## SIEMENS

## Data sheet

## 3RT2028-2AL24



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 2 NO + 2 NC, spring-loaded terminal, size: S0, removable auxiliary switch

product brand name         SIRUS           product designation         Power contactor           product designation         SRT2           Central technical data         S0           product extension         No           • auxilary switch         No           • auxilary switch         No           • auxilary switch         No           • at AC in hot operating state         9.6 W           • at AC in hot operating state per pole         3.2 W           • without load current share typical         10.5 W           insulator voltage         660 V           • of auxilary circuit with degree of pollution 3 rated value         690 V           • of auxilary circuit with degree of pollution 3 rated value         690 V           • of auxilary circuit with degree of pollution 3 rated value         690 V           • of auxilary circuit with degree of pollution 3 rated value         64V           • of auxilary circuit rated value         64V           • of auxilary ci				
product type designation         3RT2           Central tochnical data	product brand name	SIRIUS		
General decinical data           size of contactor         \$0           product extension         No           • incition module for communication         No           • incition module for communication         No           • incition module for communication         No           • ent AC in hot operating state         9.6 W           • ent AC in hot operating state per pole         3.2 W           • without load current share typical         10.5 W           insultation 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 rated value         64 V           • of main contacts according to EN 60947-1         400 V           shock resistance with sine pulse         64 V           • of auxiliary circuit rated value         64 V           • of auxiliary circuit mipulse         8.3g / 5 ms, 5.3g / 10 ms           shock resistance with sine pulse         13.5g / 5 ms, 8.3g / 10 ms           • of the contactor with added electronically optimized auxiliary witch 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				
size of contactor     S0       product extension     No       • Incritor module for communication     No       • auxiliary switch     No       power loss [W] for rated value of the current     9.6 W       • at AC in hot operating state     9.6 W       • at AC in hot operating state per pole     3.2 W       • without load current share typical     10.5 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     690 V       • of main circuit with degree of pollution 3 rated value     64 V       • of main circuit rated value     6 kV       • of main circuit rated value     6 kV       • of auxiliary site bio tolige for protective separation between     400 V       • of contactor typical     10 00 V       • of contactor typical     10 000 000       • of contactor typical     10 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor twith added auxiliary switch block typical     10 000 1000 </th <th></th> <th>3RT2</th>		3RT2		
product extension     No       • function module for communication     No       • auxiliary switch     No       power loss [W] for rated value of the current     9.6 W       • at AC in hot operating state prole     3.2 W       • eith cuit bad current share typical     10.5 W       insulation voltage     690 V       • of main circuit trade value     690 V       • of main circuit trade of pollution 3 rated value     690 V       • of main circuit trade value     680 V       • of anin circuit trade value     64 KV       • of anitigy circuit rated value     64 KV       • of and conduration trade value     64 KV       • of anitigy circuit rated value     64 KV       • at AC     13,5g / 5 ms, 8,3g / 10 ms       • at AC     13,5g / 5 ms, 8,3g / 10 ms       • at AC     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       • of the contactor with added electro	General technical data			
• function module for communication     No       • auxiliary switch     No       power loss [W] for rated value of the current     9.6 W       • at AC in hot operating state     9.6 W       • at AC in hot operating state per pole     3.2 W       • without load current share typical     10.5 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 rated value     6 kV       • of auxiliary circuit rated value     6 kV       • at AC     8,3g / 5 ms, 5,3g / 10 ms       shock resistance with sine pulse     10 000 000       • at AC     13,5g / 5 ms, 8,3g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of the contactor typical     10 000 000       • of the contactor typical     10 000 000       • of the contactor typical     10 000 000	size of contactor	SO		
• auxiliary switch         No           power loss [W] for rated value of the current         9.6 W           • at AC in hot operating state per pole         3.2 W           • without load current share typical         10.5 W           Insulation voltage         60 M           • of main circuit with degree of pollution 3 rated value         690 V           • of main circuit rated value         690 V           • of main circuit rated value         690 V           • of main circuit rated value         61 V           • of auxiliary circuit rated value         61 V           • of main circuit rated value         61 V           • of auxiliary circuit rated value         61 V           • of the contactor ofing to EN 8047-1         400 V           shock resistance at rectangular impulse         8.3g / 5 ms, 5.3g / 10 ms           • at AC         13.5g / 5 ms, 8.3g / 10 ms           mechanical service life (operating cyceles)	product extension			
power loss [W] for rated value of the current       9.6 W         • at AC in hot operating state       9.6 W         • at AC in hot operating state per pole       3.2 W         • withbut load current share typical       10.5 W         insulation voltage       600 V         • of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6 kV         • of auxiliary circuit rated value       8 kV         • of auxiliary circuit rated value       10.00 V         • of the contactor with added el	<ul> <li>function module for communication</li> </ul>	No		
• at AC in hot operating state per pole       3.2 W         • without load current share typical       10.5 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       6kV         • of auxiliary circuit rated value       6 kV         • at AC       8.3g / 5 ms, 5.3g / 10 ms         shock resistance at rectangular impulse       8.3g / 5 ms, 8.3g / 10 ms         • at AC       13.5g / 5 ms, 8.3g / 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 81345-2       Q         Substance Prohibitance (Date)       <	auxiliary switch	No		
• at AC in hot operating state per pole       3.2 W         • without load current share typical       10.5 W         Insulation voltage       600 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 3 rated value       690 V         surge voltage resistance       6 kV         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • at AC       8,3g / 5 ms, 5,3g / 10 ms         • at AC       13,5g / 5 ms, 8,3g / 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         • 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         Installation alititude at height above sea level ma	power loss [W] for rated value of the current			
• without load current share typical       10.5 W         Insulation voitage       690 V         • of main circuit with degree of pollution 3 rated value       690 V         surge voitage resistance       6 kV         • of main circuit 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 voitage for protective separation between coll and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       8,3g / 5 ms, 5,3g / 10 ms         • at AC       8,3g / 5 ms, 5,3g / 10 ms         * of the contactor with added electronically optimized auxiliary switch block 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)       10/01/2009         Ambient conditions       2000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -45 +60 °C         • during storage       -55 +60 °C	<ul> <li>at AC in hot operating state</li> </ul>	9.6 W		
insulation voltage <ul> <li>of main circuit with degree of pollution 3 rated value</li> <li>of main circuit with degree of pollution 3 rated value</li> <li>690 V</li> </ul> surge voltage resistance <ul> <li>of main circuit rated value</li> <li>6 KV</li> <li>of auxiliary circuit vated value</li> <li>6 KV</li> <li>of auxiliary circuit rated value</li> <li>6 KV</li> <li>of auxiliary circuit rated value</li> <li>6 KV</li> </ul> <ul> <li>6 KV</li> <li>of auxiliary circuit rated value</li> <li>6 KV</li> </ul> <ul> <li>6 KV</li> <li>of auxiliary circuit rated value</li> <li>6 KV</li> </ul> <ul> <li>6 KV</li> <li>maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1</li> <li>shock resistance at rectangular impulse</li> <li>at AC</li> <li>8,3g / 5 ms, 5,3g / 10 ms</li> </ul> shock resistance with sine pulse <ul> <li>at AC</li> <li>13,5g / 5 ms, 8,3g / 10 ms</li> </ul> mechanical service life (operating cycles) <ul> <li>0 for 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>fetaletion altitude at height abov</li></ul>	<ul> <li>at AC in hot operating state per pole</li> </ul>	3.2 W		
<ul> <li>of main circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> <li>surge voltage resistance</li> <li>of main circuit rated value</li> <li>6 kV</li> <li>maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1</li> <li>shock resistance at rectangular impulse</li> <li>at AC</li> <li>8,3g / 5 ms, 5,3g / 10 ms</li> <li>shock resistance with sine pulse</li> <li>at AC</li> <li>13,5g / 5 ms, 8,3g / 10 ms</li> <li>shock resistance 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>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>10 000 000</li> <li>of the contactor with added auxiliary switch block typical</li> <li>10 000 000</li> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>Installation altitude at height above sea level maximum</li> <li>2 000 m</li> <li>ambient temperature</li> <li>during operation</li> <li>-25 +60 °C</li> <li>during storage</li> <li>-55 +80 °C</li> <li>relative humidity minimum</li> <li>%</li> <li>maximum</li> </ul>	<ul> <li>without load current share typical</li> </ul>	10.5 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         • 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 kJ         • at AC       8,3g / 5 ms, 5,3g / 10 ms         shock resistance with sine pulse       6 kJ         • at AC       13,5g / 5 ms, 8,3g / 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 IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient comperation       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity minimum       10 %         95 %	insulation voltage			
surge voltage resistance <ul> <li>of main circuit rated value</li> <li>of auxiliary circuit rated value</li> <li>of auxiliary circuit rated value</li> <li>of xV</li> </ul> maximum permissible voltage for protective separation between coll and main contacts according to EN 60947-1         400 V           shock resistance at rectangular impulse <ul> <li>at AC</li> <li>bick resistance with sine pulse</li> <li>at AC</li> <li>for contactor typical</li> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of out according to IEC 81346-2</li> <li>Q</li> </ul> <li>Substance Prohibitance (Date)</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature             <ul> <li>during operation</li> <li>-25 +60 °C</li> <li>during storage</li> <li>-55 +80 °C</li> </ul> </li> <li>relative humidity minimum</li> <li>0%</li> <li>95 %</li>	<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       8,3g / 5 ms, 5,3g / 10 ms         • at AC       8,3g / 5 ms, 8,3g / 10 ms         shock resistance with sine pulse       13,5g / 5 ms, 8,3g / 10 ms         • at AC       13,5g / 5 ms, 8,3g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of the 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         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         • during storage       -55 +80 °C         • during storage       -55 +80 °C         maximum       10 %         95 %       95 %	<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       400 V         • at AC       8,3g / 5 ms, 5,3g / 10 ms         shock resistance with sine pulse       -         • at AC       13,5g / 5 ms, 8,3g / 10 ms         mechanical service life (operating cycles)       -         • 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)       10/01/2009         Ambient temperature       -         • 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       400 V         coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       8,3g / 5 ms, 5,3g / 10 ms         • at AC       8,3g / 5 ms, 5,3g / 10 ms         shock resistance with sine pulse       13,5g / 5 ms, 8,3g / 10 ms         • at AC       13,5g / 5 ms, 8,3g / 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)       10/01/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during storage       -25 +80 °C         relative humidity minimum       10 %         95 %       95 %	<ul> <li>of main circuit rated value</li> </ul>	6 kV		
coil and main contacts according to EN 60947-1         shock resistance at rectangular impulse         • at AC       8,3g / 5 ms, 5,3g / 10 ms         shock resistance with sine pulse         • at AC       13,5g / 5 ms, 8,3g / 10 ms         mechanical service life (operating cycles)         • of contactor typical         • of the contactor with added electronically optimized auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor with added auxiliary switch block typical         • of the contactor (Date)         10 000 000         reference code according to IEC 81346-2         Q         Substance Prohibitance (Date)         10/01/2009         Ambient conditions         installation altitude at height above sea level maximum         2 000 m         ambient temperature         • 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 <th><ul> <li>of auxiliary circuit rated value</li> </ul></th> <th>6 kV</th>	<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV		
• at AC       8,3g / 5 ms, 5,3g / 10 ms         shock resistance with sine pulse       13,5g / 5 ms, 8,3g / 10 ms         • at AC       13,5g / 5 ms, 8,3g / 10 ms         mechanical service life (operating cycles)       0 000 000         • 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)       10/01/2009         Ambient conditions       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		400 V		
shock resistance with sine pulse       13,5g / 5 ms, 8,3g / 10 ms         e at AC       13,5g / 5 ms, 8,3g / 10 ms         mechanical service life (operating cycles)       0 000 000         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)       10/01/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         of during operation       -25 +60 °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 AC       13,5g / 5 ms, 8,3g / 10 ms         mechanical service life (operating cycles)       0 000 000         • 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)       10/01/2009         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	• at AC	8,3g / 5 ms, 5,3g / 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)       10/01/2009         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)       10/01/2009         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 AC	13,5g / 5 ms, 8,3g / 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)       10/01/2009         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	mechanical service life (operating cycles)			
auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         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       95 %	<ul> <li>of contactor typical</li> </ul>	10 000 000		
reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         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)       10/01/2009         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)	10/01/2009		
ambient temperature         • during operation         • during storage         -25 +60 °C         • during storage         -55 +80 °C         relative humidity minimum         10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum         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 maximum       95 %         Main circuit       10 %	during operation	-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	50 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	50 A
— up to 690 V at ambient temperature 60 °C rated	42 A
value	
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
at AC-4 at 400 V rated value	22 A
at AC-5a up to 690 V rated value	44 A
• at AC-5b up to 400 V rated value	31.5 A
• at AC-6a	30.8 A
— up to 230 V for current peak value n=20 rated value	
— up to 400 V for current peak value n=20 rated value	30.8 A 30.8 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	21 A
• at AC-6a	21A
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	20.5 A
— up to 200 V for current peak value n=30 rated value	20.5 A
— up to 500 V for current peak value n=30 rated value	21.4 A
— up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated	10 mm <sup>2</sup>
value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	12 A
at 690 V rated value	12 A
operational current	
<ul> <li>at 1 current path at DC-1</li> </ul>	
— at 24 V rated value	35 A
— at 60 V rated value	20 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	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 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	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 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	20 A			
— at 60 V rated value	5 A			
— at 220 V rated value	1 A			
— at 440 V rated value	0.09 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	35 A			
— at 60 V rated value	35 A			
— at 110 V rated value	15 A			
— at 220 V rated value	3 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	35 A			
— at 60 V rated value	35 A			
— at 110 V rated value	35 A			
— at 220 V rated value	10 A			
— at 440 V rated value	0.6 A			
— at 600 V rated value	0.6 A			
operating power				
• at AC-3				
— at 230 V rated value	11 kW			
— at 400 V rated value	18.5 kW			
— at 500 V rated value	18.5 kW			
— at 690 V rated value	18.5 kW			
• at AC-3e				
— at 230 V rated value	11 kW			
— at 400 V rated value	18.5 kW			
— at 500 V rated value	18.5 kW			
— at 690 V rated value	18.5 kW			
operating power for approx. 200000 operating cycles at AC-				
4				
a at 400 M rated value				
at 400 V rated value	6 kW			
• at 690 V rated value	6 kW 10.3 kW			
at 690 V rated value     operating apparent power at AC-6a	10.3 kW			
at 690 V rated value     operating apparent power at AC-6a     up to 230 V for current peak value n=20 rated value	10.3 kW 12.2 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA			
at 690 V rated value     operating apparent power at AC-6a     up to 230 V for current peak value n=20 rated value     up to 400 V for current peak value n=20 rated value     up to 500 V for current peak value n=20 rated value     up to 690 V for current peak value n=20 rated value     operating apparent power at AC-6a	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA			
at 690 V rated value     operating apparent power at AC-6a     up to 230 V for current peak value n=20 rated value     up to 400 V for current peak value n=20 rated value     up to 500 V for current peak value n=20 rated value     up to 690 V for current peak value n=20 rated value     operating apparent power at AC-6a     up to 230 V for current peak value n=30 rated value	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 18.5 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 18.5 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 200 V for current peak value n=30 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 18.5 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a <ul> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> </ul> </li> <li>operating apparent power at AC-6a <ul> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>short-time withstand current in cold operating state up to 40 °C</li> </ul> </li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 18.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 18.5 kVA 25 kVA			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 18.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value 341 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current in cold operating state up to 40 °C</li> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 13.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value 341 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value			
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<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current in cold operating state up to 40 °C</li> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 18.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value 341 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak v</li></ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 18.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value 341 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>short-time withstand current in cold operating state up to 40 °C</li> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>at AC</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 18.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value 341 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>at 690 V rated value</li> <li>operating apparent power at AC-6a</li> <li>up to 230 V for current peak value n=20 rated value</li> <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> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>short-time withstand current in cold operating state up to 40 °C</li> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>at AC</li> <li>operating frequency</li> <li>at AC</li> </ul>	10.3 kW 12.2 kVA 21.3 kVA 26.6 kVA 25 kVA 8.1 kVA 14.2 kVA 14.2 kVA 18.5 kVA 25 kVA 593 A; Use minimum cross-section acc. to AC-1 rated value 341 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value 199 A; Use minimum cross-section acc. to AC-1 rated value 162 A; Use minimum cross-section acc. to AC-1 rated value 5 000 1/h			
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control supply voltage at AC	
• at 50 Hz rated value	230 V
at 60 Hz rated value	230 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	81 VA
• at 60 Hz	79 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
• at 50 Hz	10.5 VA
• at 60 Hz	8.5 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 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	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
operational current at DC-12	
at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
at 110 V rated value	3 A
at 125 V rated value	2 A
at 220 V rated value	1A
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 100 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	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
iun-ioau current (i LA) ior 3-phase AC motor	34 A
e at 490 V rated value	
at 480 V rated value	
• at 600 V rated value	27 A
at 600 V rated value yielded mechanical performance [hp]	
<ul> <li>at 600 V rated value</li> <li>yielded mechanical performance [hp]</li> <li>for single-phase AC motor</li> </ul>	27 A
at 600 V rated value yielded mechanical performance [hp]	

for 3-phase AC motor				
- at 200/208 V rated value	10 hp			
— at 220/230 V rated value	10 hp			
— at 460/480 V rated value	25 hp			
— at 575/600 V rated value	25 hp			
contact rating of auxiliary contacts according to UL	25 np A600 / Q600			
Short-circuit protection				
design of the fuse link				
<ul> <li>for short-circuit protection of the main circuit</li> </ul>				
— with type of coordination 1 required	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)			
- with type of assignment 2 required	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (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 +/- $22.5^{\circ}$ on vertical mounting surface			
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715			
<ul> <li>side-by-side mounting</li> </ul>	Yes			
height	102 mm			
width	45 mm			
depth	144 mm			
required spacing				
with side-by-side mounting	10			
— forwards	10 mm			
— upwards — downwards	10 mm 10 mm			
— downwards — at the side	0 mm			
<ul> <li>at the side</li> <li>for grounded parts</li> </ul>	0 mm			
— forwards	10 mm			
— upwards	10 mm			
— at the side	6 mm			
— downwards	10 mm			
for live parts				
— forwards	10 mm			
— upwards	10 mm			
— downwards	10 mm			
— at the side	6 mm			
Connections/ Terminals				
type of electrical connection				
for main current circuit	spring-loaded terminals			
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals			
at contactor for auxiliary contacts	Spring-type terminals			
of magnet coil	Spring-type terminals			
type of connectable conductor cross-sections for main contacts				
• solid	2x (1 10 mm²)			
solid or stranded	2x (1 10 mm²)			
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 6 mm²)			
<ul> <li>finely stranded without core end processing</li> </ul>	2x (1 6 mm²)			
connectable conductor cross-section for main contacts				
• solid	1 10 mm²			
• stranded	1 10 mm²			
<ul> <li>finely stranded with core end processing</li> </ul>	1 6 mm²			
<ul> <li>finely stranded without core end processing</li> </ul>	1 6 mm²			
connectable conductor cross-section for auxiliary contacts				
solid or stranded	0.5 2.5 mm <sup>2</sup>			
finely stranded with core end processing	0.5 1.5 mm <sup>2</sup>			
finely stranded without core end processing	0.5 2.5 mm²			
type of connectable conductor cross-sections				
for auxiliary contacts				
— solid or stranded	2x (0.5 2.5 mm <sup>2</sup> )			
— finely stranded with core end processing	2x (0.5 1.5 mm <sup>2</sup> )			
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)			

<ul> <li>for AWG cables f</li> </ul>	or auxiliary contacts		2x (20 ?	14)		
	d connectable conducto	r cross		,		
<ul> <li>for main contacts</li> </ul>			18 8			
for auxiliary contacts			20 14			
Safety related data						
product function						
•	cording to IEC 60947-4-1		Yes			
	operation according to IEC	60947-5-1	No			
. ,	nand rate according to SN		450 000			
proportion of dangero						
	rate according to SN 319	20	40 %			
	d rate according to SN 319		73 %			
	w demand rate according		100 FIT			
	nterval or service life acco		20 a			
protection class IP on	the front according to II	EC 60529	IP20			
touch protection on th	e front according to IEC	60529	finger-safe	e, for vertical contac	t from the front	
suitability for use						
<ul> <li>safety-related sw</li> </ul>	itching OFF		Yes			
Certificates/ approvals	-					
General Product App	oval					
	<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>Type Test Certific-</u> ates/Test Report	Special Test Certific- ate
Marine / Shipping						
ABS	B U R E A U VERITAS			Lloyd's Register us	PRS	RINA
Marine / Shipping	other				Railway	Environment
KMRS RMRS	<u>Confirmation</u>		•	<u>Confirmation</u>	Vibration and Shock	Environmental Con- firmations
Further information						
Siemens has decided	to exit the Russian mark					
https://press.siemens.co Siemens is working of Please contact your loc EAC relevant market (o Information on the par https://support.industry.	om/global/en/pressrelease n the renewal of the curr al Siemens office on the s ther than the sanctioned E	ent EAC certification ent EAC certification tatus of validity of EAEU member state ew/109813875	tes. the EAC cer	tification if you inter	nd to import or offer to supp	bly these products to an

https://www.siemens.com/ic10

Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2028-2AL24

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-2AL24 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-2AL24 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2028-2AL24&lang=en Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-2AL24/char Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-2AL24&objecttype=14&gridview=view1











2/10/2023 🖸

6/29/2023