



Figure similar

SIPLUS ET 200SP BU20-P12+A0+4B TX rail based on 6ES7193-6BP20-0BB1 with conformal coating, -40...+70 °C, OT4 with ST1/2 (+85 °C for 10 minutes), BU type B1, push-in terminals, without AUX terminals, new load group, WxH: 15 mm x 117 mm, with temperature acquisition

General information	
Product type designation	BU type B1
based on	<a href="#">6ES7193-6BP20-0BB1</a>
Supply voltage	
Rated value (DC)	See manual
<ul style="list-style-type: none"> <li>For P1 and P2 bus</li> <li>For AUX bus</li> <li>for process terminals</li> </ul>	24 V 24 V; Equal potential group to P1/P2 bus or PE 24 V
Rated value (AC)	See manual
<ul style="list-style-type: none"> <li>For P1 and P2 bus</li> <li>For AUX bus</li> <li>for process terminals</li> </ul>	230 V 230 V; Equal potential group to P1/P2 bus or PE 230 V
external protection for power supply lines	Yes
Mains filter	
<ul style="list-style-type: none"> <li>integrated</li> </ul>	No
Current carrying capacity	
up to 60 °C, max.	10 A
For P1 and P2 bus, max.	10 A
For AUX bus, max.	10 A
For process terminals, max.	5 A
Hardware configuration	
Automatic encoding	Yes
Slots	
<ul style="list-style-type: none"> <li>Number of slots</li> </ul>	1
Potential separation	
between backplane bus and supply voltage	Yes
between process terminals and supply voltage	Yes; Not applicable for process terminals 9 to 12
between power bus and supply voltage	Yes
Isolation	
Isolation tested with	2 545 V DC (type test) and according to EN 50155 (routine test)
Standards, approvals, certificates	
Railway application	
<ul style="list-style-type: none"> <li>EN 50121-3-2</li> <li>EN 50121-4</li> <li>EN 50121-5</li> <li>EN 50124-1</li> <li>EN 50125-1</li> </ul>	Yes; EMC for rail vehicles Yes; EMC for signal and telecommunications systems Yes; EMC for fixed installations and railway power supply equipment Yes; Railway applications - overvoltage category OV3; pollution degree PD2; UNm = 230 V AC Yes; Rail vehicles - see ambient conditions

- EN 50125-2
- EN 50125-3
- EN 50155
- EN 61373
- Fire protection acc. to EN 45545-2

Yes; Stationary electrical equipment - see ambient conditions  
 Yes; Signal and telecommunications systems - see ambient conditions;  
 vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)  
 Yes; Rail vehicles - temperature class OT4, ST1/ST2, horizontal mounting position  
 Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B  
 Yes; For proof of conformity, see Service & Support

#### Ambient conditions

<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul>	<p>-40 °C; = Tmin (incl. condensation/frost)          70 °C; = Tmax; +85 °C for 10 min (OT4, ST1/ST2 acc. to EN 50155)          -40 °C; = Tmin          50 °C; = Tmax</p>
<b>Altitude during operation relating to sea level</b>	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	<p>2 000 m          Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)</p>
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	<p>100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation</p>
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
<ul style="list-style-type: none"> <li>— Resistant to commercially available coolants and lubricants</li> </ul>	<p>Yes; Incl. diesel and oil droplets in the air</p>
<b>Use in stationary industrial systems</b>	
<ul style="list-style-type: none"> <li>— to biologically active substances according to EN 60721-3-3</li> <li>— to chemically active substances according to EN 60721-3-3</li> <li>— to mechanically active substances according to EN 60721-3-3</li> <li>— Against mechanical environmental conditions acc. to EN 60721-3-3</li> </ul>	<p>Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request          Yes; Class 3C4 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *          Yes; Class 3S4 incl. sand, dust, *          Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)</p>
<b>Use on land craft, rail vehicles and special-purpose vehicles</b>	
<ul style="list-style-type: none"> <li>— to biologically active substances according to EN 60721-3-5</li> <li>— to chemically active substances according to EN 60721-3-5</li> <li>— to mechanically active substances according to EN 60721-3-5</li> <li>— Against mechanical environmental conditions acc. to EN 60721-3-5</li> <li>— against mechanical environmental conditions in agriculture acc. to ISO 15003</li> </ul>	<p>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request          Yes; Class 5C3 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *          Yes; Class 5S3 incl. sand, dust; *          Yes; Class 5M2 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)          Yes; level 1 (Location LE) using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)</p>
<b>Usage in industrial process technology</b>	
<ul style="list-style-type: none"> <li>— Against chemically active substances acc. to EN 60654-4</li> <li>— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04</li> </ul>	<p>Yes; Class 3 (excluding trichlorethylene)          Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)</p>
<b>Remark</b>	
<ul style="list-style-type: none"> <li>— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> </ul>	<p>* The supplied plug covers must remain in place over the unused interfaces during operation!</p>
<b>Conformal coating</b>	
<ul style="list-style-type: none"> <li>• Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>• Protection against fouling acc. to EN 60664-3</li> <li>• Electronic equipment on rolling stock acc. to EN 50155</li> <li>• Military testing according to MIL-I-46058C, Amendment 7</li> <li>• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	<p>Yes; Class 2 for high reliability          Yes; Type 1 protection          Yes; Class PC2 protective coating acc. to EN 50155:2017          Yes; Discoloration of coating possible during service life          Yes; Conformal coating, Class A</p>
<b>Dimensions</b>	
Width	20 mm

Height	117 mm
Depth	35 mm
<b>Weights</b>	
Weight, approx.	48 g
<b>Other</b>	
Note:	for use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A, Online Support article 109736776

<b>Classifications</b>		
	<b>Version</b>	<b>Classification</b>
eClass	14	27-24-26-03
eClass	12	27-24-26-03
eClass	9.1	27-24-26-03
eClass	9	27-24-26-03
eClass	8	27-24-26-03
eClass	7.1	27-24-26-03
eClass	6	27-24-26-03
ETIM	10	EC001598
ETIM	9	EC001598
ETIM	8	EC001598
ETIM	7	EC001598
IDEA	4	3560
UNSPSC	15	32-15-17-04

**Approvals / Certificates**

**General Product Approval**

[Manufacturer Declaration](#)



[China RoHS](#)



**General Product Approval      EMV      Railway**



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