



SIRIUS Compact load feeder DOL starter for IO-Link 690 V 24 V DC
0.32...1.25 A IP20 Connection main circuit: Screw terminal Connection
control circuit: screw 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	0.1 W
• per pole	0.03 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/s ² (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/s ² ; 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	continuous 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	0.32 ... 1.25 A

current-dependent overload release	
formula for making capacity limit current	38.4 x I _e
formula for breaking capacity limit current	32 x I _e
yielded mechanical performance for 4-pole AC motor	
• at 400 V rated value	0.37 kW
• at 500 V rated value	0.55 kW
• at 690 V rated value	0.75 kW
• operating voltage at AC-3 rated value maximum	690 V
operational current	
• at AC at 400 V rated value	1.25 A
• at AC-43	
— at 400 V rated value	1.1 A
— at 500 V rated value	1.2 A
— at 690 V rated value	1.1 A
operating power	
• at AC-3 at 400 V rated value	370 W
• at AC-43	
— at 400 V rated value	370 W
— at 500 V rated value	550 W
— at 690 V rated value	750 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 (I_{cs})	
• 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	1.25 A
• at 600 V rated value	1.25 A
yielded mechanical performance [hp] for 3-phase AC motor	
• at 460/480 V rated value	0.5 hp
• at 575/600 V rated value	0.5 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	170 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	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1.5 ... 6 mm ²), 1x 10 mm ²
— finely stranded with core end processing	2x (1.5 ... 6 mm ²)
• at AWG cables for main contacts	2x (16 ... 10), 1x 8
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
— finely stranded with core end processing	0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²)
• at AWG cables for auxiliary contacts	2x (20 ... 14)
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
--------------------------	-----	---------------------------------------



Declaration of Conformity	Test Certificates	Marine / Shipping
---------------------------	-------------------	-------------------



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
-------------------	-------



[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=3RA6400-1BB42>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6400-1BB42>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-1BB42>

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

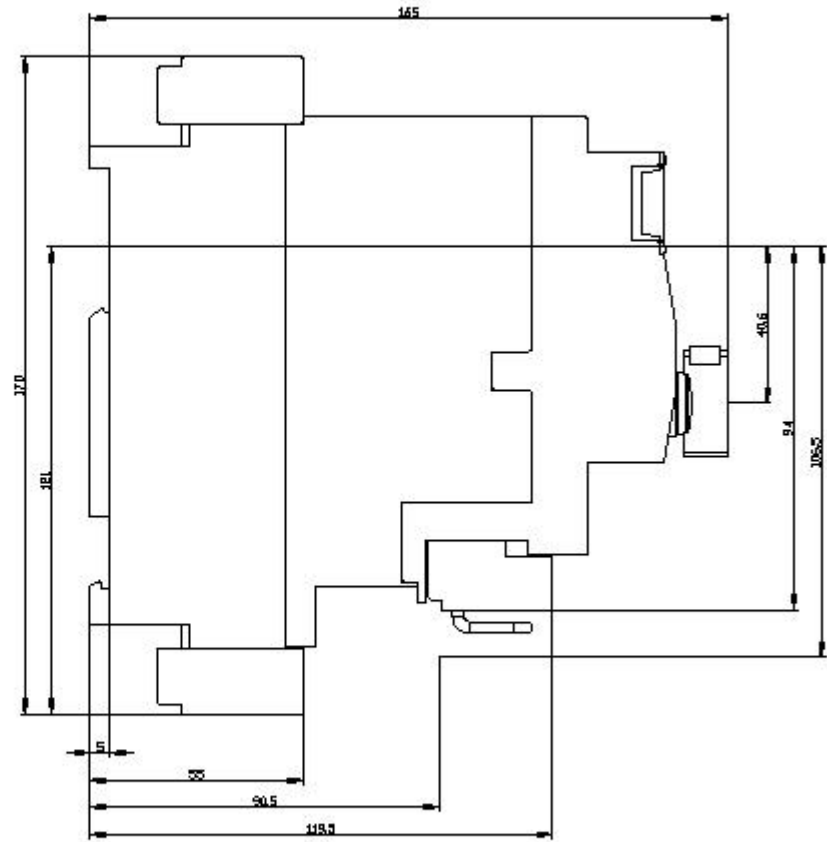
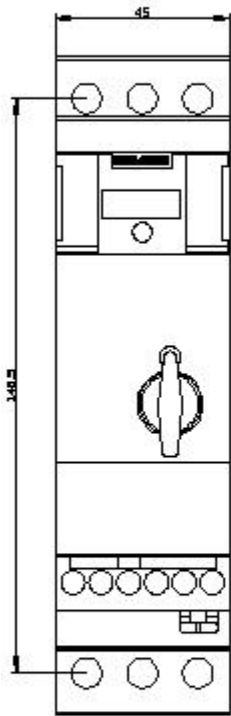
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6400-1BB42&lang=en

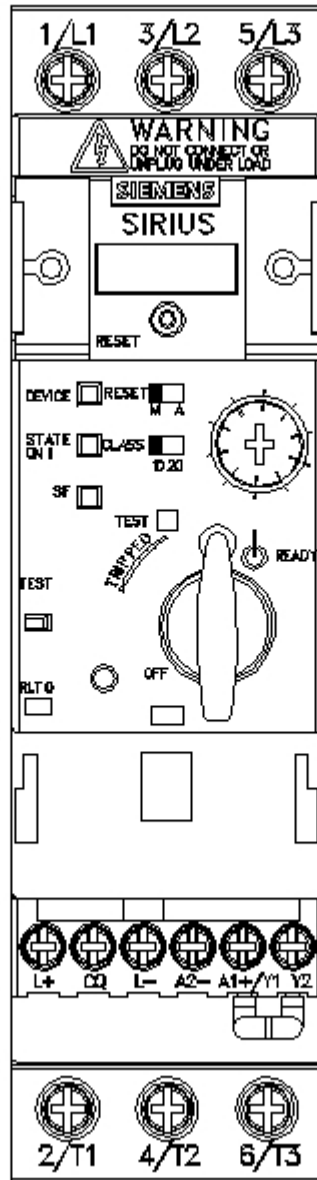
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-1BB42/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6400-1BB42&objecttype=14&gridview=view1>





last modified:

1/18/2021 