## SIEMENS

## Data sheet

## 3SU1100-1HB20-1CH0-Z X90



EMERGENCY STOP mushroom-type actuator, 22 mm, round, plastic, red, 40 mm, positive latching, according to EN ISO 13850, rotate-to-unlatch, with yellow backing plate, inscription: NOT-HALT, with holder, 1 NC, screw terminal, Z=20-unit packaging

product brand name	SIRIUS ACT
product designation	EMERGENCY STOP mushroom pushbuttons
design of the product	Complete unit
product type designation	3SU1
product line	Plastic, black, 22 mm
manufacturer's article number	
<ul> <li>of supplied contact module at position 1</li> </ul>	<u>3SU1400-1AA10-1CA0</u>
<ul> <li>of the supplied holder</li> </ul>	<u>3SU1550-0AA10-0AA0</u>
<ul> <li>of the supplied actuator</li> </ul>	<u>3SU1000-1HB20-0AA0</u>
<ul> <li>of supplied accessory</li> </ul>	<u>3SU1900-0BC31-0AT0</u>
Enclosure	
number of command points	1
Actuator	
design of the actuating element	positive latching
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
number of contact modules	1
type of unlocking device	rotate-to-unlatch mechanism
Front ring	
product component front ring	No
Holder	
material of the holder	Plastic
Display	
number of LED modules	0
General technical data	
product function	
positive opening	Yes
EMERGENCY OFF function	Yes
EMERGENCY STOP function	Yes
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
degree of protection NEMA rating	1, 2, 3, 3R, 4, 4X, 12, 13
shock resistance	
<ul> <li>according to IEC 60068-2-27</li> </ul>	sinusoidal half-wave 15g / 11 ms
<ul> <li>for railway applications according to EN 61373</li> </ul>	Category 1, Class B
vibration resistance	
<ul> <li>according to IEC 60068-2-6</li> </ul>	10 500 Hz: 5g
<ul> <li>for railway applications according to EN 61373</li> </ul>	Category 1, Class B
operating frequency maximum	600 1/h
mechanical service life (switching cycles) typical	300 000
electrical endurance (switching cycles) typical	300 000
thermal current	10 A
reference code according to IEC 81346-2	S
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
contact renability	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	0
	•
Connections/ Lerminals	
Connections/ Terminals	
type of electrical connection	Screw-type terminal
type of electrical connection • of modules and accessories	Screw-type terminal
type of electrical connection <ul> <li>of modules and accessories</li> </ul> <li>type of connectable conductor cross-sections</li>	
type of electrical connection • of modules and accessories type of connectable conductor cross-sections • solid with core end processing	2x (0.5 0.75 mm²)
type of electrical connection • of modules and accessories type of connectable conductor cross-sections • solid with core end processing • solid without core end processing	2x (0.5 0.75 mm²) 2x (1.0 1.5 mm²)
type of electrical connection • of modules and accessories type of connectable conductor cross-sections • solid with core end processing • solid without core end processing • finely stranded with core end processing	2x (0.5 0.75 mm <sup>2</sup> ) 2x (1.0 1.5 mm <sup>2</sup> ) 2x (0.5 1.5 mm <sup>2</sup> )
type of electrical connection • of modules and accessories type of connectable conductor cross-sections • solid with core end processing • solid without core end processing • finely stranded with core end processing • finely stranded without core end processing	2x (0.5 0.75 mm <sup>2</sup> ) 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> )
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables	2x (0.5 0.75 mm <sup>2</sup> ) 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)
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket	2x (0.5 0.75 mm <sup>2</sup> ) 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 electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables	2x (0.5 0.75 mm <sup>2</sup> ) 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)
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type	2x (0.5 0.75 mm <sup>2</sup> ) 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 electrical connection         • of modules and accessories         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 for auxiliary contacts with screw-type terminals         Safety related data	2x (0.5 0.75 mm <sup>2</sup> ) 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
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type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 %
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         • with low demand rate according to SN 31920         • with high demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN	2x (0.5 0.75 mm <sup>2</sup> ) 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 electrical connection         • of modules and accessories         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         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 %
type of electrical connection <ul> <li>of modules and accessories</li> </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> <li>tightening torque for auxiliary contacts with screw-type terminals</li> <li>Safety related data</li> <li>B10 value with high demand rate according to SN 31920</li> <li>proportion of dangerous failures             <ul> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> </ul> </li>	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 %
type of electrical connection <ul> <li>of modules and accessories</li> </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         <ul> <li>tightening torque of the screws with screw-type terminals</li> </ul> </li> <li>Safety related data         <ul> <li>B10 value with high demand rate according to SN 31920</li> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> </ul> </li> <li>Ambient conditions         <ul> <li>ambient temperature</li> </ul> </li>	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 100 FIT
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         Ambient conditions         ambient temperature         • during operation	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 100 FIT -25 +70 °C
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         during operation         • during operation         • during storage         environmental category during operation according to IEC	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 20 % 100 FIT -25 +70 °C -40 +80 °C 3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 95%, no
type of electrical connection         • of modules and accessories         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         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         during operation         • during operation         • during storage         environmental category during operation according to IEC 60721	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 20 % 100 FIT -25 +70 °C -40 +80 °C
type of electrical connection         • of modules and accessories         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         • finely stranded with core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure storage         e during operation         e during storage         environmental category during operation according to IEC 60721         Installation/ mounting/ dimensions	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 20 % 100 FIT -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 electrical connection <ul> <li>of modules and accessories</li> </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> <li>tightening torque for auxiliary contacts with screw-type terminals</li> <li>Safety related data</li> <li>B10 value with high demand rate according to SN 31920</li> <li>proportion of dangerous failures             <ul> <li>with low demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> </ul> </li> <li>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> </li> <li>Installation/ mounting/ dimensions         <ul> <li>fastening method</li> </ul> </li>	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 20 % 100 FIT -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 electrical connection         • of modules and accessories         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         • finely stranded with core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         Ambient conditions         ambient temperature         • during operation         • during storage         environmental category during operation according to IEC 60721         Installation/ mounting/ dimensions         fastening method         • of modules and accessories	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 100 FIT -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 Front plate mounting Front plate mounting
type of electrical connection         • of modules and accessories         type of connectable conductor cross-sections         • solid with core end processing         • solid without core end processing         • finely stranded with core end processing         • finely stranded without core end processing         • finely stranded without core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         • with high demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         Ambient conditions         ambient temperature         • during operation         • during storage         environmental category during operation according to IEC 60721         Installation/ mounting/ dimensions         fastening method         • of modules and accessories         height	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 20 % 100 FIT -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 Front plate mounting Front plate mounting 40 mm
type of electrical connection         • of modules and accessories         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         • finely stranded with core end processing         • at AWG cables         tightening torque of the screws in the bracket         tightening torque for auxiliary contacts with screw-type terminals         Safety related data         B10 value with high demand rate according to SN 31920         proportion of dangerous failures         • with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         failure rate [FIT] with low demand rate according to SN 31920         Ambient conditions         ambient temperature         • during operation         • during storage         environmental category during operation according to IEC 60721         Installation/ mounting/ dimensions         fastening method         • of modules and accessories	2x (0.5 0.75 mm <sup>2</sup> ) 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 100 000 20 % 20 % 100 FIT -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 Front plate mounting Front plate mounting

mounting diameter	22.3 mm	
positive tolerance of installation diameter	0.4 mm	
mounting height	46.4 mm	
installation width	75 mm	
installation depth	48.6 mm	
Accessories		
number of backing plates	1	
marking of backing plate	EMERGENCY-STOP	
color of backing plate	Yellow	
Certificates/ approvals		
Further information		
Information and Downloadcontor (Cataloga, Brooburge, )		

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=3SU1100-1HB20-1CH0-Z X90

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SU1100-1HB20-1CH0-Z X90 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3SU1100-1HB20-1CH0-Z X90

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3SU1100-1HB20-1CH0-Z X90&lang=en

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