## **SIEMENS**

## **Data sheet**

6AG1513-1AL02-7AB0



SIPLUS S7-1500 CPU 1513-1 PN based on 6ES7513-1AL02-0AB0 with conformal coating, -40...+70 °C, heat sink, no PS usable, central processing unit with work memory 300 KB for program and 1.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 40 ns bit performance, SIMATIC Memory Card required spare part display: 6AG1591-1AB00-2AA0

Figure similar

General information	
Product type designation	CPU 1513-1 PN
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	Yes; Distributed and central; with minimum OB $6x$ cycle of $500~\mu s$ (distributed) and $1~ms$ (central)
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	see entry ID: 109746275
Configuration control	
via dataset	Yes
Display	
Screen diagonal [cm]	3.45 cm
Control elements	
Number of keys	8
Mode buttons	2
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Mains buffering	-
Mains/voltage failure stored energy time	5 ms
Repeat rate, min.	1/s
Input current	
Current consumption (rated value)	0.7 A
Current consumption, max.	0.95 A
Inrush current, max.	1.9 A; Rated value
l²t	0.02 A <sup>2</sup> ·s
Power	
Infeed power to the backplane bus	10 W
Power consumption from the backplane bus (balanced)	5.5 W
Power loss	
Power loss, typ.	5.7 W
Memory	
Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes
Work memory	000 11 4
<ul><li>integrated (for program)</li></ul>	300 kbyte

<ul><li>integrated (for data)</li></ul>	1.5 Mbyte
Load memory	
Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	
maintenance-free	Yes
CPU processing times	
for bit operations, typ.	40 ns
for word operations, typ.	48 ns
for fixed point arithmetic, typ.	64 ns
for floating point arithmetic, typ.	256 ns
CPU-blocks	
Number of elements (total)	2 000; Blocks (OB, FB, FC, DB) and UDTs
DB	2 000, blocks (OB, 1 B, 1 G, BB) and OB 15
Number range	1 60 999; subdivided into: number range that can be used by the user: 1 59 999, and number range of DBs created via SFC 86: 60 000 60 999
• Size, max.	1.5 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
FB	
Number range	0 65 535
• Size, max.	300 kbyte
FC	
Number range	0 65 535
• Size, max.	300 kbyte
ОВ	
• Size, max.	300 kbyte
<ul> <li>Number of free cycle OBs</li> </ul>	100
<ul> <li>Number of time alarm OBs</li> </ul>	20
<ul> <li>Number of delay alarm OBs</li> </ul>	20
<ul> <li>Number of cyclic interrupt OBs</li> </ul>	20; With minimum OB 3x cycle of 500 μs
<ul> <li>Number of process alarm OBs</li> </ul>	50
<ul> <li>Number of DPV1 alarm OBs</li> </ul>	3
<ul> <li>Number of isochronous mode OBs</li> </ul>	2
<ul> <li>Number of technology synchronous alarm OBs</li> </ul>	2
<ul> <li>Number of startup OBs</li> </ul>	100
<ul> <li>Number of asynchronous error OBs</li> </ul>	4
<ul> <li>Number of synchronous error OBs</li> </ul>	2
Number of diagnostic alarm OBs	1
Nesting depth	
per priority class	24
Counters, timers and their retentivity	
S7 counter	
Number	2 048
Retentivity	
— adjustable	Yes
IEC counter	
Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
S7 times	
• Number	2 048
Retentivity	V
— adjustable	Yes
IEC timer	Any (and displication by the marine
Number  Retentivity	Any (only limited by the main memory)
Retentivity	Voc
— adjustable	Yes
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	128 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 88 KB
Flag	16 khyto
Size, max.      Number of clock memories.	16 kbyte 8: 8 clock memory bit, grouped into one clock memory byte
Number of clock memories  Data blocks	8; 8 clock memory bit, grouped into one clock memory byte
Data blocks	

Retentivity adjustable	Yes
Retentivity adjustable     Retentivity preset	No
Local data	.10
per priority class, max.	64 kbyte; max. 16 KB per block
Address area	
Number of IO modules	2 048; max. number of modules / submodules
I/O address area	
• Inputs	32 kbyte; All inputs are in the process image
<ul><li>Outputs</li></ul>	32 kbyte; All outputs are in the process image
per integrated IO subsystem	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
per CM/CP	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
Subprocess images	
Number of subprocess images, max.	32
Hardware configuration	
Number of distributed IO systems	32; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link)
Number of DP masters	
• Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
Number of IO Controllers	
• integrated	1 6: A maximum of 6 CMa (DDOFINET + DDOFIDUS) can be inserted in
• Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
Rack	.com
Modules per rack, max.	32; CPU + 31 modules; no system power supply (PS) can be used
Number of lines, max.	1
PtP CM	
Number of PtP CMs	the number of connectable PtP CMs is only limited by the number of available slots
Time of day	
Clock	
• Type	Hardware clock
Backup time	6 wk; At 40 °C ambient temperature, typically
<ul> <li>Deviation per day, max.</li> </ul>	10 s; Typ.: 2 s
Operating hours counter	
Number	16
Clock synchronization	
• supported	Yes
• in AS, master	Yes
• in AS, slave	Yes
on Ethernet via NTP	Yes
Interfaces	
Number of PROFINET interfaces	1
1. Interface	
Interface types	V V4
RJ 45 (Ethernet)	Yes; X1
Number of ports     into grated quittels	2
integrated switch  Protocols	Yes
FIGUROUS	
	Voc. IDv/
IP protocol	Yes; IPv4
<ul><li>IP protocol</li><li>PROFINET IO Controller</li></ul>	Yes
<ul><li>IP protocol</li><li>PROFINET IO Controller</li><li>PROFINET IO Device</li></ul>	Yes Yes
<ul><li>IP protocol</li><li>PROFINET IO Controller</li><li>PROFINET IO Device</li><li>SIMATIC communication</li></ul>	Yes Yes Yes
<ul> <li>IP protocol</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> </ul>	Yes Yes Yes; Optionally also encrypted
<ul> <li>IP protocol</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> </ul>	Yes Yes Yes Yes; Optionally also encrypted Yes
<ul> <li>IP protocol</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> <li>Media redundancy</li> </ul>	Yes Yes Yes; Optionally also encrypted
<ul> <li>IP protocol</li> <li>PROFINET IO Controller</li> <li>PROFINET IO Device</li> <li>SIMATIC communication</li> <li>Open IE communication</li> <li>Web server</li> </ul>	Yes Yes Yes Yes; Optionally also encrypted Yes

DO/OD : /:	V
— PG/OP communication	Yes
<ul><li>— Isochronous mode</li></ul>	Yes
<ul> <li>Direct data exchange</li> </ul>	Yes; Requirement: IRT and isochronous mode (MRPD optional)
— IRT	Yes
— PROFlenergy	Yes; per user program
<ul> <li>Prioritized startup</li> </ul>	Yes; Max. 32 PROFINET devices
<ul> <li>Number of connectable IO Devices, max.</li> </ul>	128; In total, up to 512 distributed I/O devices can be connected via AS-
	i, PROFIBUS or PROFINET
<ul> <li>Of which IO devices with IRT, max.</li> </ul>	64
<ul> <li>Number of connectable IO Devices for RT,</li> </ul>	128
max.	
— of which in line, max.	128
<ul> <li>Number of IO Devices that can be</li> </ul>	8; in total across all interfaces
simultaneously activated/deactivated, max.	
<ul> <li>Number of IO Devices per tool, max.</li> </ul>	8
<ul><li>Updating times</li></ul>	The minimum value of the update time also depends on communication
	share set for PROFINET IO, on the number of IO devices, and on the
	quantity of configured user data
Update time for IRT	
— for send cycle of 250 μs	250 µs to 4 ms; Note: In the case of IRT with isochronous mode, the
for and 1 CEOO	minimum update time of 500 μs of the isochronous OB is decisive
— for send cycle of 500 μs	500 μs to 8 ms
— for send cycle of 1 ms	1 ms to 16 ms
— for send cycle of 2 ms	2 ms to 32 ms
— for send cycle of 4 ms	4 ms to 64 ms
With IRT and parameterization of "odd" send	Update time = set "odd" send clock (any multiple of 125 μs: 375 μs, 625
cycles	μs 3 875 μs)
Update time for RT	050 4 400
— for send cycle of 250 μs	250 µs to 128 ms
— for send cycle of 500 μs	500 μs to 256 ms
— for send cycle of 1 ms	1 ms to 512 ms
— for send cycle of 2 ms	2 ms to 512 ms
— for send cycle of 4 ms	4 ms to 512 ms
PROFINET IO Device	
Services	
Services — PG/OP communication	Yes
Services	Yes No
Services — PG/OP communication	
Services — PG/OP communication — Isochronous mode	No
Services  — PG/OP communication — Isochronous mode — IRT	No Yes
Services  — PG/OP communication  — Isochronous mode  — IRT  — PROFlenergy	No Yes Yes; per user program
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max.	No Yes Yes; per user program Yes
Services  — PG/OP communication  — Isochronous mode  — IRT  — PROFlenergy  — Shared device  — Number of IO Controllers with shared device,	No Yes Yes; per user program Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max.	No Yes Yes; per user program Yes
Services  — PG/OP communication  — Isochronous mode  — IRT  — PROFlenergy  — Shared device  — Number of IO Controllers with shared device, max.  — Asset management record	No Yes Yes; per user program Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types	No Yes Yes; per user program Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)	No Yes Yes; per user program Yes 4 Yes; per user program
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps	No Yes Yes; per user program Yes 4 Yes; per user program Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation	No Yes Yes; per user program Yes 4 Yes; per user program Yes Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes
Services	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe Number of connections	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections  • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections • Number of connections, max. • Number of connections reserved for ES/HMI/web • Number of S7 routing paths  Redundancy mode	No Yes Yes; per user program Yes 4  Yes; per user program  Yes Yes Yes Yes Yes Yes Yes 10 88 16
Services	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections  • Number of connections reserved for ES/HMII/web • Number of S7 routing paths  Redundancy mode  • H-Sync forwarding  Media redundancy	No Yes Yes; per user program Yes 4  Yes; per user program  Yes Yes Yes Yes Yes 10 88 16  Yes
Services	No Yes Yes; per user program Yes 4  Yes; per user program  Yes Yes Yes Yes Yes Yes Yes 10 88 16
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections  • Number of connections reserved for ES/HMII/web • Number of S7 routing paths  Redundancy mode  • H-Sync forwarding  Media redundancy	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services	No Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services  — PG/OP communication — Isochronous mode — IRT — PROFlenergy — Shared device — Number of IO Controllers with shared device, max. — Asset management record  Interface types  RJ 45 (Ethernet)  • 100 Mbps • Autonegotiation • Autocrossing • Industrial Ethernet status LED  Protocols  PROFIsafe  Number of connections • Number of connections reserved for ES/HMI/web • Number of connections via integrated interfaces • Number of S7 routing paths  Redundancy mode  • H-Sync forwarding  Media redundancy — MRPD — MRPD — Switchover time on line break, typ.	No Yes Yes; per user program Yes 4 Yes; per user program  Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Services	No Yes Yes; per user program Yes 4  Yes; per user program  Yes Yes Yes Yes Yes Yes Yes  No  128; via integrated interfaces of the CPU and connected CPs / CMs 10 88 16  Yes  Yes Yes Yes Yes Yes Yes Yes Yes Y

<ul> <li>S7 routing</li> </ul>	Yes
<ul> <li>S7 communication, as server</li> </ul>	Yes
<ul> <li>S7 communication, as client</li> </ul>	Yes
User data per job, max.	See online help (S7 communication, user data size)
Open IE communication	
• TCP/IP	Yes
<ul><li>— Data length, max.</li></ul>	64 kbyte
<ul> <li>several passive connections per port,</li> </ul>	Yes
supported	
• ISO-on-TCP (RFC1006)	Yes
— Data length, max.	64 kbyte
• UDP	Yes
— Data length, max.	2 kbyte; 1 472 bytes for UDP broadcast
— UDP multicast	Yes; Max. 5 multicast circuits
DHCP     SNMP	No Yes
• DCP	Yes
• LLDP	Yes
Web server	1 05
HTTP	Yes; Standard and user pages
• HTTPS	Yes; Standard and user pages
OPC UA	100, Claridard and addit paged
Runtime license required	Yes
OPC UA Client	Yes
Application authentication	Yes
Security policies	Available security policies: None, Basic128Rsa15, Basic256Rsa15,
,,	Basic256Sha256
<ul> <li>User authentication</li> </ul>	"anonymous" or by user name & password
<ul> <li>Number of connections, max.</li> </ul>	4
<ul> <li>Number of nodes of the client interfaces,</li> </ul>	1 000
recommended max.	
<ul> <li>Number of elements for one call of OPC_UA_NodeGetHandleList/OPC_UA_ReadList/C</li> </ul>	300
max.	
Number of elements for one call of	20
OPC_UA_NameSpaceGetIndexList, max.	
<ul> <li>Number of elements for one call of</li> </ul>	100
OPC_UA_MethodGetHandleList, max.	
Number of simultaneous calls of the client instructions for session management, per	1
instructions for session management, per connection, max.	
Number of simultaneous calls of the client	5
instructions for data access, per connection, max.	
<ul> <li>Number of registerable nodes, max.</li> </ul>	5 000
<ul> <li>Number of registerable method calls of</li> </ul>	100
OPC_UA_MethodCall, max.	
Number of inputs/outputs when calling OPC LIA MethodCall may	20
OPC_UA_MethodCall, max.  • OPC UA Server	Yes; Data access (read, write, subscribe), method call, custom address
OI O OA GEIVEI	space
<ul> <li>Application authentication</li> </ul>	Yes
Security policies	Available security policies: None, Basic128Rsa15, Basic256Rsa15,
	Basic256Sha256
<ul> <li>User authentication</li> </ul>	"anonymous" or by user name & password
<ul><li>Number of sessions, max.</li></ul>	32
<ul> <li>Number of accessible variables, max.</li> </ul>	50 000
<ul> <li>Number of registerable nodes, max.</li> </ul>	10 000
<ul> <li>Number of subscriptions per session, max.</li> </ul>	20
<ul><li>— Sampling interval, min.</li></ul>	100 ms
— Publishing interval, min.	500 ms
Number of server methods, max.	20
<ul> <li>Number of inputs/outputs per server method,</li> </ul>	20
max.  — Number of monitored items, recommended	1 000; for 1 s campling interval and 1 s conditionval
<ul> <li>Number of monitored items, recommended max.</li> </ul>	1 000; for 1 s sampling interval and 1 s send interval
Number of server interfaces, max.	10; or 20, depending on type of server interface
<ul> <li>Number of nodes for user-defined server</li> </ul>	1 000

interfaces, max.	
Further protocols	
• MODBUS	Yes; MODBUS TCP
Isochronous mode	
Equidistance	Yes
S7 message functions	
Number of login stations for message functions, max.	32
Program alarms	Yes
Number of configurable program messages, max.	5 000; Program messages are generated by the "Program_Alarm"
Number of leadable program manages in DLIN may	block, ProDiag or GRAPH
Number of loadable program messages in RUN, max.  Number of simultaneously active program alarms	2 500
Number of program alarms	300
Number of alarms for system diagnostics	100
Number of alarms for motion technology objects	80
Test commissioning functions	
Joint commission (Team Engineering)	Yes; Parallel online access possible for up to 5 engineering systems
Status block	Yes; Up to 8 simultaneously (in total across all ES clients)
Single step	No
Number of breakpoints	8
Status/control	
Status/control variable	Yes
Variables     Number of variables, may	Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters
<ul> <li>Number of variables, max.</li> <li>— of which status variables, max.</li> </ul>	200: per joh
of which status variables, max.      of which control variables, max.	200; per job 200; per job
Forcing	
• Forcing, variables	Peripheral inputs/outputs
Number of variables, max.	200
Diagnostic buffer	
• present	Yes
<ul> <li>Number of entries, max.</li> </ul>	1 000
— of which powerfail-proof	500
Traces	At the to E40 I/D of date was transported
Number of configurable Traces	4; Up to 512 KB of data per trace are possible
Interrupts/diagnostics/status information	
Diagnostics indication LED	Voc
RUN/STOP LED  ERROR LED	Yes Yes
MAINT LED	Yes
STOP ACTIVE LED	Yes
Connection display LINK TX/RX	Yes
Supported technology objects	
Motion Control	Yes; Note: The number of axes affects the cycle time of the PLC
	program; selection guide via the TIA Selection Tool or SIZER
<ul> <li>Number of available Motion Control resources for</li> </ul>	800
technology objects	
Required Motion Control resources  Per speed controlled axis.	40
— per positioning axis	40 80
<ul><li>per positioning axis</li><li>per synchronous axis</li></ul>	160
per synchronous axis      per external encoder	80
— per output cam	20
— per cam track	160
— per probe	40
<ul> <li>Positioning axis</li> </ul>	
<ul> <li>Number of positioning axes at motion control cycle of 4 ms (typical value)</li> </ul>	5
Number of positioning axes at motion control	10
cycle of 8 ms (typical value)	
Controller	Voc. Universal DID controller with integrated antimination
PID_Compact     PID_3Step	Yes; Universal PID controller with integrated optimization Yes; PID controller with integrated optimization for valves
<ul><li>PID_3Step</li><li>PID-Temp</li></ul>	Yes; PID controller with integrated optimization for valves  Yes; PID controller with integrated optimization for temperature
▲ LID-19IIIħ	res, r ib controller with integrated optimization for temperature

Production institution in max	Counting and measuring	
Ambient impresture during operation  • horizontal installation, min.  • vertical installation in max.  Ambient emperature during storage-transportation  • vertical installation in max.  • All trained during operation relating to sea level.  • vertical installation in min.  • vertical install		Yes
• horizontal installation, min.     • horizontal installation, min.     • vertical installation, max.      • vertical installation, max.      • which installation appreciation relating to sea level.      • Inin.     • max.      • Inin.     • max.      • Inin.     • max.      • Ambient temperature during storage/transportation      • min.     • max.      • Ambient temperature barometric pressure-altitude.      • Inin.     • max.      • Ambient is remperature barometric pressure-altitude.      • Resistance      • Coolents and lubricants      • Resistance      • Coolents and lubricants      • In solidojically active substances according to EN 60721-3-3.      • To the minically active substances according to EN 60721-3-3.      • To to the minically active substances according to EN 60721-3-3.      • To to mechanically active substances according to EN 60721-3-3.      • To Norizonal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual restrictions for installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual restrictions for installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal installation altitudes > 2 000 m, see manual state). horizontal in	Ambient conditions	
• horizontal installation, max.  • vertical installation, min.  • nin.  • max.  Ambient temperature during storagetransportation  • inin.  • nin.  • max.  Ambient at temperature during storagetransportation  • inin.  • nin.  • max.  Ambient at temperature during storagetransportation  • inin.  • nin.  • max.  Ambient at temperature during storagetransportation  • nin.  • max.  Ambient at temperature during storagetransportation  • nin.  • max.  Ambient at temperature during storagetransportation  • nin.  • nin.  • nin.  • nin.  • nin.  • max.  Ambient at temperature during storagetransportation  • nin.  • nin.  • nin.  • nin.  • nin.  • max.  Ambient at temperature during storagetransportation  • nin.  • nin.  • nin.  • nin.  • nin.  • max.  Oo On.  Oo on. Restrictions for installation altitudes > 2 000 m, see entry 1D. 109763200  statistic humidity  • With condensation / frost (no commissioning in bedewed state), horizontal installation altitudes > 2 000 m, see entry 1D. 109763200  statistic humidity  • Vest. Resistance  Coolans and lubricants   Yes, Class 381 min. sand, dust.  • Net Registrated by active substances according to 18 (see as space), and the properation of faunal; Class 383 on request  Yes, Class 384 min. sand, dust.  • Net Registrated by active substances according to 18 (see as space), and the properation of space and several space and space	Ambient temperature during operation	
<ul> <li>vertical installation, min.</li> <li>vertical installation, max.</li> <li>vertical installation, max.</li> <li>Ambient temperature during storage/transportation</li> <li>nin.</li> <li>nin.</li></ul>	<ul> <li>horizontal installation, min.</li> </ul>	-40 °C; = Tmin (incl. condensation/frost)
vertical installation, max.  Ambient temperature during storage/transportation     • nin.     • ninx     * ninx     * ninx     * max     * Ambient air temperature barring to sea level     • installation altitude above sea level, max.     • Ambient air temperature-barometric pressure-stitude     * With condensation, tested in accordance with IEC 60085-2-38, max.     * Resistant to commercially available coolants and lubricants     * Resistant to commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the commercially available coolants and lubricants     * No broad of the coola	·	display is switched off
ambient temperature during storage/transportation  • nin  • nins  • ninstaliction altitude above see level. max.  • scale in the statistion altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation altitudes > 2 000 m, see manual  Restrictions for installation alti		
mink   40 °C   70 °	• Vertical installation, max.	
** (Ambient air temperature-barometric pressure-aithude       ** (Installation aithude above sea level, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (With condensation, tested in accordance with IEC 60068-2-38, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (With condensation, tested in accordance with IEC 60068-2-38, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (With condensation, tested in accordance with IEC 60068-2-38, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (With condensation, tested in accordance with IEC 60068-2-38, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (With condensation, tested in accordance with IEC 60068-2-38, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (Ambient air temperature-barometric pressure-aithude       ** (With condensation, tested in accordance with IEC 60068-2-3, max.        ** (Ambient air temperature-barometric pressure-aithude       ** (Ambient air temperature pressure-a	Ambient temperature during storage/transportation	
Installation altitude above sea level max		
Initialiation altitude above sea level, max. Ambient air temperature-barometric pressure-altitude Relative humidity  Initialiation altitudes > 2 000 m, see entry ID: 109763260 Relative humidity  Initialiation altitudes > 2 000 m, see entry ID: 109763260 Relative humidity  Initialiation altitudes > 2 000 m, see entry ID: 109763260 Resistance Coolants and lubricants  Resistance Coolants and lubricants  Resistance Coolants and lubricants  IDEN 60721-3-3  IDEN 60721-3-4  IDEN 60721-3-6  IDEN		70 °C
Ambient air temperature-barometric pressure- allitude  Relative humidity  • With condensation, tested in accordance with IEC  60068-2-36. max.  Resistance  Coolants and lubricants  — Resistant to commercially available coolants  and lubricants  — In biologically active substances according to  EN 60721-3-3  — to chemically active substances according to  EN 60721-3-3  Use on shipsiat see  — to biologically active substances according to  EN 60721-3-6  — to chemically active substances according to  EN 60721-3-6  Usage in industrial process technology  — Against chemically active substances according to  EN 60721-3-6  Usage in industrial process technology  — Against chemically active substances acc. to  EN 60654-4  — Environmental conditions for process measuring and control systems acc. to ANSI/ISA- 71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to  EN 61026  • Protection against fouling acc. to EN 6068-3  • Military testing according to EMICO21, EN 6068-1  • Military testing according to EMICO21, EN 6068-1  • Protection against fouling acc. to EN 6068-3  • Military testing according to EMICO21, EN 6068-1  • Protection against fouling acc. to EN 6068-3  • Military testing according to MILI-146058C, Amendment 7  • Qualification and Performance Elicetrical Insulating Compound for Printed Board Assemblies acc. to EN 60721, EN 6068-4  — EPO — FBD — FBD — FBD — FBD — FBD — STI, — SCI, — GRAPH Know-how protection		
altitude Relative humidity  • With condensation, tested in accordance with IEC 60088-2-38, 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 remechanically active substances according to EN 60721-3-3  Use on shipsial sea  — to biologically active substances according to EN 60721-3-3  Use on shipsial sea  — to themically active substances according to EN 60721-3-6  — to chemically active substances according to EN 60721-3-6  — to chemically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  — to mechanically active substances according to EN 60654-4  — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  — Note regarding classification of environmental conditions acc. to EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 60684-3  • Military tasking according to MILI-14058C, Amendment 7  • Qualification and Performance of Electrical Insustance Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  Programming language  — LAD  — FBD  — CARPH  Know-how protection		
Resistance Coolants and lubricants — Resistant to commercially available coolants and lubricants — Resistant to commercially available 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 chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 — to chemically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 6068-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc to EN 6068-1  • Notice regarding classification of environmental conditions acc to EN 6068-1  • Notice regarding classification of environmental conditions acc to EN 6068-3  • Military testing according to MILI-46058C, Amendment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies acc. to EN 6068-1  • Protection against fouling acc. to EN 6068-3  • Military testing according to MILI-46058C, Amendment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assem		Restrictions for installation altitudes > 2 000 m, see entry ID: 109763260
Resistant to commercially available coolants and lubricants  Resistant to commercially setimes Resistant to commercially setimes according to EN 60721-3-3  Resistant to commercially active substances according to EN 60721-3-3  Resistant to commercially active substances according to EN 60721-3-3  Resistant to commercially active substances according to EN 60721-3-3  Resistant to commercially active substances according to EN 60721-3-3  Resistant to commercially active substances according to EN 60721-3-3  Resistant to commercially active substances according to EN 60721-3-3		
Coolants and lubricants  Resistant to commercially available coolants and fubricants  Use in stationary industrial systems  Ho blologically active substances according to EN 60721-3-3  Ho chemically active substances according to EN 60721-3-3  Ho chemically active substances according to EN 60721-3-3  Use on ships/at sea  Ho blologically active substances according to EN 60721-3-6  Ho chemically active substances according to EN 60721-3-6  Ho chemically active substances according to EN 60721-3-6  Usage in industrial process technology  Against chemically active substances acc. to EN 60654-4  Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  Note regarding classification of environmental conditions are: to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  Coalings for printed circuit board assemblies acc. to EN 616068-2  Notice of the formance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  Configuration / Programming / header  Programming language  LAD  FRBD  STI  GRAPH  Know-how protection		
- Resistant to commercially available coolants and lubricants  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  Use on ships/at sea  - to biologically active substances according to EN 60721-3-3  Use on ships/at sea  - to biologically active substances according to EN 60721-3-6  - to chemically active substances according to EN 60721-3-6  - to chemically active substances according to EN 60721-3-6  - to chemically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-6  - to mechanically active substances according to EN 60721-3-6  - No mechanically active substances according to EN 60721-3-6  - No mechanically active substances according to EN 60721-3-6  - No foregarding active substances acc. to EN 60668-4  - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Remark  - Note regarding classification of environmental conditions acc. to EN 60664-3  - Protection against fouling acc. to EN 60664-3  - Military testing according to MIL-1-46058C, Amendment 7  - Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  - Configuration / header  - Configuration / header  - Configuration / programming / header  - Programming language  - LAD  - STL  - SCL  - GRAPH  - Know-how protection	Resistance	
and lubricants 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 — to mechanically active substances according to EN 60721-3-3  Use on shipsa's sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances according to EN 60721-3-6 — EN 60654-4 — EN formalization of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating		
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 — to mechanically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-6 — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60664-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60064-4 and ANSI/SA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60064-4 and ANSI/SA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61886 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-1-46056C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  configuration / header  configuration / programming / header  Programming language — LAD — FBD — STL — SCL — GRAPH  Know-how protection		Yes; Incl. diesel and oil droplets in the air
- 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 - to mechanically active substances according to EN 60721-3-3  Use on ships/at sea - to biologically active substances according to EN 60721-3-6 - to chemically active substances according to EN 60721-3-6 - to chemically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60664-4 - Environmental conditions for process, measuring and control systems acc. to EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical insulating Compound for Printed Board Assemblies according to IPC-CC-380A  configuration / header  configuration / programming / header  Programming language  — LAD — FBD — STL — SCL — GRAPH  Know-how protection		
— 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 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 6064-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating	<ul> <li>to biologically active substances according to</li> </ul>	
Use on ships/at sea  — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60064-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60684-3 • Military testing according to MIL-146058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / programming / header  Programming language  — LAD — FBD — STL — SCL — GRAPH  Know-how protection		Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
— to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating		Yes; Class 3S4 incl. sand, dust, *
EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against foulling acc. to EN 60664-3 • Military testing according to MIL-1-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-C-C-830A  configuration / header  configuration / programming / header  Programming language — LAD — FBD — STL — GRAPH  Know-how protection	Use on ships/at sea	
EN 60721-3-6  — to mechanically active substances according to EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating	EN 60721-3-6	
EN 60721-3-6  Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating	EN 60721-3-6	(severity degree 3); *
- Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating		Yes; Class 653 Inci. Sand, dust, "
EN 60654-4  — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  Remark  — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61086  • Protection against fouling acc. to EN 60664-3  • Military testing according to MIL-I-46058C, Amendment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  Configuration / programming / header  Programming language  — LAD  — FBD — STL — SCL — GRAPH  Know-how protection		
measuring and control systems acc. to ANSI/ISA-71.04 concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)  Remark  - Note regarding classification of environmental conditions acc, to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61086  • Protection against fouling acc. to EN 60664-3  • Military testing according to MIL-I-46058C, Amendment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / programming / header  Programming language  - LAD - FBD - STL - SCL - GRAPH  Know-how protection	EN 60654-4	
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61086  • Protection against fouling acc. to EN 60664-3  • Military testing according to MIL-I-46058C, Amendment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  configuration / programming / header  Programming language  - LAD - FBD - STL - SCL - GRAPH  Know-how protection  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * The supplied plug covers must remain in place over the unused interfaces during operation!  * Yes; Class 2 for high reliability  * Yes; Type 1 protection  * Yes; Conformal coating, Class A  * Yes; Conformal coating possible during service life  * Yes;	measuring and control systems acc. to ANSI/ISA-	concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);
conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04  Conformal coating  • Coatings for printed circuit board assemblies acc. to EN 61086  • Protection against fouling acc. to EN 60664-3  • Military testing according to MIL-I-46058C, Amendment 7  • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  configuration / programming / header  Programming language  — LAD — FBD — STL — SCL — GRAPH  Know-how protection  interfaces during operation!  Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A  Yes; Conformal coating, Class A	Remark	
Coatings for printed circuit board assemblies acc. to EN 61086     Protection against fouling acc. to EN 60664-3     Military testing according to MIL-I-46058C, Amendment 7     Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  configuration / programming / header  Programming language  — LAD — FBD — STL — SCL — GRAPH  Know-how protection  Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A	conditions acc. to EN 60721, EN 60654-4 and	
EN 61086  Protection against fouling acc. to EN 60664-3  Military testing according to MIL-I-46058C, Amendment 7  Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  Configuration / header  Configuration / programming / header  Programming language  — LAD — FBD — STL — SCL — GRAPH  Know-how protection  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A	Conformal coating	
Military testing according to MIL-I-46058C, Amendment 7     Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A  configuration / header  configuration / programming / header  Programming language  — LAD — FBD — STL — SCL — GRAPH  Know-how protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A		Yes; Class 2 for high reliability
Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A   Configuration / header  Configuration / programming / header  Programming language  — LAD — FBD — FBD — STL — SCL — GRAPH  Know-how protection  Yes; Conformal coating, Class A  Yes; Conformal coating, Class A	<ul> <li>Military testing according to MIL-I-46058C,</li> </ul>	
configuration / header  configuration / programming / header  Programming language  — LAD Yes  — FBD Yes  — STL Yes  — SCL Yes  — GRAPH Yes  Know-how protection	<ul> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies</li> </ul>	Yes; Conformal coating, Class A
configuration / programming / header           Programming language         Yes           — FBD         Yes           — STL         Yes           — SCL         Yes           — GRAPH         Yes           Know-how protection         Know-how protection		
Programming language           — LAD         Yes           — FBD         Yes           — STL         Yes           — SCL         Yes           — GRAPH         Yes           Know-how protection         Know-how protection		
— LAD       Yes         — FBD       Yes         — STL       Yes         — SCL       Yes         — GRAPH       Yes         Know-how protection       Yes		
— FBD       Yes         — STL       Yes         — SCL       Yes         — GRAPH       Yes         Know-how protection       Yes		Yes
— STL       Yes         — SCL       Yes         — GRAPH       Yes         Know-how protection       Yes		
— SCL Yes — GRAPH Yes Know-how protection		
— GRAPH Yes Know-how protection		
Know-how protection		
	-	
	·	Yes

<ul> <li>Copy protection</li> </ul>	Yes
Block protection	Yes
Access protection	
<ul> <li>Password for display</li> </ul>	Yes
<ul> <li>Protection level: Write protection</li> </ul>	Yes
<ul> <li>Protection level: Read/write protection</li> </ul>	Yes
<ul> <li>Protection level: Complete protection</li> </ul>	Yes
programming / cycle time monitoring / header	
<ul> <li>lower limit</li> </ul>	adjustable minimum cycle time
• upper limit	adjustable maximum cycle time
Dimensions	
Width	70 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	590 g

last modified: 4/1/2022 🖸