

# Non-Contact Temperature Measurement

**DIGITAL – INFRARED – 2 – COLOR – PYROMETER**

**Temperature range 600 to 3300°C (1112 - 5972°F)**

**Temperature control during production process**

**compact units – Infrared – measuring transducer and electronic process unit in one case with light beam aiming device, fiber optic, serial interface**

**Series QKTRD 1485**



MAURER – Infrared – pyrometer can also assist you to monitor your heating processes, ensuring a uniform standard of quality for your products.

leaflet QKTRD 1485



<http://www.maurer-ir.de>

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# Infrared-Digital-Pyrometer Series QKTRD 1485

Mainly for **fast warming processes** the **contactless temperature measurement** is suitable.

The **series QKTRD 1485** are **digital-2-color-pyrometer** with fiber optic and optic system in compact structure likewise suitable for industry, research and laboratory.

2-color-pyrometer afford on the basis of its measuring principle contrary to part radiation pyrometer a few substantial advantages. They show also still under critical conditions the true temperature, i.e. by absorption of smoke within the measuring path, mist of viewing glasses at ovens, by small parts which don't illuminate the measuring field.

With the integrated light beam aiming device (green LED) an adjusting of the pyrometer to the measuring object is very easy.

The temperature linear analog output signal 0/4 up to 20 mA is available for measuring- and controlling purposes.

The simultaneous using of the serial interface with the software IR-LOG enables the data detection, graphical representation and the parameter settings of the pyrometer.

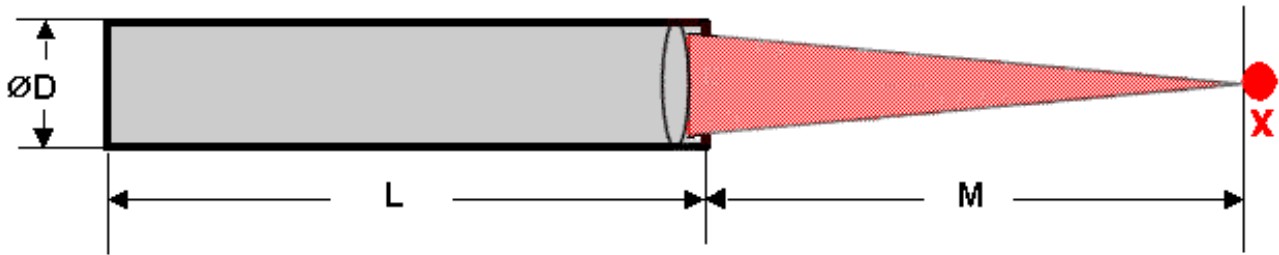
## Examples for applications:

steel, iron, non-ferrous metal, coating, wires, molding, hardening, induction heating, soldering, metal melt, forging, welding, transforming, vacuum furnace, rolling

Technical datas:	
Unit types	<b>QKTRD 1485</b>
Target marking	light beam aiming device green LED
Temp. measuring ranges:	MR1: 600-1600°C 1112-2912°F
	MR2: 900-2000°C 1652-3632°F
	MR3: 1000-2500°C 1832-4532°F
	MR4: 1000-3300°C 1832-5972°F
Spectral range	0,85 - 1,1 µm and 0,95 - 1,1µm
Response time (t95)	<20 ms
Measuring uncertainty	0,5% of meas.value in °C ± 1°C (ε = 1, T <sub>amb.</sub> = 23°C, T <sub>95</sub> = 1s)
Reproducibility	0,1% of meas.value in °C ± 1°C (ε = 1, T <sub>amb.</sub> = 23°C, T <sub>95</sub> = 1s)
Emission ratio	0,8 – 1,2 adjustable at the unit or through interface
Emission factor ε	100 - 10 % through interface
Analog output	0 - 20 mA or 4 - 20 mA , load max. 500R
Part measuring ranges:	free adjustable within the measuring range
Resolution	< 0,1% analog output, < 0,1°C at interface
1 limit output (open coll.) "min. intensity"	24 V DC / max. 100 mA
Max.reading memory	max.memory, erasing after time, external contact, by software, double memory
Interface	RS 232 ± 50 V isolated
Software IR-LOG	data recording, graph.representation, setting of pyrometer parameters
adjustable parameter with Software IR-LOG	emissionfactor,switching output,analog output, part meas.range, °C/°F, max.memory, average value, light beam aiming device switchable
Fiber optic	length 1800mm, bend radius min. 40 mm, (other length on request)
Objectives	for accommodation to the measuring application an extensive selection of objectives are available
Working temperature	pyrometer 0-50°C (32-122°F), fiber optic, optic system up to 150°C(302°F)
Stock temperature	- 10°C - + 70°C (14-158°F)
Temperature sensitivity	0,05 % / °C
Humidity tolerance	35 - 85 % RF (non condensing)
Operating voltage	24 V DC ± 10 % or 18 V AC ± 10 % < 160 mA
Unit connection	12-pole plug-connector
Dimensions: H / W / D	54 x 54 x 147 mm (2,13 x 2,13 x 5,79 inch) ALU-case
Weight	0,6 kg (1,32 lbs)
Protection grade	IP 65

mechanical assembly	electrical assembly	
Execution in cooling case	<b>AE 1010 electr.process unit</b>	<b>digital display (built in-execution)</b>
Blowing device	<b>AE 1012 electr.process unit</b>	<b>connection cable 12-pole</b>
Mirror 90°	<b>power supply 230VAC - 24 VDC</b>	
Mounting parts		

## Objectives for units with fibre optic cable KTRD 1465/1475/1485



Fibre bundle  $\varnothing 1,1 \text{ mm}$  /  $\varnothing 2,0 \text{ mm}$  /  $0,5 \times 2,7 \text{ mm}$

For determination of the respective target size X the fibre optic bundle must be multiplied by the magnification factor of the optic system.

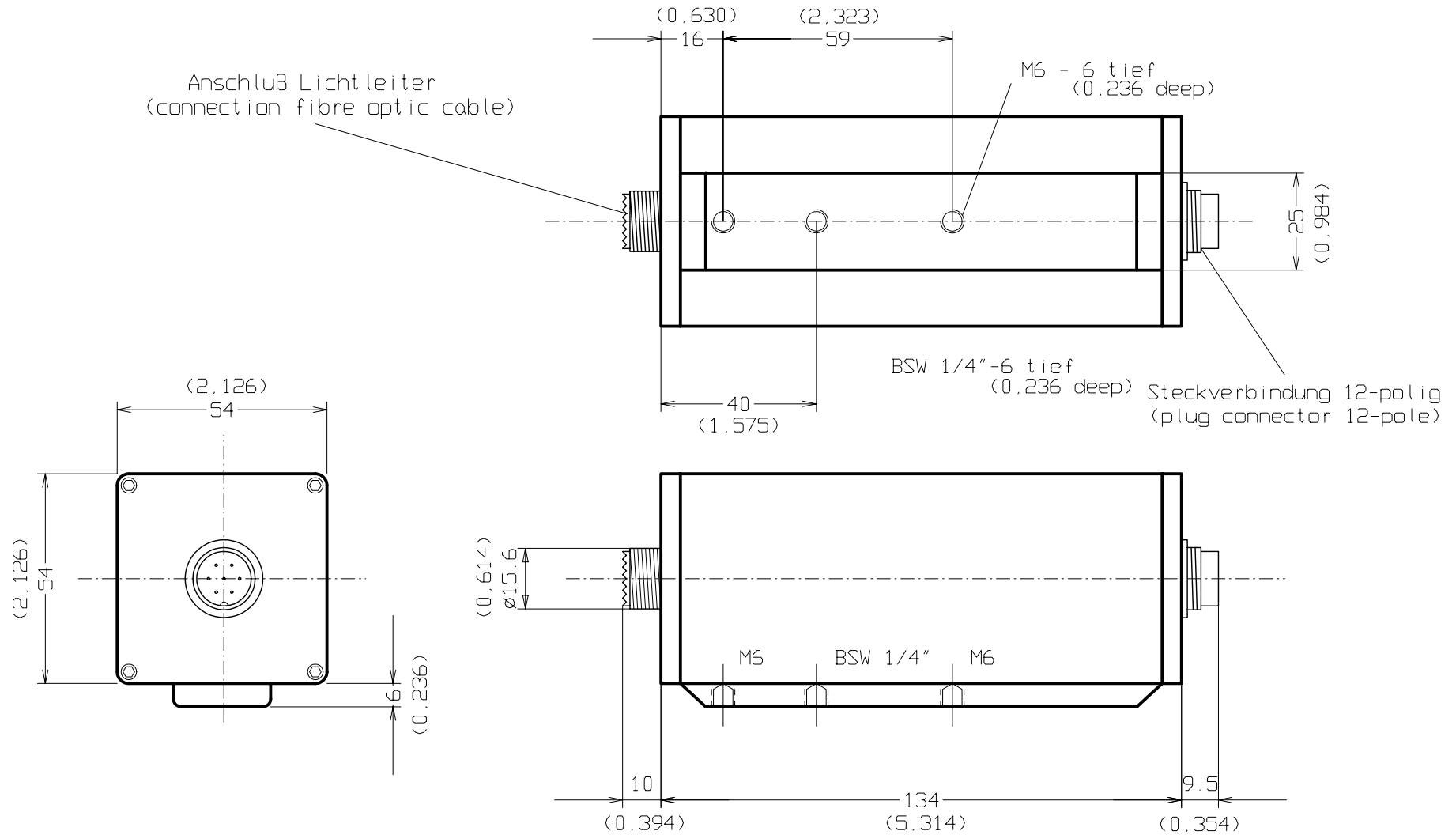
Article-No.:	Optic-type:	$\varnothing$ D mm	Meas. distance M mm	zoom factor V	length L mm
116-1206	VL 20 M	11	20	1,0	49,5
116-1068	VL 40 M	11	40	1,0	67,0
116-1207	VL 60	11	60	1,5	62,5
116-1208	VL 50 M	18	50	0,6	127,0
116-1028	VL 100 M	18	100	1,0	120,0
116-1029	VL 160	18	160	1,6	157,0
116-1209	VL 200	18	200	2,0	144,0
116-1050	VL 250	18	250	2,5	132,5
116-1210	VL 300	18	300	3,3	125,5
116-1211	VL 400	18	400	4,5	119,0
116-1071	VL 500	18	500	4,0	152,0
116-1212	VL 600	18	600	6,0	146,5
116-1213	VL 1000	18	1000	9,5	138,0
116-1214	VL 1500	18	1500	13,6	135,0
116-1215	VL 100 M	25	100	1,0	127,5
116-1216	VL 160	25	160	1,5	123,0
116-1217	VL 200	25	200	2,0	226,0
116-1218	VL 250	25	250	2,5	147,0

(special objectives on request)

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Reg.-Nr.: Q1 0201014



(xxx) - Maße in Zoll  
(dimensions inch)

		Maßstab 1:1	
		Fa.Dr. Maurer GmbH	
		STANDARDGEHÄUSE (standard case) KTRD 1400	
		091103	
		Blatt	
		Bl.	
Zust	Änderung	Datum	Name