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PSI-DATA/BASIC-MODEM/RS232

Industrial Modem

INTERFACE

Data Sheet

Description

The DIN rail-mountable **PSI-DATA/BASIC-MODEM/RS232** V.24 (RS-232) modem is specifically designed to meet industrial requirements for remote monitoring. It provides access to machines and systems anywhere in the world via dial-up line connections according to the V.34 standard. A wide range of security functions, such as connection establishment with password protection and callback function, protect the system against unauthorized access.

To ensure error-free operation even in harsh EMC conditions, the device has high-quality 3-way isolation and integrated surge protection. The modem also features an integrated automatic "Sleep" function to increase battery life and a wide supply voltage range of 10 V to 30 V, making it suitable for universal use. Modem startup is very easy using plug and play and user-friendly configuration software.

The modem is approved for use in public telephone networks in Europe, the USA, and Canada. Additional approvals can be provided on request.

The PSI-DATA/BASIC-MODEM/RS232 is designed exclusively for SELV operation according to IEC 60950/EN 60950/VDE 0805.

The modem must only be connected to devices, which meet the requirements of EN 60950 ("Safety of Information Technology Devices").

Make sure you always use the latest documentation.
It can be downloaded at www.download.phoenixcontact.com.

A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.

Ordering Data

Modem

Description	Type	Order No.	Pcs./Pck.
Industrial analog modem Scope of supply: Modem, CD with configuration software, manual, and RJ12/RJ12 cable	PSI-DATA/BASIC-MODEM/RS232	2313067	1

Accessories

Description		Type	Order No.	Pcs./Pck.
System power supply, primary-switched Input voltage range Nominal output voltage Nominal output current	 45 Hz ... 65 Hz 85 V AC ... 264 V AC 24 V DC ±1% 1.5 A	MINI-SYS-PS-100-240AC/24DC/1.5	2866983	1
DIN rail connector		ME 22,5 TBUS 1,5/ 5-ST-3,81 GN	2707437	1
V.24 (RS-232) cable, 2 m, to connect the modem to a 9-pos. device interface	9-pos. D-SUB/9-pos. D-SUB (female/female)	PSM-KA9SUB9/BB/2METER	2799474	1
V.24 (RS-232) cable, 0.5 m, to connect the modem to a 9-pos. device interface	9-pos. D-SUB/9-pos. D-SUB (female/female)	PSM-KA9SUB9/BB/0,5METER	2708520	1

Documentation

Description	Type	Order No.	Pcs./Pck.
User manual for industrial modem	UM EN PSI-DATA/BASIC-MODEM/RS232	2888699	1

Technical Data

Power Supply	
Supply voltage	10 V DC ... 30 V DC (via COMBICON plug-in screw terminal)
Current consumption	
Nominal operation	< 100 mA (at 24 V)
Sleep mode (can be configured via software)	< 40 mA (at 24 V)
LED indicators	VCC (green LED): – Steady light: Operation – Flashing: Sleep mode

V.24 (RS-232) Interface	
Connection	9-pos. D-SUB pin strip
Device type	Data Communication Equipment (DCE)
Data format	Serial asynchronous UART/NRZ
Encoding	7/8 data, 1/2 stop, 1 parity, 10/11-bit character length
Serial transmission speed	Automatic detection of transmission speed for 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Data flow control	**Software handshake:** Xon/Xoff **Hardware handshake:** RTS/CTS **or 3964R**
LED indicator/data indicator	TD (green LED), data to modem (dynamic) RD (yellow LED), data from modem (dynamic)
LED indicator/control signal indicator	DTR (yellow LED), Data Terminal Ready DCD (yellow LED), Data Carrier Detect

PSTN Port (a/b Line)	
Connection	6-pos. RJ12
Shield	Via metal foot on EN DIN rail
Operating modes	Dial-up modem, 2-wire half/full duplex
Dialing procedure	Multiple frequency/pulse dialing, configuration via software
Transmission speed	Automatic adjustment according to V.8
DCE/DCE Fax	300 baud ... 56 kbaud 2400 baud ... 14.4 kbaud
Compatibility	ITU V.42bis, V.42, V.92, V.90, V.34 extended, ITU V.32bis, V.32, V.21, V.22bis, V.22, V.23, ITU V.17
Command set compatibility	AT standard command set and extended V.250 basic command set
Error correction	V.42 (LAP-M or MNP 2 to 4)
Data compression	V.42bis (throughput 4:1), MNP 5 (throughput 2:1)
Data indicator	Green LED (OH), off the hook Yellow LED (AA), automatic answer, flashes during selective call acceptance
Acoustic signal	Integrated piezo
Startup diagnostics	Selftest, visualization via LEDs (controller, RAM, EEPROM, DSP)
Telecommunications approvals	TBR21, TIA-968-A, CS-03 for Europe, USA, and Canada

Telephone Number Memory	
Telephone number memory	4 telephone numbers with a maximum of 31 digits

General Data	
CE conformance	Complies with EMC directive 89/336/EEC
Approvals	UL (in preparation)
Telecommunications approvals	TBR21, TIA-968-A, CS-03 for Europe, USA, and Canada
Ambient operating temperature range	0°C ... +55°C
Housing type	ME 22,5 with DIN rail connector and ground contact
Housing material	ABS-V0, green
Housing dimensions (H x W x D)	99 mm x 22.5 mm x 114.5 mm
Weight	165 g
Functional earth ground	To EN DIN rail in the housing
Vibration resistance	5g according to DIN EN 60068-2-6, 1.5 h each in x, y, and z direction
Shock test according to IEC 60068-2-27	
Operation Storage	15g, 11 ms, half-sine shock pulse 30g, 11 ms, half-sine shock pulse
Free fall according to IEC 60068-2-32	1 m
Degree of protection	IP20
Separate ground levels	Supply // PSTN // V.24 (RS-232)
Test voltage	1.5 kV AC, 50 Hz, 1 min. between all ground levels according to EN 61010-1/ VDE 0411-1 and EN 60950

Conformance With EMC Directive 89/336/EEC			
Noise Immunity Test According to EN 61000-6-2[1]			
Electrostatic discharge (ESD)	EN 61000-4-2	Criterion B[2]	8 kV air discharge 6 kV contact discharge
Electromagnetic HF field	EN 61000-4-3	Criterion A[3]	
Amplitude modulation			10 V/m
Pulse modulation			10 V/m
Fast transients (burst)	EN 61000-4-4		
Signal		Criterion B[2]	2 kV/5 kHz
		Criterion A[3]	1 kV/5 kHz
Supply			2 kV/5 kHz
Surge current load	EN 61000-4-5	Criterion B[2]	
Signal			1 kV
Supply			2 kV
Conducted interference	EN 61000-4-6	Criterion A[3]	10 V
Noise Emission Test According to EN 61000-6-4			
Noise emission of housing	EN 55022		Limiting curve B

[1] EN 61000 corresponds to IEC 61000

[2] Criterion B: Temporary adverse effects on the operating behavior, which the device corrects automatically.

[3] Criterion A: Normal operating characteristics within the specified limits.

Features

- For universal use
- Password-protected access/callback function
- Wide supply voltage range of 10 V to 30 V DC
- Power-saving sleep mode
- High-quality 3-way isolation
  (VCC // V.24 (RS-232) // PTSN)
- Slim design width of 22.5 mm
- Easy startup using plug and play and user-friendly configuration software
- 3964R-compatible

Application

The PSI-DATA/BASIC-MODEM/RS232 modem is suitable for universal and international use as an analog dial-up modem.

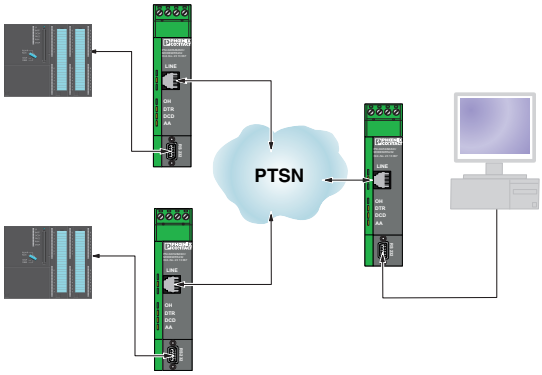

Figure 1 Dial-up operation

The modem can be used for the following applications:

– Remote monitoring of systems and machines
– Remote control
– Remote system diagnostics
– Production data acquisition

This device is approved for operation in the following public telephone networks:

– Austria
– Belgium
– Canada
– Denmark
– Finland
– France
– Germany
– Great Britain
– Greece
– Ireland
– Italy
– Luxembourg
– The Netherlands
– Norway
– Portugal
– Spain
– Sweden
– Switzerland
– USA

Approvals for other countries are available on request.