

Diagnostics repeater for PROFIBUS DP
Overview


- RS 485 repeater with online line diagnostics for PROFIBUS DP
- PROFIBUS DP standard slave (DP-V1)
- Automatic determination of fault types and locations
- Data transmission rate 9.6 Kbps to 12 Mbps
- Connection through FastConnect using IDC

Technical specifications

Article number	6ES7972-0AB01-0XA0 SIMATIC S7, DIAGNOSIS-REPEATER
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Interfaces	
PROFIBUS DP	
• Transmission rate, max.	12 Mbit/s; 9.6 kbit/s to 12 Mbit/s
Degree and class of protection	
Degree of protection acc. to EN 60529	Yes
• IP20	

Article number	6ES7972-0AB01-0XA0 SIMATIC S7, DIAGNOSIS-REPEATER
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	60 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Relative humidity	
• Operation, max.	95 %; at 25 °C
Connection method	
Power supply	Terminal block
Bus cables	FastConnect insulation displacement, 10 clamping cycles possible
Dimensions	
Width	80 mm
Height	125 mm
Depth	67.5 mm
Weights	
Weight, approx.	300 g

I/O systems

PROFIBUS components

Diagnostics

Diagnostics repeater for PROFIBUS DP

Ordering data	Article No.	Ordering data	Article No.
RS 485 diagnostics repeater For connection of 1 or 2 segments to PROFIBUS DP; with online diagnostics functions for monitoring the bus lines	6ES7972-0AB01-0XA0	PROFIBUS FastConnect RS 485 bus connector with angular cable outlet (35°) With insulation displacement terminals, max. transfer rate 12 Mbps <ul style="list-style-type: none"> • Without PG interface • With PG interface 	6ES7972-0BA61-0XA0 6ES7972-0BB61-0XA0
Accessories		PROFIBUS FastConnect stripping tool Preadjusted stripping tool for fast stripping of PROFIBUS FastConnect bus cables	6GK1905-6AA00
RS 485 bus connector with 90° cable outlet With screw terminals, max. transfer rate 12 Mbps <ul style="list-style-type: none"> • Without PG interface • With PG interface 	6ES7972-0BA12-0XA0 6ES7972-0BB12-0XA0	PROFIBUS FC standard cable Standard type with special design for quick mounting, 2-core, shielded, sold by the meter, max. delivery unit 1000 m, minimum order quantity 20 m	6XV1830-0EH10
PROFIBUS FastConnect RS 485 bus connector with 90° cable outlet With insulation displacement terminals, max. transfer rate 12 Mbps Without PG interface <ul style="list-style-type: none"> • 1 unit • 100 units With PG interface <ul style="list-style-type: none"> • 1 unit • 100 units without PG interface, grounding via control cabinet cover <ul style="list-style-type: none"> • 1 unit with PG interface, grounding via control cabinet cover <ul style="list-style-type: none"> • 1 unit 	6ES7972-0BA52-0XA0 6ES7972-0BA52-0XB0 6ES7972-0BB52-0XA0 6ES7972-0BB52-0XB0 6ES7972-0BA70-0XA0 6ES7972-0BB70-0XA0	S7 Manual Collection Electronic manuals on DVD, multilingual: S7-200, TD 200, S7-300, M7-300, C7, S7-400, M7-400, STEP 7, Engineering Tools, Runtime Software, SIMATIC DP (Distributed I/O), SIMATIC HMI (Human Machine Interface), SIMATIC NET (Industrial Communication)	6ES7998-8XC01-8YE0
RS 485 bus connector with angled cable outlet (35°) With screw terminals, max. transfer rate 12 Mbps <ul style="list-style-type: none"> • Without PG interface • With PG interface 	6ES7972-0BA42-0XA0 6ES7972-0BB42-0XA0	S7 Manual Collection update service for 1 year Scope of delivery: Current DVD "S7 Manual Collection" and the three subsequent updates	6ES7998-8XC01-8YE2
		Connecting cable for PROFIBUS 12 Mbps, for PG connection to PROFIBUS DP, pre-assembled with 2 x 9-pin sub D plug, 3.0 m	6ES7901-4BD00-0XA0

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- PROFIBUS DP standard slave (DP-V1)
- Automatic determination of fault type and location
- Transmission rate from 9.6 Kbps to 12 Mbps
- Connection via FastConnect IDC

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.

SIPLUS diagnostics repeater for PROFIBUS DP

Article No.	6AG1972-0AB01-4XA0
BasedOn Article No.	6ES7972-0AB01-0XA0
Ambient temperature range	0 °C ... +60 °C
Conformal coating	Coating of the printed circuit boards and the electronic components.
Technical specifications	The technical data of the standard product applies except for the ambient conditions.
Ambient conditions	
Relative humidity	100%, condensation/frost permissible. No commissioning if condensation present.
Biologically active substances, compliance with EN 60721-3-3	Class 3B2 mold and fungal spores (excluding fauna). The supplied plug covers must remain in place over the unused interfaces during operation!
Chemically active substances, compliance with EN 60721-3-3	Class 3C4 incl. salt spray in accordance with EN60068-2-52 (degree of severity 3). The supplied plug covers must remain in place over the unused interfaces during operation!
Mechanically active substances, compliance with EN 60721-3-3	Class 3S4 incl. sand, dust. The supplied plug covers must remain in place over the unused interfaces during operation!
Air pressure (depending on the highest positive temperature range specified)	1 080 ... 795 hPa (-1 000 ... +2 000m) See ambient temperature range 795 ... 658 hPa (+2 000 ... +3 500m) Derating 10 K 658 ... 540 hPa (+3 500 ... +5 000 m) Derating 20 K

For technical documentation on SIPLUS, see:

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

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