

Accessories

for Acoustic Emission systems

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1 Magnet Holders

MAG4R Very strong magnet holder for –R case sensors (e.g. VS150-RIC). Holding force 2*200N. Handles for convenient removal. 80*30*55 mm (incl. handles), -10°C (ice free) to +80°C



MAG4M Very strong magnet holder for –M case sensors (e.g. VS150-M). Holding force 2*140N. Handles for convenient removal. 70*25*50 mm (incl. handles), -10°C (ice free) to +80°C



MAG4SI Very strong magnet holder for –SI case sensors (e.g. VS30-SIC/SI-xxdB). Holding force 2*200N. Handles for convenient removal. 80*30*76 mm (incl. handles), -10°C (ice free) to +80°C



MAG4H Very strong magnet holder for –H case sensors (e.g. VS45-H). Holding force 2*140N. Handles for convenient removal. 70*25*57 mm (incl. handles), -10°C (ice free) to +80°C



MAG4V Very strong magnet holder for –V case sensors (e.g. VS30-V). Holding force 2*140N. Handles for convenient removal. 70*25*72 mm (incl. handles), -10°C (ice free) to +80°C



MAG4NS Very strong high-temp magnet holder for -NS-case sensors (e.g. VS160-NS), holding force 2*190N, sensor hold-down force 50N, 100*32*67mm (incl. handle), -10°C (ice free) to 180°C



MAG2S Magnetic sensor holder for -R, -M, -H, -V and -S case, -10°C (ice free) to 65°C



2 Couplants

HVF High-vacuum-grease "heavy", temperature range: -40° up to +200°C, 90ml tube

SIK Silicon Bond for permanent coupling at -20° to +150°C, 83ml tube

3 Transport Boxes

BoxM6 strong box for storage and transport, with handles, suited for M6 (AMSY-5), approx. outer dimensions (LxWxH): 50x43x42cm, with 50-95mm shock protection padding. Weight: 7,3kg

BoxM16 strong box for storage and transport, with handles, suited for M16 and E20 (AMSY-5) and for MC15 & EC21 (AMSY4), approx. outer dimensions (LxWxH): 70x63x30cm, with 50-95mm shock protection padding. Weight: 8,6kg

BoxM37 strong box for storage and transport, with handles, suited for M37 (AMSY-5) and MC36 (AMSY4), approx. outer dimensions (LxWxH): 70x63x43cm, with 50-95mm shock protection padding. Weight: 9kg



4 Cables

BNC-xm BNC to BNC cable 50 Ohm, RG58C/U, to connect preamplifier with ASIPP board. Replace x by the desired length: 2, 5, 10, 25, 50m standard, every length possible.
Approximate AC attenuation: 3,6dB/km @ 50kHz, 5,5dB/km @ 150kHz, 10,5dB/km @ 800kHz
Approximate DC resistance: 25 Ohm/km.

BNC Cable Drums

| | |
|--------|---|
| Drum-1 | cable drum, 24cm diameter for max 100m BNC cable, empty |
| Drum-2 | cable drum, 28cm diameter for max 150m BNC cable, empty |

Sensor to preamplifier cables

Tested to suit low noise applications, to connect sensors to a preamplifier with BNC input (e.g. AEP3, AEP4, ASCO-PXx), other lengths possible on request

| | |
|---------|--|
| SEC | Coax-cable RG174U, 1.2m, up to 80°C, connectors: Microdot to BNC |
| SEC-T | Coax-cable RG178U (less flexible than SEC), 1.2m, up to 100°C at the sensor side, connectors: Microdot to BNC |
| SEC-TSA | Coax-cable RG178U, 1.2m, up to 180°C at the sensor side, connectors: SMC-angled to BNC |
| SEC-TSD | Coax-cable R178d 1.2m with double screen for higher noise rejection, up to 180°C at the sensor side, connectors: SMC to BNC. This cable replaces the SEC-TS |

5 Hsu Nielsen Sources

| | |
|-------------|---|
| 5HNS03 | five pices of Hsu-Nielsen Sources (pencils) with shoe according to ASTM E976 for 0.35 mm leads. |
| 5HNS05 | five pices of Hsu-Nielsen Sources (pencils) with shoe according to ASTM E976 for 0.5 mm leads. |
| 5HNS03-Shoe | 5 replacement shoes for Hsu-Nielsen Sources 0.35 mm. |
| 5HNS05-Shoe | 5 replacement shoes for Hsu-Nielsen Sources 0.35 mm. |
| 12HNS03-Ld | 12 packages, each containing 12 pencil leads 0,35mm. |
| 12HNS05-Ld | 12 packages, each containing 12 pencil leads 0,5mm. |

6 Decoupling Box DCPL1

The Vallen Systeme GmbH preamplifiers, such as AEP3 or AEP4, are designed to receive 28 V_{DC} via the same coaxial cable (typically BNC RG58 C/U) that also transfers the amplified AE signal. The digital Vallen Systeme GmbH multi-channel AE systems provide the required voltage and decouple the AE-signal internally.

If clients want to use Vallen Systeme GmbH preamplifiers stand alone (without AE system providing the voltage and decoupling the signal) a decoupling circuit is required.

The Decoupling Box (DCPL1) contains a suited decoupling circuit in a metal box, providing two BNC connectors and two 4mm banana sockets:

- BNC1 is to connect the output of a Vallen Systeme preamplifier (combined AC signal/DC power line), to provide DC supply, 50R termination and to receive the high frequency AE signal.

- BNC2 is to provide the high frequency AC signal, decoupled from DC over 0,1 μ F, to a measuring unit (e.g. an oscilloscope or an ADC-Board), with an input impedance of 1MegaOhm.
- 29...30VDC are to be fed in over two separate 4mm banana sockets from an external power supply, plus: red, minus: blue.

The external supply for each decoupling box shall at least meet the following requirements:

- 30VDC (isolated from earth),
- 150mA per decoupling box (during power-on),
- 70mA continuous.

One power supply can supply multiple decoupling boxes, because the voltage input is internally decoupled over two 3.3mH inductors. We recommend using a linearly regulated supply, because switched power supplies may add undesired noise to the AE signal.

Each preamplifier requires one decoupling box.

Dimensions: 35x60x65mm (HxWxL, not including BNC connectors).
Weight: 250g

7 Literature - Training Guide

Trngguide J.D. Leaird: AE Training Guide

8 AMSY-5 Accessory

blank panel-1 Blank panel to cover one free board slot
blank panel-3 Blank panel to cover three free board slots

9 Laptop and Docking Station

DLC630 Dell Latitude D630, Intel Core 2 Duo Processor, Windows XP (English or German), WXGA display, 2GB RAM, 160GB HDD, compatible wit D/Dock
DCD-II Dell D/Dock Advanced Port Replicator for D-series notebooks

10 PC

TFT19 External TFT-monitor, 19 inch
PC-Desk Office PC, meeting at least the following specifications (PC-monitor and printer not included):
Min specs.: CPU: Intel Duo Core (2,33GHz, 4MB, 1333MHz); 2GB DDR2; 500GB HDD; 16x DVD+/-RW; 256MB nVidia Quadro; PCI bus according to PCI v2.2;(PCI SIG), providing +3.3V; free PCI slot (half size) to house the ASyC;
Windows XP® (English or German version).

11 Arbitrary Function Generator

VSTHP arbitrary function generator, programmable with USB or LAN interface for Vallen Sensor Tester and SysVeri. Function generator model: Agilent 33220A

12 DC Calibrator

M2000A 2000A DC calibrator, programmable via RS232

13 Vallen Sensor Tester Accessories

VSTCBL Sensor Tester cable set, consisting of 1xSEC, 1xBNC-T piece, 1x50Ohm terminator

VSTHP see section 11

VSTEM101 Sensor Tester signal emitter for VS30-V and more

VSTEM103 Sensor Tester signal emitter for VS150-M and more

HP4-dum Dummy high-pass filter for ASIPP, recommended for Vallen Sensor Tester

TP4-dum Dummy low-pass filter for ASIPP, recommended for Vallen Sensor Tester

14 SysVeri Accessories

SysVeri-Cset cable set for SysVeri, consisting of 1xET1, 1xCbP, 1xCbA, 1xCbE, 1xBNC

ET1 endtest adapter for SysVeri

CbP SubD25-SubD25 (male-male) cable, all pins wired, 2m long

CbA SubD9(male)-10pole (female), 25cm long (for Alarm connector)

CbE SubD15(female)-16pole(female), 25cm long (for Externals connect.)

15 Warranty Conditions

The warranty period is for one year from the date of its delivery, provided the parts have been correctly handled. This warranty does not cover "consumable" items such as couplants and cables, nor does it cover the repair of any accidental damage.

The warranty period for cables is 3 months from the data of delivery. The cable warranty does not cover damage caused by external force (e.g. folding a cable).

We warrant that the goods as delivered will conform to the specifications. On notification during the warranty period defective items will be replaced, free of costs and within a reasonable time.

Except as expressed before, we disclaim all other warranties.

Specifications are subject to change as product developments are made.