## SIEMENS

## Data sheet

## 6AG2232-4HD32-1XB0



SIPLUS S7-1200 SM 1232 T1 rail based on 6ES7232-4HD32-0XB0 with conformal coating, -25...+60 °C, OT1 with ST1/2 (+70 °C für 10 minutes), S7-1200, analog output, SM 1232, 4 AQ, +/-10 V, 14-bit resolution, or 0-20 mA, 13-bit resolution:

Figure similar

General information	
Product type designation	SM 1232 AQ 4x 14 bit
Supply voltage	
Rated value (DC)	24 V
Input current	
Current consumption, typ.	45 mA
from backplane bus 5 V DC, typ.	80 mA
Power loss	
Power loss, typ.	1.5 W
Analog outputs	
Number of analog outputs	4; Current or voltage
Output ranges, voltage	
• -10 V to +10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes
Load impedance (in rated range of output)	
<ul> <li>with voltage outputs, min.</li> </ul>	1 000 Ω
<ul> <li>with current outputs, max.</li> </ul>	600 Ω
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign), max.</li> </ul>	14 bit; Voltage: 14 bit; Current : 13 bit
Errors/accuracies	
Temperature error (relative to output range), (+/-)	25 °C ±0.3%, to 55 °C ±0.6% total measurement range
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	0.3 %
<ul> <li>Current, relative to output range, (+/-)</li> </ul>	0.3 %
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 =	interference frequency
<ul> <li>Common mode voltage, max.</li> </ul>	12 V
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
<ul> <li>Monitoring the supply voltage</li> </ul>	Yes
• Wire-break	Yes
Short-circuit	Yes
Diagnostics indication LED	

	<ul> <li>for status of the outputs</li> </ul>	Yes
Instantion         Production           Inclusion issued with         750 V DC (type test) and according to EN 50156 (couline test)           IP degree and class of protection         IP degree and class of protection           IP degree and class of protection         IP degree and class of protection           IP degree and class of protection         IP degree and class of protection           IP degree of protection         IP degree and class of protection           IP degree of protection         Ves.           Rel Not 32 application         Yes.           IP degree of protection         Yes.           Rel Not 32 application         Yes.           IP to 121-1         Yes.           IP to 122-1         Yes.           IP to 122-2         Yes.           IP to 122-3         Yes.           IP to 123-3         Yes.           IP to 123-3         Yes.           IP to 123-3         Yes.           IP to 1373         Yes.           IP to 1373         Yes.		
Isolation isside with       750 V DC (type test) and according to EN 50155 (routine test)         Digraduant d class of production       IP 300         Isolation is and class of production       IP 300         Standards, approxist, calificates       Ves         CE mark       Yes         Raikway application       Yes         EN 50121-4       Yes, EMC for rail whicks         EN 50122-1       Yes, EMC for rail whicks         EN 50122-1       Yes, EMC for rail which as the antibution conditions systems         Yes, Rail whicks - which as the antibution option coalse of theose (1 m to 5 m         EN 50125-1       Yes, Rail whicks - which as the antibution option coalse of theose (1 m to 5 m         EN 50155       Yes, Rail whicks - which as the antibution conditions:         EN 50155       Yes, Rail whicks - which as the antibution conditions:         EN 50155       Yes, Rail whicks - which as the antibution option coalse of theose (1 m to 5 m         En 610100       -25 °C; = Trim (ncl. condensation/frost)         Imak       -3 min, for C         Ambient conditions       -25 °C; = Trim (ncl. condensation/frost)         Imak       -30 °C; Trimak - 70 °C         Ambient installation, min, for C       -25 °C; = Trim (ncl. condensation/frost)         Imak       -25 °C; = Trim         Imak       1000 h		
Degree and class of protection         UP degree of protection           IP degree of protection         IP 20           Standards, application         Yes           A protection         IP 20           Standards, application         Yes           E M 50121-3         Yes           E N 50121-4         Yes           E N 50121-1         Yes           E N 50125-1         Yes           E N 50125-2         Yes           E N 50125-3         Yes           E N 50125-3         Yes           E N 50125-3         Yes           E N 50155         Yes           File protection acc: to EN 4554-2         Yes           Yes         Yes           Ambient conditions         Yes           Price fail         Order max           Ambient temperature datas         Order max           Ambient temperature data gereating         Yes           Ambient temperature data gereating         Class A/B           Yes         Yes           Ambient temperature data gereating         Class A/B           Yes         Yes           Ambient temperature data gereating to sea level         Storage/Tamsport, mix           Ambient temperature data gereating to sea level		750 V DC (type test) and according to EN 50155 (routine test)
IP degree of protection     IP20       Standards, approvals, certificates     CE maix       CE maix     Yes       Raikway application     Yes       EN 60121-3.2     Yes. EMC for rail vehicles       EN 60121-1     Yes. EMC for rail vehicles       EN 60125-1     Yes. EMC for rail vehicles       EN 60125-1     Yes. Stationary electrical equipment - see ambient conditions       Ves. Rail vehicles - see ambient conditions     Yes. For proof of conformity, see Service & Support       Ambient conditions     Yes. For proof of conformity, see Service & Support       Ambient conditions     Yes. For proof of conformity, see Service & Support       Ambient conditions max.     0.3 m: five times, in product package       Ambient conditions     Yes. For proof of conformity, see Service & Support       Ambient temperature during operation		
Standards, approvals, certificates         Yes           CE mak         Yes           Raiway application         Yes           • EN 60121-3         Yes, EMC for rail vehicles           • EN 60121-1         Yes, EMC for signal and telecommunications systems           • EN 60125-1         Yes, Raiway applications - overvoltage category OXP, politication export of the SK (1) Min 0 = 24 Y DC           • EN 60125-2         Yes, Standary decirction explored on the station of the data signal and telecommunications systems - see amblent conditions.           • EN 60125-3         Yes, Standary decirction explored on toutide of tracks (1 m to 3 m away from track).           • EN 60155         Yes, For proof of conformity, see Service & Support           • EN 60154         Yes, For proof of conformity, see Service & Support           Ambient conditions         Yes, For proof of conformity, see Service & Support           • Fine protection ac: to EN 45545-2         Yes, For proof of conformity, see Service & Support           • Ambient temperature during operation         -0.3 m; five times, in product package           • Initial statistion, min.         -25 °C; = Tmin (incl. condensation/frost)           • writical installation, min.         -26 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc: to EN 50155)           • vertical installation, min.         -26 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc: to EN 50155)           • writical installatio		IP20
CE mark         Yes           Relatively application         • EN 60121-3-2         Yes, EMC for rail vehicles           • EN 60121-4         Yes, EMC for rail vehicles         Yes, EMC for rail vehicles           • EN 60121-1         Yes, EMC for rail vehicles         Yes, EMC for rail vehicles           • EN 60125-1         Yes, EMC for rail vehicles         Yes, EMC for rail vehicles           • EN 60125-2         Yes, Statonary electrical equipment - see ambient conditions           • EN 60125-3         Yes, Statonary electrical equipment - see ambient conditions           • EN 60155         Yes, Rail vehicles - see ambient conditions           • EN 60155         Yes, Rail vehicles - see ambient conditions           • EN 6173         Yes, Rail vehicles - see ambient conditions           • EN 6173         Yes, Rail vehicles - temperature class OT1, ST1/ST2, horizontal mountaing position           • File protection acc: to EN 45545-2         Yes, For proof of conformity, see Service & Support           Ambient conditions         • Stationary electrical exclusion of taxis, and the second accc.           • File protection acc: to EN 45545-2         Yes, For proof of conformity, see Service & Support           Ambient conditions         • Statistical installation, min.         - 25 °C; = Tmin (incl. condensation/foot)           • max.         • The protection acc: to EN 50155)         - 25 °C; = Tmax + 70 °C for	5	11 20
Pailway spellcation       4         • H 50121-3-2       4         • H 50121-3-2       Yes: EMC for rail vehicles         • EN 50124-1       Yes: EMC for signal and telecommunications systems         • EN 50125-1       Yes: Railway applications - overvoltage category OV2; pollution degree         • EN 50125-2       Yes: Stationary electrical equipment - see ambient conditions         • EN 50125-3       Yes: Stationary electrical equipment - see ambient conditions         • EN 50155       Yes: Stationary electrical equipment - see ambient conditions         • EN 50155       Yes: Stationary electrical equipment - see ambient conditions         • EN 50155       Yes: For proof of conformity, see Service & Support         • File protection acc. to EN 45545-2       Ambient conditions         • File protection acc. to EN 45545-2       Yes: For proof of conformity, see Service & Support         • File protection acc. to EN 45545-2       Yes: For proof of conformity, see Service & Support         • File protection acc. to EN 45545-2       Yes: For proof of conformity, see Service & Support         • min.       -25 °C; = Tmin         • writical installation, min.       -25 °C; = Tmin         • writical installation attrice acturing storage/transport, max.       00 °C		Vee
<ul> <li>EN 50121-32</li> <li>Yes: EMC for rail vehicles</li> <li>EN 50121-41</li> <li>Yes: EMC for rail vehicles</li> <li>EN 50124-11</li> <li>Yes: EMC for rail vehicles</li> <li>EN 50125-1</li> <li>Yes: Rail vehicles - see ambient conditions</li> <li>EN 50125-2</li> <li>Yes: Stationary electrical equipment - see ambient conditions</li> <li>EN 50125-3</li> <li>Yes: Stationary electrical equipment - see ambient conditions</li> <li>EN 50125-3</li> <li>Yes: Stationary electrical equipment - see ambient conditions</li> <li>EN 50125-3</li> <li>Yes: Stationary electrical equipment - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m avery from track)</li> <li>EN 50155</li> <li>Yes; Rail vehicles - see ambient conditions; vibrations and shocks: Category 1 Class A/B</li> <li>File protection acc. to EN 45545-2</li> <li>Yes: Rail vehicles - vibrations and shocks: Category 1 Class A/B</li> <li>File protection acc. to EN 45545-2</li> <li>Yes: Rail vehicles - vibrations and shocks: Category 1 Class A/B</li> <li>File protection acc. to EN 45545-2</li> <li>Yes: Category 1 Class A/B</li> <li>Yes: Class 3B/B Class A/B<td></td><td>Tes</td></li></ul>		Tes
EN 50121-4     Yes: EMC for signal and telecommunications systems       EN 5012-1     Yes: Railway applications - ownerotaging category OV2s pollution degree       PD2; rated surge voltage UNI = 0.5 kV; UNI = 2.4 V DC       EN 50125-1     Yes: Rail vehicles - see ambient conditions       EN 50125-2     Yes: Signal and telecommunications systems - see ambient conditions       Vers. Signal and telecommunications systems - see ambient conditions     Yes: Rail vehicles - see ambient conditions       EN 50125-1     Yes: Signal and telecommunications systems - see ambient conditions       Vers. Rail vehicles - temperature class OT1, STI/ST2, horizontal mounting position     Ambient conditions       Free fail     - Fail height, max.     0.3 m: five times, in product package       Ambient conditions     - C: = Tmax; +70 °C for 10 min (OT1, STI/ST2 acc. to EN 50155)       • vertical installation, min.     -25 °C; = Tmin (Incl. condensation/frost)       • max.     -60 °C; = Tmax;       Ambient temperature during stragetransportation     -40 °C       • min.     -40 °C       • max.     70 °C       Abit possible network sea level, max.     100 b Pa       Ambient temperature during stragetransportation     -40 °C       • min.     -40 °C       • max.     70 °C       • Storage/transport, min.     -60 °C P       • Storage/transport, min.     -60 °C P       • Storage/transp		Voc: EMC for roll vehicles
<ul> <li>EN 50124-1</li> <li>Yes, Railway applications - overwitage categor, OVZ, polution degree PC 2000</li> <li>EN 50125-1</li> <li>Yes, Stationary electrical equipment - see ambient conditions Ves, Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)</li> <li>EN 50125-3</li> <li>Yes, Rail vehicles - temperature dates OT1, STVST2, horizontal mounting position EN 61373</li> <li>Yes, Rail vehicles - temperature dates OT1, STVST2, horizontal mounting position EN 61373</li> <li>Yes, Rail vehicles - vibrations and shocks: Category 1 Class A/B Yes, Rail vehicles - vibrations and shocks: Category 1 Class A/B Yes, Rail vehicles - vibrations and shocks: Category 1 Class A/B Yes, Rail vehicles - vibrations and shocks: Category 1 Class A/B Yes, Rail vehicles - vibrations and shocks: Category 1 Class A/B Yes, Category 1 Class A/B Yes, Trans, YP 0° Clor 10 min (OT1, ST1/ST2, aoc. to EN 50155) • vertical installation, min. • vertical installation, max. • 0° C; = Tmax</li> <li>Ambient temperature during storage/transportation • min. • ordical installation, max. • 0° C; = Tmax</li> <li>Ambient temperature during storage/transportation • min. • ordical installation, max. • 0° C</li> <li>installation altitude above sea level • Installation altitude above sea level • Ordical installation • With contensation, tested in accordance with IEC coolaris and lubricarits • Periodicarits: • Periodicarits: •</li></ul>		
PD2; rated skrige voltage UNI = 0.5 KV; UNIT = 24 V DC         • EN 50125-1       Yes; Rail vehicles - see ambient conditions         • EN 50125-2       Yes; Stationary electrical equipment - see ambient conditions;         • EN 50125-3       Yes; Rail vehicles - temperature class OT1, ST1/ST2, horizontal mountains and shocks: Application point custade of tracks (1 m to 3 m every from track)         • EN 50155       Yes; Rail vehicles - temperature class OT1, ST1/ST2, horizontal mountains and shocks: Category 1 Class AVB         • Fire protection acc, to EN 45545-2       Yes; For proof of conformity, see Service & Support         Anbient conditions       -         • Fail height, max.       0.3 m; five times, in product package         Ambient conditions min.       -25 °C; = Tmin (incl. condensation/frost)         • min.       -25 °C; = Tmin (incl. condensation/frost)         • wortical installation, min.       -25 °C; = Tmin         • vertical installation, min.       -25 °C; = Tmin         • wortical installation, max.       60 °C; = Tmax; * 70 °C for 10 min (OT1, ST1/ST2 acc, to EN 50155)         • origitariansport, min.       -40 °C         • max.       70 °C         Ambient conditiona 800068-2-13       -25 °C; = Tmin         • Storage/transport, min.       660 hPa         • Installation altitude above see level, max.       1080 hPa         Attlicted during operation r		-
• EN 50125-2       Yes: Stationary electrical equipment - see ambient conditions;         • EN 50125-3       Yes: Signal and telecommunications systems - see ambient conditions;         • EN 50155       Yes: Rail vehicles - temperature class OT1, ST1/ST2, horizontal mount track)         • EN 61373       Yes; Rail vehicles - temperature class OT1, ST1/ST2, horizontal mount track)         • EN 61373       Yes; Rail vehicles - temperature class OT1, ST1/ST2, horizontal mount track)         • EN 61373       Yes; Rail vehicles - temperature class OT1, ST1/ST2, horizontal mount track)         • File protection acc, to EN 45545-2       Yes: For proof of conformity, see Service & Support         Ambient conditions		
• EN 50125-3       Yes: Signal and telecommunications systems - see ambient conditions: waw from track)         • EN 50155       Yes: Rail vehicles - temperature class OT1, ST1/ST2, horizontal mounting position         • EN 61373       Yes: Rail vehicles - temperature class OT1, ST1/ST2, horizontal mounting position         • EN 61373       Yes: Rail vehicles - vehrations and shocks: Category 1 Class AB Yes: For proof of conformity, see Service & Support         Ambient conditions       -         • Free fail       -         • Fail height, max.       0.3 m; five times, in product package         Ambient temperature during operation       -         • min.       -25 °C; = Tmin (ncl. condensation/frost)         • min.       -25 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)         • vertical installation, min.       -60 °C         • vertical installation, min.       -40 °C         • min.       -40 °C         • min.       -40 °C         • min.       -100 °C         • max.       70 °C         Altride during storage/transport.min.       660 hPa         • Storage/transport, max.       1080 hPa         • Mithe during apperature-barometric pressure- atitude       100 %; RH incl. condensation / frost (no commissioning in bedewed stab), horizontal installation         • Mithe durine ant tested in accordance with IEC 000068 2	• EN 50125-1	Yes; Rail vehicles - see ambient conditions
• EN 50125-3       Yes: Signal and telecommunications systems - see ambient conditions: waw from track)         • EN 50155       Yes: Rail vehicles - temperature class OT1, ST1/ST2, horizontal mounting position         • EN 61373       Yes: Rail vehicles - temperature class OT1, ST1/ST2, horizontal mounting position         • EN 61373       Yes: Rail vehicles - vehrations and shocks: Category 1 Class AB Yes: For proof of conformity, see Service & Support         Ambient conditions       -         • Free fail       -         • Fail height, max.       0.3 m; five times, in product package         Ambient temperature during operation       -         • min.       -25 °C; = Tmin (ncl. condensation/frost)         • min.       -25 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)         • vertical installation, min.       -60 °C         • vertical installation, min.       -40 °C         • min.       -40 °C         • min.       -40 °C         • min.       -100 °C         • max.       70 °C         Altride during storage/transport.min.       660 hPa         • Storage/transport, max.       1080 hPa         • Mithe during apperature-barometric pressure- atitude       100 %; RH incl. condensation / frost (no commissioning in bedewed stab), horizontal installation         • Mithe durine ant tested in accordance with IEC 000068 2	• EN 50125-2	Yes; Stationary electrical equipment - see ambient conditions
• EN 61373       Yes: Rail vehicles - vibrations and shocks: Category 1 Class A/B         • Fire protection acc. to EN 45545-2       Yes: For proof of conformity, see Service & Support         Ambient conditions       -         Free fail       -         • Fail height, max.       0.3 m; five times, in product package         Ambient temperature during operation       -         • inin.       -25 °C; = Tmin (incl. condensation/frost)         • vertical installation, min.       -25 °C; = Tmia         • vertical installation, max.       60 °C; = Tmax         Ambient temperature during storage/transportation       -         • min.       -40 °C         • max.       70 °C         Ambient temperature during to sea level       -         • oftorage/transport, max.       1 080 hPa         • storage/transport, max.       1 080 hPa         • storage/transport, max.       2 000 m         • which are temperature-barometric pressure- atitude       Tmin Trax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)         • Nationalision and shocks: **       2 000 m         • Nationalision and shocks: **       -************************************	• EN 50125-3	Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m
Fire protection acc. to EN 45545-2       Yes; For proof of conformity, see Service & Support         Ambient conditions       Free fail         • Fail height, max.       0.3 m; five times, in product package         Ambient temperature during operation       -25 °C; = Tmin (incl. condensation/frost)         • inin.       -25 °C; = Tmin (incl. condensation/frost)         • evirical installation, min.       -25 °C; = Tmin 50 °C; = Tmax         • evirical installation, max.       50 °C; = Tmin 50 °C; = Tmi	• EN 50155	
Amblent conditions         Free fail <ul> <li> <ul> <li></li></ul></li></ul>	• EN 61373	Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B
Free fail <ul> <li>Free fail</li> <li>Fail height, max.</li> <li>Call height, max.</li> <li>Single Control of the previous of the previ</li></ul>	• Fire protection acc. to EN 45545-2	Yes; For proof of conformity, see Service & Support
• Fall height, max.       0.3 m; five times, in product package         Ambient temperature during operation       -25 °C; = Tmin (incl. condensation/frost)         • min.       60 °C; = Tmax, +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)         • vertical installation, min.       -25 °C; = Tmin         • vertical installation, max.       50 °C; = Tmax         Ambient temperature during storage/transportation       -40 °C         • min.       -40 °C         • max.       70 °C         Arbient temperature during operation relating to sea level       -         • Storage/transport, min.       60 0 hPa         • Storage/transport, max.       1080 hPa         Altitude during operation relating to sea level       -         • Installation altitude above sea level, max.       2 000 m         • Numient air temperature-barometric pressure- altitude       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Relative humidity       -       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         • Resistance       -       Coolants and lubricants         - Resistant to commercially available coolants and lubricants       Yes; Class 382 mold, fungus and dry rot spores (with the exception of fauna); Class 383 on request         - to belologically active substances according to EN 60721-3.3<	Ambient conditions	
Ambient temperature during operation       -25 °C; = Tmin (incl. condensation/frost)         • min.       -25 °C; = Tmin (incl. condensation/frost)         • vertical installation, min.       -25 °C; = Tmin         • vertical installation, max.       60 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)         • vertical installation, max.       50 °C; = Tmax         Ambient temperature during storage/transportation       -40 °C         • min.       -40 °C         • max.       70 °C         Air pressure acc. to IEC 60068-2-13       660 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max.       1080 hPa         Altitude during operation relating to sea level       -         • Installation altitude above sea level, max.       2 000 m         • Ambient air temperature-barometric pressure- altitude       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         • With condensation, tested in accordance with IEC 60082-328, max.       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         • The 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 60721-3.4       Yes; Class SB2 mold, fungus and dry rot spores (with the exc	Free fall	
<ul> <li>min.</li> <li>-25 °C; = Tmin (incl. condensation/frost)</li> <li>max.</li> <li>60 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)</li> <li>-25 °C; e Tmin</li> <li>vertical installation, min.</li> <li>-25 °C; e Tmin</li> <li>S0 °C; = Tmax</li> <li>Ambient temperature during storage/transportation</li> <li>max.</li> <li>70 °C</li> <li>Air pressure acc. to IEC 60068-2-13</li> <li>Storage/transport, max.</li> <li>1080 hPa</li> <li>Storage/transport, max.</li> <li>1080 hPa</li> <li>Altitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> <li>2000 m</li> <li>Air pressure acc. to IEC 60068-2-13</li> <li>Storage/transport, max.</li> <li>1080 hPa</li> <li>Altitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> <li>Altitude</li> <li>Altitude</li> <li>Altitude</li> <li>Altitude</li> <li>Altitude</li> <li>Altitude</li> <li>Storage/transport, max.</li> <li>100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>Altitude store sea coording to face ordinate with IEC 6N068-2-38, max.</li> <li>Altitude store substances according to face; Incl. diesel and oil droplets in the air</li> <li>and lubricants</li> <li>Ves; Class 382 mold, fungus and dry rot spores (with the exception of fauna); Class 383 or request</li> <li>Ves; Class 382 mold, fungus and dry rot spores (with the exception of fauna); Class 583 or request</li> <li>Ves; Class 582 mold, fungus and dry rot spores (with the exception of fauna); Class 583 or request</li> <li>Ves hof0721-3-3</li> <li>Ves: Class 582 mold, fungus and dry rot spores (with the exception of fauna); Class 583 more quest</li> <li>Ves: No721-3-3</li> <li>Ves: Class 582 mold, fungus and dry rot spores (with</li></ul>		0.3 m; five times, in product package
<ul> <li>max.</li> <li>60 °C; = Tmax, +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)</li> <li>vertical installation, min.</li> <li>-25 °C; = Tmin</li> <li>-25 °C; = Tmax</li> <li>-26 °C; = Tmax</li> <li>-26 °C; = Tmax</li> <li>-26 °C; = Tmax</li> <li>-27 °C</li> <li>-27 °C</li> <li>-27 °C</li> <li>-28 °C; = Tmax</li> <li>-27 °C</li> <li>-28 °C; = Tmax</li> <li>-28 °C; = Tmax</li> <li>-28 °C; = Tmax</li> <li>-28 °C; = Tmax</li> <li>-20 °C</li> <li></li></ul>	Ambient temperature during operation	
<ul> <li>vertical installation, min.</li> <li>-25 °C; = Tmin</li> <li>vertical installation, max.</li> <li>60 °C; = Tmax</li> <li>Ambient temperature during storage/transportation</li> <li>min.</li> <li>40 °C</li> <li>max.</li> <li>70 °C</li> <li>Air pressure acc. to IEC 60068-2-13</li> <li>660 hPa</li> <li>Storage/transport, min.</li> <li>660 hPa</li> <li>Storage/transport, max.</li> <li>1080 hPa</li> <li>Attitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressure- altitude</li> <li>Notice and the pressure-barometric pressure- altitude</li> <li>With condensation, tested in accordance with IEC</li> <li>60068-2-38, max.</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>Testistant to commercially available coolants and lubricants</li> <li>Use in stationary industrial systems</li> <li>- to chemically active substances according to EN 60721-3-3</li> <li>- to chemically active substances according to EN 60721-3-3</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>- to chemically active substances according to EN 60721-3-3</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>- to chemically active substances according to EN 60721-3-3</li> <li>- to chemically active substances according to EN 60721-3-5</li> <li>- to chemically a</li></ul>	• min.	
• vertical installation, max.       50 °C; = Tmax         Ambient temperature during storage/transportation       -40 °C         • min.       -40 °C         • max.       70 °C         Air pressure acc. to IEC 60068-2-13       660 hPa         • Storage/transport, min.       1080 hPa         • Installation attitude above sea level       1080 hPa         • Installation attitude above sea level, max.       2 000 m         • Ambient air temperature-barometric pressure- altitude full       Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)         Relative humidity       Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)         • With condensation, tested in accordance with IEC 60068-2-38, max.       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Resistance       Too biologically active substances according to EN 60721-3-3       Yes; Incl. diesel and oil droplets in the air and lubricants         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 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         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	• max.	60 °C; = Tmax; +70 °C for 10 min (OT1, ST1/ST2 acc. to EN 50155)
Ambient temperature during storage/transportation       -40 °C         • min.       -40 °C         • max.       70 °C         Air pressure acc. to IEC 60068-2-13       660 hPa         • Storage/transport, min.       660 hPa         • Installation altitude above sea level, max.       1 080 hPa         • Ambient air temperature-barometric pressure- altitude       1 nstallation altitude above sea level, max.         • Ambient air temperature-barometric pressure- altitude       1 00 %; RH incl. condensation / fost (no commissioning in bedewed state), horizontal installation         Resistance       100 %; RH incl. condensation / fost (no commissioning in bedewed state), horizontal installation         Resistance       100 %; RH incl. condensation / fost (no commissioning in bedewed state), horizontal installation         Resistance       100 %; RH incl. condensation / fost (no commissioning in bedewed state), horizontal installation         Resistance       Yes; Incl. diesel and oil droplets in the air         - Resistant to commercially available coolants and lubricants       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 chemically active substances according to EN 60721-3-5       Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna);	<ul> <li>vertical installation, min.</li> </ul>	-25 °C; = Tmin
<ul> <li>min.</li> <li>max.</li> <li>70 °C</li> <li>max.</li> <li>70 °C</li> <li>Air pressure acc. to IEC 60068-2-13</li> <li>Storage/transport, min.</li> <li>Storage/transport, max.</li> <li>1 080 hPa</li> <li>Attitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> <li>A mbient air temperature-barometric pressure- altitude</li> <li>Mith condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>To 30 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>A resistant to commercially available coolants and lubricants</li> <li>Ves; Incl. diesel and oil droplets in the air</li> <li>to biologically active substances according to EN 60721-3-3</li> <li>The orechanically active substances according to EN 60721-3-3</li> <li>Ves; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request</li> <li>Yes; Class 3C4 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3);*</li> <li>To biologically active substances according to EN 60721-3-5</li> <li>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>To biologically active substances according to EN 60721-3-5</li> <li>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>Yes; Class 5B3 on request</li> <li>Yes; Class 5B3 on request</li> <li>To chemically active substances according to EN 60721-3-5</li></ul>		50 °C; = Tmax
• max.       70 °C         Air pressure acc. to IEC 60068-2-13       660 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max.       1080 hPa         • Installation altitude above sea level       70 °C         • Installation altitude above sea level       70 °C         • Installation altitude above sea level, max.       2 000 m         • Ambient air temperature-barometric pressure- altitude       70 °C         Relative humidity       70 °C         Resistance       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Coolants and lubricants       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         - Resistance       Yes; Incl. diesel and oil droplets in the air and lubricants         - 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 54 cl. sand, dust,*         Use on land craft, rail vehicles and special-purpose vehicles       -         - to chemically active substances according to EN 60721-3-5       Yes; Class 552 mold, fungus and dry rot spores (with the exception of fauna); Class 553 incl. sant, dust,*         - to chemically active substances according to EN 60721-3-5       Yes; Cla	Ambient temperature during storage/transportation	
Air pressure acc. to IEC 60068-2-13       660 hPa         • Storage/transport, min.       660 hPa         • Storage/transport, max.       1 080 hPa         Altitude during operation relating to sea level       1 080 hPa         Altitude during operation relating to sea level, max.       2 000 m         • Ambient air temperature-barometric pressure- altitude       7 min Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)         Relative humidity       00 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         • With condensation, tested in accordance with IEC 60068-2-38, max.       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Resistance       Coolants and lubricants       Yes; Incl. diesel and oil droplets in the air         - no 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); *         Use on land craft, rail vehicles and special-purpose vehicles       Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class SB3 on request         - to chemically active substances according to EN 60721-3-5       Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class SB3 on request         - to chemically a	● min.	
<ul> <li>Storage/transport, min.</li> <li>Storage/transport, max.</li> <li>1080 hPa</li> <li>Attitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressure- altitude</li> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressure- altitude</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>Coolants and lubricants</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>Yes; Incl. diesel and oil droplets in the air</li> <li>Installationary industrial systems</li> <li>to chemically active substances according to EN 60721-3-3</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>to chemically active substances according to EN 60721-3-3</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>to chemically active substances according to EN 60721-3-5</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>to chemically active substances according to EN 60721-3-5</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>to chemically active substances according to EN 60721-3-5</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>to chemically active substances according to EN 60721-3-5</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>to chemically active substances according to EN 60721-3-5</li> <li>to chemically 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>to mechanically active substances according to EN 60721-3-5</li> <li>to mechanically active substan</li></ul>		70 °C
<ul> <li>Storage/transport, max.</li> <li>1 080 hPa</li> <li>Altitude during operation relating to sea level</li> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressure- altitude</li> <li>Multitude</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>Multitude</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>— Resistant to commercially available coolants and lubricants</li> <li>— to biologically active substances according to EN 60721-3-3</li> <li>— to mechanically active substances according to EN 60721-3-3</li> <li>— to mechanically active substances according to EN 60721-3-3</li> <li>Use on land craft, rail vehicles and special-purpose vehicles</li> <li>— to chemically active substances according to EN 60721-3-5</li> <li>— to chemically active substances according to</li></ul>	•	
Altitude during operation relating to sea level <ul> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressure- altitude</li> </ul> 2 000 m         Relative humidity       Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)         Relative humidity       00 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Resistance       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Resistance       Ves; Incl. diesel and oil droplets in the air         Coolants and lubricants       Yes; Incl. diesel and oil droplets in the air <ul> <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 enchanically active substances according to EN 60721-3-5</li> <li>to chemically active substances accordin</li></ul>		
<ul> <li>Installation altitude above sea level, max.</li> <li>Ambient air temperature-barometric pressure- altitude</li> <li>Ambient air temperature-barometric pressure- altitude</li> <li>Mith condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> <li>Mith condensation to commercially available coolants and lubricants</li> <li>Resistance</li> <li>Coolants and lubricants</li> <li>Yes; Incl. diesel and oil droplets in the air</li> <li>Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request</li> <li>Yes (Class 3C4 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</li> <li>Yes; 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 3S4 incl. sand, dust, *</li> <li>Yes; 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 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request</li> <li>Yes; Class 5B3 on request</li> <li>Yes; Class 5C3 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</li> <li>Yes; Class 5S3 incl. sand, dust; *</li> <li>Yes; Class 5S3 incl. sand, dust; *</li> </ul>		1 U8U NPa
• Ambient air temperature-barometric pressure- altitudeTmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m)Relative humidity• With condensation, tested in accordance with IEC 60068-2-38, max.100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installationResistance• Resistant to commercially available coolants and lubricantsYes; Incl. diesel and oil droplets in the air- Resistant to commercially available coolants and lubricantsYes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request- to biologically active substances according to EN 60721-3-3Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on requestUse 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- to chemically active substances according to EN 60721-3-3Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on requestUse 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- to chemically 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- to chemically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *- to chemically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * <td></td> <td>2.000</td>		2.000
altitude       Image: Stance         Collants and lubricants       100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation         Resistance       Image: Stance         Collants and lubricants       Yes; Incl. diesel and oil droplets in the air         - Resistant to commercially available coolants and lubricants       Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request         Use in stationary industrial systems       Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
Relative humidity         • With condensation, tested in accordance with IEC 60068-2-38, max.         60068-2-38, max.         Resistance         Coolants and lubricants         — Resistant to commercially available coolants and lubricants         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 3B2 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); *		111111 1 max at 1 140 nPa 795 nPa (-1 000 m +2 000 m)
With condensation, tested in accordance with IEC 60068-2-38, max.      I00 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation      Resistance      Coolants and lubricants          — Resistant to commercially available coolants and lubricants          — Resistant to commercially available coolants and lubricants          — to biologically active substances according to EN 60721-3-3          — to chemically 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          Use on land craft, rail vehicles and special-purpose vehicles          — to chemically active substances according to EN 60721-3-5          — to chemically active substances according to EN 60721-3-5          — to biologically active substances according to EN 60721-3-5          — to biologically active substances according to EN 60721-3-5          — to chemically active substances according to EN 60721-3-5          — to chemically active substances according to EN 60721-3-5          — to chemically active substances according to EN 60721-3-5          — to mechanically active substances according to EN 60721-3-5          Usage in industrial process technology          EN 60721-3-5          EN 60721-3-5		
60068-2-38, max.       state), horizontal installation         Resistance         Coolants and lubricants         — Resistant to commercially available coolants and lubricants       Yes; Incl. diesel and oil droplets in the air         Use in stationary industrial systems       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 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       Yes; Class 3S4 incl. sand, dust, *         Use on land craft, rail vehicles and special-purpose vehicts       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         Use on land craft, rail vehicles and special-purpose vehicts       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 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *         — to mechanically active substances according to EN 60721-3-5       Yes; Class 5S3 incl. sand, dust; *         Usage in industrial process technology       Yes; Class 5S3 incl. sand, dust; *	·	100 %; RH incl. condensation / frost (no commissioning in bedewed
Coolants and lubricantsYes; Incl. diesel and oil droplets in the air— Resistant to commercially available coolants and lubricantsYes; Incl. diesel and oil droplets in the airUse 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); *Use on land craft, rail vehicles and special-purpose vehiclesYes; 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 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 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 requestUse on land craft, rail vehicles and special-purpose vehicles— to biologically active substances according to EN 60721-3-5— to chemically active substances according to EN 60721-3-5— to mechanically active substances accord		
— Resistant to commercially available coolants and lubricantsYes; Incl. diesel and oil droplets in the airUse 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-purpose vehicles—— 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— to chemically 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— to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-5Yes; Class 5B3 on request— to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *Usage in industrial process technologyYes; Class 5S3 incl. sand, dust; *	Resistance	
and lubricantsUse 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-purpose vehiclesYes; 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- 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- to chemically 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- to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *- to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *Usage in industrial process technologyYes; Class 5S3 incl. sand, dust; *	Coolants and lubricants	
— 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-purpose vehiclesYes; 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— to chemically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *Usage in industrial process technologyYes; Class 5S3 incl. sand, dust; *		Yes; Incl. diesel and oil droplets in the air
EN 60721-3-3fauna); 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— to biologically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *Usage in industrial process technologyYes; Class 5S3 incl. sand, dust; *		
EN 60721-3-3(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 vehicles— 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— to chemically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-5Yes; Class 5S3 incl. sand, dust; *Usage in industrial process technologyYes; Class 5S3 incl. sand, dust; *	EN 60721-3-3	fauna); Class 3B3 on request
EN 60721-3-3         Use on land craft, rail vehicles and special-purpose vehicles         — to biologically active substances according to       Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request         — to chemically active substances according to       Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	EN 60721-3-3	(severity degree 3); *
— 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— to chemically active substances according to EN 60721-3-5Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *— to mechanically active substances according to EN 60721-3-5Yes; Class 5S3 incl. sand, dust; *Usage in industrial process technologyYes; Class 5S3 incl. sand, dust; *	EN 60721-3-3	
EN 60721-3-5       fauna); Class 5B3 on request         — to chemically active substances according to EN 60721-3-5       Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
EN 60721-3-5       (severity degree 3); *         — to mechanically active substances according to EN 60721-3-5       Yes; Class 5S3 incl. sand, dust; *         Usage in industrial process technology       Yes; Class 5S3 incl. sand, dust; *	EN 60721-3-5	fauna); Class 5B3 on request
EN 60721-3-5 Usage in industrial process technology	EN 60721-3-5	(severity degree 3); *
	EN 60721-3-5	Yes; Class 5S3 incl. sand, dust; *
— Against chemically active substances acc. to     Yes; Class 3 (excluding trichlorethylene)		
	<ul> <li>Against chemically active substances acc. to</li> </ul>	Yes; Class 3 (excluding trichlorethylene)

EN 60654-4	
<ul> <li>Environmental conditions for process, measuring and control systems acc. to ANSI/ISA- 71.04</li> </ul>	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)
Remark	
<ul> <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!
Conformal coating	
<ul> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>	Yes; Class 2 for high reliability
<ul> <li>Protection against fouling acc. to EN 60664-3</li> </ul>	Yes; Type 1 protection
<ul> <li>Electronic equipment on rolling stock acc. to EN 50155</li> </ul>	Yes; Class PC2 protective coating acc. to EN 50155:2017
<ul> <li>Military testing according to MIL-I-46058C, Amendment 7</li> </ul>	Yes; Discoloration of coating possible during service life
<ul> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	Yes; Conformal coating, Class A
connection method / header	
required front connector	Yes
	Yes
required front connector	Yes
required front connector Mechanics/material	Yes
required front connector Mechanics/material Enclosure material (front)	
required front connector Mechanics/material Enclosure material (front) • Plastic	
required front connector Mechanics/material Enclosure material (front) • Plastic Dimensions	Yes
required front connector Mechanics/material Enclosure material (front) • Plastic Dimensions Width	Yes 45 mm
required front connector Mechanics/material Enclosure material (front) • Plastic Dimensions Width Height	Yes 45 mm 100 mm
required front connector Mechanics/material Enclosure material (front) • Plastic Dimensions Width Height Depth	Yes 45 mm 100 mm
required front connector Mechanics/material Enclosure material (front) • Plastic Dimensions Width Height Depth Weights	Yes 45 mm 100 mm 75 mm
required front connector Mechanics/material Enclosure material (front) • Plastic Dimensions Width Height Depth Weights Weight, approx.	Yes 45 mm 100 mm 75 mm