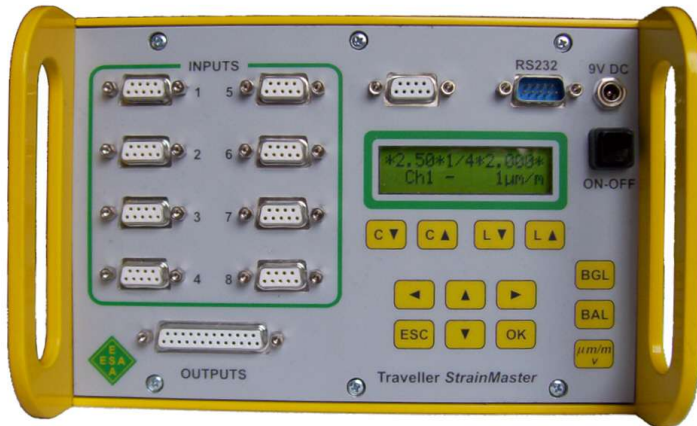




Multi-Channel Bridge Amplifier System

Traveller StrainMaster



FEATURES

- ◆ 4 or 8 Input Channels
- ◆ 1/4-, 1/2- and Full Bridges, 120 Ω und 350 Ω
- ◆ Built-in Bridge Completion Resistors 120 Ω , 350 Ω
- ◆ Signal frequency static up to 2 kHz dynamic
- ◆ 16-Bit Sigma-Delta-A/D-Converter
- ◆ RS-232-Interface
- ◆ Softkey Operation
- ◆ LCD Data and Menue Display
- ◆ Intuitive, Menue-guided Operation
- ◆ Flash memory for 16 marked events (average recording time – 30 minutes)
- ◆ Data Transfer to EXCEL[®]-Tables
- ◆ Fully Battery Operated
- ◆ Portable, light, rugged

DESCRIPTION

Traveller StrainMaster is a mobile, battery operated, compact strain measurement system which completes the well known family of ESAM-*Traveller* Data Acquisition Systems. *Traveller StrainMaster* accepts static strain signals as well as dynamic signals with frequencies up to 2 kHz.

Built-in bridge completion resistors with 120 Ω and 350 Ω resistances are allowing for true single strain gauge quarter bridge operation with 3-wire hook-up.

Instrument set-up and operation are achieved through an all-weather softkey-pad on the front-panel. The user is guided by an easy-to-use intuitive software menue through all necessary set-up and measurement steps.

A large LCD display on the front-panel allows for readout of set-up-information as well as static strain data. Channels are switched by softkey operation. As an option, the system can be computer connected through a RS232 interface. Acquired data can be directly transferred to EXCEL[®]-tables using a special software module which is optionally available. A 16-bit Sigma-Delta-A/D-Converter enables an optimal data resolution and high accuracy.

For dynamic measurements *Traveller StrainMaster* features ± 5 V analog output for signal frequencies up to 2 kHz.

Traveller StrainMaster is a small, high-performance portable strain indicator system. It offers an excellent price/performance ratio, and due to special design features of both hardware and software it is particularly useful in educational applications and industrial field measurement project, as well.



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TECHNICAL DATA

Number of Channels: 4 or 8 channels

Connector-Typ: 9-pin D-Sub-Connector

Inputs: Quarterbridge 120 Ω and 350 Ω , half- and fullbridges 60 to 2000 Ω (60 Ω only for bridge excitation 1,25 and 2,5 V DC) strain gauges and strain gauges based transducers, selected by softkey-pad

Excitation: 1,25 V; 2,5 V; 5 V selected by softkey-pad

Bridge Balance: Electronically balanced bridge circuits by internal controller

Gage factor: 1,50 to 6,00 selected by softkey-pad

Calibration: Remote calibration via switch contacts at input connectors (for use as static system it is factory calibrated in $\mu\text{m}/\text{m}$)

User defined Units: units freely defined by user accordingly to transducer calibration

Resolution: 16-Bit; Sigma/Delta (Σ/Δ)-Converter (**only for static measurements**)

Measurement range: $\pm 9999 \mu\text{m}/\text{m}$ for static measurements, for dynamic $\pm 4000 \mu\text{m}/\text{m}$

Gain: 125, 250, 500, 1000, 1500, 2000 - software programmable (for dynamic measurements only)

Bandwidth: DC to 2 kHz (**only for dynamic measurements**)

Outputs: $\pm 5 \text{ V}$ ($\pm 4000 \mu\text{m}/\text{m}$) through external connectors D-Sub 25 pins

LCD-Display: LCD display with keyboard and backlight for data readout (static measurements), system setup and system operation

Flash-Memory: 16 marked events (average recording time – 30 minutes)

Power Supply: 6 batteries D-cell (9 V) or external power supply 230V AC

Height: 140 mm

Width: 200 mm

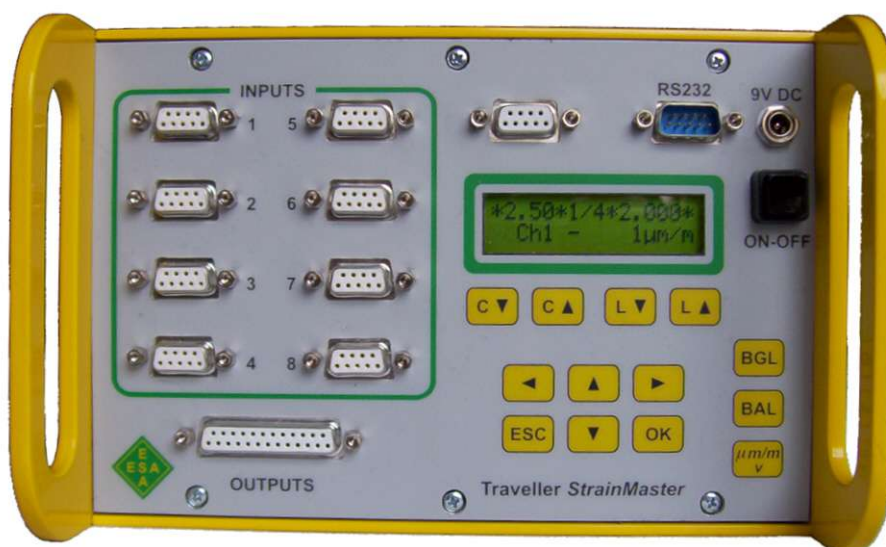
Depth: 150 mm

Weight: 2 kg

Computer interface (optional): RS 232 – for static only, supported by ESAM SMT software (optional)

Software (optional): Transfer-Software: ESAM SMT software to EXCEL[®]-Tables

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Front view of the *Traveller* StrainMaster



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