



F-DS1E-X for ET 200S Fail-safe DOL starter Setting range 0.3...3 A Mechanical switching Electronic protection expandable for Brake control module 2DI module 2DI module Circuit breaker signaling parameterizable

product brand name	SIMATIC
product designation	Motor starters
design of the product	direct starter
product type designation	ET 200S
<b>General technical data</b>	
product function on-site operation	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	9 W
• at AC in hot operating state per pole	3 W
• without load current share typical	4.22 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 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
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 Perfluorobutane sulfonic acid (PFBS) and its salts - -
Weight	1.71 kg
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
<b>Electromagnetic compatibility</b>	
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)
<b>conducted interference</b>	
• 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)
<b>field-based interference according to IEC 61000-4-3</b>	80 MHz ... 1 GHz 10 V/m, 1.4 GHz ... 2 Hz 3 V/m, 2 GHz ... 2.7 GHz 1 V/m
<b>Safety related data</b>	
<b>safe state</b>	Load circuit open
<b>stop category according to IEC 60204-1</b>	0
<b>failure rate [FIT] at rate of recognizable hazardous failures (<math>\lambda_{dd}</math>)</b>	3 800 FIT
<b>failure rate [FIT] at rate of non-recognizable hazardous failures (<math>\lambda_{du}</math>)</b>	25 FIT
<b>average diagnostic coverage level (DCavg)</b>	99 %
<b>MTBF</b>	14 a
<b>MTTFd</b>	31 a
IEC 62061	
SIL Claim Limit (subsystem) according to EN 62061	SILCL 3
PFHD with high demand rate according to IEC 62061	1.8E-9 1/h
ISO 13849	
performance level (PL) according to EN ISO 13849-1	PL e
category according to EN ISO 13849-1	4
IEC 61508	
<b>safety device type according to IEC 61508-2</b>	Type B
<b>Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508</b>	8E-5 1/y
PFDavg with low demand rate according to IEC 61508	8E-5
<b>Safe failure fraction (SFF)</b>	99.5 %
hardware fault tolerance according to IEC 61508	1
T1 value for proof test interval or service life according to IEC 61508	10 a
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>design of the switching contact</b>	electromechanical
<b>adjustable current response value current of the current-dependent overload release</b>	0.3 ... 3 A
<b>type of the motor protection</b>	solid-state
operating voltage rated value	200 ... 400 V
<b>operating frequency 1 rated value</b>	50 Hz
<b>operating frequency 2 rated value</b>	60 Hz
<b>relative positive tolerance of the operating frequency</b>	10 %
<b>relative negative tolerance of the operating frequency</b>	10 %
operating range relative to the operating voltage at AC at 50 Hz	200 ... 440 V
<b>operational current</b>	
• at AC-3 at 400 V rated value	3 A
operating power at AC-3 at 400 V rated value	1.1 kW
operating power for 3-phase motors at 400 V at 50 Hz	0.1 ... 1.1 kW
<b>Inputs/ Outputs</b>	
<b>product function</b>	
• digital inputs parameterizable	Yes
• digital outputs parameterizable	No
<b>number of digital inputs</b>	2
<b>number of sockets</b>	
• for digital output signals	0
• for digital input signals	0

<b>Supply voltage</b>	
<b>type of voltage of the supply voltage</b>	DC
<b>supply voltage 1 at DC</b>	24 ... 24 V
<b>supply voltage 1 at DC rated value</b>	
• minimum permissible	20.4 V
• maximum permissible	28.8 V
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	DC
<b>control supply voltage at DC rated value</b>	21.6 ... 26.4 V
<b>control supply voltage 1 at DC rated value</b>	21.6 ... 26.4 V
<b>control supply voltage 1 at DC</b>	24 ... 24 V
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	vertical, horizontal
<b>fastening method</b>	pluggable on terminal module
<b>height</b>	290 mm
<b>width</b>	65 mm
<b>depth</b>	150 mm
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	0 ... 60 °C
• during storage	-40 ... +70 °C
• during transport	-40 ... +70 °C
relative humidity during operation	5 ... 95 %
<b>Communication/ Protocol</b>	
<b>protocol is supported</b>	
• PROFIBUS DP protocol	Yes
• PROFINET protocol	Yes
design of the interface PROFINET protocol	Yes
<b>product function bus communication</b>	Yes
protocol is supported AS-Interface protocol	No
<b>product function</b>	
• supports PROFlenergy measured values	No
• supports PROFlenergy shutdown	No
<b>address space memory of address range</b>	
• of the inputs	2 byte
• of the outputs	2 byte
<b>type of electrical connection</b>	
• of the communication interface	via backplane bus
• for communication transmission	via backplane bus
<b>Connections/ Terminals</b>	
<b>type of electrical connection for main current circuit</b>	screw-type terminals
<b>type of electrical connection</b>	
• 1 for digital input signals	using control module
• 2 for digital input signals	using control module
<b>type of electrical connection</b>	
• 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
<b>UL/CSA ratings</b>	
operating voltage at AC at 60 Hz according to CSA and UL rated value	600 V
<b>Approvals Certificates</b>	
<b>General Product Approval</b>	<b>EMV</b>



**UK**  
**CA**

**CE**  
EG-Konf.

**UL**  
UL

**EAC**

**CCC**  
CCC

EMV	Functional Safety	Test Certificates	other	Dangerous goods	Environment
 RCM	<a href="#">Type Examination Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>	<a href="#">Transport Information</a>	<a href="#">Environmental Confirmations</a>

#### Further information

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=3RK1301-0AB13-0AA4>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1301-0AB13-0AA4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RK1301-0AB13-0AA4>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RK1301-0AB13-0AA4&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1301-0AB13-0AA4&lang=en)

last modified:

4/1/2025 