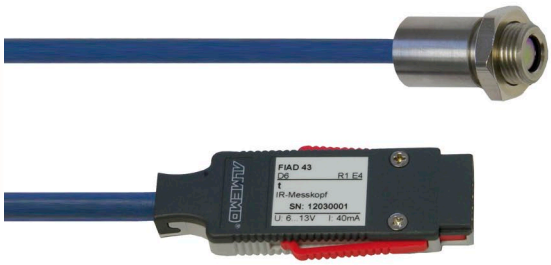
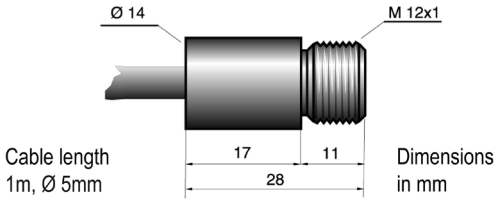
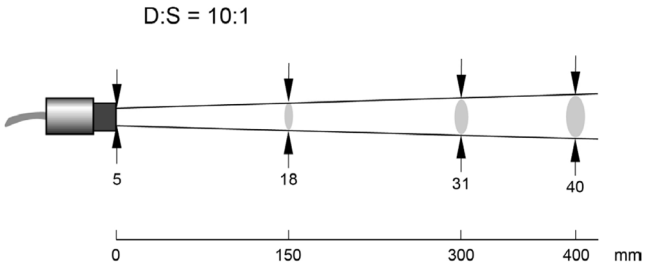
Digital infra-red sensor for measuring surface temperature FIAD43
Miniature probe head, integrated electronics, ALMEMO® D6 plug





- Digital infra-red probe head with integrated signal processor
- All sensor characteristics and adjustment data are stored in the probe head itself.
- Digital transmission ensures that measured values are not affected by the sensor cable being moved, bent, or twisted.
- Surface temperature is measured over a wide range up to 600°C.
- Robust stainless steel housing, protection class IP65
- The probe head, thanks to its small dimensions, can be installed in cramped and restricted conditions.
- The probe head is threaded for quick and easy installation.
- The sensor cable in polyurethane (PUR) is suitable for industrial use and is resistant to oily, acidic, basic environments.
- The sensor can be connected directly via the cable's ALMEMO® D6 plug to any ALMEMO® device.
- One measuring channel is preprogrammed on leaving our factory - surface temperature (°C).
- Emissivity 0.95 are preprogrammed (on leaving our factory).
- This can be programmed from 0.1 to 1.0 at the current ALMEMO® V6 devices via the device or via interface (some only via interface).
- Transmittance 1.0 is preprogrammed (on leaving our factory). Transmittance can be modified directly on the PC using USB adapter cable ZA1919AKUV. (see "General accessories for ALMEMO® D6 sensors" page 04.05).

Measuring Field



General features and accessories, ALMEMO® D6 sensors
see page 01.08

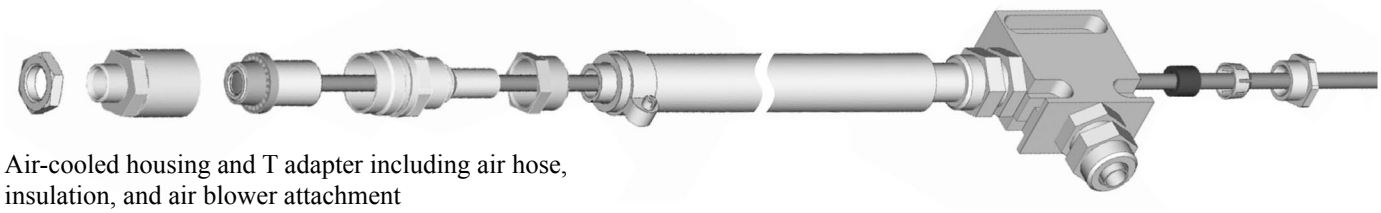
Options fitted at our factory



Air blower attachment OR7843LB



Deflecting mirror with integrated air blower attachment OR7843US1



Air-cooled housing and T adapter including air hose, insulation, and air blower attachment
Length of air hose 0.8 meters OR7843KL1
Length of air hose 2.8 meters OR7843KL2



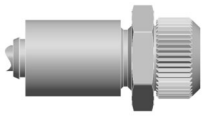
Deflecting mirror for air-cooled housing OR7843US

Standard delivery	**Order no.**
Infra-red probe head with cable and ALMEMO® D6 plug and 1 mounting nut	
Cable length = 1 meter	**FIAD4332**
Cable length = 3 meters	**FIAD4332L3**
DAkkS / DKD or factory calibration KI9xxx temperature for digital sensor (see chapter Calibration certificates)	

Technical data

Digital infra-red probe head (including A/D converter)	
Temperature measuring range	-40 to +600 °C
Spectral sensitivity	8 to 14 µm
Optical resolution (90 % energy)	10:1 with focal point lens attachment 1 mm at distance of 10 mm Transmittance can be programmed to 0.75. (see below)
Accuracy	±1 % of meas. value or ±1 K (whichever value is higher) ±2 K for meas. values <20 °C
Reproducibility	±0.5 % of measured value or ±0.5 K (whichever value is higher)
Nominal conditions	23 °C ±5 K, emissivity 1.0
Temperature coefficient	±0.05 K / K or ±0.05 % of measured value / K (whichever value is higher)
Temperature resolution	0.1 K
Response time	130 ms (90 %)
Emissivity	0.95 (preprogrammed on leaving our factory) This can be programmed from 0.1 to 1.0 at the current ALMEMO® V6 devices via the device (some only via interface).
Transmittance	1.0 (preprogrammed on leaving our factory) This can be programmed from 0.1 to 1.0 directly on the PC using USB adapter cable ZA1919AKUV. (please place a special order) (see "General accessories for ALMEMO® D6 sensors")
Protection class	IP65 (NEMA 4) (National Electric Manufacturers Association)
Ambient temperature	-10 to +120 °C with air-cooled housing -10 to +200 °C
Storage temperature	-20 to +120 °C
Relative atmospheric humidity	10 to 95 % non-condensing
Housing	Stainless steel
Dimensions	Probe head Length 28 mm x Ø 14 mm Thread M12 x 1
Weight	Probe head 50 grams with 1-meter cable
Connecting cable(s)	permanently fitted Polyurethane (PUR) For available lengths see variants. with ALMEMO® D6 plug
ALMEMO® D6 plug	Refresh time 0.25 seconds for all channels Supply voltage 6 to 13 VDC Current consumption 4 mA

Accessories



Focal point lens attachment (cannot be used together with air blower attachment or air-cooled housing)
Transmittance 0.75 ZR7843CFL

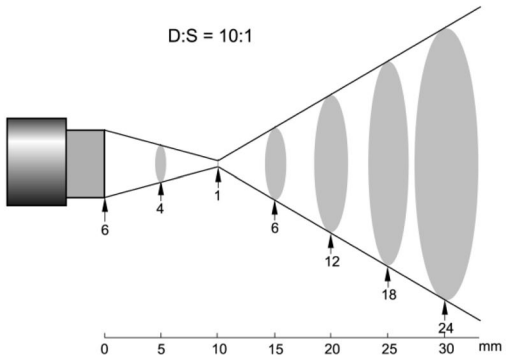


Protective window (cannot be used together with air blower attachment or air-cooled housing)
Transmittance 0.75 ZR7843PW



Mounting bracket, rigid ZR7842H

Measuring field with focal point lens attachment





Mounting bracket, adjustable ZR7842JH

10/2013 • We reserve the right to make technical changes.