



Figure similar

SIPLUS ET 200SP IM155-6PN HF based on 6ES7155-6AU01-0CN0 with conformal coating, -40...+60 °C, 2-port interface module 1 slot for BusAdapter, max. 64 I/O modules, and 16 ET 200AL modules, S2 redundancy, multi hot swap, 0.25 ms, isochronous mode, optional PN strain relief, including server module (6AG1193-6PA00-7AA0)

General information	
Product type designation	IM 155-6 PN/2 HF
Firmware version	
<ul style="list-style-type: none"> FW update possible 	Yes
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Module swapping during operation (hot swapping) 	Yes; Multi-hot swapping
<ul style="list-style-type: none"> Isochronous mode 	Yes
<ul style="list-style-type: none"> Tool changer 	Yes; Docking station and docking unit
<ul style="list-style-type: none"> Local coupling, IO data 	No
<ul style="list-style-type: none"> Local coupling, data records 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	see entry ID: 109746275
Configuration control	
via dataset	Yes
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	
<ul style="list-style-type: none"> Mains/voltage failure stored energy time 	10 ms
Input current	
Current consumption, max.	700 mA
Inrush current, max.	4.5 A
I ² t	0.25 A ² ·s
Power loss	
Power loss, typ.	2.4 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Address space per module, max. 	288 byte; For input and output data respectively
Address space per station	
<ul style="list-style-type: none"> Address space per station, max. 	1 440 byte; Dependent on configuration
Hardware configuration	
Rack	
<ul style="list-style-type: none"> Modules per rack, max. 	64; + 16 ET 200AL modules
Submodules	
<ul style="list-style-type: none"> Number of submodules per station, max. 	256

Time stamping	
Accuracy	10 ms
Interfaces	
Number of PROFINET interfaces	1; 2 ports (switch)
1. Interface	
Interface types	
<ul style="list-style-type: none"> Number of ports integrated switch BusAdapter (PROFINET) 	2; via BusAdapter Yes Yes; Compatible BusAdapter: BA 2x RJ45, BA 2x FC, BA 2x SCRJ, BA SCRJ / RJ45, BA SCRJ / FC, BA 2x LC, BA LC / RJ45, BA LC / FC
Protocols	
<ul style="list-style-type: none"> PROFINET IO Device Open IE communication Media redundancy 	Yes Yes Yes; PROFINET MRP
PROFINET IO Device	
Services	
— IRT	Yes; 250 μ s, 500 μ s, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 μ s to 4 ms in 125 μ s frame
— PROFIenergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	4
Interface types	
RJ 45 (Ethernet)	
<ul style="list-style-type: none"> Transmission procedure 10 Mbps 100 Mbps Autonegotiation Autocrossing 	PROFINET with 100 Mbit/s full duplex (100BASE-TX) No Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX) Yes Yes
Protocols	
Number of connections	
<ul style="list-style-type: none"> Number of MtM communication relationships/connections, max. 	16
Redundancy mode	
<ul style="list-style-type: none"> PROFINET system redundancy (S2) PROFINET system redundancy (R1) H-Sync forwarding 	Yes; NAP S2 No Yes
Media redundancy	
— MRP	Yes
— MRPD	No
Open IE communication	
<ul style="list-style-type: none"> TCP/IP SNMP LLDP 	Yes Yes Yes
Isochronous mode	
Equidistance	Yes
shortest clock pulse	250 μ s
max. cycle	4 ms
Bus cycle time (TDP), min.	250 μ s
Jitter, max.	1 μ s
Interrupts/diagnostics/status information	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED ERROR LED MAINT LED Monitoring of the supply voltage (PWR-LED) Connection display LINK TX/RX 	Yes; green LED Yes; red LED Yes; Yellow LED Yes; green PWR LED Yes; 2x green link LEDs on BusAdapter
Potential separation	

between backplane bus and electronics	No
between PROFINET and all other circuits	Yes
between supply and all other circuits	No
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Network loading class	3
Security level	According to Security Level 1 Test Cases V1.1.1
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> horizontal installation, min. 	-40 °C; = Tmin (incl. condensation/frost)
<ul style="list-style-type: none"> horizontal installation, max. 	60 °C; = Tmax
<ul style="list-style-type: none"> vertical installation, min. 	-40 °C; = Tmin (incl. condensation/frost)
<ul style="list-style-type: none"> vertical installation, max. 	50 °C; = Tmax
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> Installation altitude above sea level, max. 	5 000 m
<ul style="list-style-type: none"> Ambient air temperature-barometric pressure-altitude 	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
<ul style="list-style-type: none"> With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance	
Coolants and lubricants	
— 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 EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
— Against mechanical environmental conditions acc. to EN 60721-3-3	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
— Against mechanical environmental conditions acc. to EN 60721-3-6	Yes; Class 6M4 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
<ul style="list-style-type: none"> Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high reliability
<ul style="list-style-type: none"> Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection
<ul style="list-style-type: none"> Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life
<ul style="list-style-type: none"> Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	Yes; Conformal coating, Class A
connection method / header	
ET-Connection	
<ul style="list-style-type: none"> via BU/BA Send 	Yes; + 16 ET 200AL modules
Mechanics/material	

Strain relief Yes; Optional

Dimensions

Width 50 mm
Height 117 mm
Depth 74 mm

Weights

Weight, approx. 120 g; without BusAdapter

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