

# Non-Contact Temperature Measurement

MAURER – INFRARED – QUOTIENT THERMOMETER

**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**

**Series QKTR 1485**



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

leaflet QKTR 1485

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

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# Infrared-Quotient-Thermometer Series QKTR 1485

Quotient thermometer afford on the basis of it's measuring principle contrary to part radiation thermometer a few substantial advantages. They show also still under critical conditions the true temperature, par ex. by absorption of smoke within the measuring path, mist of viewing glasses at ovens, by small parts which don't illuminate the measuring field. For optimum adaptation to the respective measuring application the unit Type **QKTR 1485** with fibre optic cable and optic system is available. This unit type guarantees also in narrow proportion by volume or high ambient temperatures exact measuring results.

## Examples for application:

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

## Temperature-measuring range

- linear:

No.	Measuring range
1	600 - 1600°C (1112 - 2912°F)
2	700 - 1700°C (1292 - 3092°F)
3	800 - 1800°C (1472 - 3272°F)
4	900 - 2000°C (1652 - 3632°F)
5	1000 - 2500°C (1832 - 4532°F)
6	1000 - 3000°C (1832 - 5432°F)
7	1000 - 3300°C (1832 - 5972°F)

(special measuring range on request)

## Technical data:

Measuring range	600 - 3300°C (1112 - 5972°F)
Spectral range	0,85 - 1,1 µm
	0,95 - 1,1 µm
Response time	20 - 200 msec. adjustable
Accuracy	1 % ± 1°C
Reproducibility	3 ‰
Emission ratio	0,8 - 1,2 adjustable
Emission factor	0,1 - 1,0
Working temperature	0°C - 50°C (32 - 122°F)
Stock temperature	0°C - 60°C (32 - 140°F)
Temperature sensitivity	0,05 % / °C
Humidity tolerance	35 - 85 % RF
Output actual value	0 - 20 mA
- alternative -	4 - 20 mA
Min. Intensity - optical coupler	24 V / 10 mA
Operating voltage	24 V DC ± 10 %
Current input	300 mA
Unit connection	12 pole socket
Dimensions H / W / D	54 x 54 x 147mm (2,13x2,13x5,70 inch)
Weight	0,7 kg (1,54 lbs)
Protection grade	IP 65

**Fibre optic cable:** Type GM-L48, length 1800 mm in metal hose/T-coated  
ambient temperature max. 150°C, bend radius min. 40 mm

186-1005	Fibre optic cable	Type GM-L48	1800 mm	∅ 1,1 mm fibre bundle
186-1010	Fibre optic cable	Type GM-L48	1800 mm	∅ 2,0 mm fibre bundle
186-1030	Fibre optic cable	Type GM-L48	1800 mm	0,5 x 2,7 mm fibre bundle

(other length and fibre bundles on request)

## Objectives:

For accommodation to the measuring application are several objectives available.

## Options: - built-in digital display

### electronic process unit

AE 1010

AE 1012

AE 1410

AE 1412

### electrical assembly

- digital display

- 2 contact outputs

- interface RS 232 o.s.

- power supply 230V/AC - 24 V/DC

### mechanical assembly

- units with cooling case

- blowing device

- mirror 90°

- mounting parts

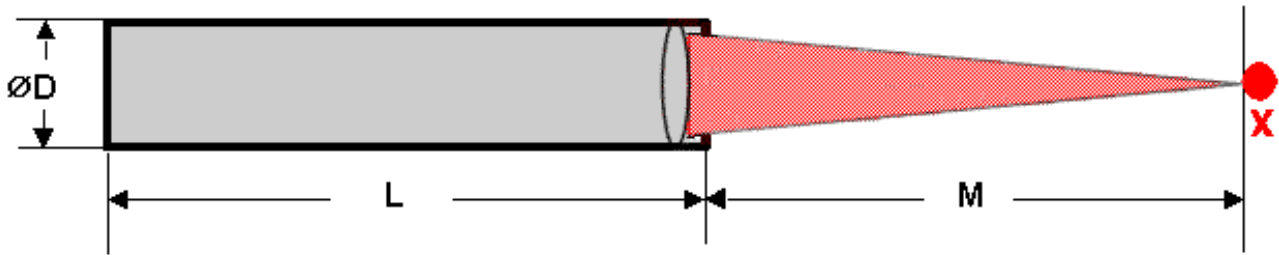
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Reg.-Nr.: Q1 0201014

# Objectives for units with fibre optic cable 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	127,0
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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