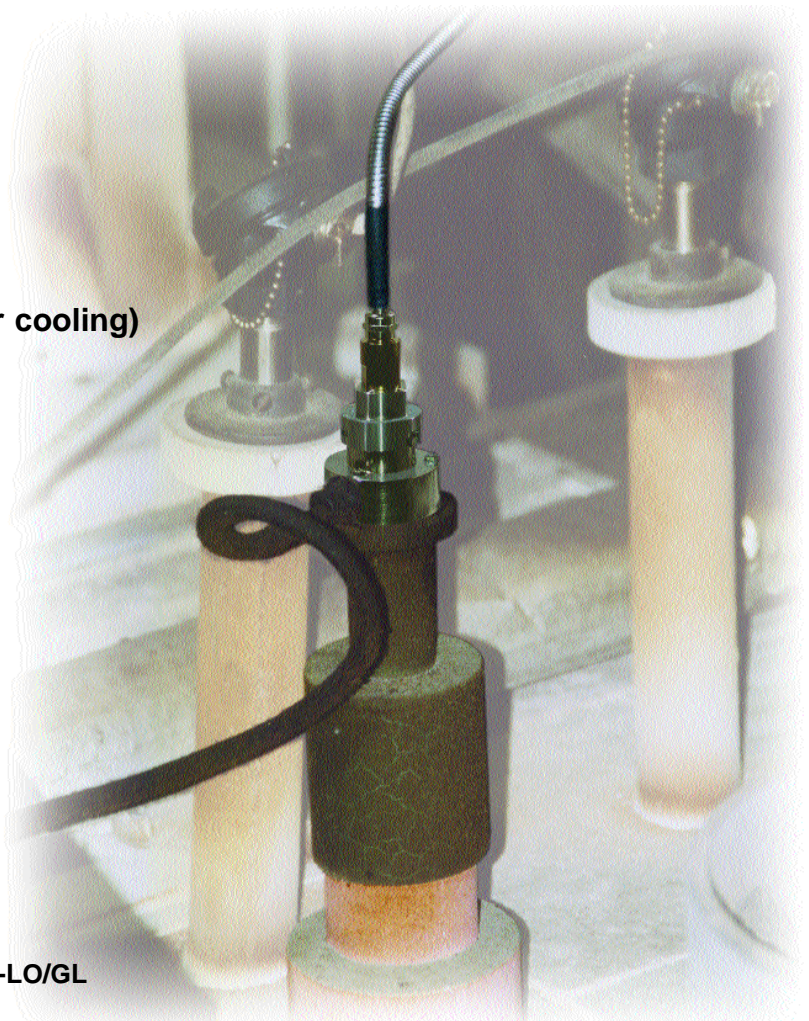


MI-S 50-LO-GL

MI-S 5-LO-GL

Advanced Digital fiber optic infrared thermometers designed for the glass industry

- Robust design
- High accuracy
- Ambient up to 250°C (without water cooling)
- Simple Set-up
- Integrated air purge
- Quick release for optical head
- MI-S 50-LO/GL: Two wire form
- MI-S 5-LO/GL: Equipped with analog output and serial interface, with RS485 bus control



The pyrometers **MI-S 50-LO/GL** and **MI-S 5-LO/GL** are specially designed for the glass industry. They are used for the temperature measurement of glass in tank, working end, forehearth and feeder. Additional applications are the measurement of refractory in regenerator and tank.

Using a robust fiber optic cable (length up to 30 m) enables the use of the instrument in an ambient temperature up to 250°C without water cooling.

MI-S 50-LO/GL

The **MI-S 50-LO/GL** is a digital pyrometer in **two wire form**. This technique combines the high accuracy of the digital signal processing with the simple connection and operating with two wires.

The emissivity is exactly adjustable at the device, additionally any sub range and the response time via service interface.

MI-S 5-LO/GL:

The **MI-S 5-LO/GL** is a digital pyrometer equipped with a digital **interface** additionally to the standard analog output. All pyrometer parameters are adjustable via interface. By choosing the RS485 interface the

Technical Data



	MI-S 50-LO/GL	MI-S 5-LO/GL
Measuring range:	600 ... 1800°C	650 ... 1800°C 800 ... 2500°C
Sub range:	any range adjustable within the measuring range, minimum range 51°C	
IR-detector:	Silicon photo diode	
Spectral range:	0.8 ... 1.1 µm	
Data handling:	Digital	
Uncertainty:	< 1500°C: ± 0.3% of meas. value in °C + 1°C > 1500°C: ± 0.5% of meas. value in °C + 1°C	
Repeatability:	0.1% of measured value in °C + 1°C	
Resolution:	1°C	
Emissivity:	0.05 ... 1.00; adjustable	
Response time t_{90} :	250 ms, adjustable up to 10 s factory adjusted to 1 s	
Test port:	4 ... 20 mA, temperature linear	
Max. load:	700 Ohm at 24 V power supply	
Temperature dependency:	0.2°C per °C variation from 23°C	
Power supply:	24 V DC ± 25%, ripple max. 50 mV	
Power consumption:	0.6 W	
Interface:	Service interface RS232	
Aiming system:	–	
Parameter settings:	Emissivity, test signal 12 mA	
Additional parameters via interface:	Measuring range, response time	
Maximum value storage:	–	
Protection:	IP65 (DIN 40050) with mounted cable	
Ambient temperature:	0 ... +70°C at the housing	
Storage temperature:	-20 ... +70°C	
Converter housing:	Al die-casting, 125 mm x 80 mm x 57 mm (L x B x H, without plug)	
Optical head:	Stainless steel, 112 mm x 22 mm	
Fibre optic:	Multi fiber with flexible stainless steel protection	
Weight:	600 g	
CE-label:	According EU rules for electromagnetic immunity	

Typical applications

Glass temperature measurement

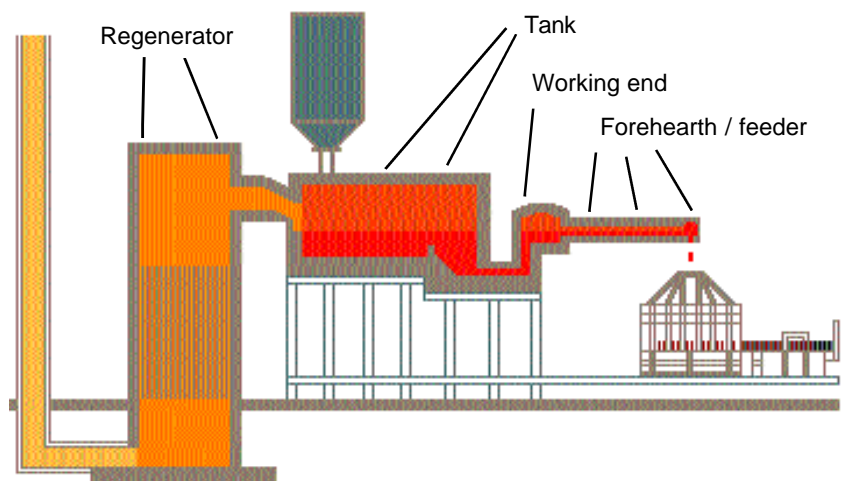
- in forehearth
- in feeder
- in tank

Temperature measurement of refractory

- tank side walls
- tank roof
- in regenerator

The different sighting tubes enable to adapt the pyrometers optimally to the different applications

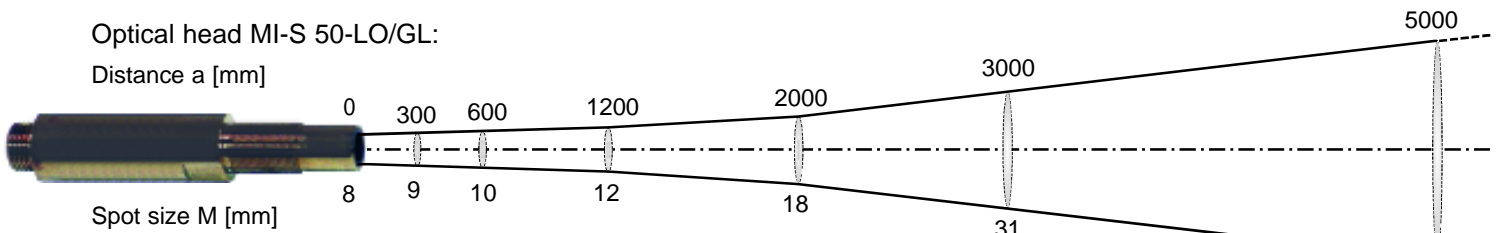
For an easy installation of the pyrometers it is possible to separate the optical head and converter from the fibre optic.



Measuring distance and spot sizes

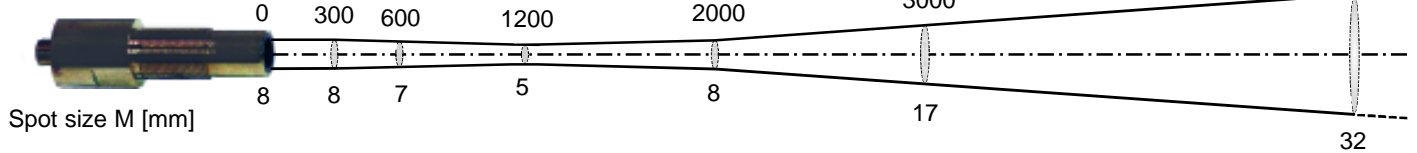
Optical head MI-S 50-LO/GL:

Distance a [mm]



Optical head MI-S 5-LO/GL:

Distance a [mm]



Reference numbers

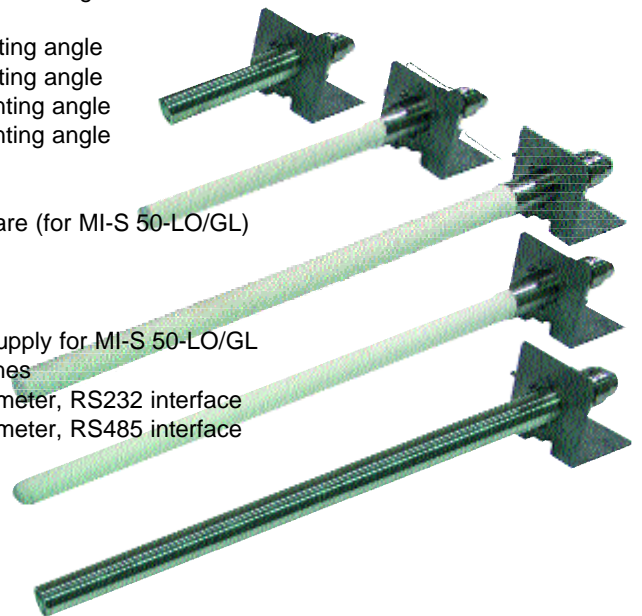
Instruments:

5 857 900	MI-S 50-LO/GL, 600 ... 1800 °C, fibre optic 5 m and optical head
5 857 800	MI-S 5-LO/GL, 650 ... 1800°C, RS232 interface, fiber optic 5 m and optical head
5 857 810	MI-S 5-LO/GL, 650 ... 1800°C, RS485 interface, fiber optic 5 m and optical head
5 857 850	MI-S 5-LO/GL, 800 ... 2500°C, RS232 interface, fiber optic 5 m and optical head
5 857 860	MI-S 5-LO/GL, 800 ... 2500°C, RS485 interface, fiber optic 5 m and optical head

Accessories:

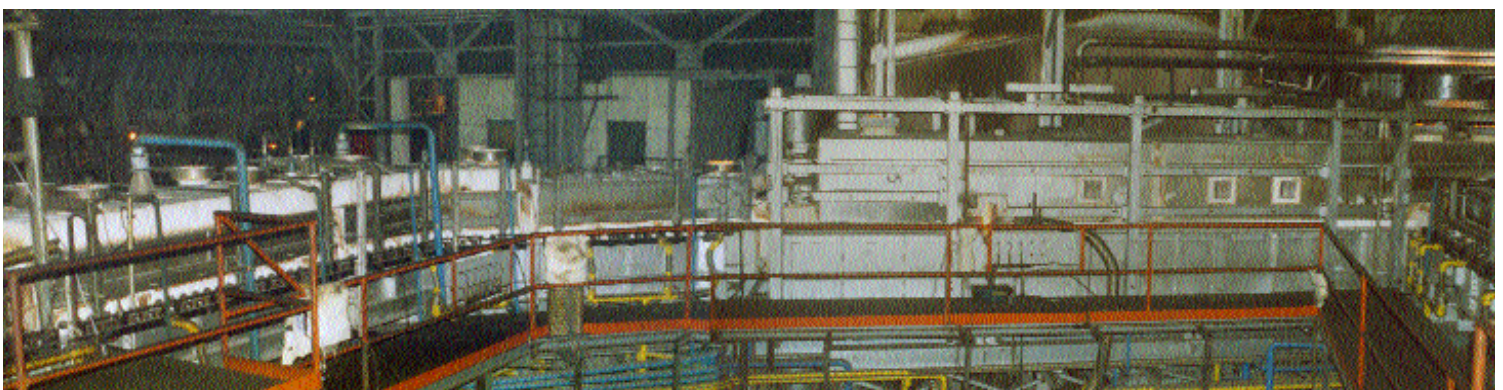
Connection cable MI-S 50-LO/GL		Connection cable MI-S 5-LO/GL	
3 820 650	Length 5 m	3 820 330	Length 5 m
3 820 660	Length 10 m	3 820 500	Length 10 m
3 820 670	Length 15 m	3 820 510	Length 15 m
3 820 680	Length 30 m	3 820 810	Length 25 m
		3 820 520	Length 30 m

On request:	Other length of fibre optic: 10 m, 15 m and 30 m
3 835 300	Air purge unit with inconel tube, 140 mm, open, incl. mounting angle
3 835 380	Air purge unit with inconel tube, 600 mm, open, incl. mounting angle
3 835 310	Air purge unit with ceramic tube, 300 mm, open, incl. mounting angle
3 835 370	Air purge unit with ceramic tube, 600 mm, open, incl. mounting angle
3 835 390	Ceramic tube, 600 mm, closed, incl. mounting angle
3 835 400	Air purge unit incl. mounting angle
3 820 370	RS232 adapter cable for MI-HT 6000 or PC incl. PC software (for MI-S 50-LO/GL)
3 820 980	RS232 adapter cable MI-HT 6000 (for MI-S 50-LO/GL)
3 890 600	Din-rail power supply (MI-S 50-LO/GL)
3 852 140	Power supply NG-0 (MI-S 5-LO/GL)
5 890 640	MI-DA 4000-N: LED digital display with integrated 2 wire supply for MI-S 50-LO/GL
5 890 650	MI-DA 4000: like DA 4000-N, additionally with 2 limit switches
5 890 520	MI-DA 6000: LED digital display for set-up of a digital pyrometer, RS232 interface
5 890 530	MI-DA 6000: LED digital display for set-up of a digital pyrometer, RS485 interface
3 890 660	Frontal IP 65 covering for LED digital displays
5 826 500	MI-HT 6000: Battery driven portable set-up unit
3 863 010	Converter IW 5-C (4 ... 20 m A in 0 ... 20 mA)



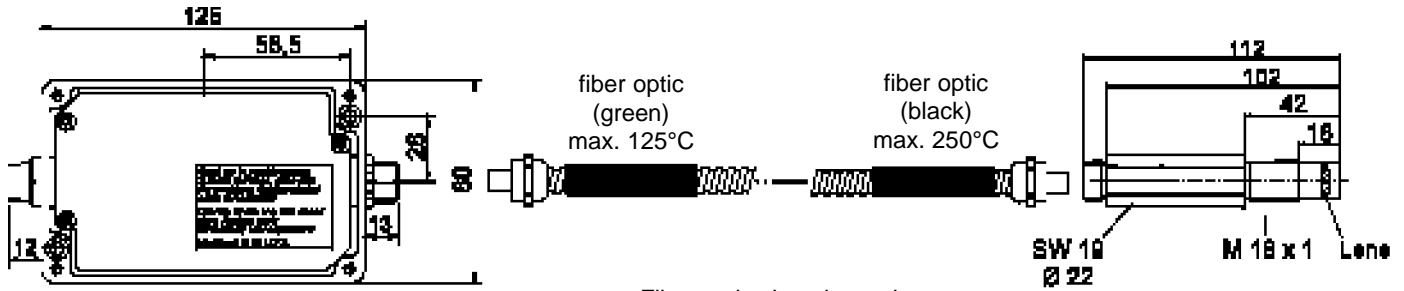
Scope of delivery:

Converter, optical head, fiber optic 5 m



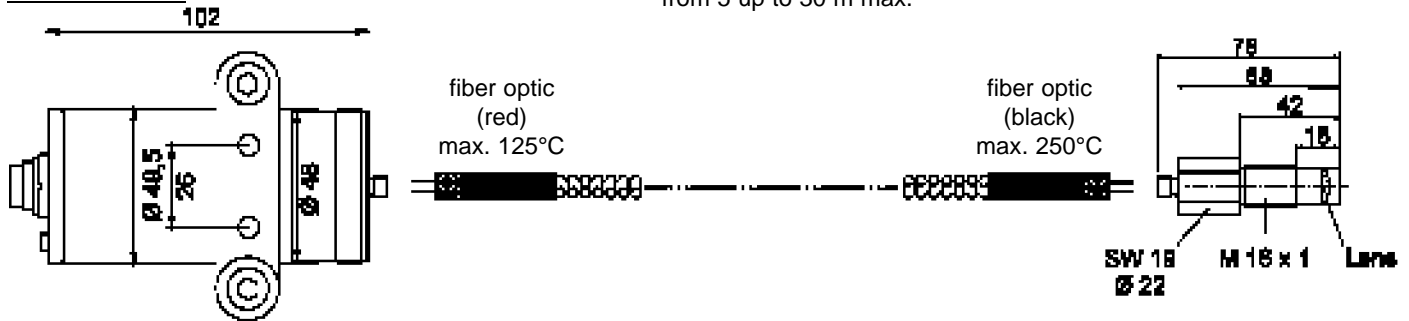
Dimensions

MI-S 50-LO/GL:

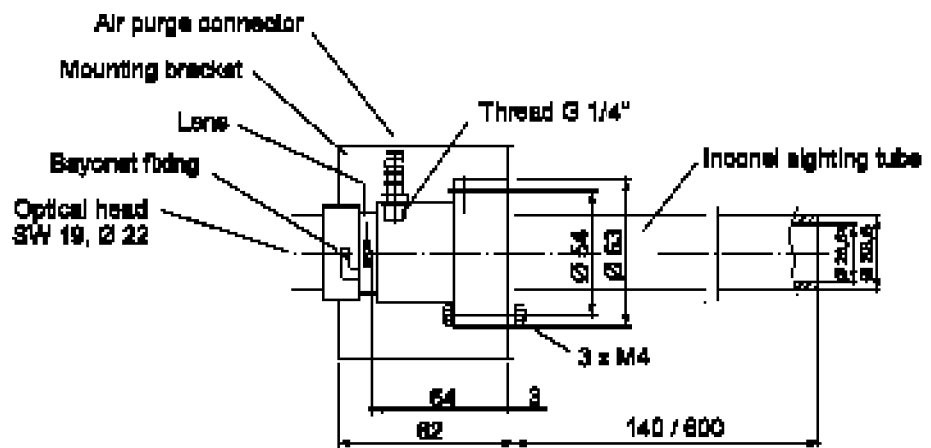


Fiber optics length ranging from 5 up to 30 m max.

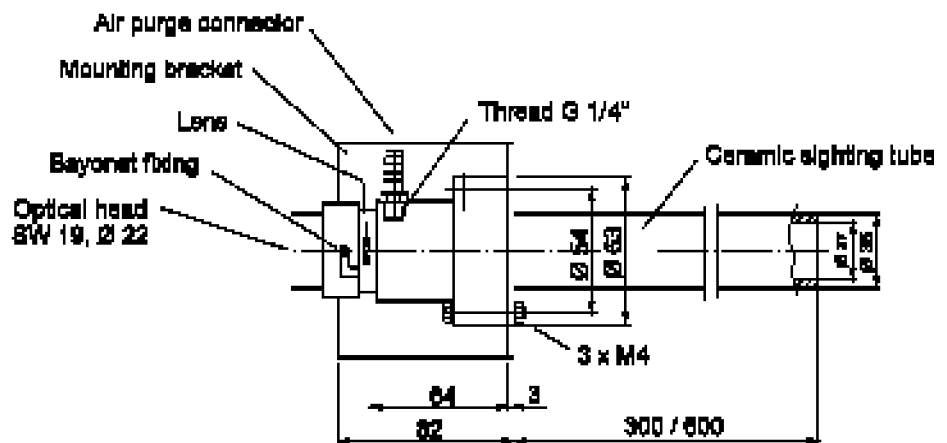
MI-S 5-LO/GL:



Air purge with inconel tubes:



Air purge with ceramic tubes:



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