SIEMENS

Data sheet

6AG1331-7TF01-7AB0

SIPLUS SM 331 AI 8x0/4...20 mA -25...+70 °C with conformal coating based on 6ES7331-7TF01-0AB0



Supply voltage	
Load voltage L+	
 Rated value (DC) 	24 V
 Reverse polarity protection 	Yes
Input current	
from load voltage L+ (without load), max.	20 mA
from backplane bus 5 V DC, max.	120 mA
Output voltage	
Power supply to the transmitters	
• Rated value (DC)	24 V
Power loss	
Power loss, typ.	1.5 W
Analog inputs	
Number of analog inputs	8
permissible input current for current input (destruction limit), max.	40 mA
Input ranges	

Voltage	No
Current	Yes
Thermocouple	No
Resistance thermometer	No
Resistance	No
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
 Input resistance (0 to 20 mA) 	240 Ω
 Input resistance (-20 mA to +20 mA) 	240 Ω
 Input resistance (4 mA to 20 mA) 	240 Ω
Cable length	
● shielded, max.	800 m
Analog value generation for the inputs	
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	
 Resolution with overrange (bit including sign), max. 	16 bit
 Integration time, parameterizable 	Yes
 Integration time (ms) 	20 ms at 50 Hz; 16.6 ms at 60 Hz; 100 ms at 100 Hz
 Interference voltage suppression for 	10 / 50 / 60 Hz
interference frequency f1 in Hz	
Encoder	
Connection of signal encoders	
• for current measurement as 2-wire transducer	Yes
• for current measurement as 4-wire transducer	Yes
Errors/accuracies	
Operational error limit in overall temperature range	
• Current, relative to input range, (+/-)	0.15 %; ±0.25 % @ < 0 °C or > 60 °C
Basic error limit (operational limit at 25 °C)	
 Current, relative to input range, (+/-) 	0.1 %
Interrupts/diagnostics/status information	
Diagnostic functions	Yes
Alarms	
Diagnostic alarm	Yes
• Limit value alarm	Yes
Diagnostic messages	
Diagnostic information readable	Yes
Diagnostics indication LED	
Group error SF (red)	Yes

• between the channels and backplane bus Ves Isolation Isolation Isolation tested with 500 Sindards, approvals, certificates CE mark Ves UL approval Ves; File E239877 FM approval Ves; ColC 3028431 RCM (formerly C-TICK) Ves CE approval Ves; ColC 3028431 RCM (formerly C-TICK) Ves CE approval Ves; ColC 3028431 RCM (formerly C-TICK) Ves CE approval Ves; ColC 3028431 RCM (formerly C-TICK) Ves CE approval Ves; ColC 3028431 RCM (formerly C-TICK) Ves CE approval Ves; ColC 3028431 RCM (formerly C-TICK) Ves CE approval Ves CE approve Ves CE approval Ves CE approve Ves CE approve	Potential separation analog inputs	
Isolation tested with 500 Standards, approvals, certificates Yes CE mark Yes, File E239877 FM approval Yes; ColC 3028431 RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes Failway application Yes • EN 50121-4 No • EN 501255 No Ambient temperature during operation -25 °C; = Tmin • min. -25 °C; = Tmin • min. -25 °C; = Tmin • max. 70 °C Ambient temperature during storage/transportation -0 °C • min. -40 °C • max. 70 °C Anbient air temperature-barometric pressure- alitude 5000 m • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- alitude 5000 m • With condensation, tested in accordance with EC 60068-2-38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Use in stationary industrial systems - - to biologically active substances according to EN 60721-3-3 Yes; Class 322 mold, fungus and dry rot spores (with the exception of fauna); Class 335 on request Yes; Class 354 incl. sand, dust, * Use on shipkaf t sca Yes; Class 622 mold and fungal	 between the channels and backplane bus 	Yes
Isolation tested with 500 Standards, approvals, certificates Yes CE mark Yes, File E239877 FM approval Yes; ColC 3028431 RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes Failway application Yes • EN 50121-4 No • EN 501255 No Ambient temperature during operation -25 °C; = Tmin • min. -25 °C; = Tmin • min. -25 °C; = Tmin • max. 70 °C Ambient temperature during storage/transportation -0 °C • min. -40 °C • max. 70 °C Anbient air temperature-barometric pressure- alitude 5000 m • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- alitude 5000 m • With condensation, tested in accordance with EC 60068-2-38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Use in stationary industrial systems - - to biologically active substances according to EN 60721-3-3 Yes; Class 322 mold, fungus and dry rot spores (with the exception of fauna); Class 335 on request Yes; Class 354 incl. sand, dust, * Use on shipkaf t sca Yes; Class 622 mold and fungal	Isolation	
CE mark Yes UL approval Yes; File E239877 FM approval Yes; ColC 3028431 FM opproval Yes; ColC 3028431 RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly C-STICK) Yes Railway application Yes • EN 50155 No Ambient conditions No Ambient temperature during operation · · · · · · · · · · · · · · · · · · ·		500
CE mark Yes UL approval Yes; File E239877 FM approval Yes; ColC 3028431 FM opproval Yes; ColC 3028431 RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly C-STICK) Yes Railway application Yes • EN 50155 No Ambient conditions No Ambient temperature during operation · · · · · · · · · · · · · · · · · · ·	Standards approvals certificates	
FM approval Yes; CofC 3028431 RCM (formerly C-TICK) Yes RC approval Yes EAC (formerly Gost-R) Yes Railway application • • EN 50121-4 No • EN 50155 No Ambient temperature during operation • • min. -25 °C; = Tmin • max. 70 °C 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 • With condensation, tested in accordance with LEC 60068-2-38, max. 100 %, RH Incl. condensation/frost (no commissioning under condensation conditions) Resistance 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 mechanically active substances according to EN 60721-3-3 Yes; Class 3B4 incl. sand, dust, * • to mechanically active substance		Yes
RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes Railway application Yes e.IN 50121-4 No e.EN 50121-4 No Ambient conditions No Ambient conditions 70 °C; = Tmin Ambient temperature during operation -25 °C; = Tmin min. -25 °C; = Tmin max. 70 °C Ambient temperature during storage/transportation -40 °C max. 70 °C Attitude during operation relating to sea level 5 000 m • Installation altitude above sea level, max. 5 000 m • Ambient air temperature-barometric pressure- altitude 5 000 m min	UL approval	Yes; File E239877
KC approval Yes EAC (formerly Gost-R) Yes Railway application	FM approval	Yes; CofC 3028431
EAC (formerly Gost-R) Yes Railway application No • EN 50121-4 No • EN 50155 No Ambient conditions	RCM (formerly C-TICK)	Yes
Railway application EN 50121-4 EN 50155 No Ambient conditions Ambient temperature during operation min. max. 70 °C; = Tmax; 60 °C @ UL/cUL use Ambient temperature during storage/transportation -25 °C; = Tmin rmax; 70 °C; = Tmax; 60 °C @ UL/cUL use Ambient temperature during storage/transportation -40 °C max. 70 °C Ambient temperature during operation relating to sea level Installation altitude above sea level, max. 5000 m Tmin Tmax at 1 140 hPa 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 658 hPa 540 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 Lo biologically active substances according to EN 60721-3-3 to biologically active substances according to EN 60721-3-3 to EN 600721-3-3 to EN 60068-2-13.3 Yes; Class 382 mold, fungus and dry rot spores (with the exception of fauna); Class 383 on request Yes; Class 384 incl. sand, dust, * .	KC approval	Yes
• EN 50121-4 No • EN 50155 No Ambient conditions Ambient temperature during operation • min. -25 °C; = Tmin • max. 70 °C; = Tmax; 60 °C @ UL/cUL 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 • Ambient air temperature-barometric pressure- altitude Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // • Ambient air temperature-barometric pressure- altitude 100 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) Resistance 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 3G4 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); * - to mechanically active substances according to EN 60721-3-3<	EAC (formerly Gost-R)	Yes
• EN 50155 No Ambient conditions -25 °C; = Tmin • min. -25 °C; = Tmin • max. 70 °C; = Tmax; 60 °C @ UL/cUL use Ambient temperature during storage/transportation -40 °C • min. -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 • With condensation, tested in accordance with ICC 60068-2:38, max. 500 %; 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) • to chemically 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 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B4 incl. sand, dust, * • to mechanically active substances according to EN 60721-3-3 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B4 incl. sand, dust, * • t	Railway application	
Ambient conditions Ambient temperature during operation • min. -25 °C; = Tmin • max. 70 °C; = Tmax; 60 °C @ UL/cUL use Ambient temperature during storage/transportation • min. • max. 70 °C; Antitude during operation relating to sea level • 0 °C • 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 • Mith condensation, tested in accordance with IEC 60068-2-38, max. 500 m// Tmin (Tmax - 10 K) at 795 hPa 540 hPa (+3 500 m +5 000 m) Relative humidity 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance 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 mechanically 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 6B2 mold and fungal spores (excluding fauna); Class Use on ships/at sea - to biologically active substances according Yes; Class 6B2	• EN 50121-4	No
Ambient temperature during operation • min. -25 °C; = Tmin • max. 70 °C; = Tmax; 60 °C @ UL/cUL 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 • 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 - 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. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Use in stationary industrial systems 100 %; RH incl. condensation conditions) Resistance 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 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 362 mold and fungal spores (excluding fauna); C	• EN 50155	No
Ambient temperature during operation • min. -25 °C; = Tmin • max. 70 °C; = Tmax; 60 °C @ UL/cUL 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 • 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 - 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. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) Resistance Use in stationary industrial systems 100 %; RH incl. condensation conditions) Resistance 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 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 362 mold and fungal spores (excluding fauna); C	Ambient conditions	
 min. max. -25 °C; = Tmin 70 °C; = Tmax; 60 °C @ UL/cUL use Ambient temperature during storage/transportation min. max. Attitude 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. Ambient air temperature-barometric pressure- altitude Installation altitude above sea level, max. Mith 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 to chemically active substances according to EN 60721-3-3 Use on ships/at sea to mechanically active substances according to EN 60721-3-3 Ves; Class 6B2 mold and fungal spores (excluding fauna); Class 		
• max.70 °C; = Tmax; 60 °C @ UL/cUL useAmbient temperature during storage/transportation-40 °C• max40 °C70 °CAltitude during operation relating to sea level-• Installation altitude above sea level, max.5 000 m• Ambient air temperature-barometric pressure- altitude5 000 mTmin Tmax at 1 140 hPa 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 - 20 K) at 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa (-1 000 m +2 000 m) // Second m +500 m +5000 m +		-25 °C: = Tmin
Ambient temperature during storage/transportation -40 °C • max. 70 °C Altitude during operation relating to sea level 5 000 m • 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 • Multiple 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) • With condensation, tested in accordance with IEC 60068-2-38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions) • With condensation yindustrial 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 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 mechanically active substances according to EN 60721-3-3 Yes; Class 3S4 incl. sand, dust, * • to biologically active substances according to EN 60721-3-3 Yes; Class 6B2 mold and fungal spores (excluding fauna); Class		
 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 Mini 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 chemically 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); * Yes; Class 3S4 incl. sand, dust, * Use on ships/at sea to biologically active substances according Ves; Class 6B2 mold and fungal spores (excluding fauna); Class 	-	
Max.70 °CAltitude during operation relating to sea level5000 m• Installation altitude above sea level, max.5 000 m• Ambient air temperature-barometric pressure- altitudeTmin 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 - 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 +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +3 500 m) // Tmin (Tmax - 20 K) at 658 hPa 540 hPa (+3 500 m +5 00 m)Relative humidity100 %; RH incl. condensation/frost (no commissioning under condensation conditions)Resistance100 %; RH incl. condensation/frost (no commissioning under condensation conditions)Ves in stationary industrial systemsYes; 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 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, *- to biologically active substances according to EN 60721-3-3Yes; Class 3S4 incl. sand, dust, *Use on ships/at seaYes; Class 6B2 mold and fungal spores (excluding fauna); Class		-40 °C
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 +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) Ves in stationary industrial systems 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 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); * to mechanically active substances according to EN 60721-3-3 Ves; Class 3S4 incl. sand, dust, * Source on ships/at sea to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class Yes; Class 6B2 mold and fungal spores (excluding fauna); Class Yes; Class 6B2 mold and fungal spores (excluding fauna); Class Yes; Class 6B2 mold and fungal spores (excluding fauna); Class		
 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 With condensation, tested in accordance with IEC 60068-2-38, max. With condensation y tested in accordance with IEC 60068-2-38, max. 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 Use on ships/at sea To mechanically active substances according to EN 60721-3-3 Yes; Class 354 incl. sand, dust, * Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 		
 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. 100 %; RH incl. condensation/frost (no commissioning under condensation 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 Use on ships/at sea — to biologically active substances according to EN 60721-3-3 Yes; Class 3S4 incl. sand, dust, * Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 		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 chemically active substances according to EN 60721-3-3 to EN 60721-3-3 to endensation (Resistance) Yes; 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); * to mechanically active substances according to EN 60721-3-3 Yes; Class 3S4 incl. sand, dust, * Use on ships/at sea to biologically active substances according to EN 60721-3-3 Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 	• Ambient air temperature-barometric pressure-	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 ships/at seaYes; Class 6B2 mold and fungal spores (excluding fauna); Class	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 60721-3-3Yes; 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 ships/at sea—— to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class	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 ships/at seaYes; Class 6B2 mold and fungal spores (excluding fauna); Class	Use in stationary industrial systems	
to EN 60721-3-3 52 (severity degree 3); * — to mechanically active substances according to EN 60721-3-3 Yes; Class 3S4 incl. sand, dust, * Use on ships/at sea — — to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class		
according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class		
- to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class	-	Yes; Class 3S4 incl. sand, dust, *
	Use on ships/at sea	

 to chemically active substances according to EN 60721-3-6 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); * Yes; Class 6S4 incl. sand, dust; *
from supply voltage 1L+	
 Note regarding classification of environmental conditions acc. to EN 60721 	* The supplied plug covers must remain in place over the unused interfaces during operation!
Connection method	
required front connector	20-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	117 mm
Weights	
Weight, approx.	205 g
last modified:	04/11/2018