

I/O systems

ET 200 systems for the control cabinet

ET 200S - Interface modules

IM 151-1

Technical specifications (continued)

Article number	6ES7151-1CA00-1BL0 ET 200S COMPACT, 32DI STD, DC24V, 3MS	6ES7151-1CA00-3BL0 ET 200S COMPACT, 16DI/16DO STD, DC24V
Dimensions		
Width	120 mm	120 mm
Height	81 mm	81 mm
Depth	758 mm; 58	58 mm
Weights		
Weight, approx.		230 g; EB only

Article number	6ES7151-1AA05-0AB0 ET200S, IM151-1 STD, 12MBIT/S	6ES7151-1AB05-0AB0 ET200S, INTERFACE MODULE IM151-1 FO	6ES7151-1BA02-0AB0 ET200S, INTERF.MOD. IM151-1 HF, 12MBIT/S	6ES7151-1CA00-0AB0 ET200S, IM151-1 BASIC, 12MBIT/S
Product type designation				
General information				
Vendor identification (VendorID)	806Ah	806Bh		80F3h
Supply voltage				
Mains buffering				
• Mains/voltage failure stored energy time	20 ms	20 ms	20 ms	No
Input current				
from supply voltage 1L+, max.	200 mA	200 mA	200 mA	70 mA
Output current				
Current output to backplane bus (DC 5 V), max.		700 mA		
Power losses				
Power loss, typ.	3.3 W	3.3 W	3.3 W	1.5 W
Address area				
Addressing volume				
• Inputs	244 byte	244 byte	244 byte	88 byte
• Outputs	244 byte	244 byte	244 byte	88 byte
Interfaces				
Interface physics, RS 485	Yes; 9-pin sub D socket		Yes	Yes; 9-pin sub D socket
Interface physics, FOC		Yes; 4 x Simplex socket		
PROFIBUS DP				
• Output current, max.	80 mA			80 mA
• Transmission rate, max.	12 Mbit/s; 9,6 / 19,2 / 45,45 / 93,75 / 187,5 / 500 kbit/s; 1,5 / 3 / 6 / 12 Mbit/s	12 Mbit/s; 9,6 / 19,2 / 45,45 / 93,75 / 187,5 / 500 kbit/s; 1,5 / 12 Mbit/s	12 Mbit/s	12 Mbit/s; 9,6 / 19,2 / 45,45 / 93,75 / 187,5 / 500 kbit/s; 1,5 / 3 / 6 / 12 Mbit/s
• Transmission procedure	RS 485			
• SYNC capability	Yes	Yes	Yes	Yes
• FREEZE capability	Yes	Yes	Yes	Yes
• Direct data exchange (slave-to-slave communication)	Yes	Yes	Yes	Yes
Cable length				
- Cable length, max.	1 200 m	2 m		
Protocols				
PROFIBUS DP	Yes	Yes	Yes	Yes
Isochronous mode				
Isochronous operation (application synchronized up to terminal)	No	No	Yes	No
Interrupts/diagnostics/status information				
Alarms				
• Alarms	Yes	Yes	Yes	No
Diagnostic messages				
• Diagnostic functions	Yes	Yes	Yes	Yes
Diagnostics indication LED				
• Bus fault BF (red)	Yes	Yes	Yes	Yes
• Group error SF (red)	Yes	Yes	Yes	Yes
• Monitoring 24 V voltage supply ON (green)	Yes	Yes	Yes	Yes

Technical specifications (continued)

Article number	6ES7151-1AA05-0AB0 ET200S, IM151-1 STD, 12MBIT/S	6ES7151-1AB05-0AB0 ET200S, INTERFACE MODULE IM151-1 FO	6ES7151-1BA02-0AB0 ET200S, INTERF.MOD. IM151-1 HF, 12MBIT/S	6ES7151-1CA00-0AB0 ET200S, IM151-1 BASIC, 12MBIT/S
Galvanic isolation				
between backplane bus and electronics	No	No	No	No
between electronic block and PROFIBUS DP	Yes		Yes	Yes
between supply voltage and electronics	No	No	No	No
Permissible potential difference				
between different circuits	75V DC/60V AC	500 V DC	75V DC/60V AC	75V DC/60V AC
Isolation				
Isolation checked with	500 V DC	57V DC/60V AC	500 V DC	500 V DC
Standards, approvals, certificates				
CE mark	Yes		Yes	
UL approval	Yes		Yes	
Ambient conditions				
Ambient temperature in operation				
• Min.	0 °C		0 °C	
• max.	60 °C		60 °C	
Dimensions				
Width	45 mm	45 mm	45 mm	45 mm
Height	119.5 mm	119.5 mm	119.5 mm	119.5 mm
Depth	75 mm	75 mm	75 mm	75 mm
Weights				
Weight, approx.	150 g	150 g	150 g	150 g

Ordering data

Article No.

Article No.

IM 151-1 BASIC interface module

for ET 200S; transfer rates up to 12 Mbit/s; max. 12 power, electronic and motor start modules can be connected; bus connection via 9-pin sub D incl. termination module

6ES7151-1CA00-0AB0

IM 151-1 COMPACT 32 DI 24 V DC interface module

for ET 200S; transfer rates up to 12 Mbit/s; max. 32 digital inputs, can be expanded by max. 12 power, electronic and motor start modules; bus connection via 9-pin sub D incl. termination module

6ES7151-1CA00-1BL0

IM 151-1 COMPACT 16 DI 24 V DC / 16 DO 24 V/0.5 A interface module

for ET 200S; transfer rates up to 12 Mbit/s; max. 16 digital inputs and 16 digital outputs, can be expanded by max. 12 power, electronic and motor start modules; bus connection via 9-pin sub D incl. termination module

6ES7151-1CA00-3BL0

IM 151-1 STANDARD interface module

for ET 200S; transfer rates up to 12 Mbit/s; data volumes 244 bytes each for inputs and outputs, max. 63 power, electronic and motor start modules can be connected; bus connection via 9-pin sub D incl. termination module

6ES7151-1AA05-0AB0

IM 151-1 FO STANDARD interface module

for ET 200S, transfer rates up to 12 Mbit/s; data volumes 244 bytes each for inputs and outputs; max. 63 power, electronic and starter modules can be connected; bus connection via integrated fiber-optic cable incl. termination module

6ES7151-1AB05-0AB0

IM 151-1 HIGH FEATURE interface module

for ET 200S; transfer rate up to 12 Mbit/s; data volumes 244 bytes each for I/O, up to 63 modules can be connected; connection of PROFIsafe modules, isochronous mode; bus connection via 9-pin sub D incl. termination module

6ES7151-1BA02-0AB0

I/O systems

ET 200 systems for the control cabinet

ET 200S - Interface modules

SIPLUS IM 151-1

Overview



- Interface module for linking the ET 200S to PROFIBUS DP
- Handles all data exchange with the PROFIBUS DP master

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme specific information was added.

For technical documentation on SIPLUS, see:

<http://www.siemens.com/siplus-extreme>

Technical specifications

Article number	6AG1151-1AA05-7AB0	6AG1151-1BA02-2AB0
Based on	6ES7151-1AA05-0AB0 SIPLUS ET200S IM 151-1 STANDARD	6ES7151-1BA02-0AB0 SIPLUS ET200S IM151 HF
Ambient conditions		
Ambient temperature in operation		
• Min.		-25 °C; = Tmin
• max.		60 °C; = Tmax
Extended ambient conditions		
• Relative to ambient temperature-atmospheric pressure-installation altitude	Tmin ... Tmax at 1080 hPa ... 795 hPa (-1000 m ... +2000 m) // Tmin ... (Tmax - 10K) at 795 hPa ... 658 hPa (+2000 m ... +3500 m) // Tmin ... (Tmax - 20K) at 658 hPa ... 540 hPa (+3500 m ... +5000 m)	Tmin ... Tmax at 1080 hPa ... 795 hPa (-1000 m ... +2000 m) // Tmin ... (Tmax - 10K) at 795 hPa ... 658 hPa (+2000 m ... +3500 m) // Tmin ... (Tmax - 20K) at 658 hPa ... 540 hPa (+3500 m ... +5000 m)
Relative humidity		
- With condensation, max.	100 %; incl. condensation / frost permitted (no commissioning under condensation conditions)	100 %; Relative humidity, incl. condensation / frost permitted (no commissioning under condensation conditions)
Resistance		
- against biologically active substances / conformity with EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation in corrosive atmospheres!	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation!
- against chemically active substances / conformity with EN 60721-3-3	Yes; Class 3C4 incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!	Yes; Class 3C4 incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
- against mechanically active substances / conformity with EN 60721-3-3	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!

Ordering data

SIPLUS IM 151-1 STANDARD interface module

(extended temperature range and medial exposure)

for ET 200S; transfer rates up to 12 Mbit/s; data volumes 244 bytes each for inputs and outputs, max. 63 power, electronic and motor start modules can be connected; bus connection via 9-pin D-sub incl. termination module

Article No.

6AG1151-1AA05-7AB0

Article No.

SIPLUS IM 151-1 HIGH FEATURE interface module

(extended temperature range and medial exposure)

for ET 200S; transfer rate up to 12 Mbit/s; data volumes 244 bytes each for inputs and outputs, up to 63 modules can be connected; connection of PROFIsafe modules, isochronous mode (clock synchronization); bus connection via 9-pin Sub-D incl. terminating module

Accessories

6AG1151-1BA02-2AB0

See SIMATIC IM 151-1, page 9/114