SIEMENS

Data sheet 3RK1301-1EB00-0AA2

DS1-X FOR ET 200S ELECTROMECHANICS LINE STARTER EXPANDABLE ADJUSTABLE RANGE 2.8...4.0A AC-3, 1.5 KW/400V FOR BRAKE CONTROL MODULE

Figure similar

Product brand name	Sirius
Product designation	motor starter ET 200S
Design of the product	direct starter

General technical data

Product function	
• on-site operation	Yes
Power loss [W] typical	10 W
Insulation voltage	
• rated value	500 V
Degree of pollution	3 at 400 V, 2 at 500 V according to IEC60664 (IEC61131)
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• between main and auxiliary circuit	400 V
Protection class IP	IP20
Shock resistance	5g / 11 ms
Vibration resistance	2g
Operating frequency maximum	750 1/h

Mechanical service life (switching cycles)	
• of the main contacts typical	100 000
Type of assignment	1
Equipment marking	
• acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	A
• acc. to DIN EN 61346-2	Q
• acc. to DIN EN 81346-2	Q
Product function	
• direct start	Yes
• reverse starting	No
Product component Motor brake output	Yes
Product feature	
• brake control with 230 V AC	No
• brake control with 24 V DC	No
• brake control with 180 V DC	No
• brake control with 500 V DC	No
Product extension braking module for brake control	Yes
Product function Short circuit protection	Yes
Design of short-circuit protection	circuit-breakers
Trip class	CLASS 10
Maximum short-circuit current breaking capacity (Icu)	
• at 400 V rated value	50 kA

Electromagnetic compatibility

EMC emitted interference	
• acc. to IEC 60947-1	CISPR11, ambience A (industrial sector)
EMI immunity acc. to IEC 60947-1	corresponds to degree of severity 3, ambience A (industrial sector)
Conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV on voltage supply, inputs and outputs
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV (U > 24 V DC)
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV (U > 24 V DC)
Field-bound parasitic coupling acc. to IEC 61000-4-3	80 MHz ... 1 GHz 10 V/m, 1.4 GHz ...2 Hz 3 V/m, 2 GHz ... 2.7 GHz 1 V/m

Safety related data

B10 value	
• with high demand rate acc. to SN 31920	1 000 000
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	75 %

Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Protection against electrical shock	finger-safe

Inputs/ Outputs

Product function	
• digital inputs parameterizable	No
• digital outputs parameterizable	No
Number of digital inputs	0
Number of sockets	
• for digital output signals	0
• for digital input signals	0

Main circuit

Number of poles for main current circuit	3
Design of the switching contact	electromechanical
Adjustable pick-up value current of the current-dependent overload release	2.8 ... 4 A
Type of the motor protection	bimetal
Operating voltage	
• rated value	200 ... 400 V
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz
Operating range relative to the operating voltage at AC	
• at 50 Hz	200 ... 440 V
Operating power	
• **at AC-3**	
— at 400 V rated value	1.5 kW
Operating power for three-phase motors at 400 V at 50 Hz	1.5 ... 1.5 kW

Supply voltage

Type of voltage of the supply voltage	DC
Supply voltage 1 at DC	24 ... 24 V
Supply voltage 1 at DC rated value	
• minimum permissible	20.4 V
• maximum permissible	28.8 V

Control circuit/ Control

Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
• rated value	20.4 ... 28.8 V
Control supply voltage 1	

• at DC rated value	20.4 ... 28.8 V
• at DC	24 ... 24 V
Power loss [W] in auxiliary and control circuit	
• **in switching state OFF**	
— with bypass circuit	0.3744 W
— without bypass circuit	0.374 W
• **in switching state ON**	
— with bypass circuit	4.1184 W
— without bypass circuit	4.118 W

Power Electronics

Relative negative tolerance of the operating frequency	10 %
Relative positive tolerance of the operating frequency	10 %

Installation/ mounting/ dimensions

Mounting position	vertical, horizontal
Mounting type	pluggable on terminal module
Height	265 mm
Width	45 mm
Depth	120 mm

Ambient conditions

Installation altitude at height above sea level	
• maximum	2 000 m
Ambient temperature	
• during operation	0 ... 60 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
Relative humidity during operation	5 ... 95 %

Communication/ Protocol

Protocol is supported	
• PROFIBUS DP protocol	Yes
• PROFINET protocol	Yes
Design of the interface	
• PROFINET protocol	Yes
Product function Bus communication	Yes
Protocol is supported	
• AS-interface protocol	No
Product function	
• supports PROFIenergy measured values	No
• supports PROFIenergy shutdown	No
Address space memory of address range	
• of inputs	1 byte

• of outputs	1 byte
Type of electrical connection	
• of the communication interface	via backplane bus
• for communication transmission	via backplane bus

Connections/Terminals

Type of electrical connection	
• for main current circuit	screw-type terminals
Type of electrical connection	
• 1 for digital input signals	using control module
• 2 for digital input signals	using control module
Type of electrical connection	
• at the manufacturer-specific device interface	plug
• for main energy infeed	screw-type terminals
• for load-side outgoing feeder	Screw-type terminals
• for main energy transmission	via energy bus
• for supply voltage line-side	via backplane bus
• for supply voltage transmission	via backplane bus

UL/CSA ratings

Operating voltage	
• at AC at 60 Hz acc. to CSA and UL rated value	600 V

Certificates/approvals

General Product Approval				For use in hazardous locations	
CCC	CSA	UL	EAC	ATEX	IECEx

Declaration of Conformity	Test Certificates	other
EG-Konf.	Type Test Certificates/Test Report	Confirmation

Further information

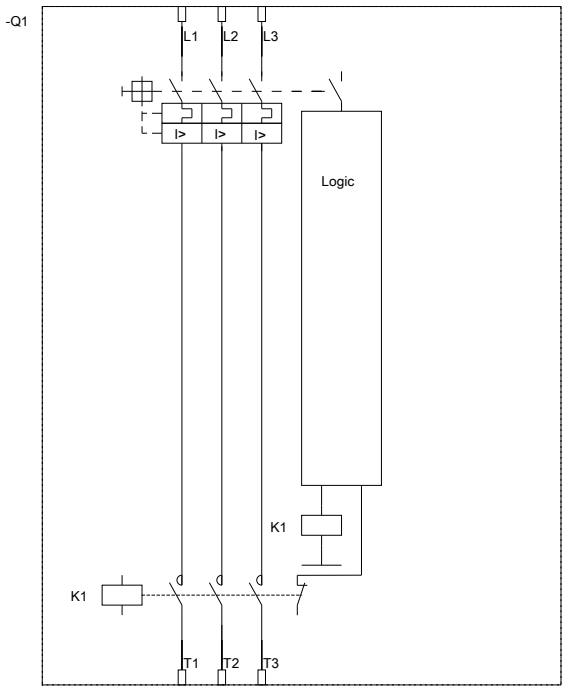
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RK1301-1EB00-0AA2

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1301-1EB00-0AA2

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RK1301-1EB00-0AA2

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1301-1EB00-0AA2&lang=en



DI 0.0	Bereit
DI 0.1	Schütz ein
DI 0.2	Leistungsschalter ausg.
DO 0.0	Motor ein
DO 0.2	Bremse

DI 0.0	Ready
DI 0.1	Contactor on
DI 0.2	Circuit breaker tripped
DO 0.0	Motor on
DO 0.2	Brake

last modified: 10/06/2017