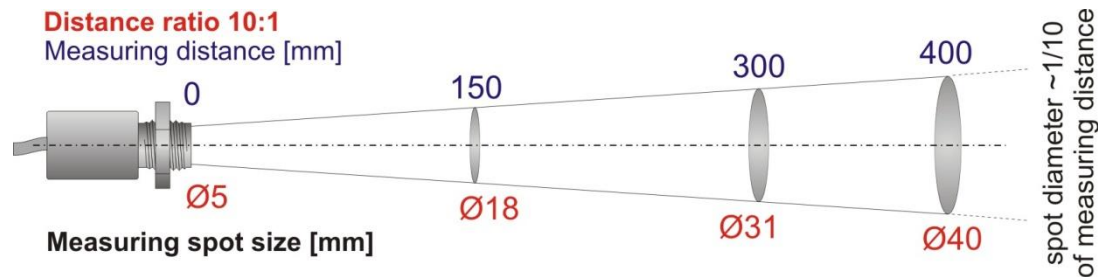


Miniature infrared sensor for non-contact temperature measurement

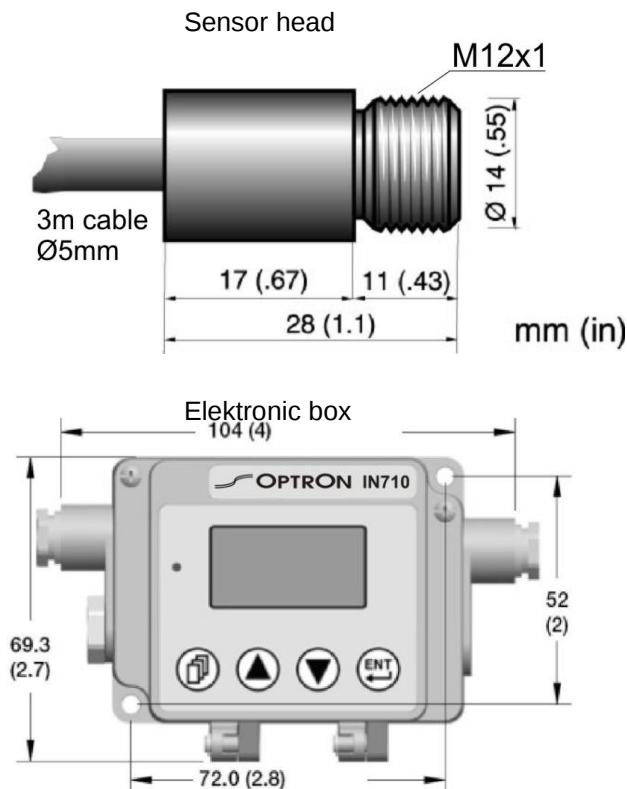
- Plug & Play – automatic sensor head detection
- Miniature sensor head for installations at tight spaces
- Failsafe functions for internal temperature and sensor cable break
- All-digital communication (sensor head → electronic box)
- Industrial rugged head cable (PUR): Silicone and Halogen free, resistant against oil, bases, and acids
- Analog output
(0/4...20 mA, 0...5/10 V or thermocouple type J, K, R or S)
- User friendly configuration by keys at the electronic box or software



The IN710 is a digital pyrometer for non-contact temperature measurement of non-metallic or coated objects. The device has a sensor head optic with a distance ratio of 10:1. Sensor heads can be replaced by customers without losing accuracy. The devices are equipped with a display which shows the actual temperature as well as all configurations. All available parameters can be set by the keys or software.



Dimensions:



Miniature infrared sensor for non-contact temperature measurement

Technical data

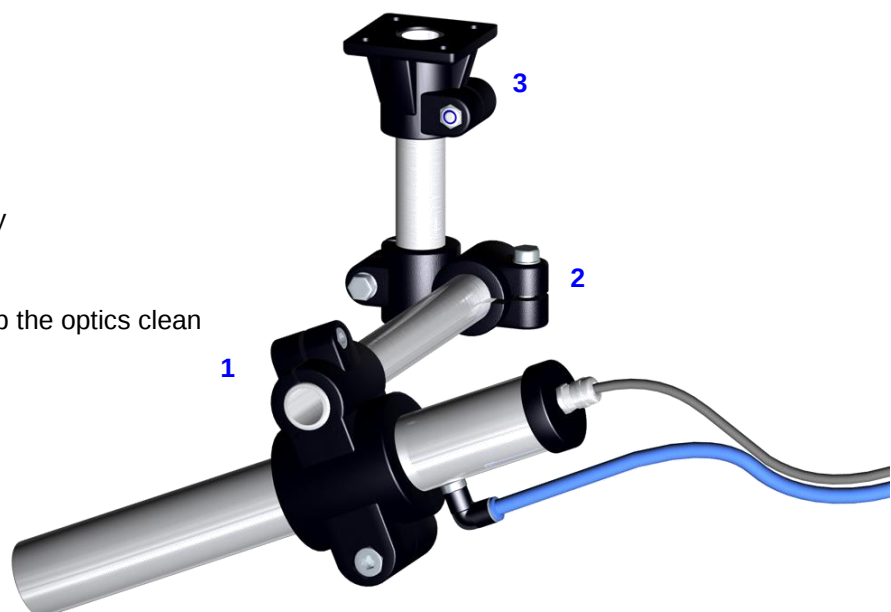
Temperature range	-40 ... 600°C (sub range scalable)
Spectral range:	8 ... 14 µm
Optics/distance ratio	10:1
Power supply	8 ... 32 V DC, max. 6 W
Output:	Out 1: 0 ... 5/10V DC, object or sensor head temperature Out 2: 0/4 ... 20 mA or 0 ... 5/10 V DC, object or sensor head temperature Alarm: Solid-state relay (potential-free, max. 48 V / 300 mA)
Inputs:	Emissivity setting (analog 0-5 V DC) Background radiation compensation (analog 0 – 5 V DC) Trigger / hold or laser switching (digital high / low)
Interface:	USB 2.0 (connector type mini B)
Emissivity ε:	10 ... 110% adjustable
Transmission:	10 ... 100% adjustable
Signal processing:	Peak & valley hold, intelligent averaging (flicker) Dwell time adjustable up to 998 s
Response time t_{90} :	130 ms
Resolution:	1/10°C
Measuring uncertainty sensor head: ($\epsilon = 1$, $T_{Amb} = 23^\circ\text{C} \pm 5^\circ\text{C}$)	$\pm 1\%$ of reading or $\pm 1^\circ\text{C}$ * $\pm 2^\circ\text{C}$ for object temperatures $< 20^\circ\text{C}$
Repeatability sensor head:	$\pm 0,5\%$ of reading or $\pm 0,5^\circ\text{C}$ *
Measuring uncertainty electronic box:	$\pm 1^\circ\text{C}$ (mA/V output)
Valid ambient temperature electronic box:	-10 ... +65°C (storage temperature: -20 ... +85°C)
Valid ambient temperature sensor head:	IN710: -10 ... +120°C (storage temperature: -20 ... +120°C) IN715: -10 ... +180°C (with air cooling +200°C) (storage temperature: -20 ... +180°C)
Relative humidity:	10 ... 95% rH, non condensing
Protection class:	IP65 (electronic box and sensor head) (NEMA-4) / IEC 60529
Weight:	approx. 500 g
Dimensions in mm:	Electronic box: 104x69,3x31,5 (L x B x H), Sensor head: Ø14mm x 28, thread M12x1
Housing:	die cast zinc (electronic box), stainless steel (sensor head)
Cable:	3m PUR (polyurethane), halogen- and silicone free
EMC:	IEC 61326-1:2006 (max. cable length 3m)
Vibration sensor head:	11 ... 200 Hz, 3 g > 25 Hz in operation, 3 axis / IEC 60068-2-6
Schock sensor head:	50 g, 11 ms, in operation, 3 axis / IEC 60068-2-27

* - The larger value is valid. The sensor head must be in constant ambient temperature for at least 15 minutes.

Accessories

Protection armature

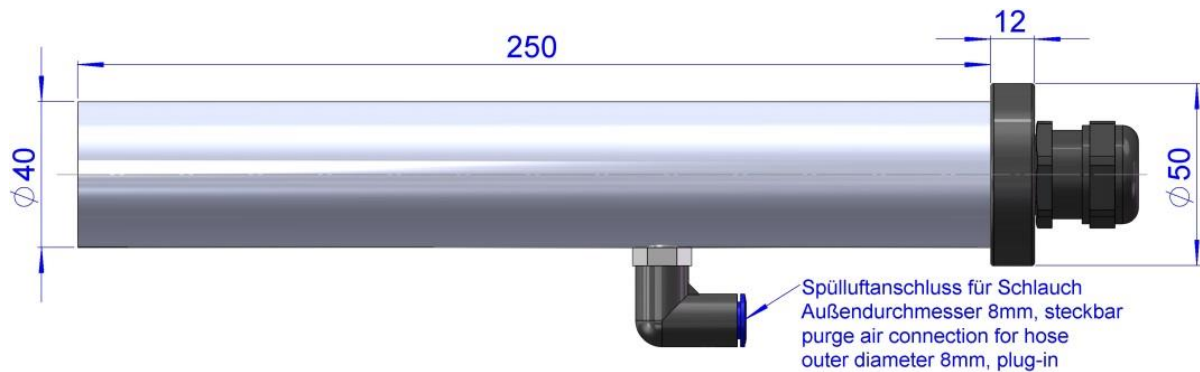
- Robust protection armature
- Easy to mount and adjust by clamping elements (optional)
- Air purge connection to keep the optics clean (hose outer diameter 8mm)



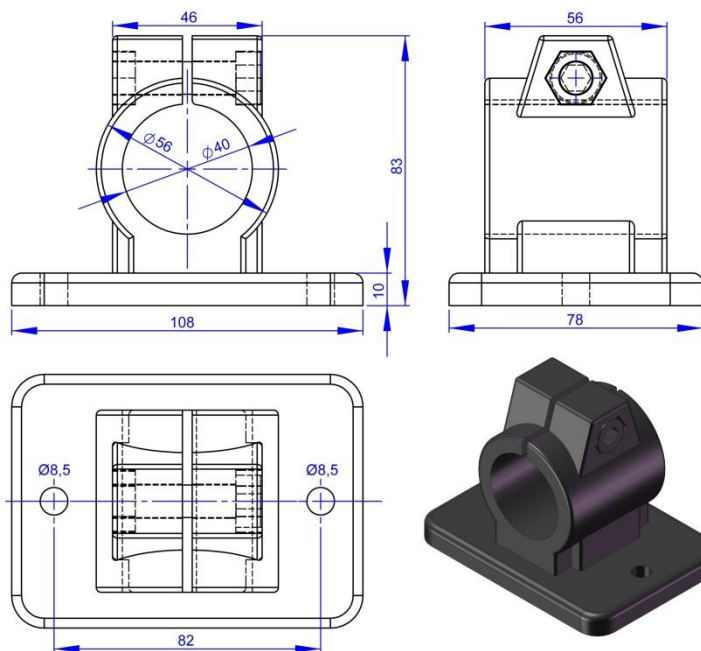
IN710 / IN715

Miniature infrared sensor for non-contact temperature measurement

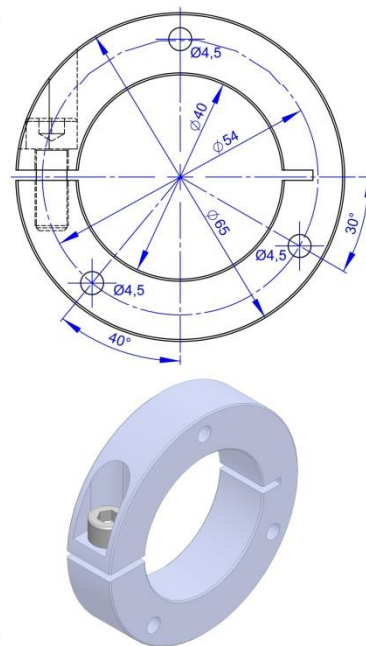
Dimensions:



Flange clamping element for protection armature



Clamp ring for protection armature, stainless steel

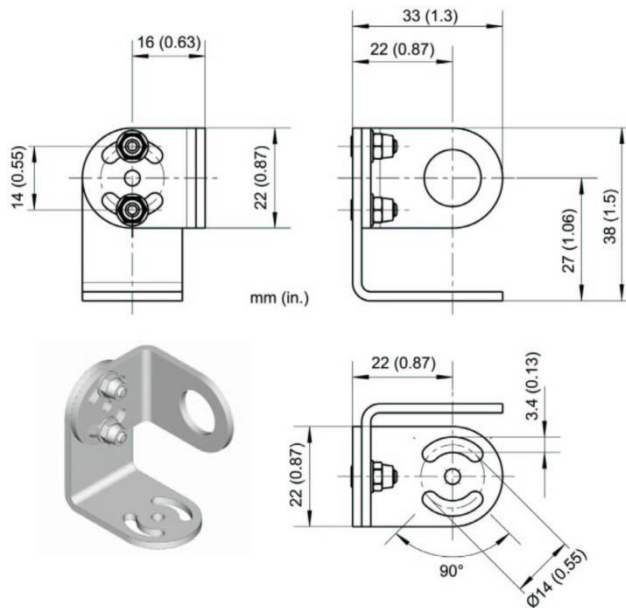


Dimensions in mm

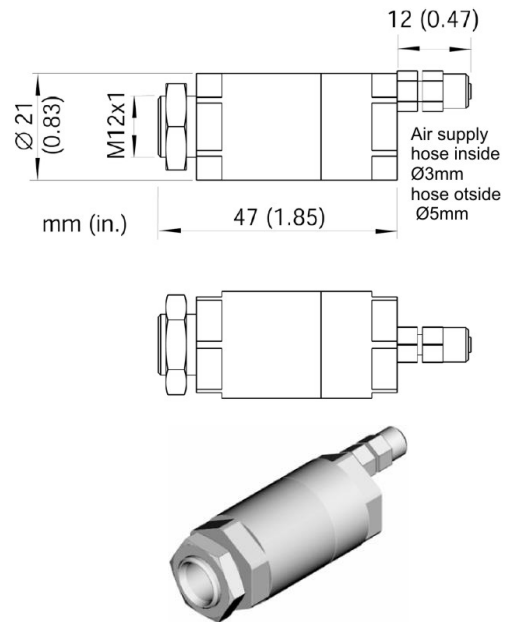
Miniature infrared sensor for non-contact temperature measurement

For assembly, without protection armature:

Adjustable mounting angle



Air purge (for IN710 only)



Item No.

Pyrometer type IN710

with electronic box and miniature sensor head, measuring range -40 ... 600°C (sub range scalable), 10:1 optics, 3m sensor head cable; ambient temperature -10 ... +120°C

121710

Pyrometer type IN715

with electronic box and miniature sensor head, measuring range -40 ... 600°C (sub range scalable), 10:1 optics, 3m sensor head cable; ambient temperature -10 ... +180°C

121915

Protection armature, stainless steel

121711

Cross clamping element, (no.1) [Ø40 to Ø30 mm], for protection armature

1310510

Cross clamping element (no.2) [Ø30 to Ø30 mm], for protection armature

1310520

Mounting clamping element (no.3) [Ø30 mm], for protection armature

1310530

Mounting pipe, (Ø30 mm), 1m

1310540

Clamp ring, stainless steel, for assembly of the armature on IR fields, boilers, etc.

1310550

Flange clamping element, for sidewise assembly of the armature

1310560

Adjustable mounting angle

3834380

Air purge (for IN710 only)

3835330

Laser pilot light for measuring spot alignment (mounted instead of the sensor head first, adjusted and then removed from the mounting angle), battery powered (3x 1.5 V button cell)

121702

Power supply 230V AC / 24V DC; 0,3A

E110028