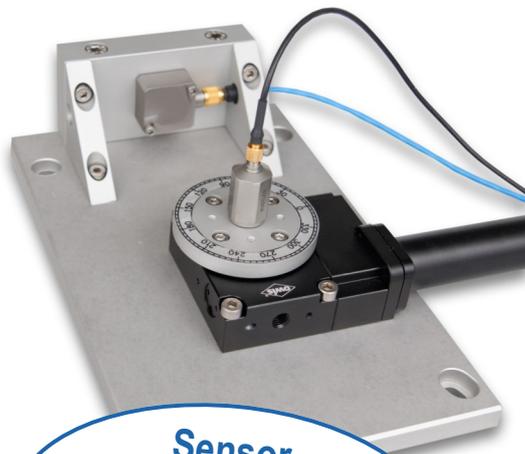


CS18 Optional Extra

TRANS for CS18 VLF (primary and secondary)



Sensor
Characterization
Transverse Sensitivity

APS 500



APS 129



Application

Type CS18 TRANS is the practical implementation of a system for determining the transversal transfer coefficient as a function of operating angle according to ISO 16063-31.

In this system, the angular actuator is remote-controlled by a step motor. Thus the measurement of $S_T(\varphi, f)$ as a function of angle and frequency can be carried out all-automatically.

The system is offered under the trade name CS18 TRANS as an optional extra to a type CS18 VLF Calibration system. It is intended for operation in conjunction with an APS 129 or APS 500 air bearing long-stroke vibration exciter in the frequency range between 2 Hz and 50 Hz.

Features

Excitation in transversal direction is accomplished by means of an air bearing slide table. As a result, both frequency and vibration amplitude (acceleration or displacement) can be set at will or varied continuously within certain limits.

- Due to its step motor, rotation can be controlled precisely in steps, but also continuously.
- Extremely low interferences, e.g. transverse vibrations due to the minor mass of construction

CS18 Optional Extra

TRANS for CS18 VLF (primary and secondary)



Components

- Precision board to mount the angular actuator
- Angular actuator with sensor-mounting board
- Position control for the angular actuator
- Operation mode „Measurement of transverse sensitivity“ for CS18 Software
- Reference standard ATS-7 for installation and periodic verification of angular actuator

Specifications

Measuring device for determining the transverse sensitivity according to ISO 16063-31

Given that the transverse sensitivity of exciter is < 0.1 % in direction of main sensitivity of DUT, the following measurement uncertainties apply:

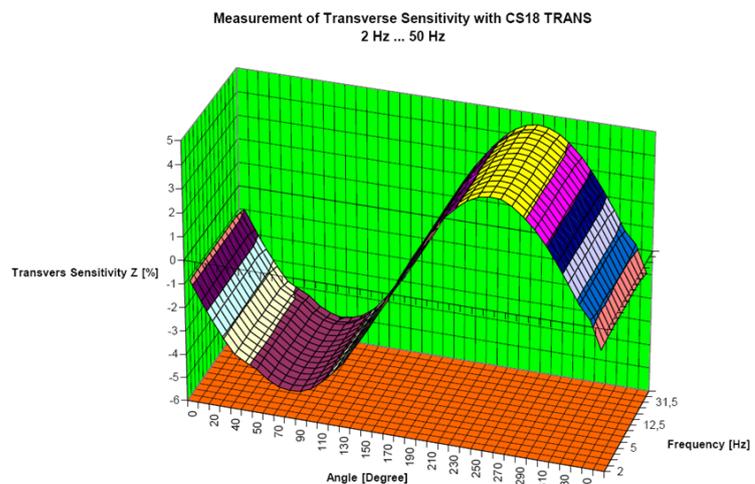
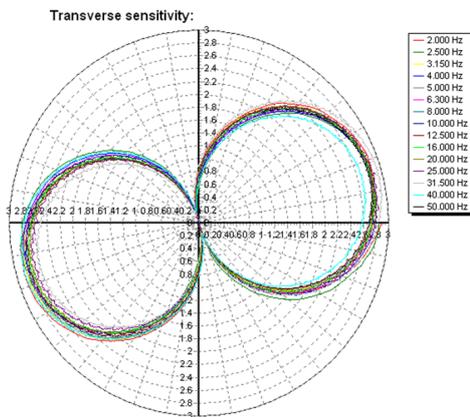
Frequency Range		Weight of DUT ³⁾ up to	Expanded Measurement Uncertainty ¹⁾ Relative Transverse Sensitivity ²⁾	PEAK-Acceleration in m/s ²	
from	to			min.	max.
2 Hz	25 Hz	200 gram	1	2 - 10	
> 25 Hz	50 Hz	50 gram		10	

¹⁾ Determined according to GUM (ISO Guide to the expression of uncertainty in measurement) with k = 2 (coverage factor)

²⁾ Reference value for interval width of given relative Measurement Uncertainty (e.g. 0.3%) is not the measurement value, as usual (in this case the relative transverse sensitivity), but the dynamic sensitivity of the DUT in direction of main sensitivity at same frequency.

³⁾ Higher weight of DUT possible on demand

The following figures show different illustrations of the relative transverse sensitivity.



All data are subject to change without notice

March 2014