Data sheet 6AG1212-1HE40-2XB0



Figure similar

SIPLUS S7-1200 CPU 1212C DC/DC/relay based on 6ES7212-1HE40-0XB0 with conformal coating, -40...+70 °C, start up -25 °C, signal board: 0, compact CPU, DC/DC/relay, onboard I/O: 8 DI 24 V DC; 6 DQ relay 2 A; 2 AI 0-10 V DC, power supply: DC 20.4-28.8 V DC, program/data memory 75

Product type designation Engineering with • STEP 7 TIA Portal configurable/integrated from version Supply voltage Rated value (DC) • 24 V DC • Permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Reverse polarity protection Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) * power lossupply * 1 24 V * 22 V * Power loss (5 V DC), max. * 1 000 mA; Max. 5 V DC for SM and CM * Encoder supply * 24 V * Power loss * Power loss * Power loss, typ. * Work memory * integrated * expandable * Polug-in (SIMATIC Memory Card), max. * Backup * present * vimitout battery * Yes; maintenance-free * vimitout battery * Yes; maintenance-free * Yes;	General information	
STEP 7 TIA Portal configurable/integrated from version Supply voltage Rated value (DC) 24 V DC 9 cermissible range, lower limit (DC) 25.8 V Reverse polarity protection Yes Load voltage L* Rated value (DC) 9 permissible range, upper limit (DC) 25.8 V Reverse polarity protection Yes Load voltage L* 1 Rated value (DC) 9 permissible range, lower limit (DC) 25.0 V 1 permissible range, upper limit (DC) 25.0 V 1 purt current Current consumption (rated value) Current consumption (rated value) Current consumption (rated value) Current consumption, max. 1 200 mA; CPU with all expansion modules Insula current, max. 1 2 A; at 28.8 V Cutput current For backplane bus (5 V DC), max. 1 1000 mA; Max. 5 V DC for SM and CM Encodor supply 24 V 1 + minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory Integrated No 1 Mbyte 1 Mbyte 1 Mbyte 1 Mbyte 1 Mbyte 1 Plug-in (SIMATIC Memory Card), max. With SIMATIC memory card 2 Present 9 without battery Yes: For bit operations, typ. 0.085 µs; / instruction	Product type designation	CPU 1212C DC/DC/relay
version Supply voltage Rated value (DC) • 24 V DC permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 2.8.8 V Reverse polarity protection Ves Load voltage L+ • Rated value (DC) • permissible range, upper limit (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • 24 V • permissible range, upper limit (DC) • 250 V Input current Current consumption (rated value) Current consumption, max. 1 200 mA; Typical Current consumption, max. 1 20 mA; CPU with all expansion modules Inrush current, max. 2 A; at 28.8 V Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply • 24 V	Engineering with	
Rated value (DC) • 24 V DC permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Pes Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) permissible range, lower limit (DC) • permissible range, upper limit (DC) • permissible range, upper limit (DC) **Toput current** Current consumption (rated value) Current consumption, max. 1 200 mA; Typical Current, max. 12 A; at 28.8 V Output current for backplane bus (5 V DC), max. 1 1 000 mA; Max. 5 V DC for SM and CM **Encoder supply** 24 V encoder supply • 24 V		see entry ID: 109746275
e- 24 V DC permissible range, lower limit (DC) permissible range, lower limit (DC) Reverse polarity protection Ves Load voltage L+ Rated value (DC) permissible range, lower limit (DC) permissible range, lower	Supply voltage	
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Load voltage L+ Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Current consumption, max. 1 200 mA; Typical 1 200 mA; CPU with all expansion modules Inrush current, max. 1 200 mA; CPU with all expansion modules Inrush current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V encoder supply 24 V encoder supply 9 W Momory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup Present ves; maintenance-free without battery CPU processing times for bit operations, typ. 0.085 µs; / instruction	Rated value (DC)	
permissible range, upper limit (DC) Reverse polarity protection Load voltage L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Current consumption, max. 1 200 mA; Typical 1 20 mA; CPU with all expansion modules Inrush current, max. 1 2 A; at 28.8 V Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V encoder supply 24 V encoder supply 24 V Power loss Power loss, typ. 9 W Memory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup Present ves: maintenance-free without battery CPU processing times for bit operations, typ. 0.085 µs; / instruction		Yes
Reverse polarity protection Load voltage L+ • Rated value (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) 1 put current Current consumption (rated value) Current consumption, max. 1 200 mA; Typical Current consumption, max. 1 200 mA; CPU with all expansion modules Inrush current, max. 1 200 mA; CPU with all expansion modules Inrush current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable No Load memory • integrated Plug-in (SIMATIC Memory Card), max. Backup • present • without battery Pres: maintenance-free • without battery CPU processing times for bit operations, typ. 0 0.085 µs; / instruction		20.4 V
Load voltage L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Current consumption, max. 1 200 mA; Typical Current consumption, max. 1 2 A; at 28.8 V Output current for backplane bus (5 V DC), max. 1 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present without battery Yes; maintenance-free vithout battery CPU processing times for bit operations, typ. 0.085 µs; / instruction		28.8 V
 Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 25 V permissible range, upper limit (DC) 250 V Input current Current consumption (rated value) 400 mA; Typical Current consumption, max. 1 200 mA; CPU with all expansion modules Inrush current, max. 0 400 mA; CPU with all expansion modules Inrush current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory integrated expandable No Load memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup present with SIMATIC memory card Backup present without battery Yes; maintenance-free yes CPU processing times for bit operations, typ. 0.085 μs; / instruction 		Yes
• permissible range, lower limit (DC) • permissible range, upper limit (DC) Input current Current consumption (rated value) Current consumption, max. Inrush current, max. Output current for backplane bus (5 ∨ DC), max. Encoder supply 24 ∨ encoder supply 24 ∨ encoder supply • 24 ∨ Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • without battery CPU processing times for bit operations, typ. 9 U 5 ∨ V 250 ∨ V 400 mA; Typical 400 mA; Typical 400 mA; Typical 400 mA; CPU with all expansion modules 1 200 mA; Typical 1 200 mA; CPU with all expansion modules 1 200 mA; CPU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; Typical 2 4 ∨ PU with all expansion modules 1 200 mA; CPU with all expansion modul		
• permissible range, upper limit (DC) Input current Current consumption (rated value) Current consumption, max. 1 20 mA; CPU with all expansion modules Inrush current, max. 1 2 A; at 28.8 V Output current for backplane bus (5 V DC), max. I 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. Memory Work memory • integrated • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • without battery CPU processing times for bit operations, typ. 400 mA; Typical 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 mA; Max. 5 V DC for SM and CM 400 ma; Max. 5 V DC for SM and CM 400 ma; Max. 5 V DC for SM and CM 400 ma; Max. 5 V DC for	, ,	
Input current Current consumption (rated value) Current consumption, max. 1 200 mA; CPU with all expansion modules Inrush current, max. 1 2 A; at 28.8 V Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable No Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • without battery Yes CPU processing times for bit operations, typ. 0.085 µs; / instruction		
Current consumption (rated value) Current consumption, max. 1 200 mA; Typical 1 200 mA; CPU with all expansion modules Inrush current, max. 12 A; at 28.8 V Output current for backplane bus (5 V DC), max. 1 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply 24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • with out battery Yes; maintenance-free • without battery CPU processing times for bit operations, typ. 400 mA; Typical 1 200 mA; CPU with all expansion modules 1 2 4 2 2 8 8 V 1 200 mA; CPU with all expansion modules 1 2 4 2 8 8 V 1 000 mA; CPU with all expansion modules 1 1 000 mA; Max. 5 V DC for SM and CM 1 000 mA; CPU with all expansion modules 1 1 000 mA; Typical 1 200 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 000 mA; CPU with all expansion modules 1 1 1 200 mA; CPU with all expansion modules 1 1 1 200 mA; CPU with all expansion modules 1 1 1 200 mA; CPU with all expansion modules 1 1 1 200 mA; CPU with all expansion modules 1 1 2 2 8 8 V		250 V
Current consumption, max. Inrush current, max. Output current for backplane bus (5 V DC), max. Inrush current for backplane bus (5 V DC), max. Inrush current for backplane bus (5 V DC), max. Inrush current for backplane bus (5 V DC), max. Inrush current Inrush	Input current	
Inrush current, max. Output current for backplane bus (5 V DC), max. I 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • without battery For bit operations, typ. 1 0.085 µs; / instruction		
Output current for backplane bus (5 V DC), max. Encoder supply 24 V encoder supply • 24 V	Current consumption, max.	1 200 mA; CPU with all expansion modules
for backplane bus (5 V DC), max. I 000 mA; Max. 5 V DC for SM and CM Encoder supply 24 V encoder supply • 24 V	Inrush current, max.	12 A; at 28.8 V
Encoder supply 24 V encoder supply 24 V b L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present without battery Yes; maintenance-free without battery for bit operations, typ. 0.085 µs; / instruction	Output current	
24 V encoder supply • 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable No Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • without battery For bit operations, typ. 0.085 μs; / instruction	for backplane bus (5 V DC), max.	1 000 mA; Max. 5 V DC for SM and CM
• 24 V L+ minus 4 V DC min. Power loss Power loss, typ. 9 W Memory Work memory • integrated • expandable • expandable Load memory • integrated • Plug-in (SIMATIC Memory Card), max. Backup • present • without battery Yes; maintenance-free • without battery For bit operations, typ. 0.085 µs; / instruction	Encoder supply	
Power loss Power loss, typ. 9 W Memory Work memory integrated 75 kbyte expandable No Load memory integrated 1 Mbyte Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup present Yes; maintenance-free without battery Yes CPU processing times for bit operations, typ. 0.085 µs; / instruction	24 V encoder supply	
Power loss, typ. Memory Work memory integrated expandable Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present present with SIMATIC memory card Yes; maintenance-free without battery CPU processing times for bit operations, typ. 9 W When 1 Mbyte No 1 Mbyte with SIMATIC memory card Yes; maintenance-free Yes CPU processing times	• 24 V	L+ minus 4 V DC min.
Memory Work memory ● integrated 75 kbyte ● expandable No Load memory ● integrated 1 Mbyte ● Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup ● present Yes; maintenance-free ● without battery Yes CPU processing times for bit operations, typ. 0.085 µs; / instruction	Power loss	
Work memory integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present with SIMATIC memory card Yes; maintenance-free without battery CPU processing times for bit operations, typ. 75 kbyte No 1 Mbyte Ves yes The processing times 75 kbyte No 1 Mbyte Yes Yes The processing times 75 kbyte No 1 Mbyte Yes The processing times 75 kbyte No 1 Mbyte Yes With SIMATIC memory card Yes; maintenance-free Yes O.085 µs; / instruction	Power loss, typ.	9 W
 integrated expandable No Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present with SIMATIC memory card Backup Operations times For bit operations, typ. On the state of the state o	Memory	
 expandable Load memory integrated Plug-in (SIMATIC Memory Card), max. Backup present with SIMATIC memory card Backup Operations times For bit operations, typ. No No No No No An intervent of the properties of th	Work memory	
Load memory • integrated • Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup • present • without battery CPU processing times for bit operations, typ. 1 Mbyte 2 Yes; maintenance-free Yes; maintenance-free Yes 0.085 µs; / instruction	integrated	75 kbyte
 integrated Plug-in (SIMATIC Memory Card), max. with SIMATIC memory card Backup present without battery CPU processing times for bit operations, typ. 1 Mbyte with SIMATIC memory card Yes; maintenance-free Yes CPU processing times 0.085 µs; / instruction	expandable	No
 Plug-in (SIMATIC Memory Card), max. Backup present with SIMATIC memory card Yes; maintenance-free without battery Yes CPU processing times for bit operations, typ. 0.085 µs; / instruction 	Load memory	
Backup	integrated	1 Mbyte
 present without battery CPU processing times for bit operations, typ. Yes; maintenance-free Yes CPU processing times 0.085 µs; / instruction 	Plug-in (SIMATIC Memory Card), max.	with SIMATIC memory card
without battery CPU processing times for bit operations, typ. 0.085 μs; / instruction	·	
CPU processing times for bit operations, typ. 0.085 μs; / instruction	·	
for bit operations, typ. 0.085 µs; / instruction	-	Yes
	CPU processing times	
for word operations, typ. 1,7 µs: / instruction	for bit operations, typ.	0.085 μs; / instruction
	for word operations, typ.	1.7 µs; / instruction

for floating point arithmetic, typ.	2.3 µs; / instruction
CPU-blocks	2.5 µ3,7 motradion
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
ОВ	
 Number, max. 	Limited only by RAM for code
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	10 kbyte
Flag	
• Size, max.	4 kbyte; Size of bit memory address area
Local data	
per priority class, max.	16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2 to 26: 6 KB
Address area	
Process image	
 Inputs, adjustable 	1 kbyte
 Outputs, adjustable 	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 com. modules, no signal board can be used, 2 signal modules
Time of day	
Clock	
Hardware clock (real-time)	Yes
Backup time	480 h; Typical
Deviation per day, max.	60 s/month at 25 °C
Digital inputs	
Number of digital inputs	8; Integrated
of which inputs usable for technological functions	4; HSC (High Speed Counting)
Source/sink input	Yes
Number of simultaneously controllable inputs	165
all mounting positions	
— up to 40 °C, max.	8
Input voltage	
Rated value (DC)	24 V
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 V DC at 2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	0.2 $\mu s,0.4~\mu s,0.8~\mu s,1.6~\mu s,3.2~\mu s,6.4~\mu s$ and 12.8 $\mu s,selectable$ in 4 groups
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Single phase: 3 @ 100 kHz & 1 @ 30 kHz, differential: 3 @ 80 kHz & 1 @ 30 kHz
Cable length	FOO we FO we for to should size I for the re-
shielded, max.	500 m; 50 m for technological functions
• unshielded, max.	300 m; for technological functions: No
Digital outputs	
Number of digital outputs	6; Relays
Switching capacity of the outputs	
with resistive load, max.	2 A
on lamp load, max. Output delegatification leads	30 W with DC, 200 W with AC
Output delay with resistive load	40
• "0" to "1", max.	10 ms; max.
• "1" to "0", max.	10 ms; max.
Switching frequency	411-
of the pulse outputs, with resistive load, max. Pelay outputs.	1 Hz
Relay outputs	6
Number of energing evelor, may	6 machanically 10 million, at rated lead valtage 100 000
Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100 000

Cable length	
shielded, max.	500 m
• unshielded, max.	150 m
Analog inputs	
Number of analog inputs	2
Input ranges	
Voltage	Yes
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
— Input resistance (0 to 10 V)	≥100k ohms
Cable length	
shielded, max.	100 m; twisted and shielded
Analog outputs	
Number of analog outputs	0
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	10 bit
 Integration time, parameterizable 	Yes
Conversion time (per channel)	625 µs
Encoder	
<u>-</u>	
Connectable encoders	Voc
• 2-wire sensor	Yes
1. Interface	
Interface type	PROFINET
Isolated	Yes
automatic detection of transmission rate	Yes
Autonegotiation	Yes
Autocrossing	Yes
Interface types	
• RJ 45 (Ethernet)	Yes
Protocols	
PROFINET IO Controller	Yes
PROFINET IO Device	Yes
Open IE communication	Yes
Web server	Yes
PROFINET IO Controller	400 MI: 1/-
Transmission rate, max.	100 Mbit/s
Services	40
— Number of connectable IO Devices, max. PROFINET IO Device	16
Services — Shared device	Voe
	Yes
 Number of IO Controllers with shared device, max. 	2
Protocols	
	Von
Supports protocol for PROFINET IO	Yes
PROFIBUS	No Voc CM 1242 F required
PROFIBUS AS Interface	Yes; CM 1243-5 required
AS-Interface Protocole (Ethernet)	Yes
Protocols (Ethernet) • TCP/IP	Yes
Open IE communication	163
TCP/IP	Yes
• ISO-on-TCP (RFC1006)	Yes
• IDP	Yes
Web server	100
supported	Yes
SupportedUser-defined websites	Yes
User-defined websites Further protocols	169
MODBUS	Yes
	100
communication functions / header	
S7 communication	

• cupported	Voe
• supported	Yes Yes
as serveras client	Yes
Number of connections	160
• overall	16; dynamically
Test commissioning functions	10, aynamouny
Status/control	
Status/control variable	Yes
Variables	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
Forcing	inputoroutputo, memory bito, bbo, diotributou iroo, timoro, oduritoro
• Forcing	Yes
Diagnostic buffer	
• present	Yes
Traces	
 Number of configurable Traces 	2; Up to 512 KB of data per trace are possible
Integrated Functions	
Frequency measurement	Yes
controlled positioning	Yes
Number of position-controlled positioning axes, max.	8
PID controller	Yes
Number of alarm inputs	4
Potential separation	
Potential separation digital inputs	
 Potential separation digital inputs 	500V AC for 1 minute
between the channels, in groups of	1
Potential separation digital outputs	
Potential separation digital outputs	Relays
between the channels	No
between the channels, in groups of	2
EMC	
Interference immunity against discharge of static electricity	V.
 Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 	Yes
Test voltage at air discharge	8 kV
— Test voltage at contact discharge	6 kV
Interference immunity to cable-borne interference • Interference immunity on supply lines acc. to IEC	Yes
61000-4-4	
 Interference immunity on signal cables acc. to IEC 61000-4-4 	Yes
Interference immunity against voltage surge	
 Interference immunity on supply lines acc. to IEC 	Yes
61000-4-5	
Interference immunity against conducted variable disturbance	, , ,
Interference immunity against high-frequency radiation acc. to IEC 61000-4-6	Yes
Emission of radio interference acc. to EN 55 011	Voc. Croup 1
 Limit class A, for use in industrial areas Limit class B, for use in residential areas 	Yes; Group 1 Yes; When appropriate measures are used to ensure compliance with
	the limits for Class B according to EN 55011
Degree and class of protection	
IP degree of protection	IP20
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-40 °C; = Tmin; Startup @ -25 °C
• max.	70 °C; = Tmax; Tmax > +55 °C number of simultaneously switched-on digital inputs 4, digital outputs 3, analog inputs 2 (no adjacent points) with horizontal mounting position; Tmax > +60 °C number of simultaneously switched-on digital inputs 3, digital outputs 2, analog inputs 0 (no adjacent points) with horizontal mounting position
vertical installation, min.	-40 °C; = Tmin; Startup @ -25 °C
 vertical installation, max. 	50 °C; = Tmax

At and another the	05.00
At cold restart, min.	-25 °C
Ambient temperature during storage/transportation	40 °C
• min.	-40 °C 70 °C
Max. Altitude during exerction relating to see level.	70 C
Altitude during operation relating to sea level Installation altitude above sea level, max.	2 000 m
Ambient air temperature-barometric pressure-	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin
altitude	(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); above
	2 000 m max. 132 V AC
Relative humidity	
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Vibrations	condensation conditions)
Vibration resistance during operation acc. to IEC	2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail
60068-2-6	2 g (1110) Wall Mountaing, 1 g (11110) Bitt fall
 Operation, tested according to IEC 60068-2-6 	Yes
Shock testing	
 tested according to IEC 60068-2-27 	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak
	value), duration 11 ms
Resistance	
Coolants and lubricants	Vocal had dispolated in the size
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
to biologically active substances according to	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of
EN 60721-3-3	fauna); Class 3B3 on request
 to chemically active substances according to 	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
EN 60721-3-3	(severity degree 3); *
— to mechanically active substances according to	Yes; Class 3S4 incl. sand, dust, *
EN 60721-3-3	
Use on ships/at sea — to biologically active substances according to	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on
EN 60721-3-6	request
— to chemically active substances according to	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
EN 60721-3-6	(severity degree 3); *
— to mechanically active substances according to	Yes; Class 6S3 incl. sand, dust; *
EN 60721-3-6	
Usage in industrial process technology	Van Class 2 (avaluding trichlerathy land)
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)
Environmental conditions for process,	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas
measuring and control systems acc. to ANSI/ISA-	concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);
71.04	level LC3 (salt spray) and level LB3 (oil)
Remark	
Note regarding classification of environmental conditions are to EN 60721. EN 60654 4 and	* The supplied plug covers must remain in place over the unused
conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	interfaces during operation!
Conformal coating	
Coatings for printed circuit board assemblies acc. to	Yes; Class 2 for high reliability
EN 61086	, , , , , , , , , , , , , , , , , , ,
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection
 Military testing according to MIL-I-46058C, 	Yes; Discoloration of coating possible during service life
Amendment 7	Very Conference of the Columbia
 Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies 	Yes; Conformal coating, Class A
according to IPC-CC-830A	
configuration / header	
configuration / programming / header	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
programming / cycle time monitoring / header	
adjustable	Yes
Dimensions	
Width	90 mm
Height	100 mm
M ·	

Depth	75 mm
Weights	
Weight, approx.	385 g
last modified:	4/1/2022 🗗