
— at 690 V rated value	45 kW			
operating power for approx. 200000 operating cycles at AC- 4				
at 400 V rated value	15.8 kW			
• at 690 V rated value	21.8 kW			
operating apparent power at AC-6a				
• up to 230 V for current peak value n=20 rated value	27.8 kVA			
	48.4 kVA			
up to 400 V for current peak value n=20 rated value	60.6 kVA			
• up to 500 V for current peak value n=20 rated value				
up to 690 V for current peak value n=20 rated value	69.3 kVA			
operating apparent power at AC-6a	19 6 10/0			
up to 230 V for current peak value n=30 rated value	18.6 kVA			
• up to 400 V for current peak value n=30 rated value	32.3 kVA			
up to 500 V for current peak value n=30 rated value	40.4 kVA			
up to 690 V for current peak value n=30 rated value	55.8 kVA			
short-time withstand current in cold operating state up to 40 °C				
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	1 298 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	898 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 3 switching at zero current maximum</li> </ul>	640 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 10's switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> </ul>	414 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>Imited to 50's switching at zero current maximum</li> <li>Imited to 60's switching at zero current maximum</li> </ul>	333 A; Use minimum cross-section acc. to AC-1 rated value			
no-load switching frequency	See 7, See minimum cross-section acc. to AC-11dee Value			
• at DC	1 500 1/h			
operating frequency	700.4/b			
• at AC-1 maximum	700 1/h			
• at AC-2 maximum	350 1/h			
• at AC-3 maximum	500 1/h			
• at AC-3e maximum	500 1/h			
• at AC-4 maximum	150 1/h			
Control circuit/ Control				

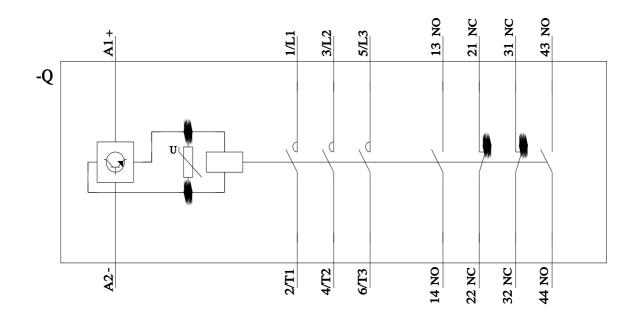
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• full-scale value	1.2
design of the surge suppressor	with varistor
inrush current peak	2.6 A
duration of inrush current peak	- 50 μs
locked-rotor current mean value	0.9 A
locked-rotor current peak	2.1 A
duration of locked-rotor current	230 ms
holding current mean value	40 mA
closing power of magnet coil at DC	21.5 W
holding power of magnet coil at DC	1 W
closing delay	
• at DC	35 80 ms
opening delay	30 55 ms
• at DC	30 55 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	2
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul> <li>at 230 V rated value</li> </ul>	6 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
operational current at DC-12	
<ul> <li>at 24 V rated value</li> </ul>	10 A
<ul> <li>at 48 V rated value</li> </ul>	6 A
<ul> <li>at 60 V rated value</li> </ul>	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	6 A
at 48 V rated value	2 A
at 60 V rated value	2 A
at 110 V rated value	1A
at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts UL/CSA ratings	1 faulty switching per 100 million (17 V, 1 mA)
full-load current (FLA) for 3-phase AC motor	65 A
at 480 V rated value	65 A
at 600 V rated value	62 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	5 hp
— at 230 V rated value	15 hp
• for 3-phase AC motor	
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	25 hp

— at 460/480 V rated value	50 hp
— at 575/600 V rated value	60 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
	backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	114 mm
width	55 mm
depth	178 mm
required spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
<ul> <li>for live parts</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
<ul> <li>for main current circuit</li> </ul>	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals
● of magnet coil	Spring-type terminals
type of connectable conductor cross-sections for main contacts	
<ul> <li>solid or stranded</li> </ul>	2x (1 35 mm²), 1x (1 50 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)
connectable conductor cross-section for main contacts	
<ul> <li>finely stranded with core end processing</li> </ul>	1 35 mm²
connectable conductor cross-section for auxiliary contacts	
<ul> <li>solid or stranded</li> </ul>	0.5 2.5 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 1.5 mm²
<ul> <li>finely stranded without core end processing</li> </ul>	0.5 2.5 mm²
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
— solid or stranded	2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 14)
AWG number as coded connectable conductor cross section	
	10 1
for main contacts	18 1
for auxiliary contacts      Safety related data	20 14
Safety related data	
product function	

	ccording to IEC 60947-4-1 operation according to IE		Yes			
. ,			No 1 000 000			
B10 value with high demand rate according to SN 31920 proportion of dangerous failures			1 000 000			
		920	40 %			
<ul> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> </ul>		40 % 73 %				
			100 FIT			
failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC		20 a				
61508 protection class IP on the front according to IEC 60529			IP20			
touch protection on t	he front according to IE	C 60529	finger-safe, for vertical contact	ct from the front		
suitability for use						
<ul> <li>safety-related sv</li> </ul>	•		Yes			
Certificates/ approvals						
General Product App	oroval					
		<u>Confirmation</u>		KC	EHC	
EMC	Functional Safety/Safety of Ma- chinery	Declaration of	Conformity	Test Certificates		
RCM	<u>Type Examination Cer-</u> tificate	UK CA	CE EG-Konf.	<u>Special Test Certific-</u> <u>ate</u>	Type Test Certific- ates/Test Report	
Marine / Shipping						
ABS	BUREAU VERITAS		Lloyd's Register us	PRS	RINA	
Marine / Shipping	other	Railway	Environment			
RMRS RMRS	<u>Confirmation</u>	Vibration and S	nock Environmental Con- firmations			
urther information						
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