

## ACCELEROMETER TRANSDUCER

# TA-18/S

The TA-18/S transducers seismically measure absolute machine vibrations by directly fastening the vibrating part on the supports. They provide an output signal directly proportional to the vibration of the point on which they are fastened. This signal can subsequently be processed by a measuring channel of a CEMB "T" or "N" series device.

The TA-18/S transducers exploit the piezoelectric effect, i.e. the capability of a material to provide a difference of potential when mechanically stressed. In this application, a ceramic material subjected to acceleration generates an electrical signal proportional to the stress



### TECHNICAL CHARACTERISTICS

#### GENERAL

|                        |  |
|------------------------|--|
| Type of measurement    | ■ seismic (absolute vibration) piezoelectric             |
| Sensitivity            | ■ 100 mV/g   |
| Response in frequency  | ■ $\pm 3$ dB 0,5 ÷ 15000 Hz<br>■ $\pm 10$ % 2 ÷ 10000 Hz |
| Vibration direction    | ■ any  |
| Dynamic range          | ■ $\pm 50$ g pk  |
| Transverse sensitivity | ■ < 5 %  |

#### ELECTRICAL

|                             |                         |
|-----------------------------|-------------------------|
| Power supply                | ■ 2÷10 mA - 18÷30 Vdc   |
| Output polarization voltage | ■ 10-14 Vdc             |
| Output impedance            | ■ < 100 ohm             |
| Outer casing insulation     | ■ > 10 <sup>8</sup> ohm |
| Settling time               | ■ < 2,5 sec.            |

#### AMBIENT

|                                    |             |
|------------------------------------|-------------|
| Protection against shocks          | ■ 5000 g pk |
| Protection against external agents | ■ IP68      |

#### PHYSICAL

|                           |                                       |
|---------------------------|---------------------------------------|
| Weight                    | ■ 90 grammi                           |
| Resonance frequency       | ■ 23 kHz                              |
| Outer casing material     | ■ AISI 316-L stainless steel          |
| Retaining screw threading | ■ see "dimensions and threads"        |
| Connection                | ■ MIL-C-5015 2-pin connector provided |
| Tightening torque         | ■ 2.7 to 6.8 Nm                       |

# TA-18/S

## INFORMATION FOR THE ORDER:

A B  
TA-18/S / □ / □

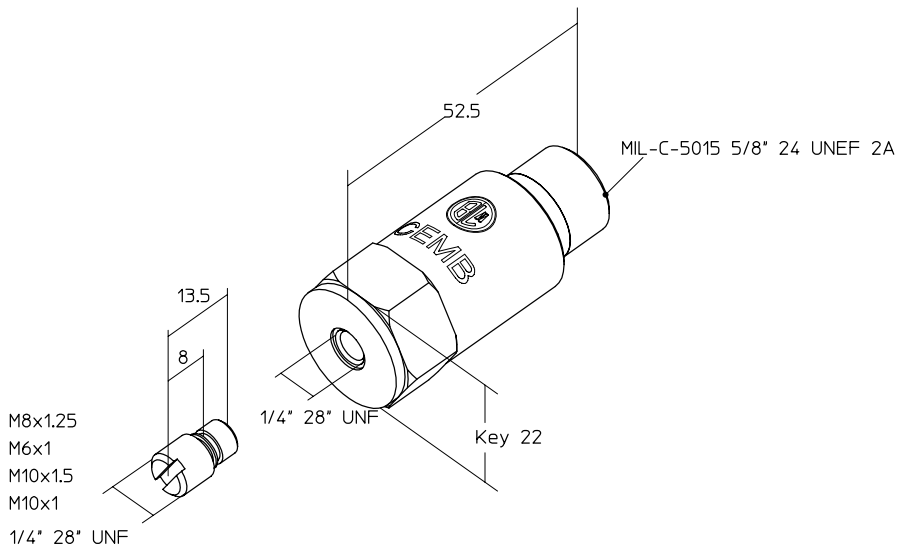
### A: RETAINING SCREW

|   |   |
|---|---|
| 0 | 1/4" - 28 UNF   |
| 1 | M8 X 1,25   |
| 2 | M6 X 1  |
| 3 | M10 X 1,5   |
| 4 | M10 X 1   |
| 9 | MULTI THREAD KIT (1/4"-28 UNF - M8X1.25 - M6X1 - M10X1,5) |

### B: TEMPERATURE RANGE

|   |                  |       |        |
|---|------------------|-------|--------|
| 0 | STANDARD         | -50°C | +121°C |
| 1 | HIGH TEMPERATURE | -50°C | +150°C |

## DIMENSIONS AND THREADS



## CABLES AND OPTIONAL ACCESSORIES

### CABLES:



**SHIELDED CABLE 2X1 STANDARD** 80419-P  
CBL / TA-18 / S / 0 / XX (length in meters)



**SHIELDED CABLE ARMoured IN ETFE** 87SEA7952  
CBL / TA-18 / E / 0 / XX (length in meters)



**SHIELDED CABLE 2X1 WITH METAL JACKET COVERED BY PVC** 95743-P  
CBL / TA-18 / A / 0 / XX (length in meters)

### ONLY CONNECTORS:

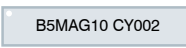


**2 PINS STRAIGHT (standard)** 597023104



**2 PINS 90°** 597023108 + 59070352

### TAGS:



**PLASTIC TAG** 040STR000



**STAINLESS STEEL TAG** 980710835