## SIEMENS

## Data sheet

## 3SU1150-1BA20-1FA0-Z Y12



Mushroom pushbutton, 22 mm, round, metal, shiny, red, 40mm, latching, pull-to-unlatch mechanism, with holder, 1 NO+1 NC, screw terminal, with laser labeling, lower case

product brand name	SIRIUS ACT
product designation	Mushroom pushbuttons
design of the product	Complete unit
product type designation	3SU1
product line	Metal, shiny, 22 mm
manufacturer's article number	
<ul> <li>of supplied contact module at position 1</li> </ul>	<u>3SU1400-1AA10-1FA0</u>
<ul> <li>of the supplied holder</li> </ul>	<u>3SU1550-0AA10-0AA0</u>
<ul> <li>of the supplied actuator</li> </ul>	<u>3SU1050-1BA20-0AA0</u>
Enclosure	
number of command points	1
Actuator	
principle of operation of the actuating element	latching
product extension optional light source	No
color of the actuating element	red
material of the actuating element	plastic
shape of the actuating element	round
outer diameter of the actuating element	40 mm
marking of the actuating element	Any inscription, text in lower case
number of contact modules	1
type of unlocking device	pull-to-unlatch mechanism
number of switching positions	2
Front ring	
product component front ring	Yes
design of the front ring	Standard
material of the front ring	Metal, high gloss
color of the front ring	silver
Holder	
material of the holder	Plastic
Display	
number of LEDs	0
General technical data	
product function	
<ul> <li>positive opening</li> </ul>	Yes
<ul> <li>EMERGENCY OFF function</li> </ul>	No
<ul> <li>EMERGENCY STOP function</li> </ul>	No
product component light source	No
insulation voltage rated value	500 V
degree of pollution	3

type of voltage of the operating voltage	AC/DC
surge voltage resistance rated value	6 kV
protection class IP	IP66, IP67, IP69(IP69K)
of the terminal	
	IP20, clamping screw tightened
degree of protection NEMA rating shock resistance	1, 2, 3, 3R, 4, 4X, 12, 13
	cinusoidal half wayo 15g / 11 mg
according to IEC 60068-2-27 vibration resistance	sinusoidal half-wave 15g / 11 ms
according to IEC 60068-2-6	10 500 Hz: 5g
operating frequency maximum	1 800 1/h
mechanical service life (switching cycles) typical	500 000
electrical endurance (switching cycles) typical	10 000 000
thermal current	10 A
reference code according to IEC 81346-2	
continuous current of the C characteristic MCB	10 A; for a short-circuit current smaller than 400 A
continuous current of the quick DIAZED fuse link	10 A
continuous current of the DIAZED fuse link gG	10 A
Substance Prohibitance (Date)	10/01/2014
operating voltage	
• at AC	
— at 50 Hz rated value	5 500 V
— at 60 Hz rated value	5 500 V
• at DC rated value	5 500 V
Power Electronics	
contact reliability	One maloperation per 100 million (17 V, 5 mA), one maloperation per 10
	million (5 V, 1 mA)
Auxiliary circuit	
design of the contact of auxiliary contacts	Silver alloy
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
Connections/ Terminals	
tune of electrical conception of medulation and interview	Screw-type terminal
type of electrical connection of modules and accessories	
type of electrical connection of modules and accessories type of connectable conductor cross-sections	
	2x (0.5 0.75 mm²)
type of connectable conductor cross-sections	2x (0.5 0.75 mm²) 2x (1.0 1.5 mm²)
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> </ul>	
<ul> <li>type of connectable conductor cross-sections</li> <li>solid with core end processing</li> <li>solid without core end processing</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> )
<ul> <li>type of connectable conductor cross-sections</li> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> )
<ul> <li>type of connectable conductor cross-sections</li> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> )
<ul> <li>type of connectable conductor cross-sections</li> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14)
<ul> <li>type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> </li> <li>tightening torque of the screws in the bracket</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m
type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded with core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque with screw-type terminals	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions ambient temperature <ul> <li>during operation</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> <li>tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> </li> <li>Ambient conditions <ul> <li>aution during operation</li> <li>during storage</li> </ul> </li>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions ambient temperature <ul> <li>during operation</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> <li>tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> </li> <li>Ambient conditions <ul> <li>ambient temperature <ul> <li>during operation</li> <li>during storage</li> </ul> </li> </ul></li>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions ambient temperature <ul> <li>during operation</li> <li>during storage</li> </ul> environmental category during operation according to IEC 60721	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions ambient temperature <ul> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> Ambient conditions <ul> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> </ul> environmental category during operation according to IEC 60721 Installation/ mounting/ dimensions	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel)
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> <li>tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> </li> <li>Ambient conditions <ul> <li>ambient temperature <ul> <li>during operation</li> <li>during storage</li> </ul> </li> <li>environmental category during operation according to IEC 60721</li> </ul> </li> <li>Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> </ul> </li>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions ambient temperature <ul> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket tightening torque with screw-type terminals Ambient conditions ambient temperature <ul> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> </ul> height <ul> <li>width</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> Ambient conditions <ul> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> <li>height</li> <li>width</li> </ul> shape of the installation opening	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm round
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> <li>tightening torque of the screws in the bracket</li> <li>tightening torque with screw-type terminals</li> <li>Ambient conditions</li> <li>ambient temperature <ul> <li>during operation</li> <li>during storage</li> </ul> </li> <li>environmental category during operation according to IEC 60721</li> <li>Installation/ mounting/ dimensions</li> <li>fastening method <ul> <li>of modules and accessories</li> <li>height</li> <li>width</li> </ul> </li> <li>shape of the installation opening</li> <li>mounting diameter</li> <li>positive tolerance of installation diameter</li>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm round 22.3 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> Ambient conditions <ul> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> <li>height</li> <li>width</li> <li>shape of the installation opening</li> <li>mounting diameter</li> <li>positive tolerance of installation diameter</li> <li>mounting height</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm round 22.3 mm 0.4 mm 27.5 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> Ambient conditions <ul> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> <li>height</li> <li>width</li> <li>shape of the installation opening</li> <li>mounting diameter</li> <li>positive tolerance of installation diameter</li> <li>mounting height</li> <li>installation width</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm round 22.3 mm 0.4 mm 27.5 mm 40 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> Ambient conditions <ul> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> <li>height</li> <li>width</li> <li>shape of the installation opening</li> <li>mounting diameter</li> <li>positive tolerance of installation diameter</li> <li>mounting height</li> <li>installation depth</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm round 22.3 mm 0.4 mm 27.5 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> <li>tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> </li> <li>Ambient conditions <ul> <li>ambient temperature <ul> <li>during operation</li> <li>during storage</li> </ul> </li> <li>environmental category during operation according to IEC 60721</li> </ul> </li> <li>Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> <li>height</li> <li>width</li> <li>shape of the installation opening</li> <li>mounting diameter</li> <li>positive tolerance of installation diameter</li> <li>mounting height</li> <li>installation width</li> <li>installation depth</li> </ul></li>	2x (1.0 1.5 mm2)  2x (0.5 1.5 mm2)  2x (1,0 1,5 mm2)  2x (18 14)  1 1.2 N·m  0.8 0.9 N·m  -25 +70 °C  -40 +80 °C  3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel)  Front plate mounting  40 mm  40 mm  round  22.3 mm  0.4 mm  27.5 mm  40 mm
type of connectable conductor cross-sections <ul> <li>solid with core end processing</li> <li>solid without core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>at AWG cables</li> </ul> tightening torque of the screws in the bracket <ul> <li>tightening torque with screw-type terminals</li> </ul> Ambient conditions <ul> <li>ambient temperature</li> <li>during operation</li> <li>during storage</li> <li>environmental category during operation according to IEC 60721</li> </ul> Installation/ mounting/ dimensions <ul> <li>fastening method</li> <li>of modules and accessories</li> <li>height</li> <li>width</li> <li>shape of the installation opening</li> <li>mounting diameter</li> <li>positive tolerance of installation diameter</li> <li>mounting height</li> <li>installation depth</li> </ul>	2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> ) 2x (1,0 1,5 mm <sup>2</sup> ) 2x (18 14) 1 1.2 N·m 0.8 0.9 N·m -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no condensation in operation permitted for all devices behind front panel) Front plate mounting 40 mm 40 mm 40 mm 70 nd 22.3 mm 0.4 mm 27.5 mm 40 mm 71.7 mm

## https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SU1150-1BA20-1FA0-Z Y12

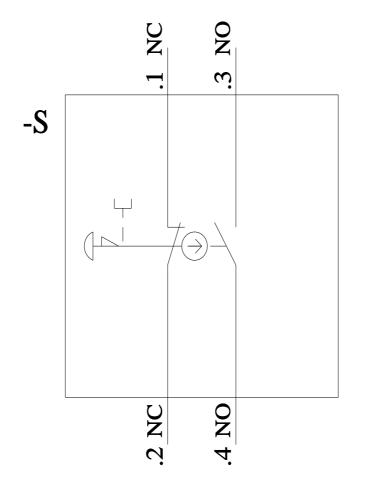
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SU1150-1BA20-1FA0-Z Y12

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

https://support.industry.siemens.com/cs/ww/en/ps/3SU1150-1BA20-1FA0-Z Y12

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3SU1150-1BA20-1FA0-Z Y12&lang=en



last modified:

1/27/2022 🖸