SIEMENS

Data sheet 3RA6400-2DB43

SIRIUS Compact load feeder DOL starter for IO-Link 690 V 24 V DC 3...12 A IP20 Connection main circuit: plug-in, without terminals Connection control circuit: Spring-type terminal

product brand name	SIRIUS
product designation	Compact starter for IO-Link
design of the product	direct starter
product type designation	3RA64
General technical data	
product function control circuit interface to parallel wiring	No
product extension auxiliary switch	Yes
power loss [W] for rated value of the current at AC in hot operating state	1.8 W
● per pole	0.6 W
power loss [W] for rated value of the current without load current share typical	2.9 W
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 000 V
degree of protection NEMA rating	other
shock resistance	a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes
vibration resistance	f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s²; 10 cycles
mechanical service life (switching cycles)	
● of the main contacts typical	10 000 000
● of auxiliary contacts typical	10 000 000
● of the signaling contacts typical	10 000 000
electrical endurance (switching cycles) of auxiliary contacts	
● at DC-13 at 6 A at 24 V typical	30 000
● at AC-15 at 6 A at 230 V typical	200 000
type of assignment	continous operation according to IEC 60947-6-2
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.05.2012 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
● ambient temperature during operation	-20 ... +60 °C
● ambient temperature during storage	-55 ... +80 °C
● ambient temperature during transport	-55 ... +80 °C
relative humidity during operation	10 ... 90 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the	3 ... 12 A

current-dependent overload release	
formula for making capacity limit current	12 x Ie
formula for breaking capacity limit current	10 x Ie
yielded mechanical performance for 4-pole AC motor	
● at 400 V rated value	5.5 kW
● at 500 V rated value	5.5 kW
● at 690 V rated value	7.5 kW
● operating voltage at AC-3 rated value maximum	690 V
operational current	
● at AC at 400 V rated value	12 A
● at AC-43	
— at 400 V rated value	11.5 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
operating power	
● at AC-3 at 400 V rated value	5.5 kW
● at AC-43	
— at 400 V rated value	5 500 W
— at 500 V rated value	5 500 W
— at 690 V rated value	7 500 W
no-load switching frequency	3 600 1/h
operating frequency	
● at AC-41 acc. to IEC 60947-6-2 maximum	750 1/h
● at AC-43 acc. to IEC 60947-6-2 maximum	250 1/h
Control circuit/ Control	
type of voltage	DC
holding power	
● at DC maximum	2.9 W
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of NO contacts of instantaneous short-circuit trip unit for signaling contact	0
number of CO contacts of the current-dependent overload release for signaling contact	0
operational current of auxiliary contacts at AC-12 maximum	10 A
operational current of auxiliary contacts at DC-13 at 250 V	0.27 A
Protective and monitoring functions	
trip class	CLASS 10 and 20 adjustable
breaking capacity operating short-circuit current (Ics)	
● at 400 V	53 kA
● at 500 V rated value	3 kA
● at 690 V rated value	3 kA
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
● at 480 V rated value	12 A
● at 600 V rated value	12 A
yielded mechanical performance [hp] for 3-phase AC motor	
● at 200/208 V rated value	3 hp
● at 220/230 V rated value	3 hp
● at 460/480 V rated value	7.5 hp
● at 575/600 V rated value	10 hp
Short-circuit protection	
product function short circuit protection	Yes
design of short-circuit protection	electromagnetic
design of the fuse link	

● for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
Installation/ mounting/ dimensions	
mounting position	any
● recommended	vertical, on horizontal standard mounting rail
fastening method	screw and snap-on mounting
height	191 mm
width	45 mm
depth	165 mm
Connections/ Terminals	
product function	
● removable terminal for main circuit	Yes
● removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
● for main current circuit	plug-in without terminals
● for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
● for main contacts	
— solid	2x (1.5 ... 6 mm²), 1x 10 mm²
— finely stranded with core end processing	2x (1.5 ... 6 mm²)
— finely stranded without core end processing	2x (1.5 ... 6 mm²)
● at AWG cables for main contacts	2x (16 ... 10), 1x 8
type of connectable conductor cross-sections	
● for auxiliary contacts	
— solid	2x (0.25 ... 1.5 mm²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm²)
— finely stranded without core end processing	2x (0.25 ... 1.5 mm²)
● at AWG cables for auxiliary contacts	2x (24 ... 16)
Safety related data	
B10 value with high demand rate acc. to SN 31920	3 000 000
proportion of dangerous failures	
● with high demand rate acc. to SN 31920	50 %
Communication/ Protocol	
product function bus communication	Yes
protocol is supported	
● IO-Link protocol	Yes
product function control circuit interface with IO link	Yes
IO-Link transfer rate	COM2 (38,4 kBaud)
point-to-point cycle time between master and IO-Link device minimum	2.5 ms
type of voltage supply via input/output link master	No
data volume	
● of the address range of the inputs with cyclical transfer total	2 byte
● of the address range of the outputs with cyclical transfer total	2 byte
Electromagnetic compatibility	
conducted interference	
● due to burst acc. to IEC 61000-4-4	4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device
● due to conductor-earth surge acc. to IEC 61000-4-5	4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
● due to conductor-conductor surge acc. to IEC 61000-4-5	2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
● due to high-frequency radiation acc. to IEC 61000-4-6	0.15-80Mhz at 10V
field-based interference acc. to IEC 61000-4-3	80 ... 3000 MHz at 10V/m
electrostatic discharge acc. to IEC 61000-4-2	8 kV
conducted HF interference emissions acc. to CISPR11	150 kHz ... 30 MHz Class A
field-bound HF interference emission acc. to CISPR11	30 ... 1000 MHz Class A

Supply voltage	
Supply voltage required Auxiliary voltage	Yes

Display	
number of LEDs	3
display version as status display of the input/output link device	green/red dual LED

Certificates/ approvals

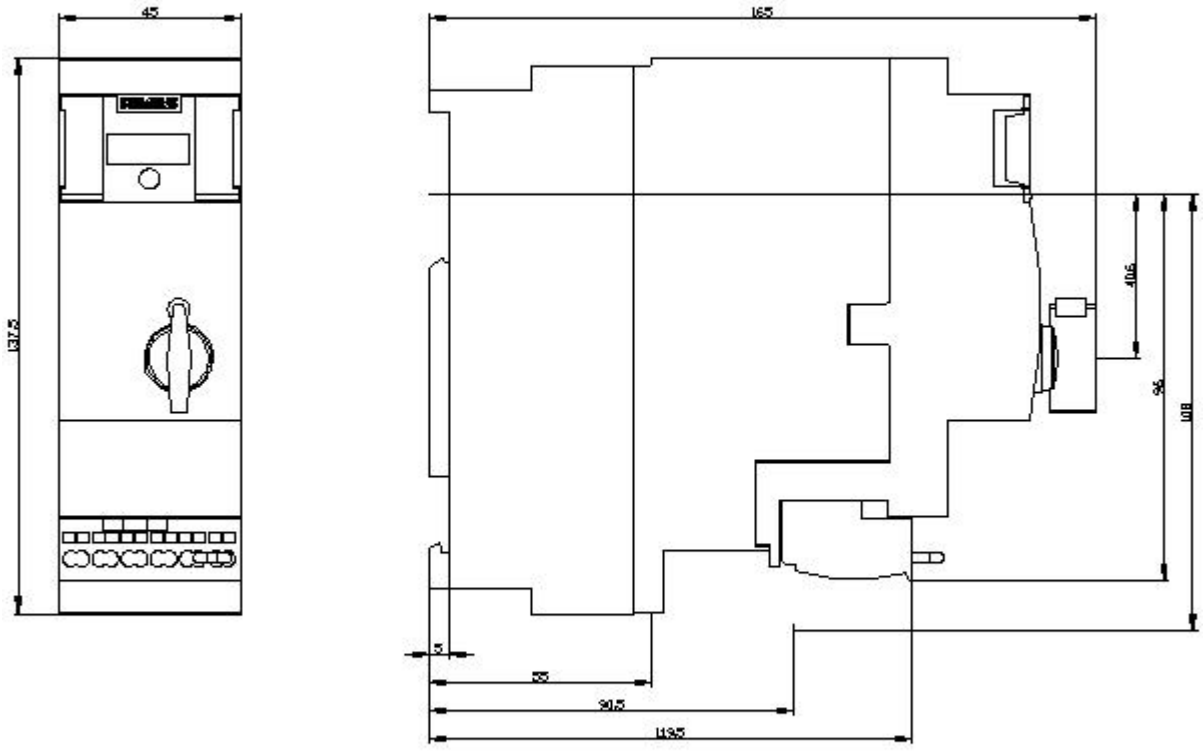
General Product Approval				EMC	Functional Safety/Safety of Machinery
CSA	CCC	UL	EAC	RCM	VDE

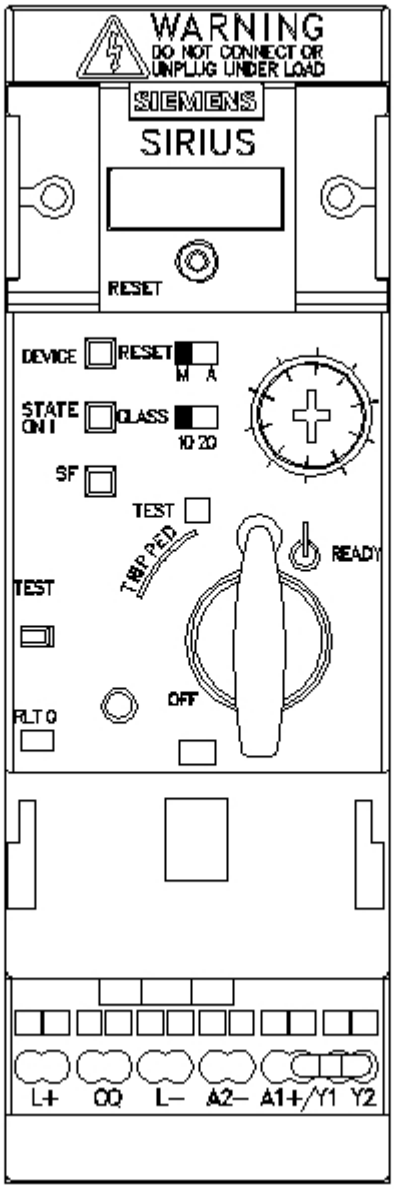
Declaration of Conformity		Test Certificates	Marine / Shipping		
EG-Konf.	Miscellaneous	Type Test Certificates/Test Report	ABS	BUREAU VERITAS	LRS

Marine / Shipping			other
PRS	RINA	RMRS	Confirmation

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=3RA6400-2DB43
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6400-2DB43
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-2DB43
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6400-2DB43&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-2DB43/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6400-2DB43&objecttype=14&gridview=view1





last modified: 1/8/2021