SIEMENS

Data sheet

6AG1321-7BH01-2AB0

SIPLUS S7-300 SM 321-20-pole -25...+70 °C with conformal coating Conformity with EN 50155 T1 Kat 1 KI A/B based on 6ES7321-7BH01-0AB0 . Digital input Isolated "16 DI; 24 V DC, 1x 20-pole," process interrupt, diagnostics, suitable for isochronous mode operation

Figure similar

Supply voltage	
Load voltage L+	
 Rated value (DC) 	24 V
 permissible range, lower limit (DC) 	20.4 V
• permissible range, upper limit (DC)	28.8 V
Input current	
from load voltage L+ (without load), max.	90 mA
from backplane bus 5 V DC, max.	130 mA
Power loss	
Power loss, typ.	4 W
Digital inputs	
Number of digital inputs	16
Input characteristic curve in accordance with IEC	Yes
61131, type 2	
Number of simultaneously controllable inputs	
horizontal installation	

— up to 60 °C, max.	16
•	
vertical installation	16
— up to 40 °C, max.	10
Input voltage	50
• Type of input voltage	DC
 Rated value (DC) 	24 V
• for signal "0"	-30 to +5V
● for signal "1"	13 to 30V
Input current	
● for signal "1", typ.	7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.1 / 0.5 / 3 / 15 / 20 ms
Cable length	
 shielded, max. 	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	
2-wire sensor	Yes
— permissible quiescent current (2-wire	2 mA
sensor), max.	
Isochronous mode Isochronous operation (application synchronized up	Yes
to terminal)	
Interrupts/diagnostics/status information	V/cc. Doromotorizable
Diagnostics function	Yes; Parameterizable
Alarms	Yes; Parameterizable
Diagnostic alarm	
Hardware interrupt	Yes; Parameterizable
Diagnostic messages	
• Wire-break	Yes; to I< 1 mA
Diagnostics indication LED	
• Group error SF (red)	Yes
 Status indicator digital input (green) 	Yes
Potential separation	
Potential separation digital inputs	
	No
Potential separation digital inputs	No 16
Potential separation digital inputs between the channels 	

Isolation Isolation tested with 500 V DC Standards, approvals, certificates CE mark Yes Us approval Yes; File E239877 RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Cost.R) Yes Use in hazardous areas Yes • ATEX Yes Railway application Yes; Sactions 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions Yes; Sactions 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient temperature during operation • min. • min. -25 °C • max. 70 °C Ambient temperature during storage/transportation • min. • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- altitude 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Use in stationary industrial systems 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request • to biologically active substances according to EN 80721-3-3 Yes; Class 524 mold, fungus and dry rot spores (with the exce	between different circuits	75 V DC/60 V AC	
Standards, approvals, certificates CE mark Yes UL approval Yes; File E239877 RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Cost-R) Yes Use in hazardous areas • • ATEX Yes Railway application Yes • EN 50155 Yes, Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions -25 °C Ambient temperature during operation -0 °C • min. -25 °C • max. 70 °C Ambient temperature during storage/transportation -40 °C • max. 70 °C Antitude during operation relating to sea level 5 000 m • installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- altitude 5 000 m • With condensation, tested in accordance with IEC 60068-2-38, max. 5 000 m • With condensation, tested in accordance with IEC 60068-2-38, max. 100 %; RH incl. condensation/firost (no commissioning under condensation conditions) • to biologicall	Isolation		
CE mark Yes UL approval Yes; File E239877 RCM (formerty C-TICK) Yes KC approval Yes EAC (formerty Gost-R) Yes Use in hazardous areas Yes • ATEX Yes Railway application Yes • EN 50155 Yes: Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155;2007 Ambient conditions	Isolation tested with	500 V DC	
CE mark Yes UL approval Yes; File E239877 RCM (formerty C-TICK) Yes KC approval Yes EAC (formerty Gost-R) Yes Use in hazardous areas Yes • ATEX Yes Railway application Yes • EN 50155 Yes: Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155;2007 Ambient conditions	Standards approvals certificates		
RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes Use in hazardous areas * • ATEX Yes Railway application * • EN 50155 Yes, Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions * Ambient temperature during operation * • min. -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation * • max. 70 °C Altitude during operation relating to sea level * • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure-altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax -10 K) at 795 hPa 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // SE Class 382 mold, fung		Yes	
KC approval Yes EAC (formerly Gost-R) Yes Use in hazardous areas Yes • ATEX Yes Railway application • • EN 50155 Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions • Ambient conditions -25 °C max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation • • max. 70 °C Altitude during operation relating to sea level • • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure-altitude 5 000 m • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Cass 382 mold, storage-ShPa (-1 000 m +2 000 m) // Tmin (Tmax -10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hP	UL approval	Yes; File E239877	
EAC (formerly Gost-R) Yes Use in hazardous areas Yes • ATEX Yes Railway application Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions -25 °C Ambient temperature during operation -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level -40 °C • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure-altitude 5 000 m • With condensation, tested in accordance with IEC 60068-2:38, max. 5 000 m, // Tmin (Tmax -20 K) at 565 hPa 560 hPa (+3 000 m +3 000 m) // Tmin (Tmax -20 K) at 565 hPa 540 hPa (+3 000 m +3 000 m) // Tmin (Tmax -20 K) at 565 hPa 540 hPa (+3 000 m +3 000 m) // Tmin (Tmax -20 K) at 565 hPa 540 hPa (+3 000 m +3 000 m) Relative humidity • With condensation, tested in accordance with IEC 60068-2:38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance • to biologically active substances according to EN 60721:3:3 Yes; Class 382 mold, fungus and dry rot spores (with the exception of fauna); Class 383 on request	RCM (formerly C-TICK)	Yes	
Use in hazardous areas Yes ATEX Yes Railway application -EN 50155 Yes; Sections 4, 5 and 12, no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions Ambient temperature during operation • min. -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation - • max. 70 °C Attitude during operation relating to sea level - • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure-attitude Tmin (Tmax - 1 140 hPa 795 hPa 658 hPa (+2 000 m +2 000 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) • With condensation, tested in accordance with IEC 60068-2-38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Use in stationary industrial systems Yes; Class 3B2 mold, fungus and dry not spores (with the exception of fauna); Class 3B3 on request • to biologically active substances according to EN 60721-3-3 Yes; Class 354 incl. sand, dust, * • to mechanically active substances according to EN 60721-3-3 Yes; Class 352 mold, fung	KC approval	Yes	
• ATEX Yes Railway application · • EN 50155 Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions · Ambient temperature during operation · • min. -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation - • min. -40 °C • max. 70 °C Altitude during operation relating to sea level - • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressureatitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-2 000 m +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m) // Zmax +5 00 m) // Zmax +5 00 m // Zmax +5 00	EAC (formerly Gost-R)	Yes	
Raikway application • EN 50155 Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient conditions Ambient temperature during operation • min. -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level -40 °C • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Installation altitude above sea level, max. 5 000 m • Installation altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-2 000 m +3 500 m) // Tmin (Tmax - 10 K) at 795 hPa (-58 hPa (+2 000 m +3 500 m) // Tmin (Tmax - 10 K) at 795 hPa (-58 hPa (+2 000 m +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) Relative humidity 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance - to biologically active substances according to EN 60721-3-3 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3S4 incl. sand, dust,	Use in hazardous areas		
• EN 50155 Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 Ambient temperature during operation -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level -40 °C • installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure-altitude 5 000 m min	• ATEX	Yes	
Category 1, Class A/B, EN 50155:2007 Ambient temperature during operation • min. -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level -40 °C • Installation altitude above sea level, max. 70 °C Altitude during operation relating to sea level Tmin Tmax at 1140 hPa 795 hPa (-1 000 m +2 000 m) // • Ambient air temperature-barometric pressure- altitude Tmin Tmax at 1140 hPa 795 hPa (-1 000 m +2 000 m) // • Mobient air temperature-barometric pressure- altitude Tmin Tmax at 1140 hPa 795 hPa (-1 000 m +2 000 m) // • Mobient air temperature-barometric pressure- altitude Tmin Tmax at 1140 hPa 795 hPa (-1 000 m +2 000 m) // • Mobient air temperature-barometric pressure- altitude Tmin Tmax at 1140 hPa 795 hPa (-1 000 m +2 000 m) // • Installation altitude above sea level, max. 500 m • Category 1, Class 3B2 mold, fungus and dry rot spores (with the exception of fauna): Class 3B3 on request • to biologically active substances according to EN 60721-3-3 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna): Class 3B3 on request • to mechanically active substances acc	Railway application		
Ambient temperature during operation -25 °C • max. 70 °C; = Tmax; 60 °C @ UL/CUL, ATEX and FM use Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level -40 °C • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- altitude 5 000 m • Ambient air temperature-barometric pressure- altitude 5 000 m • Mile condensation, tested in accordance with IEC 60068-2-38, max. 5 000 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Ves: Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request • to biologically active substances according to EN 60721-3-3 Yes; Class 3S4 incl. sant, dust, * according to EN 60721-3-3 Use on land craft, rail vehicles and special-purpose vehicles Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request — to biologically active substances according to EN 60721-3-3 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request	• EN 50155		
 min. -25 °C max. 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use Ambient temperature during storage/transportation min. -40 °C max. 70 °C Altitude during operation relating to sea level Installation altitude above sea level, max. Ambient air temperature-barometric pressure- altitude Installation altitude above sea level, max. Ambient air temperature-barometric pressure- altitude Installation altitude above sea level, max. Ambient air temperature-barometric pressure- altitude Installation altitude above sea level, max. Mitted by a trys hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 558 hPa (-2 000 m +3 000 m) Relative humidity With condensation, tested in accordance with IEC 60068-2-38, max. To biologically active substances according to EN 60721-3-3 Use on land craft, rail vehicles and special-purpose vehicles <	Ambient conditions		
Imax.70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM useAmbient temperature during storage/transportation-40 °CImin40 °CImax.70 °CAltitude during operation relating to sea level	Ambient temperature during operation		
Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level • • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- altitude 5 000 m • Ambient air temperature-barometric pressure- altitude 5 000 m • Mith condensation, tested in accordance with IEC 60068-2-38, max. 5 000 m) Resistance 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RI incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RI incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RI incl. condensation/frost (no commissioning under condensation conditions) I to biologically active substances according to EN 60721-3-3 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request - to biologically active substances according to EN 60721-3-3 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request - to biol	• min.	-25 °C	
 min. -40 °C max. 70 °C Altitude during operation relating to sea level Installation altitude above sea level, max. Ambient air temperature-barometric pressureatitude Ambient air temperature-barometric pressureatitude S 000 m Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) Relative humidity With condensation, tested in accordance with IEC 60068-2-38, max. Resistance Use in stationary industrial systems to biologically active substances according to EN 60721-3-3 To chemically active substances according to EN 60721-3-3 Ves; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * to mechanically active substances according to EN 60721-3-3 Ves; Class 3S4 incl. sand, dust, * to biologically active substances according to EN 60721-3-3 Ves; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request 	• max.	70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use	
Image: max.70 °CAltitude during operation relating to sea level5 000 m• Installation altitude above sea level, max.5 000 m• Ambient air temperature-barometric pressure- altitude5 000 m• Mitice humidityTmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)Relative humidity100 %; RH incl. condensation/frost (no commissioning under condensation conditions)Resistance100 %; RH incl. condensation/frost (no commissioning under condensation conditions)Use in stationary industrial systems100 %; RH incl. condensation/frost (no commissioning under condensation conditions)• to biologically active substances according to EN 60721-3-3Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request• to mechanically active substances according to EN 60721-3-3Yes; Class 3S4 incl. sand, dust, *• to biologically active substances according to EN 60721-3-3Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request• to biologically active substances according to EN 60721-3-3Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request• to biologically active substances according to EN 60721-3-5Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request	Ambient temperature during storage/transportation		
Altitude during operation relating to sea level Installation altitude above sea level, max. Ambient air temperature-barometric pressure- altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) Relative humidity 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Use in stationary industrial systems 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) — to biologically active substances according to EN 60721-3-3 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request — to mechanically active substances according to EN 60721-3-3 Yes; Class 34 incl. sand, dust, * — to biologically active substances according to EN 60721-3-3 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request — to biologically active substances according to EN 60721-3-3 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request	• min.	-40 °C	
 Installation altitude above sea level, max. Ambient air temperature-barometric pressure- altitude Ambient air temperature-barometric pressure- altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) Relative humidity With condensation, tested in accordance with IEC 60068-2-38, max. Resistance Use in stationary industrial systems to biologically active substances according to EN 60721-3-3 To mechanically active substances according to EN 60721-3-3 Use on land craft, rail vehicles and special-purpose vehicles to biologically active substances according to EN 60721-3-5 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request 	• max.	70 °C	
 Ambient air temperature-barometric pressure- altitude Ambient air temperature-barometric pressure- altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m) Relative humidity With condensation, tested in accordance with IEC 60068-2-38, max. Coordensation conditions) Resistance Use in stationary industrial systems to biologically active substances according to EN 60721-3-3 to chemically active substances according to EN 60721-3-3 to mechanically active substances according to EN 60721-3-3 Ves; Class 3S4 incl. sand, dust, * Ves; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); class 3S4 incl. sand, dust, * To biologically active substances according to EN 60721-3-3 Ves; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); class 5B3 on request Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request 	Altitude during operation relating to sea level		
altitudeTmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)Relative humidityImage: Transmitter of the test of te	 Installation altitude above sea level, max. 	5 000 m	
 With condensation, tested in accordance with IEC 60068-2-38, max. Resistance Use in stationary industrial systems to biologically active substances according to EN 60721-3-3 to mechanically active substances according to EN 60721-3-3 Ves; Class 3S4 incl. sand, dust, * Yes; Class 3S4 incl. sand, dust, * Use on land craft, rail vehicles and special-purpose vehicles to biologically active substances according to EN 60721-3-5 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 3S4 incl. sand, dust, * 		Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5	
IEC 60068-2-38, max.condensation conditions)ResistanceUse in stationary industrial systems— to biologically active substances according to EN 60721-3-3Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request— to chemically active substances according to EN 60721-3-3Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-3Yes; Class 3S4 incl. sand, dust, *Use on land craft, rail vehicles and special-purposeYes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request— to biologically active substances according to EN 60721-3-3Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request	Relative humidity		
Use in stationary industrial systems — to biologically active substances according to EN 60721-3-3 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request — to chemically active substances according to EN 60721-3-3 Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		· · · · ·	
 to biologically active substances according to EN 60721-3-3 to chemically active substances according to EN 60721-3-3 to mechanically active substances according to EN 60721-3-3 Ves; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 3S4 incl. sand, dust, * Ves; Class 3S4 incl. sand, dust, * Ves; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request 	Resistance		
to EN 60721-3-3exception of fauna); Class 3B3 on request— to chemically active substances according to EN 60721-3-3Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-3Yes; Class 3S4 incl. sand, dust, *Use on land craft, rail vehicles and special-purpose vehiclesYes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request	Use in stationary industrial systems		
to EN 60721-3-352 (severity degree 3); *- to mechanically active substances according to EN 60721-3-3Yes; Class 3S4 incl. sand, dust, *Use on land craft, rail vehicles and special-purpose vehiclesYes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request			
according to EN 60721-3-3 Use on land craft, rail vehicles and special-purpose vehicles — to biologically active substances according to EN 60721-3-5 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request			
- to biologically active substances according to EN 60721-3-5 Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request	-	Yes; Class 3S4 incl. sand, dust, *	
to EN 60721-3-5 exception of fauna); Class 5B3 on request	Use on land craft, rail vehicles and special-purpose vehicles		
— to chemically active substances according Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155			
to EN 60721-3-5 (ST2); *			

 — to mechanically active substances according to EN 60721-3-5 	Yes; Class 5S3 incl. sand, dust; *
Use on ships/at sea	
 — to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
 — to chemically active substances according to EN 60721-3-6 	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); *
 — to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *
Remark	
 — Note regarding classification of environmental conditions acc. to EN 60721 	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high availability
 Electronic equipment on rolling stock acc. to EN 50155 	Yes; Class PC2 protective coating acc. to EN 50155:2017
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life
 Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	Yes; Conformal coating, Class A
Connection method	
required front connector	20-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	200 g
last modified:	12/14/2018