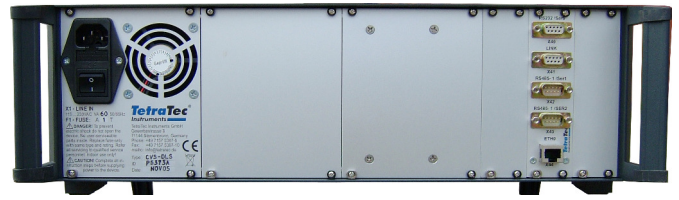


Front View:



Rear View:



- PMU-DLS-application as flow calibration system
- Fullfills the accuracy requirements acc. EPA
- Electronical flow computing of
- Laminar Flow Elements or SAO nozzles
- Compact design in 19"-rack
- Incl. factory calibration certificate

TECHNICAL DESCRIPTION

The electronical calibration unit PMU-DLS-KAL can be used to calibrate gas meters, LFE or other flow elements in a particle collectors or other applications of the CVS test bench.

This compact unit is alternatively equipped with a integrated SAO-nozzle or a LFE, which offers through additional functions like leakage test, averaging and DP-zeroing a comfortable way of calibration.

As a standard are included the sensors to measure difference pressure, absolute pressure and temperature. In addition there's a humidity sensor available and the standard sensors are also available in higher accuracy.

SPECIFICATION

Measurement Range and Accuracy

Different. pressure	0–50 mbar	±0.025 %F.S. (2 Pa)
Absolute pressure	0–1200 mbar	±0.25 %F.S. (2 mbar)
Temperature	0 – 50 °C	±0.14 °C
Humidity	0 – 100 %r.H.	±3 %r.H.
Linearity, repeatability and hysteresis included		
Temperature effect approx. 0,01%/°C.		

Flow-Element-measuring range and accuracy

Laminar-Flow Elements (LFE) , or SAO-nozzles:
F.S. range: 10 / 20 / 45 / 80 / 100 / 160 and 200 l/min
The calibration of this flow elements is better than ±0,65 %o.R. for the differential pressure span of 1:10. The system accuracy is better ±1%o.R. without humidity measurement and ±0,85 %o.R. with humidity measurement.

Media Compatibility

Air, dry, dustfree, not condensing humidity.

Temperature Conditions

Storage:	0 ... +50 °C
Operation:	0 ... +40 °C

Overpressure Limits

Pressure sensors: double full scale measurement range, if only plus side is overpressured and differential pressure up to 10 bar static if pressure is applied on both sides at the same time.

Display

Controller S320 front panel mounted housing acc. DIN IEC 61554 with six independent red LED display lines, 3 x 6 digits LED displays (10 mm) and 3 x 4 digits text-LED displays (6 mm). With the integrated five function keys the complete operation and setting of parameter is possible.

Supply

90 - 260 V AC, 50/60 Hz max. 80 Watt

Interfaces

Ethernet, RS 232 and 2x RS 485

Gehäuse

Measures:	450 x 150 x 316 mm (WxHxD) 3HU, 84DU
Material:	Aluminium profile, cover plates coated
Weight:	ca. 9 kg
Protection class:	IP20, higher protection classes up to IP54 on demand

Process Connections

Air intake connection with lock cap for leakage test, Line connection as a connector QF16 (1"NPT), Customer specific connection possible.

NECESSARY SIZING DATA

For sizing purposes should be supplied:

CVS Flow Range

Minimal and maximal flow of air.

ORDERING INFORMATION

Part-No-Structure: PMU-DLS-KAL-DP-PA-TA-FE-RH

PMU-DLS-KAL	Standard CVS-DLS-calibration unit
DP-	Difference pressure measuring range
50P	0 – 50 mbar, ±0.025 %F.S., RS485
PA	Absolute pressure
12S	0 – 1200 mbar, ±0.025 %F.S., RS485
12A	0 – 1200 mbar, ±0.25 %F.S., analog
TA	Temperature measuring range
14	0 – 50 °C, ±0.2°C, Pt100-Sensor internal
FE	Flow-element model:
LFE-200 *	Laminar Flow Element measuring range up to 200 l/min e.g. for air
SAO-200 *	SAO-nozzle measuring range up to 200 l/min e.g. for air
RH	Integrated humidity measurement:
RH	Internal humidity sensor 0 – 100 %r.H.

* Attached the desired flow range as number in L/min
Special gradings and accessories on demand