SIEMENS

Data sheet 3RK1301-0BB13-0AA2

F-DS1E-X for ET 200S Fail-safe DOL starter Setting range 2.4...8 A Mechanical switching Electronic protection AC-3, up to 3 kW / 400 V expandable for brake control module for 2DI control module

product brand name	SIMATIC
product designation	Motor starters
design of the product	direct starter
product type designation	ET 200S
General technical data	
product function on-site operation	Yes
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 protective separation between main and auxiliary circuit	400 V
shock resistance	5g / 11 ms
vibration resistance	2g
operating frequency maximum	80 1/h
mechanical service life (operating cycles) of the main contacts typical	100 000
type of assignment	2
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/26/2016
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
maximum short-circuit current breaking capacity (Icu)	
● at 400 V rated value	50 kA
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	CISPR11, ambience A (industrial sector)
EMC immunity according to IEC 60947-1	corresponds to degree of severity 3, ambience A (industrial sector)
conducted interference	
● due to burst according to IEC 61000-4-4	2 kV on voltage supply, inputs and outputs
● due to conductor-earth surge according to IEC 61000-4-5	2 kV (U > 24 V DC)
● due to conductor-conductor surge according to IEC 61000-4-5	1 kV (U > 24 V DC)

field-based interference according 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	
safety device type according to IEC 61508-2	Type B
safe state	Load circuit open
SIL Claim Limit (subsystem) according to EN 62061	SILCL 3
performance level (PL) according to EN ISO 13849-1	e
category according to EN ISO 13849-1	4
stop category according to EN 60204-1	0
average diagnostic coverage level (DCavg)	99 %
PFHD with high demand rate according to EN 62061	1.8E-9 1/h
failure rate [FIT]	
• at rate of recognizable hazardous failures (λdd)	3 800 FIT
• at rate of non-recognizable hazardous failures (λdu)	25 FIT
Safe failure fraction (SFF)	99.5 %
PFDavg with low demand rate according to IEC 61508	8E-5
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	8E-5 1/y
MTBF	14 a
MTTFd	31 a
hardware fault tolerance according to IEC 61508	1
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe
Main circuit	
number of poles for main current circuit	3
design of the switching contact	electromechanical
adjustable current response value current of the current-dependent overload release	2.4 ... 8 A
type of the motor protection	solid-state
operating voltage rated value	200 ... 400 V
operating frequency 1 rated value	50 Hz
operating frequency 2 rated value	60 Hz
relative positive tolerance of the operating frequency	10 %
relative negative tolerance of the operating frequency	10 %
operating range relative to the operating voltage at AC at 50 Hz	200 ... 440 V
operational current	
• at AC-3 at 400 V rated value	8 A
operating power at AC-3 at 400 V rated value	3 kW
operating power for 3-phase motors at 400 V at 50 Hz	1.1 ... 3 kW
Inputs/ Outputs	
product function	
• digital inputs parameterizable	Yes
• digital outputs parameterizable	No
number of digital inputs	2
number of sockets	
• for digital output signals	0
• for digital input signals	0
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	21.6 ... 26.4 V
control supply voltage 1	
• at DC rated value	21.6 ... 26.4 V
• at DC	24 ... 24 V
Installation/ mounting/ dimensions	
mounting position	vertical, horizontal
fastening method	pluggable on terminal module

height	290 mm
width	65 mm
depth	150 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
address space memory of address range	
● of the inputs	2 byte
● of the outputs	2 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 according to CSA and UL rated value	600 V

Certificates/ approvals

General Product Approval					EMC
CSA	Confirmation	CCC	UL	EAC	RCM

Functional Safety/Safety of Machinery	Declaration of Conformity		Test Certificates	other	Dangerous Good
Type Examination Certificate	CE EG-Konf.	UKCA	Type Test Certificates/Test Report	Confirmation	Transport Information

Further information

Siemens has decided to exit the Russian market (see here).
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
Siemens is working on the renewal of the current EAC certificates.
Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).
Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RK1301-0BB13-0AA2

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1301-0BB13-0AA2

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RK1301-0BB13-0AA2

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1301-0BB13-0AA2&lang=en

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