



SIPLUS ET 200SP IM155-6PN ST based on 6ES7155-6AU01-0BN0 with conformal coating, -40...+70 °C, PROFINET interface module, 1 slot for BusAdapter, max. 32 I/O modules, and 16 ET 200AL modules, single hot swap, including server module (6AG1193-6PA00-7AA0)

General information	
Product type designation	IM 155-6 PN ST
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0313H
Product function	
• I&M data	Yes; I&M0 to I&M3
• Module swapping during operation (hot swapping)	Yes; Single hot swapping
• Isochronous mode	No
Engineering with	
• 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
Short-circuit protection	Yes
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Input current	
Current consumption (rated value)	450 mA
Current consumption, max.	550 mA
Inrush current, max.	3.7 A
I <sup>2</sup> t	0.09 A <sup>2</sup> ·s
Power	
Infeed power to the backplane bus	4.5 W
Power loss	
Power loss, typ.	1.9 W
Address area	
Address space per module	
• Address space per module, max.	256 byte; per input / output
Address space per station	
• Address space per station, max.	512 byte; Dependent on configuration
Hardware configuration	
Rack	
• Modules per rack, max.	32; + 16 ET 200AL modules
Submodules	
• Number of submodules per station, max.	256
Interfaces	

Number of PROFINET interfaces	1; 2 ports (switch)
<b>1. Interface</b>	
<b>Interface types</b>	
<ul style="list-style-type: none"> <li>• Number of ports</li> <li>• integrated switch</li> <li>• BusAdapter (PROFINET)</li> </ul>	2 Yes Yes; Applicable BusAdapter: BA 2x RJ45, BA 2x FC
<b>Protocols</b>	
<ul style="list-style-type: none"> <li>• PROFINET IO Device</li> <li>• Open IE communication</li> <li>• Media redundancy</li> </ul>	Yes Yes Yes; PROFINET MRP
<b>PROFINET IO Device</b>	
<b>Services</b>	
— IRT	Yes; with send cycles of between 250 µs and 4 ms in increments of 125 µs
— PROFINergy	Yes
— Prioritized startup	Yes
— Shared device	Yes
— Number of IO Controllers with shared device, max.	2
<b>Interface types</b>	
<b>RJ 45 (Ethernet)</b>	
<ul style="list-style-type: none"> <li>• Transmission procedure</li> <li>• 10 Mbps</li> <li>• 100 Mbps</li> <li>• Autonegotiation</li> <li>• Autocrossing</li> </ul>	PROFINET with 100 Mbit/s full duplex (100BASE-TX) Yes; for Ethernet services Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX) Yes Yes
<b>Protocols</b>	
<b>Redundancy mode</b>	
• PROFINET system redundancy (S2)	No
<b>Media redundancy</b>	
— MRP	Yes
— MRPD	No
<b>Open IE communication</b>	
• TCP/IP	Yes
• SNMP	Yes
• LLDP	Yes
<b>Interrupts/diagnostics/status information</b>	
Status indicator	Yes
Alarms	Yes
Diagnostics function	Yes
<b>Diagnostics indication LED</b>	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Connection display LINK TX/RX	Yes; 2x green link LEDs on BusAdapter
<b>Potential separation</b>	
between backplane bus and electronics	No
between PROFINET and all other circuits	Yes; 1 500 V AC
between supply and all other circuits	No
<b>Permissible potential difference</b>	
between different circuits	Safety extra low voltage SELV
<b>Standards, approvals, certificates</b>	
Network loading class	2
Security level	According to Security Level 1 Test Cases V1.1.1
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-40 °C; = Tmin (incl. condensation/frost)
• horizontal installation, max.	70 °C; = Tmax
• vertical installation, min.	-40 °C; = Tmin
• vertical installation, max.	50 °C; = Tmax
Altitude during operation relating to sea level	

<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	5 000 m 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)
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
<b>Use in stationary industrial systems</b>	
— 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)
<b>Use on ships/at sea</b>	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— 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)
<b>Usage in industrial process technology</b>	
— 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)
<b>Remark</b>	
— 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!
<b>Conformal coating</b>	
<ul style="list-style-type: none"> <li>• Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>• Protection against fouling acc. to EN 60664-3</li> <li>• Military testing according to MIL-I-46058C, Amendment 7</li> <li>• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	Yes; Class 2 for high reliability  Yes; Type 1 protection  Yes; Discoloration of coating possible during service life  Yes; Conformal coating, Class A
<b>connection method</b>	
<b>ET-Connection</b>	
<ul style="list-style-type: none"> <li>• via BU/BA Send</li> </ul>	Yes; + 16 ET 200AL modules
<b>Dimensions</b>	
Width	50 mm
Height	117 mm
Depth	74 mm
<b>Weights</b>	
Weight, approx.	147 g; without BusAdapter
<b>last modified:</b>	3/31/2023 