MSR 10

MemoryCard Reading Module

User Manual

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1 Generally

1.1 Application

The MSR10 reader makes it possible to load data from memory cards into PCs over a serial interface (V.24). The MSR10 MemoryCard (PC Card) reader distinguishes itself from all other card readers that are currently available through the two different transfer protocols that are used:

1) **Standard protocol** creates the possibility of reading in only a specified number of bytes from the requested MemoryCard address and allows for the formatting of the memory card.
2) **SCTM-protocol** (this is the speciality on the MSR10) - enables the reading and formatting of MemoryCards

This unit is capable to read and format MemoryCards (68-pole) with a capacity of up to 8 MByte (JEIDA/ PC-card standard).

1.2 Features

The following stored information can be requested from MemoryCards that come from DATA-FW/DLC32/DLX (DATAREG) units:

- The specification of the periodic buffer
- The last 100 entries in the spontaneous buffer (e.g. voltage interruption, parameter changes, etc.)
- The values that were current at the time that the MemoryCard was removed from the card reader in the following areas:
  - Date and time, the most recent working values and the performance values.
  - depending on the software version of the originating unit of the MemoryCard: The outstation location number (the first 5 places of the unit identification) or the unit identification, the working values at the time that the MemoryCard was installed in the unit, the reference constants.
  - The time of the last measuring period, the most recently set baud rate for requests through the SCTM-protocol.
  - The measuring period, the status of the unit, information about the password that was entered last (correct or incorrect), if reception in the radio clock was turned on. The total capacity of the periodic buffer on the MemoryCard in measurement periods, the length of a measurement period, entry bytes, the contents of periodic buffers 01 and 02.
  - Information on the software version and the equipment available in the MemoryCard originating unit's MSC01-card.

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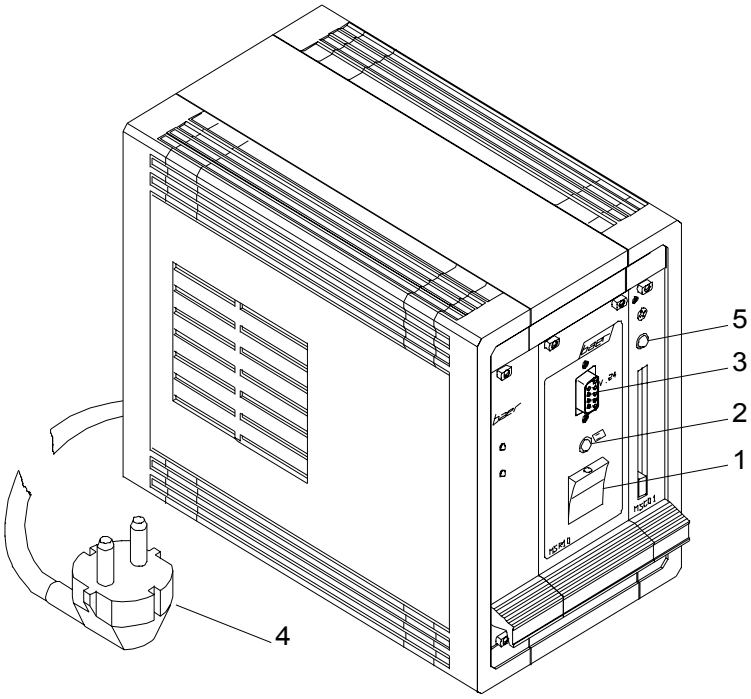
2 Installation



①: Power button: power on/off

②: LED: power on

③: V.24/RS232 Interface

④: Mains socket: power supply 230VAC

⑤: Operate-LED: LED for indicating MemoryCard access.

Connect the power cable to the mains socket ④.With the MSR10 connected to the mains, you may now switch on the power button.

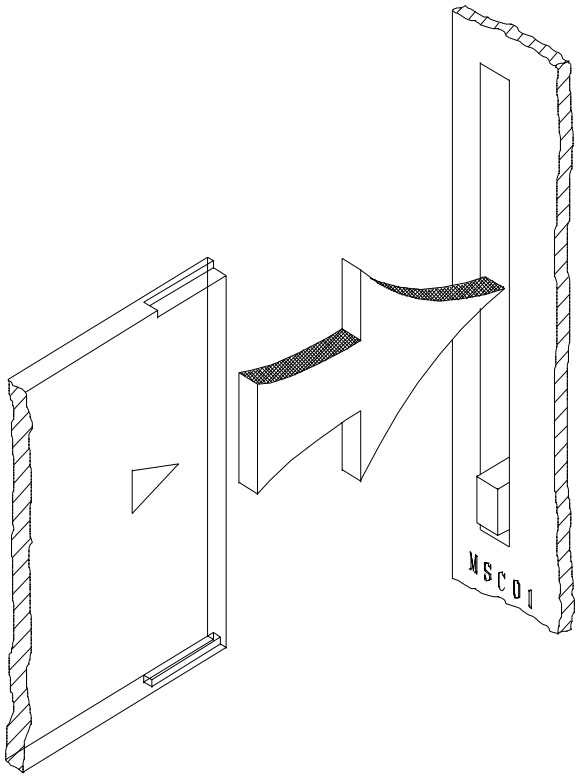
2.1 RS232 Interface

The pin assignment of the V.24/RS232 socket ③ on the front panel is as follows:

Connection	Designation	Additional Information	
1	-	n.c.	Not connected
2	TxD	Input	Transmitted data
3	RxD	Output	Received data
4	-	n.c.	Not connected
5	GND	0V	Signal-ground
6	-	n.c.	Not connected
7	CTS	Output	Clear to send
8	RTS	Input	Request to send
9	-	n.c.	Not connected

A special connecting cable is required to read out the data. It can be ordered separately.

3 Inserting the MemoryCard



When inserting the MemoryCard ensure that the connector side of the MemoryCard enters the MSR10 (MSC01) board first. Also make sure that the MemoryCard is inserted in the recording device with the guide slots in the same position as shown in the figur. The two guide rails of the MSR10 board keep the MemoryCard in position inside the device.
Push the MemoryCard into the slot as far as it will go and press the MemoryCard carefully until you can feel it latch. The LED ⑤ indicates that the card has been inserted correctly by lighting up briefly.

Available baud rates:

2400 baud (7, E, 1) MemoryCard not inserted by power on

9600 baud (7, E, 1) MemoryCard inserted by power on

3.1 Removing the MemoryCard

To remove the MemoryCard, activate the eject button below the MemoryCard.

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4 SCTM protocoll

List of addresses for SCTM:

000-00	Time (YYMMDD Whhmm)
000-01	Summer time: begin (YYMMDD hhmm)
000-02	Summer time: end (YYMMDD hhmm)
010-00	Last measuring period (YYMMDD hhmm)
100-tb	Energy counter rate 1
101-tb	Energy counter rate 2
102-tb	Energy counter rate 3
103-tb	Energy counter rate 4
104-tb	Demand values
700-00	Protocol name: SCTM-Control
700-01	Version
700-02	Version date
700-03	Manufacturer name: Baer GmbH
700-04	Baudrate (DATA-FW/DLC32/DLX/DATAREG)
700-05	CPU
700-06	DUART
700-07	RAM
700-08	ROM
700-09	PC- / MemoryCard
700-10	Capacity of PC- / MemoryCard
700-11	Device status
700-99	Version of the MSR10
701-01	Measuring period

tb = { 0;31} counter 1÷32
{32;39} total 1÷8

5 Connection MSR10 - PC

The MSR10 and the PC / Lap-Top in which the data reading program is installed are connected through a cable (special MSR10-Cable). It has to be plugged into the telecounters front panel and a Com-Port on the computer.

MSR10 (9-pole)			**PC (9-pole)**		
Input/Output	**Pin-Nr.**		**Pin-Nr.**	**Input/Output**	**Standard**
Input	**2**	————	**3**	Output	TxD (Transmit Data)
Output	**3**	————	**2**	Input	RxD (Receive Data)
	5	————	**5**		GND (Signal-Ground)
Output	**7**	————	**8**	Input	CTS (Clear to Send)
Input	**8**	————	**7**	Output	RTS (Request to Send)

6 Technical Data

PC-/ MemoryCard: S-RAM up to 8 MByte (JEIDA standard)
68 pole

Interface: Front side V.24/RS232 interface (9-pole socket)

Available baud rates: SCTM-Protocol: 2400 baud (7, E, 1) PC Card not inserted by power on
9600 baud (7, E, 1) PC Card inserted by power on
Standard protocol: 19200 baud (8, N, 1)

Supply voltage: 115V/230 VAC 50/60Hz (switchable)

Display: Operate-LED, LED for indicating PC-Card access.

Dimension: 160mm × 110mm × 200mm (Height × Width × Depth

Permissible environment temperature:
During operation ..... -10°C to +60°C
During transport and storage -20°C to +70°C