



Figure similar

SIPLUS S7-1200 CB 1241 RS 485 rail based on 6ES7241-1CH30-1XB0 with conformal coating, -25...+55 °C, OT1 with ST1/2 (+70 °C für 10 minutes), RS-485, terminal block, supports Freepport

General information	
Product type designation	CB 1241 RS 485
based on	<a href="#">6ES7241-1CH30-1XB0</a>
Input current	
from backplane bus 5 V DC, typ.	50 mA
Power loss	
Power loss, typ.	1.5 W
Interfaces	
Point-to-point connection	
• Cable length, max.	1 000 m
Integrated protocol driver	
— Freepport	Yes
— ASCII	Yes; Available as library function
— Modbus RTU master	Yes
— Modbus RTU device	Yes
— USS	Yes; Available as library function
Protocols	
Integrated protocols	
Freeport	
— Telegram length, max.	1 kbyte
— Bits per character	7 or 8
— Number of stop bits	1 (Standard), 2
— Parity	No parity (standard); even, uneven, mark (parity bit always 1); space (parity bit always 0)
3964 (R)	
— Telegram length, max.	1 kbyte
— Bits per character	7 or 8
— Number of stop bits	1 (Standard), 2
— Parity	No parity (standard); even, uneven, mark (parity bit always 1); space (parity bit always 0)
Modbus RTU master	
— Address area	1 through 49 999 (Standard Modbus addressing)
— max. number of devices	247; slave numbers 1 through 247, per MODBUS network segment maximum 32 devices, additional repeaters needed to expand the network to maximum configuration
protocols / Modbus RTU device / header	
— Address area	1 through 49 999 (Standard Modbus addressing)
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Isolation	

Isolation tested with	750 V DC (type test) and according to EN 50155 (routine test)
<b>Degree and class of protection</b>	
IP degree of protection	IP20
<b>Standards, approvals, certificates</b>	
<b>Railway application</b>	
<ul style="list-style-type: none"> <li>• EN 50121-3-2</li> <li>• EN 50121-4</li> <li>• EN 50124-1</li>   <li>• EN 50125-1</li> <li>• EN 50125-2</li> <li>• EN 50125-3</li>   <li>• EN 50155</li>   <li>• EN 61373</li> <li>• Fire protection acc. to EN 45545-2</li> </ul>	<p>Yes; EMC for rail vehicles</p> <p>Yes; EMC for signal and telecommunications systems</p> <p>Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 24 V DC</p> <p>Yes; Rail vehicles - see ambient conditions</p> <p>Yes; Stationary electrical equipment - see ambient conditions</p> <p>Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)</p> <p>Yes; Rail vehicles - temperature class OT1, ST1/ST2, horizontal mounting position</p> <p>Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B</p> <p>Yes; For proof of conformity, see Service &amp; Support</p>
<b>Ambient conditions</b>	
<b>Free fall</b>	
<ul style="list-style-type: none"> <li>• Fall height, max.</li> </ul>	0.3 m; five times, in product package
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul>	<p>-25 °C; = Tmin (incl. condensation/frost)</p> <p>60 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)</p> <p>-25 °C; = Tmin</p> <p>50 °C; = Tmax</p>
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	<p>-40 °C</p> <p>70 °C</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</p> <p>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>	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
<ul style="list-style-type: none"> <li>— Resistant to commercially available coolants and lubricants</li> </ul>	Yes; Incl. diesel and oil droplets in the air
<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> </ul>	<p>Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request</p> <p>Yes; Class 3C4 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 3S4 incl. sand, dust, *</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> </ul>	<p>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</p> <p>Yes; Class 5C3 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 5S3 incl. sand, dust; *</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)</p> <p>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>	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Conformal coating</b>	
<ul style="list-style-type: none"> <li>• Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>	Yes; Class 2 for high reliability

- Protection against fouling acc. to EN 60664-3
- Electronic equipment on rolling stock acc. to EN 50155
- Military testing according to MIL-I-46058C, Amendment 7
- Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

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

#### Mechanics/material

Enclosure material (front)  
 • Plastic

Yes

#### Dimensions

Width 38 mm  
 Height 62 mm  
 Depth 21 mm

#### Weights

Weight, approx. 40 g

#### Other

Note: for use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A, Online Support article 109736776

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