SIEMENS

Data sheet 3RM1301-2AA14



Fail-safe reversing starter, 3RM1, 500 V, 0 - 0.12 kW, 0.1 - 0.5 A, 110-230 V AC, spring-type terminals

product brand name	SIRIUS		
product category	Motor starter		
product designation	Failsafe reversing starters		
design of the product	With electronic overload protection and safety-related disconnection		
product type designation	3RM1		
General technical data			
trip class	CLASS 10A		
equipment variant according to IEC 60947-4-2	3		
product function	fail-safe reversing starter		
 intrinsic device protection 	Yes		
 for power supply reverse polarity protection 	Yes		
suitability for operation device connector 3ZY12	No		
insulation voltage rated value	500 V		
overvoltage category	III		
surge voltage resistance rated value	6 kV		
maximum permissible voltage for safe isolation			
 between main and auxiliary circuit 	500 V		
 between control and auxiliary circuit 	250 V		
shock resistance	6g / 11 ms		
vibration resistance	1 6 Hz, 15 mm; 20 m/s², 500 Hz		
operating frequency maximum	1 1/s		
mechanical service life (switching cycles) typical	15 000 000		
reference code according to IEC 81346-2	Q		
Substance Prohibitance (Date)	03/01/2017		
product function			
direct start	No		
reverse starting	Yes		
product function short circuit protection	No		
Electromagnetic compatibility			
EMC emitted interference according to IEC 60947-1	class A		
EMC immunity according to IEC 60947-1	Class A		
conducted interference			
 due to burst according to IEC 61000-4-4 	3 kV / 5 kHz		
 due to conductor-earth surge according to IEC 61000-4-5 	4 kV signal lines 2 kV		
 due to conductor-conductor surge according to IEC 61000-4-5 	2 kV		
 due to high-frequency radiation according to IEC 61000-4-6 	10 V		
field-based interference according to IEC 61000-4-3	10 V/m		

electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge		
conducted HF interference emissions according to			
CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC		
field-bound HF interference emission according to CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC		
Safety related data			
safety device type according to IEC 61508-2	Туре В		
Safety Integrity Level (SIL) according to IEC 61508	3		
SIL Claim Limit (subsystem) according to EN 62061	SILCL 3		
performance level (PL) according to EN ISO 13849-1	е		
category according to EN ISO 13849-1	4		
stop category according to EN 60204-1	0		
Safe failure fraction (SFF)	99.4 %		
average diagnostic coverage level (DCavg)	99 %		
diagnostics test interval by internal test function maximum	600 s		
function test interval maximum	1 y		
failure rate [FIT]			
 at rate of recognizable hazardous failures (λdd) 	1 400 FIT		
 at rate of non-recognizable hazardous failures (λdu) 	16 FIT		
PFHD with high demand rate according to EN 62061	0.00000002 1/h		
PFDavg with low demand rate according to IEC 61508	0.000018		
MTTFd	75 y		
hardware fault tolerance according to IEC 61508	1		
safe state	Load circuit open		
protection class IP on the front according to IEC 60529	IP20		
touch protection on the front according to IEC 60529	finger-safe		
hardware fault tolerance according to IEC 61508 relating to ATEX	0		
PFDavg with low demand rate according to IEC 61508 relating to ATEX	0.0005		
PFHD with high demand rate according to EN 62061 relating to ATEX	0.0000005 1/h		
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL2		
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 y		
Main circuit			
number of poles for main current circuit	3		
design of the switching contact	Hybrid		
adjustable current response value current of the current-dependent overload release	0.1 0.5 A		
minimum load [%]	20 %; from set rated current		
type of the motor protection	solid-state		
operating voltage rated value	48 500 V		
relative symmetrical tolerance of the operating voltage	10 %		
operating frequency 1 rated value	50 Hz		
operating frequency 2 rated value	60 Hz		
relative symmetrical tolerance of the operating frequency	10 %		
operational current			
 at AC at 400 V rated value 	0.5 A		
 at AC-3 at 400 V rated value 	0.5 A		
 at AC-53a at 400 V at ambient temperature 40 °C rated value 	0.5 A		
ampacity when starting maximum	4 A		
operating power for 3-phase motors at 400 V at 50 Hz	0 0.12 kW		
Inputs/ Outputs			
input voltage at digital input			
at DC rated value	110 V		
with signal <0> at DC	0 40 V		

• for signal <1> at DC	79 121
input voltage at digital input	
 at AC rated value 	110 V
with signal <0> at AC	0 40 V
• for signal <1> at AC	93 253 V
input current at digital input	
• for signal <1> at DC	1.5 mA
with signal <0> at DC	0.25 mA
input current at digital input with signal <0> at AC	
• at 110 V	0.2 mA
• at 230 V	0.4 mA
input current at digital input for signal <1> at AC	
• at 110 V	1.1 mA
• at 230 V	2.3 mA
number of CO contacts for auxiliary contacts	1
operational current of auxiliary contacts at AC-15 at	3 A
230 V maximum	
operational current of auxiliary contacts at DC-13 at 24 V maximum	1 A
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	110 230 V
at 60 Hz rated value	110 230 V
relative negative tolerance of the control supply	15 %
voltage at AC at 60 Hz	
relative positive tolerance of the control supply voltage at AC at 60 Hz	10 %
control supply voltage 1 at AC	
● at 50 Hz	110 230 V
● at 60 Hz	110 230 V
control supply voltage frequency	
• 1 rated value	50 Hz
2 rated value	60 Hz
relative negative tolerance of the control supply voltage at DC	15 %
relative positive tolerance of the control supply voltage at DC	10 %
control supply voltage 1 at DC rated value	110 V
operating range factor control supply voltage rated value at DC	
• initial value	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	
• initial value	0.85
full-scale value	1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value	0.85
• full-scale value	1.1
control current at AC	
 at 110 V in standby mode of operation 	8 mA
• at 230 V in standby mode of operation	6 mA
at 110 V when switching on	40 mA
at 230 V when switching on	25 mA
at 110 V during operation	25 mA
at 230 V during operation	14 mA
control current at DC	
in standby mode of operation	4 mA
when switching on	13 mA
during operation	30 mA
• during operation	OO HILL

fastening method height width depth required spacing with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — forwards — backwards — backwards — o mm for grounded parts — forwards — backwards — o mm o for grounded parts — forwards — backwards — upwards — backwards — o mm height with side-by-side mounting o mm o	2 900 mA 1 ms 1 m	at AC at 130 V at AC at 230 V duration of inrush current peak at AC at 230 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit 2.2 W Response times ON-delay time OFF-delay time OFF-d	
at AC at 230 V duration of inrush current peak	2 900 mA 1 ms 1 ms 1 ms 1 ms 1.4 W 3.22 W 90 120 ms 60 90 ms 0.5 A 0.5 M	• at AC at 230 V duration of inrush current peak • at AC at 110 V • at AC at 230 V power loss [W] in auxiliary and control circuit • in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit • in switching state ON — with bypass circuit • in switching state ON — with bypass circuit • on the symbol of	
duration of inrush current peak at AC at 110 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit 2.2 W Response times ON-delay time OPF-delay time OFF-delay time OS-5 A at 55 °C rated value at 50 °C rated value bat 50 °C rated value cat 50 °C rated value at 50 °C rated value bat 50 °C rated value cat 50 °C value value cat 60 °C value	1 ms	duration of inrush current peak at AC at 110 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit ON-delay time OF-delay time OS-delay time OF-delay time OF-delay time OF-delay time OS-A at 40 °C rated value at 50 °C rated value at 60 °C rated value os-5 A installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting — forwards — backwards — of ownwards — at the side for grounded parts — forwards — backwards — at the side — downwards — on mm sinstallation altitude at height above sea level maximum ambient temperature — during operation — during transport — environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 communication/ Protocol protocol is supported — PROFINET IO protocol	
at AC at 110 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit 60	1 ms	at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time OFF-delay time 0 0.5 A at 40 °C rated value at 50 °C rated value at 50 °C rated value at 60 °C rated value at 60 °C rated value bircuit on the state of the stat	
e at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time OFF-delay time OFF-delay time o at 40 °C rated value in the off-crated value in the of	1 ms	• at AC at 230 V power loss [W] in auxiliary and control circuit • in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time OF-delay time 0.5 A • at 50 °C rated value • at 50 °C rated value • at 60 °C rated value • on 50 A Installation/ mounting/ dimensions mounting position fastening method height vidth depth vidth depth 100 mm vidth depth required spacing • with side-by-side mounting • forwards — backwards — backwards — ownwards — at the side • for grounded parts — forwards — at the side • for grounded parts — hownwards — at the side • ownwards — at the side • downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum amblent temperature • during operation • during storage • during transport • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol PROFINET IO protocol	
power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — on switching state ON ON-delay time OO-delay time OO-delay time OFF-delay time OFF-delay time OFF-delay time Oo-so on switching — at 50 °C rated value — o.5 A Installation/ mounting/ dimensions mounting position fastening method — screw and snap-o height — of on switching — of on switching — of on switching — of on switching — of on m depth — required spacing — with side-by-side mounting — forwards — backwards — ownwards Ambient conditions installation altitude at height above sea level maximum ambient temperature — ownwards Ambient conditions installation altitude at height above sea level maximum ambient temperature — ownwards — ownwards Ambient conditions installation altitude at height above sea level maximum ambient temperature — ownwards — ownw	1.4 W 3.22 W	power loss [W] in auxiliary and control circuit in switching state OFF with bypass circuit in switching state ON with bypass circuit 3.22 W Response times ON-delay time OFF-delay time 0.5 A at 40 °C rated value at 50 °C rated value at 60 °C rated value ot 60 °C rated value to 60 °C rated value at 60 °C rated value at 60 °C rated value to 55 A Installation/ mounting/ dimensions mounting position fastening method height frequired spacing with side-by-side mounting forwards backwards upwards at the side for grounded parts for grounded parts for grounded parts forwards backwards upwards at the side dommands at the side dommands at the side downwards backwards upwards backwards backwards backwards dommands at the side downwards backwards backwards backwards dommands at the side downwards backwards backwards backwards backwards backwards dommands at the side downwards backwards backwards backwards backwards backwards backwards backwards dommands at the side downwards backwards backward	
• in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time 0 0.5 A • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • on 5 A Installation/ mounting/ dimensions mounting position fastening method height vidth • 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — on mm • on mm	1.4 W 3.22 W 90 120 ms 60 90 ms 60 mm 6	• in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit Response times ON-delay time OFF-delay time OFF-delay time • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • at 60 °C rated value ot 5 A Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards — at the side — downwards — backwards — upwards — at the side — downwards — our side states of the side — downwards — at the side — downwards — our side states of the side — downwards — our side states of the side — downwards — side states of the side — side states of the si	
- with bypass circuit • in switching state ON - with bypass circuit ON-delay time ON-delay time ON-delay time ON-delay time OFF-delay time OFF-delay time • at 40 °C rated value • at 50 °C rated value • at 50 °C rated value • at 60 °C	90 120 ms 60 90 ms 0.5 A 0.	- with bypass circuit • in switching state ON - with bypass circuit ON-delay time OF-delay time OF-delay time • at 40 °C rated value • at 55 °C rated value • at 60 °C rated value • on 5 A Installation/ mounting/ dimensions mounting position screw an height vidth depth required spacing • with side-by-side mounting - forwards - backwards - upwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - downwards - at the side - downwards - So mm Ambient conditions installation altitude at height above sea level maximum - ambient temperature - during operation - during storage - during transport - during transp	
• in switching state ON — with bypass circuit Response times ON-delay time OFF-delay time OFF-delay time operational current • at 40 °C rated value • at 55 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method height vertical, horizonta fastening method height vertical, horizonta fastening method screw and snap-o height vertical, horizonta fastening method operation height vertical, horizonta fastening method height op mm vertical, horizonta height op mm vertical, horizonta fastening method no mm vertical, horizonta height op mm vertical, horizonta height height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta no mm op mm vertical, horizonta non no mm vertical, horizonta non non non mm vertical, horizonta non non mm vertical, horizonta non non non mm vertical, horizonta non non non non mm vertical, horizonta non non non non non non non mm vertical, horizonta non non non non non non non non non no	90 120 ms 60 90 ms 0.5 A 0.	• in switching state ON — with bypass circuit Response times ON-delay time OF-delay time OF-delay time • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method screw ar height vidth 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — o mm — upwards — odwnwards — at the side • for grounded parts — forwards — backwards — o mm • for grounded parts — forwards — backwards — o mm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 900 1 Communication/ Protocol	
- with bypass circuit Response times ON-delay time OR-delay time OFF-delay time Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • at 70 °C rated value • at 60 °C rated	90 120 ms 60 90 ms 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 M 0.	Response times ON-delay time OFF-delay time OFF-de	
Response times ON-delay time OF-delay time OF-delay time OF-delay time o at 40 °C rated value o at 50 °C rated value o at 50 °C rated value o tat 60 °C o mm o tat 6	90 120 ms 60 90 ms 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 M 0.	Response times ON-delay time OFF-delay time OFF-delay time Power Electronics operational current • at 40 °C rated value • at 55 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value • at 55 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — at the side • of mrain operation — at the side • for grounded parts — forwards — backwards — upwards — backwards — on mm • for grounded parts — forwards — backwards — upwards — at the side • of mrain operation — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 900 1 Communication/ Protocol	
ON-delay time OFF-delay time OFF-del	0.5 A vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 1	ON-delay time 90 12 OFF-delay time 60 90 Power Electronics operational current • at 40 °C rated value 0.5 A • at 50 °C rated value 0.5 A • at 60 °C rated value 0.5 A Installation/ mounting/ dimensions mounting position vertical, fastening method screw ar height 100 mm width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting 0 mm	
OFF-delay time Power Electronics operational current at 40 °C rated value at 50 °C rated value at 55 °C rated value o.5 A at 60 °C rated value o.5 A installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting — forwards — backwards — upwards — at the side of or grounded parts — forwards — upwards — at the side of or grounded parts — at the side — downwards — the side — downwards — the side — downwards — the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 protocol is supported • PROFINET IO protocol • PROFISafe protocol PROFISafe protocol Protocol is supported AS-Interface protocol No Connections/ Terminals	0.5 A vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 1	OFF-delay time Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side • for grounded parts — forwards — at the side • onm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 communication/ Protocol PROFINET IO protocol	
power Electronics operational current	0.5 A	Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — backwards — o mm • with side departs — forwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 protocol is supported • PROFINET IO protocol	S
operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method height vidth depth 100 mm width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — of or grounded parts — for grounded parts — for grounded parts — backwards — upwards — at the side • for grounded parts — backwards — upwards — at the side — downwards — the side — on man ### 10 mm	vertical, horizontal, standing (observe derating) vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 m	operational current • at 40 °C rated value • at 50 °C rated value • at 55 °C rated value • at 60 °C rated value • o.5 A installation/ mounting/ dimensions mounting position fastening method height width vidth	
at 40 °C rated value at 50 °C rated value at 55 °C rated value at 60 °C rated value at 60 °C rated value building of the side	vertical, horizontal, standing (observe derating) vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 m	at 40 °C rated value at 50 °C rated value at 55 °C rated value at 60 °C	
at 50 °C rated value at 55 °C rated value be at 60 °C rated value contained position surrounting position fastening method height vidth depth required spacing with side-by-side mounting — forwards — backwards — upwards — downwards — at the side of or grounded parts — forwards — backwards — at the side of with side-by-side mounting for grounded parts — for grounded parts — backwards — upwards — backwards — at the side of or grounded parts — the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature of uring storage or uring	vertical, horizontal, standing (observe derating) vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 m	at 50 °C rated value at 55 °C rated value at 60 °C rated value bat 60 °C rated value constituting position mounting position fastening method height vidth depth required spacing with side-by-side mounting — forwards — backwards — upwards — at the side for grounded parts — forwards — backwards — backwards — at the side for grounded parts — forwards — backwards — backwards — o mm for grounded parts — forwards — backwards — o mm for grounded parts — forwards — backwards — backwards — backwards — o mm for grounded parts — forwards — backwards — backwards — backwards — o mm ambient tenside — downwards — at the side — downwards — side for the side of the side	
at 55 °C rated value at 60 °C rated value builded to be at 60 °C rated value constallation/ mounting/ dimensions mounting position fastening method screw and snap-o height width depth required spacing with side-by-side mounting forwards builded	vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 50 mm 50 mm 50 mm 50 mm 150 m	at 55 °C rated value at 60 °C rated value bat 60 °C rated value nostallation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing with side-by-side mounting — forwards — backwards — upwards — downwards — at the side for grounded parts — forwards — backwards — backwards — at the side for grounded parts — forwards — backwards — backwards — backwards — o mm for grounded parts — forwards — backwards — backwards — backwards — backwards — o mm for grounded parts — forwards — backwards — backwards — upwards — at the side — downwards — the side — downwards — at the side — downwards — downwards — at the side — downwards — do	
at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing at with side-by-side mounting — forwards — backwards — upwards — at the side — for grounded parts — forwards — backwards — backwards — of mm — of m	vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 50 mm 50 mm 50 mm 50 mm 10 mm 50 mm 10 mm 1	• at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height vidth depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — o mm • for wards — backwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 protocol is supported • PROFINET IO protocol Protocol PROFINET IO protocol	
mounting position fastening method height width depth required spacing - forwards - backwards - downwards - at the side - downwards - the side - the	vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 140 mm 150 m	mounting position fastening method height width depth required spacing - with side-by-side mounting - forwards - backwards - upwards - downwards - at the side - backwards - upwards - backwards - at the side - backwards - upwards - backwards - at the side - bomm - backwards - upwards - backwards - backwards - backwards - o mm - for grounded parts - for grounded parts - forwards - upwards - at the side - downwards - 50 mm - 50 mm - 40 00 m - 25 +6 - 60721 - environmental category during operation according to IEC 60721 - relative humidity during operation - air pressure according to SN 31205 - good 1 Communication/ Protocol protocol is supported - PROFINET IO protocol	
mounting position fastening method height width depth 100 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — of orgrounded parts — backwards — upwards — backwards — of orm — of orwards — of orm — of orwards — of orwards — of orwards — of orm — of orwards — of orm — of orwards — of orwards — of orwards — of orwards — of ormal — at the side — of orm — of orwards — of ormal — at the side — of ormal	screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 3.5 mm 50 mm 3.6 mm 50 mm 3.7 mm 50 mm 3.8 mm 50 mm 3.8 mm 50 mm 3.9 mm 50 mm 3.9 mm 50 mm 3.5 mm 50 mm 60 mm 60 mm 60 mm 60 mm 70 mm 7	mounting position fastening method screw ar height 100 mm width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
mounting position fastening method height width depth 100 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — of orgrounded parts — backwards — upwards — backwards — of orm — of orwards — of orm — of orwards — of orwards — of orm — of orwards — of orm — of ormards — of orm • for grounded parts — forwards — backwards — upwards — backwards — of orm — of orm • downwards — of orm • downwards — of orm — of orm • downwards — of orm — of orm • of or grounded parts — of orwards — of orm • of or grounded parts — of orm • of orm • of or grounded parts — of orm • of orm	screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 3.5 mm 50 mm 3.6 mm 50 mm 3.7 mm 50 mm 3.8 mm 50 mm 3.8 mm 50 mm 3.9 mm 50 mm 3.9 mm 50 mm 3.5 mm 50 mm 60 mm 60 mm 60 mm 60 mm 70 mm 7	mounting position fastening method screw ar height 100 mm width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
fastening method screw and snap-or 100 mm width 22.5 mm depth 141.6 mm required spacing • with side-by-side mounting • with side-by-side mounting 0 mm — forwards 0 mm — backwards 0 mm — downwards 50 mm — at the side 0 mm • for grounded parts 0 mm — backwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions installation altitude at height above sea level maximum 4 000 m; For dera ambient temperature • during operation -25 +60 °C • during operation -25 +60 °C • during storage -40 +70 °C • during transport -40 +70 °C • during transport -3 K6 (no ice forma mist), 3S2 (sand relative humidity during operation 10 95 % • air pressure according to SN 31205 900 1 060 hPa Communication/ Protocol No • PROFINET IO protocol No	screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 3.5 mm 50 mm 3.6 mm 50 mm 3.7 mm 50 mm 3.8 mm 50 mm 3.8 mm 50 mm 3.9 mm 50 mm 3.9 mm 50 mm 3.5 mm 50 mm 60 mm 60 mm 60 mm 60 mm 70 mm 7	fastening method height width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — for grounded parts — forwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — backwards — upwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	rizontal, standing (observe derating)
height 100 mm width 22.5 mm depth 141.6 mm required spacing • with side-by-side mounting • forwards 0 mm — backwards 0 mm — downwards 50 mm — at the side 0 mm • for grounded parts 0 mm — forwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions 10 mm installation altitude at height above sea level maximum 4 000 m; For dera ambient temperature 4 during operation -25 +60 °C • during storage -40 +70 °C • during transport -40 +70 °C environmental category during operation according to IEC 3K6 (no to forma mist), 3s2 (sand mist), 3s2	100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 3.5 mm 50 mm 3.5 mm 50 mm 50 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm	height 100 mm width 22.5 mm depth 141.6 m required spacing 411.6 m • with side-by-side mounting 0 mm — forwards 0 mm — backwards 0 mm — at the side 0 mm • for grounded parts 0 mm — backwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions installation altitude at height above sea level maximum 4 000 m ambient temperature • during operation -25 +6 • during transport -40 +7 • during transport -40 +7 environmental category during operation according to IEC 60721 3K6 (no mist), 3S relative humidity during operation 10 95 air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported • PROFINET IO protocol	
width 22.5 mm depth 141.6 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — backwards — o mm • for grounded parts — forwards — at the side — o mm • for grounded parts — backwards — upwards — at the side — downwards — 3.5 mm 50 mm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 good 1 060 hPa Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol PROFISafe protocol No product function bus communication No protocol is supported AS-Interface protocol No Connections/ Terminals	141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 0 mm	width 22.5 mm depth 141.6 m required spacing 141.6 m • with side-by-side mounting 0 mm — forwards 0 mm — backwards 50 mm — at the side 0 mm • for grounded parts 0 mm — backwards 0 mm — backwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions 50 mm installation altitude at height above sea level maximum 4 000 m ambient temperature 4 during operation -25 +6 • during transport -40 +7 • during transport -40 +7 environmental category during operation according to IEC 60721 3K6 (no mist), 3S relative humidity during operation 10 95 air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported PROFINET IO protocol	
required spacing with side-by-side mounting forwards backwards upwards downwards at the side for grounded parts forwards backwards for grounded parts forwards backwards backwards backwards cat the side downwards backwards cat the side downwards at the side downwards at the side downwards ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during operation during storage during transport environmental category during operation according to IEC environmental category during operation air pressure according to SN 31205 communication/ Protocol protocol is supported PROFINET IO protocol PROFISafe protocol protocol is supported AS-Interface protocol No Connections/ Terminals	0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 0 mm 0 mm	required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — o mm • for grounded parts — forwards — backwards — upwards — upwards — at the side — at the side — at the side — downwards — at the side — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side • for grounded parts — forwards — backwards — backwards — upwards — at the side — downwards — at the side — downwards — at the side — downwards — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 good 1 060 hPa Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFINET IO protocol • PROFIsafe protocol Product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No	 with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — for grounded parts — forwards — backwards — backwards — backwards — upwards — at the side — at the side — at the side — downwards — at the side — downwards — at the side — downwards Installation altitude at height above sea level maximum — ambient temperature — during operation — during storage — during transport — forwards — for mm — forwards — for mm <	
with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side • for grounded parts — forwards — backwards — backwards — upwards — at the side — downwards — at the side — downwards — at the side — downwards — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 good 1 060 hPa Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFINET IO protocol • PROFIsafe protocol Product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No	 with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — for grounded parts — forwards — backwards — backwards — backwards — upwards — at the side — at the side — at the side — downwards — at the side — downwards — at the side — downwards Installation altitude at height above sea level maximum — ambient temperature — during operation — during storage — during transport — forwards — for mm — forwards — for mm <	
— backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — backwards — upwards — 10 mm — the side — of mm — backwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFISafe protocol PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No	- backwards - upwards - downwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - upwards - upwards - at the side - downwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol No	
- upwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side 0 mm - backwards 0 mm - upwards - at the side - downwards 50 mm - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	50 mm 50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -	- upwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards - at the side - downwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport - during transport - environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol No	
- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - at the side - of mm - backwards - upwards - at the side - downwards - downwards **Mbient conditions** installation altitude at height above sea level maximum • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 **Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol **Connections/ Terminals**	50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	- downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
- at the side • for grounded parts - forwards - backwards - upwards - at the side - at the side - downwards Ambient conditions	0 mm 0 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C -40 +70 °C -40 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	- at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation 10 95 air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
for grounded parts — forwards — backwards — upwards — at the side — downwards — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	0 mm 0 mm 50 mm 3.5 mm 50 mm level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	for grounded parts — forwards — backwards — upwards — at the side — downwards — d	
— forwards — backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	0 mm 50 mm 3.5 mm 50 mm level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	— forwards — backwards — upwards — at the side — downwards So mm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
— backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	0 mm 50 mm 3.5 mm 50 mm level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	- backwards - upwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
- upwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	50 mm 3.5 mm 50 mm level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	- upwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
— at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	3.5 mm 50 mm level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	— at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
— downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	— downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	-25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • ouring transport • environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
ambient temperature ● during operation ● during storage ● during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported ● PROFINET IO protocol PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	-25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	
ambient temperature • during operation • during storage • during transport • during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	-25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol	or derating see manual
during operation during storage during transport during transport environmental category during operation according to IEC environmental category during operation according to IEC air pressure according to SN 31205 Communication/ Protocol protocol is supported PROFINET IO protocol PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	-40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	during operation during storage during transport during transport environmental category during operation according to IEC mist), 38 relative humidity during operation ir pressure according to SN 31205 Communication/ Protocol protocol is supported PROFINET IO protocol No	
during storage during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported PROFINET IO protocol PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals -40 +70 °C -40	-40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	◆ during storage ◆ during transport environmental category during operation according to IEC 60721 relative humidity during operation if pressure according to SN 31205 Communication/ Protocol protocol is supported ◆ PROFINET IO protocol -40 +7 -40 .	°C
◆ during transport environmental category during operation according to IEC 60721	No No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	◆ during transport environmental category during operation according to IEC 60721	°C
environmental category during operation according to IEC 60721 relative humidity during operation 10 95 % air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	environmental category during operation according to IEC 60721 3K6 (no mist), 3S relative humidity during operation 10 95 air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported • PROFINET IO protocol No	°C
mist), 3S2 (sand r relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported PROFINET IO protocol PROFIsafe protocol No product function bus communication protocol is supported AS-Interface protocol No Connections/ Terminals	mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	relative humidity during operation 10 95 air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported • PROFINET IO protocol No	e formation, only occasional condensation), 3C3 (no salt
air pressure according to SN 31205 Communication/ Protocol protocol is supported PROFINET IO protocol PROFIsafe protocol No product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	No No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported • PROFINET IO protocol No	remaining or any occupional confidence and the call
Communication/ Protocol protocol is supported ● PROFINET IO protocol ● PROFIsafe protocol Product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	No No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	Communication/ Protocol protocol is supported • PROFINET IO protocol No	(sand must not get into the devices), 3M6
protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	protocol is supported • PROFINET IO protocol No	(sand must not get into the devices), 3M6
PROFINET IO protocol PROFIsafe protocol Product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals	No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	PROFINET IO protocol	(sand must not get into the devices), 3M6
● PROFIsafe protocol No product function bus communication No protocol is supported AS-Interface protocol No Connections/ Terminals	No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	·	(sand must not get into the devices), 3M6
product function bus communication No protocol is supported AS-Interface protocol No Connections/ Terminals	No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	PROFIsafe protocol No	(sand must not get into the devices), 3M6
protocol is supported AS-Interface protocol No Connections/ Terminals	spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit		(sand must not get into the devices), 3M6
Connections/ Terminals	spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit	product function bus communication No	(sand must not get into the devices), 3M6
	terminals (push-in) for control circuit	protocol is supported AS-Interface protocol	(sand must not get into the devices), 3M6
type of electrical connection spring-loaded terr	terminals (push-in) for control circuit	Connections/ Terminals	(sand must not get into the devices), 3M6
			(sand must not get into the devices), 3M6
• for main current circuit spring-loaded terr	spring-loaded terminals (push-in)	• for main current circuit spring-lo	(sand must not get into the devices), 3M6 60 hPa ded terminals (push-in) for main circuit, spring-loaded
	spring-loaded terminals (push-in)	• for auxiliary and control circuit spring-lo	ded terminals (push-in) for main circuit, spring-loaded push-in) for control circuit
terminals (push-in	spring-loaded terminals (push-in)	product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals type of electrical connection spring-lot terminals	(sand must not get into the devices), 3M6

wire length for motor unshielded maximum	100 m	
type of connectable conductor cross-sections		
for main contacts		
— solid	1x (0.5 4 mm²)	
 finely stranded with core end processing 	1x (0.5 2.5 mm²)	
 finely stranded without core end processing 	1x (0.5 4 mm²)	
at AWG cables for main contacts	1x (20 12)	
connectable conductor cross-section for main contacts		
solid or stranded	0.5 4 mm²	
 finely stranded with core end processing 	0.5 2.5 mm²	
finely stranded without core end processing	0.5 4 mm²	
connectable conductor cross-section for auxiliary contacts		
solid or stranded	0.5 1.5 mm²	
 finely stranded with core end processing 	0.5 1 mm²	
finely stranded without core end processing	0.5 1.5 mm ²	
type of connectable conductor cross-sections		
for auxiliary contacts		
— solid	1x (0.5 1.5 mm²), 2x (0.5 1.5 mm²)	
 finely stranded with core end processing 	1x (0,5 1,0 mm²), 2x (0,5 1,0 mm²)	
 finely stranded without core end processing 	1x (0.5 1.5 mm²), 2x (0.5 1.5 mm²)	
at AWG cables for auxiliary contacts	1x (20 16), 2x (20 16)	
AWG number as coded connectable conductor cross section		
for main contacts	20 12	
for auxiliary contacts	20 16	
JL/CSA ratings		
operating voltage at AC		
according to UL rated value	480 V	
according to CSA rated value	400 V	
Certificates/ approvals		
General Product Approval		EMC



Confirmation



(II)





For use in hazardous locations Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

other

Railway



Type Examination Certificate CE EG-Konf. Type Test Certificates/Test Report Confirmation

Special Test Certificate

Further information

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RM1301-2AA14

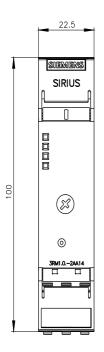
Cax online generator

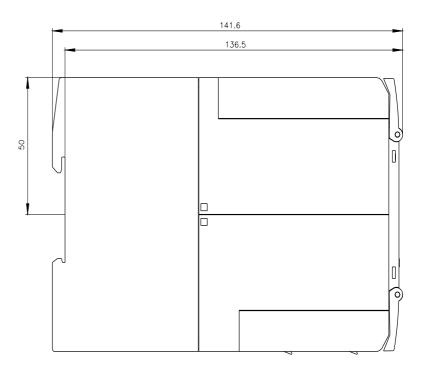
 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RM1301-2AA14}}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RM1301-2AA14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RM1301-2AA14&lang=en





last modified: 6/21/2022 🖸