SIEMENS

Data sheet

6AG4141-7BB30-0DA0

SIMATIC IPC427E (Microbox PC), HD graphic onboard, 4x USB V3.0 (high current), PCIE (optional), XEON E3-1505L; 3x Gbit Ethernet (IE/PN); Mounting onto standard rail; 8 GB; 2x RS232/485; without PCIe; without operating system, Without replaceable mass storage; 256 GB Eco SSD; Without SIMATIC software; 24 V DC industrial power supply

	Without Shink file Software, 24 V DC industrial power suppry
General information	
Product type designation	IPC427E
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	217 00
Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T,
Chipset	1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT) Intel C236 / Intel H110
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
	2 5" SATA > 220 CD
Hard disk SSD	2.5" SATA ≥ 320 GB Yes; 128 / 240 / 480 GB
	Tes, 1207 2407 400 GB
Memory	
Type of memory	DDR4-2400 SO-DIMM
Main memory	4 / 8 / 16 GB, ECC optional
Capacity of main memory, max.	16 Gbyte
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
Hardware configuration	
Slots	
free slots	2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer
 Number of PCI slots 	2; Optional
Number of compact flash slots	1; CFast
Interfaces	
Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)
USB port	4x USB 3.0
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 485 / 422; switchable)
Video interfaces	
Graphics interface	2x DisplayPort
Industrial Ethernet	
Industrial Ethernet interface	3x Ethernet (RJ45)
— 100 Mbps	Yes
— 1000 Mbps	Yes
Interrupts/diagnostics/status information	
Bus diagnostics	Yes
Integrated Functions	
Monitoring functions	
Temperature monitoring	Yes

 Shubs LEDs It prover, 3 x user No Monitoring function via network Optional Monitoring function via network Monitoring function via network Monitoring function via network Monitoring function via network Monitoring against flight frequency sectoragenet. Decision Interference immunity against high frequency Monitoring against high frequency <li< th=""><th></th><th></th></li<>		
A Monitoring function via network A Monitoring function A M	Status LEDs	1x power, 3x user
Interference immunity against discharge of static electricity Interference immunity against discharge of static Static electronic electronice	• Fan	No
Interference immunity against discharge of static electricity interference immunity against discharge of static is (V contact discharge acc: to IEC 61000-4.2; ±6 KV all discharge acc: is (V contact discharge acc: to IEC 61000-4.2; ±6 KV all discharge acc: is (V contact discharge acc: to IEC 61000-4.2; ±6 KV all discharge acc: is (V contact discharge acc: to IEC 61000-4.2; ±6 KV all discharge acc: is (V contact discharge acc: to IEC 61000-4.2; ±6 KV all discharge acc: is (V contact discharge acc: to IEC 61000-4.2; ±6 KV all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V contact discharge acc: to IEC 61000-4.4; to V all discharge acc: is (V acc: to IEC 61000-4.4; to V all discharge acc: is (V acc: to IEC 61000-4.4; to V all discharge acc: is (V acc: to IEC 61000-4.4; to V all discharge acc: is (V acc: to IEC 61000-4.4; to V all discharge acc: is	 Monitoring function via network 	Optional
A standard sector of the	EMC	
electricity to IEC 61000 4.2 Interference immunity against high-frequency to Um for 80 - 1000 MHz and 1.4 - 2 GHz 80% AM acc. to IEC 61000 - 4.5 Interference immunity to cable-borne interference 10 Vm for 80 - 1000 MHz and 1.4 - 2 GHz 80% AM acc. to IEC 61000 - 4.5 Interference immunity on supply cables 12 kV acc. to IEC 61000 - 4.5 Interference immunity on signal cables - 30m 12 kV acc. to IEC 61000 - 4.4 Interference immunity against high frequency 12 kV acc. to IEC 61000 - 4.4 Interference immunity on signal cables - 30m 12 kV acc. to IEC 61000 - 4.4 Interference immunity against voltage surge 28 kV acc. to IEC 61000 - 4.4 esymmetric interference 12 kV acc. to IEC 61000 - 4.5 esymmetric interference 12 kV acc. to IEC 61000 - 4.5 esymmetric interference 12 kV acc. to IEC 61000 - 4.5 esymmetric interference 110 Am; to IEC 61000 - 4.5 Interference immunity against voltage surge 100 Am; to IEC 61000 - 4.5 esymmetric interference 12 kV acc. to IEC 61000 - 4.5 Interference immunity interference 12 kV acc. to IEC 61000 - 4.8 Ermssion of conducted and non-conducted interference 100 Am; to IEC 61000 - 4.8 Interference immunity interference 12 kV	Interference immunity against discharge of static electricity	
Interference immunity against high frequency radiation 10 V/m for 80 - 1 000 MHz and 1.4 - 2 CHz, 80% AM acc. to IEC 6 1000-4.4 Si V/m for 2.2 - 7 CHz, 80% AM acc. to IEC 6 1000-4.5, surge Interference immunity to asupe/ cables Interference immunity on signal cables >30m Interference immunity to magnetic fields Interference immunity in unexpetic fields Interference areasion via the MC current cables Interference areasion via the		o
radiation 4-3; 3 V/m for 2-27. CHz, 20% AM acc. to IEC 61000-4-3; 10 V for 10 kHz.25 00 MHz, 20% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 00 MHZ, 20% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-5; UV for 10 kHz.25 0% AT ACC AV acc. to IEC 61000-4-5; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-5; UV for 10 kHz.25 0% AM acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-6; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-4; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-4; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-4; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-4; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-4; UV for 10 kHz.25 0% AN acc. to IEC 61000-4-4; UV for 10 kHz.25 0% ACC ACC ACC ACC ACC ACC ACC ACC ACC AC	Interference immunity against high-frequency electromagneti	c fields
Interference immunity on supply cables #2 kV acc. to IEC 61000-4-5, uurge symmetric Interference immunity on signal cables <30m Interference immunity on signal cables Interference Interference immunity on signal cables Interference immunity on signal cables Interference Interference Interference immunity on signal cables Interference Interference Interference Interference	, , , , ,	4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10
symmetric: 22 V acc. to IEC 6 1000-4-5, surge asymmetric 24 V acc. to IEC 6 1000-4-5, use, length > 30 m 21 V acc. to IEC 6 1000-4-4, burst, length < 3 m; ±2 V acc. to IEC 6 1000-4-4; burst, length < 3 m; ±2 KV acc. to IEC 6 1000-4-4; burst, length < 3 m; ±2 KV acc. to IEC 6 1000-4-4; burst, length < 3 m; ±2 KV acc. to IEC 6 1000-4-4; burst, length < 3 m; ±2 KV acc. to IEC 6 1000-4-5; surge asymmetric 22 KV acc. to IEC 6 1000-4-5, surge asymmetric 23 KV acc. to IEC 6 1000-6-2 34 KT X X acc 2 34 KT X X are 2 34 KT X X are 2 34 KT X are 2 34 K	Interference immunity to cable-borne interference	
Interference immunity on signal cables < 30m t1 kV acc. to IEC 61000-44; burst; length < 3 m; ±2 kV acc. to IEC finderference immunity against voltage surge t2 kV acc. to IEC 61000-44; burst; length < 3 m; ±2 kV acc. to IEC finderference immunity to magnetic fields to IEC 61000-44; burst; length < 3 m; ±2 kV acc. to IEC finderference immunity to magnetic fields to IEC 61000-44; burst; length < 3 m; ±2 kV acc. to IEC finderference immunity to magnetic fields to IEC 61000-45; Burge symmetric thereference immunity to magnetic fields to IEC 61000-44; Burge symmetric to IEC 61000-44; CISPR 22 Class B, FCC Class A Degree and class of protection Inderference emission vice unrent cables EN 61000-63; EN 61000-64; CISPR 22 Class B, FCC Class A Degree and class of protection IP degree of protection IP degree of protection IP degree of protection IP degree of protection Ves UL approval CE mark U, EGNS Ves UL 508 Ves CUlus Ves CUlus Ves CUlus Ves CC Ves CO Ves CC Ves CO Ves Ves CO Ves CO	Interference immunity on supply cables	
61000-44; burst; length > 3 m Interference immunity against voltage surge • asymmetric interference • symmetric interference • asymmetric interference • Interference immunity to magnetic fields • Interference immunity to magnetic fields at 50 Hz • Interference immunity to magnetic fields at 50 Hz • Interference immunity to magnetic fields at 50 Hz • Interference immunity to magnetic fields • Degree and class of protection IP degree of protection IP degree of protection IP degree of protection Ves UL approval • UL 508 • UL 508 • UL 508 • UL 508 • ATEX Zone 2 Ves CKC Cernank to class I Zone 2, Division 2 • ATEX Zone 2 • Cernank class I Zone 2, Division 2 • Cernac	 Interference immunity on signal cables >30m 	± 2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• asymmetric interference ±2 K vac: to IEC 61000-4-5, surge symmetric • Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4-8, surge symmetric • Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4-8, EVER 22 Class B, FCC Class A Degree and class of protection IP20 Standards, approvals, certificates EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A Degree and class of protection IP20 Standards, approvals, certificates EN 61000-6-4, CISPR 22 Class A, EVER CE mark Yes UL approval Yes UL approval Yes CLI Yes CE mark Yes UL approval Yes CE mark Yes UL approval Yes CE mark Yes Us proval Yes CE CC Yes FCC Yes ENC (Interrety C-TICK) Yes: Optional • In brazerous areas Yes: Optional • CCE cone 2 Yes: Optional • LCE Xone 2 Yes: Optional • Clus In brazerous of Shipping (ABS) Yes • Deureav	 Interference immunity on signal cables < 30m 	
• symmetric interference ±1 kV acc. to IEC 61000-4-5, surge symmetric Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4-8 Emission of conducted and non-conducted interference interference emission will line/AC current cables Degree and class of protection IP20 Standards, approvals, certificates IP20 CE mark Yes UL approval Yes oll US 508 Yes oll US 508 Yes oll US 608 Yes oll US 608 Yes oll US 608 Yes oll US 608 Yes clus Yes clus Yes clus Yes clus Yes clus Yes EAC (formerly Cost-R) Yes FCC Yes oblic Class 1 Zone 2 Yes: Optional i ECEX Zone 2 Yes: Optional i ECEX Zone 2, Division 2 Yes: Optional ol Lus Fibrion (RKS) Yes bureau Veritas (RV) Yes Det Norske Veritas (DNV)	Interference immunity against voltage surge	
Interference immunity to magnetic fields • Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-6-3, EN 6100-6-4, CISPR 22 Class B, FCC Class A Pegree and class of protection IP20 Standards, approvals, certificates EN 81000-6-3, EN 6100-6-4, CISPR 22 Class B, FCC Class A CE mark Yes UL approval Yes • UL 508 Yes • UL 508 Yes CC mark Yes CLUs Yes FCC Yes CG (formerly Gast-R) Yes FCC Yes FCC Yes Interference Burger and class of protection Yes FCC Yes FCC Yes FCC Yes • ATEX Zone 2 Yes: Optional • LECEX Zone 2 Yes: Optional • Cluss Closs I Zone 2, Division 2 Yes: Optional • Cluss Closs I Zone 2, Division 2 Yes: Optional • Cluss Closs I Zone 2, Division 2 Yes: Optional • Cluss Closs I Zone 2, Division 2 Yes: Optional • Amerion Burgeroval	asymmetric interference	
 Interference immunity to magnetic fields at 50 Hz Interference amission of conducted and non-conducted interference Interference emission within the former of t		±1 kV acc. to IEC 61000-4-5, surge symmetric
Emission of conducted and non-conducted interference Interference emission via line/AC current cables Degree and class of protection IP20 Standards, approvals, certificates IP20 CE mark Ves UL approval Yes • UL 503 Yes CULus Yes CC mark Yes • UL 503 Yes CULus Yes CC mark Yes CLUs Yes CC mark Yes CLUs Yes CLUs Yes CC mark Yes CLUs Yes CC mark Yes Ves Y	Interference immunity to magnetic fields	
Interference emission via line/AC current cables EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A Degree and class of protection IP20 Standards, approvals, certificates CE mark Ves UL approval Ves Ves UL approval Ves Optional Ves Ves Ves Optional Ves Ves Ves Optional Ves Ves Ves Ves Optional Ves Ves Ves Optional Ves	, ,	100 A/m; to IEC 61000-4-8
Degree and class of protection IP20 Standards, approvals, certificates File CE mark Yes UL approval Yes ULUUS Yes ULUUS Yes CULUUS Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes RCM (formerly Gost-R) Yes FCC Yes EMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas Yes; Optional • ATEX Zone 2 Yes; Optional • ECC Yes Optional Yes; Optional • ECC Zone 2 Yes; Optional • ECCAZone 2, Division 2 Yes; Optional • ECCAZONE 2, Division 2 Yes; Optional • Encorean Userias (ENV) Yes • ULucy Vertas (DNV) Yes • Bureau Vertas (DNV) Yes • Userias Uvertas (NV) Yes • Userias Userias (DNV) Yes • Userias Userias Userias (DNV) Yes • Use Start Constevertas Userias (DNV) Y	Emission of conducted and non-conducted interference	
IP degree of protection IP20 Standards, approvals, certificates IP20 CE mark Yes UL approval Yes • UL 508 Yes cULus Yes RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes FCC Yes EAC (formerly Gost-R) Yes FCC Yes eMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas * • ATEX Zone 2 Yes; Optional • ECEX Zone 2 Yes; Optional • Clus Class 1 Zone 2, Division 2 Yes; Optional • Bureau Veritas (BV) Yes • Bureau Veritas (DNV) Yes • Bureau Veritas (DNV) Yes • Napor Kajii Kyokai (Class NK) Yes • Nipon Kajii Kyokai (Class NK) Yes • Nipon Kajii Kyokai (Class NK) Yes • Nabient temperature during operation 0 °C to 55 °C Ambient temperature during operation -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-78, Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation) • Vibration resistance during operation acc. to IEC <td>Interference emission via line/AC current cables</td> <td>EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A</td>	Interference emission via line/AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Standards, approvals, certificates CE mark Yes UL approval Yes • UL 508 Yes cULus Yes RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly C-TICK) Yes FCC Yes EAC (formerly C-TICK) Yes FCC Yes EAC (formerly Gost-R) Yes FCC Yes eLCEx Zone 2 Yes; Optional • ATEX Zone 2 Yes; Optional • CLUss Class I Zone 2, Division 2 Yes; Optional • CULus Class I Zone 2, Division 2 Yes; Optional • CULus Class I Zone 2, Division 2 Yes; Optional • CULus Class I Zone 2, Division 2 Yes; Optional • CULus Class I Zone 2, Division 2 Yes; Optional • CULus Class I Zone 2, Division 2 Yes; Optional • Culus Class I Zone 2, Division 2 Yes; Optional • Culus Class I Zone 2, Division 2 Yes • Bureau Veritas (BV) Yes • Bureau Veritas (BV) Yes • Norske Veritas (DNV) Yes • Ambient	Degree and class of protection	
CE mark Yes UL approval Yes • UL 508 Yes cULus Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes RCM (formerly C-TICK) Yes RCM (formerly Gost-R) Yes FCC Yes EMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas Yes: Optional • ATEX Zone 2 Yes: Optional • CEC Ex Zone 2 Yes: Optional • CULus Class I Zone 2, Division 2 Yes: Optional • CULus Class I Zone 2, Division 2 Yes: Optional • Germanischer Lloyd (GL) Yes • Bureau Veritas (BV) Yes • Det Korske Verinas (DNV) Yes • Bureau Veritas (BV) Yes • Loyds Register of Shipping (LRS) Yes • Nipon Kajii Kyokai (Class NK) Yes Ambient temperature during operation 0 "C to 55 "C Ambient temperature during operation 0 "C to 55 "C Ambient temperature during operation 0 "C to 55 "C • max 70 "C Relative humidity Te	IP degree of protection	IP20
UL approvalYes• UL 508YesOULusYesRCM (formerly C-TICK)YesRCM (formerly C-TICK)YesEAC (formerly Gost-R)YesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 55022A, EN 61000-6-4, EN 61000-6-2Use in hazardous areasYes: Optional• ATEX Zone 2Yes: Optional• ATEX Zone 2, Division 2Yes: Optional• ECEx Zone 2, Division 2Yes: Optional• Clus class I Zone 2, Division 2Yes: Optional• American Bureau of Shipping (ABS)Yes• American Bureau of Shipping (ABS)Yes• Bureau Veritas (BV)Yes• Bureau Veritas (BV)Yes• Bureau Veritas (DNV)Yes• Det Norske Veritas (DNV)Yes• Nippon Kaiji Kyokai (Class NK)Yes• Nippon Kaiji Kyokai (Class NK)Yes• Ambient temperature during operation0 °C to 55 °CAmbient temperature during operation0 °C to 55 °C• Ambient temperature during operation0 °C to 55 °C• Ambient temperature during operation0 °C to 55 °C• Ambient temperature during operation0 °C to 55 °C• Motient temperature during operation0 °C to 55 °C• Motient temperature during operation0 °C to 55 °C• Nippon Kaiji Kyokai (Dass NK)Yes• Vibration resistance during operation acc. to IEC60068-2-78, IEC 60068-2-78, IEC 60068-2-30. Operation: 5% to 85% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at	Standards, approvals, certificates	
• UL 508 Yes cULus Yes RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes FCC Yes EMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas	CE mark	Yes
cULusYesRCM (formerly C-TICK)YesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesFCCYesEMCCCE, EN 55022A, EN 61000-6-4, EN 61000-6-2Use in hazardous areas*********************************	UL approval	Yes
RCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 55022A, EN 61000-6-4, EN 61000-6-2Use in hazardous areas	• UL 508	Yes
KC approval Yes EAC (formerly Gost-R) Yes FCC Yes FCC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas • ATEX Zone 2 Yes; Optional • EICC Zone 2 Yes; Optional • CULus Class I Zone 2, Division 2 Yes; Optional • cULus Class I Zone 2, Division 2 Yes; Optional • Germanischer Loyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Loyds Register of Shipping (KRS) Yes • Loyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokai (Class NK) Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation 0 °C to 55 °C • Mineint temperature during operation 0 °C to 55 °C • min. 40 °C • min. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 630% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to	cULus	Yes
EAC (formerly Gost-R) Yes FCC Yes EMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas ************************************	RCM (formerly C-TICK)	Yes
FCC Yes EMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas • • ATEX Zone 2 Yes; Optional • IECEx Zone 2 Yes; Optional • cULus Class I Zone 2, Division 2 Yes; Optional Germanischer Lloyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Korean Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokal (Class NK) Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation 0 °C to 55 °C • min. -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at	KC approval	Yes
FCC Yes EMC CE, EN 55022A, EN 61000-6-4, EN 61000-6-2 Use in hazardous areas • • ATEX Zone 2 Yes; Optional • IECEx Zone 2 Yes; Optional • cULus Class I Zone 2, Division 2 Yes; Optional Germanischer Lloyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Korean Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokal (Class NK) Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation 0 °C to 55 °C • min. -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage: 5% to 95% at	EAC (formerly Gost-R)	Yes
Use in hazardous areas ATEX Zone 2 ATEX Zone 2 IECEx Zone 2 cULus Class I Zone 2, Division 2 Cluss Class I Zone 2, Division 2 Germanischer Lloyd (GL) Germanischer Lloyd (GL) Germanischer Lloyd (GL) American Bureau of Shipping (ABS) Bureau Veritas (BV) Det Norske Veritas (DNV) Edersame Register of Shipping (KRS) Lloyds Register of Shipping (LRS) Ves Nippon Kaiji Kyokai (Class NK) Ves Nippon Kaiji Kyokai (Class NK) Ves Ambient temperature during operation 0 °C Ambient temperature during storage/transportation - max. 70 °C rested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 60% at 25 °C (no condensation). Vibrati		Yes
ATEX Zone 2 Yes; Optional IECEx Zone 2 Yes; Optional cULus Class I Zone 2, Division 2 Yes; Optional Armie approval Germanischer Lloyd (GL) Yes American Bureau of Shipping (ABS) Yes American Bureau of Shipping (ABS) Yes Det Norske Veritas (DNV) Yes Lloyds Register of Shipping (KRS) Yes Iolyds Register of Shipping (KRS) Yes Nippon Kaiji Kyokai (Class NK) Yes Nippon Kaiji Kyokai (Class NK) Yes Ambient temperature during operation Ambient temperature during operation o "C to 55 °C Ambient temperature during operation o "C to 55 °C Relative humidity Relative humidity Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation), Storage	EMC	CE, EN 55022A, EN 61000-6-4, EN 61000-6-2
• IECEx Zone 2 Yes; Optional • cULus Class I Zone 2, Division 2 Yes; Optional Marine approval - • Germanischer Lloyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Lloyds Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Nippon Kajij Kyokai (Class NK) Yes Ambient conditions - Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation) Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g) Shock lead during operation Tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g) Shock lead during operation Tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)	Use in hazardous areas	
• cULus Class I Zone 2, Division 2 Yes; Optional Marine approval • • Germanischer Lloyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Korean Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokai (Class NK) Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation 0 °C to 55 °C Ambient temperature during storage/transportation -40 °C • min. -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation) Vibrations tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g) Shock load during operation Tested to DIN IEC 60068-2-9: 50 m/s² (5 g), 30 ms, 100 shocks	ATEX Zone 2	Yes; Optional
Marine approval • Germanischer Lloyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Det Norske Veritas (DNV) Yes • Loyds Register of Shipping (KRS) Yes • Lioyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokai (Class NK) Yes Ambient conditions Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during storage/transportation -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation) Vibrations - • Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 HZ: 9.8 m/s² (1 g) Shock testing - • Shock load during operation Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	IECEx Zone 2	Yes; Optional
• Germanischer Lloyd (GL) Yes • American Bureau of Shipping (ABS) Yes • Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Det Norske Veritas (DNV) Yes • Lloyds Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokai (Class NK) Yes Ambient conditions Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during storage/transportation -40 °C • min. -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation) Vibration s Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g) Shock testing - • Shock load during operation Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	 cULus Class I Zone 2, Division 2 	Yes; Optional
American Bureau of Shipping (ABS)YesBureau Veritas (BV)YesDet Norske Veritas (DNV)YesDet Norske Veritas (DNV)YesKorean Register of Shipping (KRS)YesLloyds Register of Shipping (LRS)YesNippon Kaiji Kyokai (Class NK)YesAmbient conditionsAmbient temperature during operation0 °C to 55 °CAmbient temperature during operation0 °C to 55 °CAmbient temperature during operation0 °C to 55 °CAmbient temperature during storage/transportation-40 °C• min40 °C• max.70 °CRelative humidityTested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)Vibration resistance during operation acc. to IEC 60068-2-6Hz: 9.8 m/s² (1 g)Shock testing-• Shock load during operationTested to DIN IEC 60068-2-9: 50 m/s² (5 g), 30 ms, 100 shocks	Marine approval	
• Bureau Veritas (BV) Yes • Det Norske Veritas (DNV) Yes • Korean Register of Shipping (KRS) Yes • Lloyds Register of Shipping (LRS) Yes • Nippon Kaiji Kyokai (Class NK) Yes Ambient conditions Yes Ambient temperature during operation 0 °C to 55 °C Ambient temperature during operation 0 °C to 55 °C Ambient temperature during storage/transportation -40 °C • min. -40 °C • max. 70 °C Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation) Vibrations Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g) Shock testing Tested to DIN IEC 60068-2-3: 50 m/s² (5 g), 30 ms, 100 shocks	 Germanischer Lloyd (GL) 	Yes
• Det Norske Veritas (DNV)Yes• Korean Register of Shipping (KRS)Yes• Lloyds Register of Shipping (LRS)Yes• Nippon Kaiji Kyokai (Class NK)YesAmbient conditionsAmbient temperature during operation0 °C to 55 °C• Ambient temperature during storage/transportation0 °C to 55 °C• min40 °C• max.70 °CRelative humidityTested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)VibrationsVibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)Shock testingTested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	 American Bureau of Shipping (ABS) 	Yes
• Korean Register of Shipping (KRS)Yes• Lloyds Register of Shipping (LRS)Yes• Nippon Kaiji Kyokai (Class NK)YesAmbient conditionsAmbient temperature during operation0 °C to 55 °C• Ambient temperature during storage/transportation0 °C to 55 °C• Ambient temperature during storage/transportation-40 °C• min40 °C• max.70 °CRelative humidityTested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)Vibrations-• Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)Shock testingTested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	 Bureau Veritas (BV) 	Yes
Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (Class NK) Yes Ambient conditions Ambient temperature during operation Ambient temperature during operation o °C to 55 °C Ambient temperature during storage/transportation o min. o max. Relative humidity Relative humidity Relative humidity Relative humidity Vibrations Vibration resistance during operation acc. to IEC 60068-2-6 Shock testing Shock load during operation Shock load during operation Shock load during operation Caster A and a state according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g) Shock load during operation Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	 Det Norske Veritas (DNV) 	Yes
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60068-2-6 Hz: 9.8 m/s² (1 g) Shock testing • Shock load during operation Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	Vibrations	
Shock load during operation Tested to DIN IEC 60068-2-29: 50 m/s ² (5 g), 30 ms, 100 shocks	60068-2-6	
Operating systems		Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks
	Operating systems	

pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional
pre-installed operating system	
Windows 7	Yes; Ultimate 32 bit or 64 bit
 Windows 10 Enterprise 	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle
Dimensions	
Width	262 mm
Height	139.7 mm
Depth	55.5 mm
last modified:	10/28/2021 🖸