

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
or viewfinder

Series QKTR 1085



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

leaflet QKTR 1085

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

Dr. Georg Maurer
GmbH
Optoelektronik

Industriegebiet 10
D-72664 Kohlberg

Telefon +49(0)7025-9219-0
Telefax +49(0)7025-9219-20
Email: info@maurer-ir.de

Infrared-Quotient-Thermometer Series QKTR 1085

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 exact adjustment to the measuring point a **light beam aiming device** is available for short measuring distances - for longer measuring distances **an optical viewfinder**.

Examples for application:

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

unit types	target marking
QKTR 1085-1	light beam aiming device
QKTR 1085-2	optical viewfinder

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

Objectives:

For accommodation to the measuring application are several objectives available.

Options: - built-in digital display

scanner	electronic process unit	electrical assembly	mechanical assembly
SC 1010	AE 1010	- digital display	- units with cooling case
SC 1012	AE 1012	- 2 contact outputs	- blowing device
		- interface RS 232 o.s.	- mirror 90°
		- power supply 230V/AC - 24 V/DC	- mounting parts

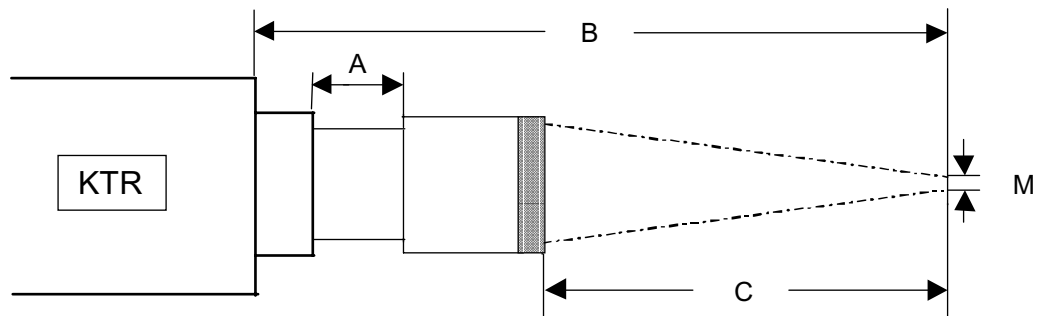
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Industriegebiet 10 D-72664 Kohlberg Telefon +49(0)7025-9219-0 Telefax +49(0)7025-9219-20



Reg.-Nr.: Q1 0201014

Optic tables for KTR 1075+1085 and QKTR 1075+1085



Optic-type : L 1060-T			
Achromat : f 60 22,4 Ø			
Meas. aperture : 0,5 mm Ø			
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
375	319	13	2,7
400	345,4	11,6	2,9
500	447,6	9,4	3,5
600	549,8	7,2	4,2
700	651,4	5,6	5,0
800	752,4	4,6	6,0
900	853	4,0	7,0
1000	953,5	3,5	7,2
2000	1955,6	1,4	15
3000	2956,3	0,7	24
4000	3956,5	0,5	31

Optic-type : A 1080			
Achromat : f 80 31,5 Ø			
Meas. aperture : 0,5 mm Ø			
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
620	557,5	13	3,5
700	639,9	10,6	4,0
800	741,4	9,1	4,5
900	842,5	8,0	5,0
1000	943,4	7,1	6,0
1100	1044,3	6,2	6,5
1200	1144,9	5,6	7,0
1300	1245,4	5,1	7,5
1400	1345,8	4,7	8,0
1500	1446,2	4,3	8,5
1600	1546,5	4,0	9,2
1700	1646,9	3,6	10,0
1800	1747,2	3,3	10,8
1900	1847,4	3,1	11,5
2000	1947,5	3,0	12,1
3000	2948,5	2,0	18,0
4000	3949,2	1,3	24,0

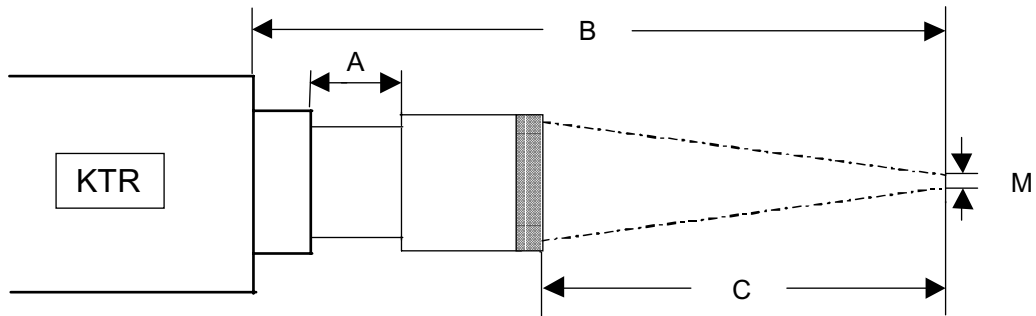
Target=98 % of beam density of the surface

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Reg.-Nr.: Q1 0201014

Optic tables for KTR 1075+1085 and QKTR 1075+1085



Optic-type : L 1050-N1			
Lens : f 50 22,4 Ø			
Meas. aperture : 0,5 mm Ø			
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
180	124	13	1,5
190	137	10	1,6
200	149,5	7,5	1,7
210	162	5,0	1,8
220	173,5	3,5	1,9
230	185	2,0	2,0
240	196	1,0	2,1
250	207	0	2,2

Optic-type : L 1060-N1			
Achromat : f 60 22,4 Ø			
Meas. aperture : 0,5 mm Ø			
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
285	229	13	1,5
300	245,4	11,6	1,6
350	299,9	7,1	1,9
400	352,3	4,7	2,3
450	404,1	2,9	2,7
500	455,5	1,5	3,2
550	507	0	3,8

Optic-type : L 1050-N2			
Lens : f 50 22,4 Ø			
Meas. aperture : 0,5 mm Ø			
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
210	154,0	13,0	1,3
220	166,1	10,9	1,4
240	188,6	8,4	1,6
260	210,9	6,1	1,8
280	232,6	4,4	2,1
300	253,9	3,1	2,3
320	274,9	2,1	2,5
340	295,5	1,5	2,7
360	316,0	1,0	2,9
380	336,5	0,5	3,1
400	357,0	0,0	3,3

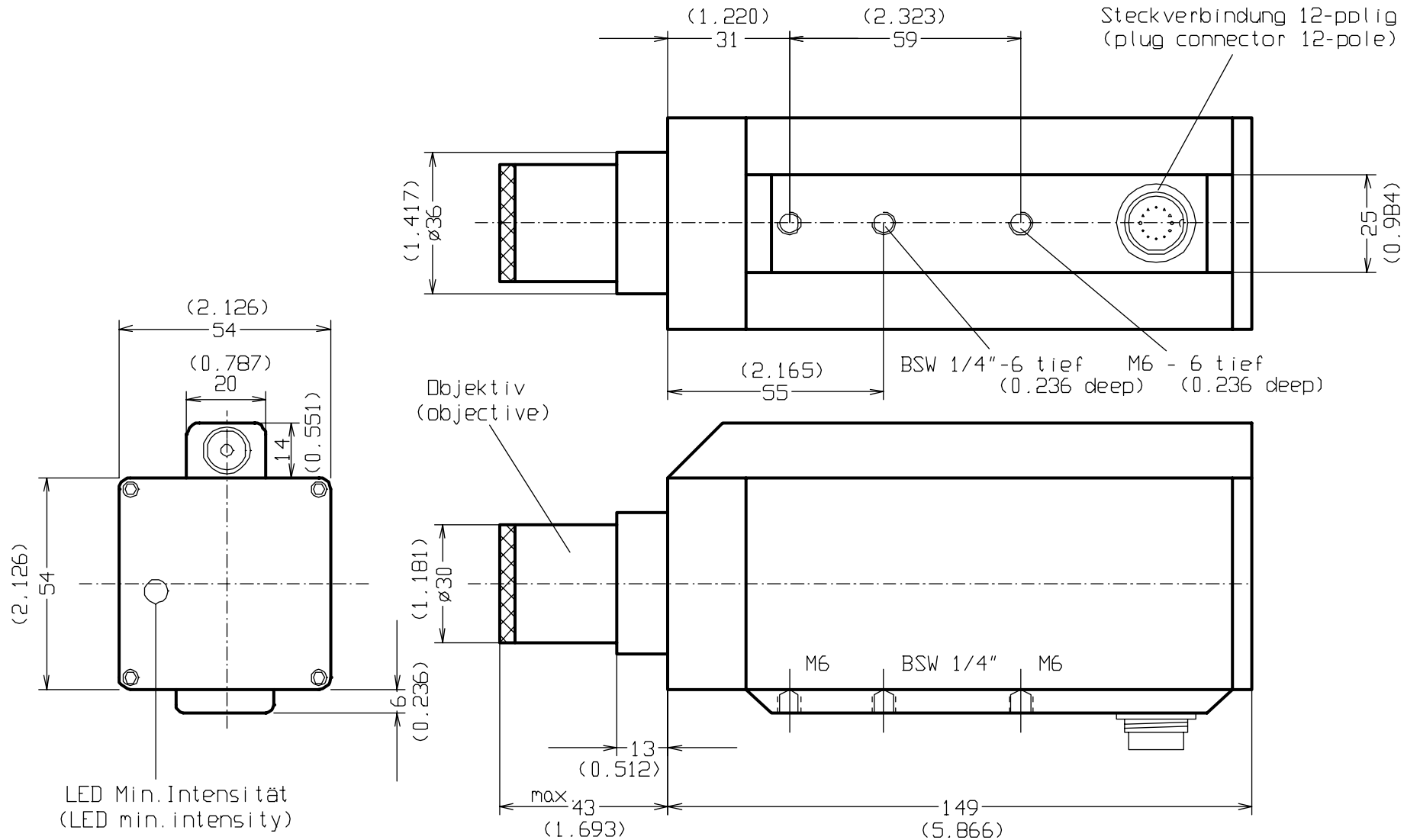
Optic-type : L 1060-N2			
Achromat : f 60 22,4 Ø			
Meas. aperture : 0,5 mm Ø			
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
350	294	13	2,0
400	346,7	10,3	2,4
450	398,9	8,1	2,8
500	450,1	6,9	3,2
550	501,1	5,9	3,7
600	522	5,0	4,2
650	603	4,0	4,7
700	653,9	3,1	5,2
750	704,4	2,6	5,6
800	754,9	2,1	6,1
1000	956,2	0,8	9,2

Target=98 % of beam density of the surface

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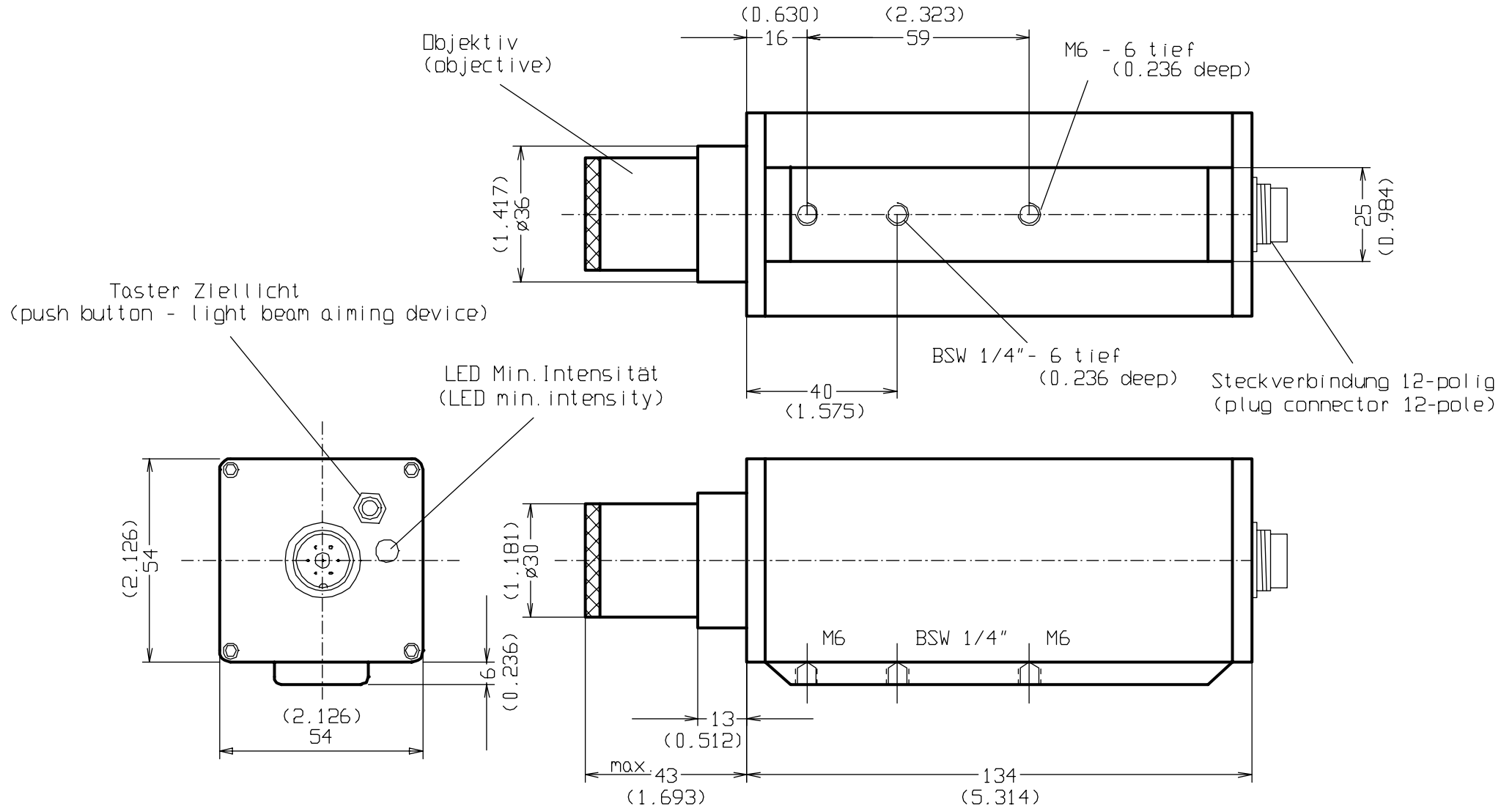


Reg.-Nr.: Q1 0201014



(xxx) - Maße in Zoll
(dimensions inch)

			Maßstab 1:1		
			Fa. Dr. Maurer GmbH		
			STANDARDGEHÄUSE (standard case)		
			QKTR 1000-2		
			Visiereinrichtung (view finder)		
			Blatt		
			Bl.		
Zust	Änderung	Datum	Name		
		11.06.03		970403	
Bearb		28.04.97	Schlottierb.		
Bepf					
Norm					



(xxx) - Maße in Zoll
(dimensions inch)

				Maßstab	1:1
				Fa. Dr. Maurer GmbH	
			Datum	Name	STANDARDGEHÄUSE (standard case) QKTR 1000-1 Ziellicht (light beam aiming device)
			Bearb.	Schlotterb.	
			Gepr.		
			Norm		
			991103		Blatt
		11.06.03			Bl.
Zust.	Änderung	Datum	Name		