

Digital MAURER Pyrometer

KTRD 1085

UNIVERSAL DEVICE



Performance, precision and reliability - you can count on MAURER pyrometers. Benefit from maximum adaptability by choosing the right optics, accessories and the appropriate interface. Thus our pyrometer fits perfectly into existing systems.

The most important features and characteristics at a glance:

- Spectral range: 0,85 – 1,1 μm
- Short response time of less than 0,5 ms
- Emissivity from 100 – 10 %, adjustable directly at the pyrometer or via interface
- Available with either light beam aiming device (LED / Laser) or viewfinder
- Green target light (LED) that is exactly identical to the actual measuring spot in position and size
- With Vario-optic for exact focusing on the measuring spot
- Use with either digital or analogue output
- 1 limit output (open collector)
- Operating voltage 24 V DC
- Free Software (IR-LOG) for parameter setting, data recording and storage

Measuring Ranges

Measuring ranges

1. 550 – 1800 °C	1022 – 3272 °F
2. 600 – 1600 °C	1112 – 2912 °F
3. 650 – 3000 °C	1202 – 5432 °F
4. 700 – 3500 °C	1292 – 6332 °F
5. 600 – 2000 °C	1112 – 3632 °F
6. 1000 – 4000 °C	1832 – 7232 °F

Special measuring ranges upon request

Subranges freely adjustable within measuring range

Scope of Applications

Processing of steel, iron, non-ferrous metal and wires, ceramics, glass tub, glass arching, as well as hardening, rolling, soldering, forging, welding, transforming, induction heating, vacuum furnace, etc.

Technical Data

Spectral range	0,85 – 1,1 µm
Target marking	Light beam aiming device (green LED/Laser) <u>or</u> viewfinder
Response time	< 0,5 ms
Measurement uncertainty	0,5 % ± 1 °C (ε = 1, Tu = 23°C, T95 = 1 s)
Temperature dependence	0,05 % / °C
Reproducibility	0,1 % ± 1 °C (ε = 1, Tu = 23°C, T95 = 1 s)
Emissivity	100 – 10 %, adjustable directly at the pyrometer or via interface
Resolution	< 0,1 % at the analogue output < 0,1 °C at the interface
Operating / Storage temperature	0 – 50 °C, Optics 150 °C / -10 – 70 °C 32 – 140 °F, Optics 302 °F / 14 – 158 °F
Permissible humidity	35 – 85 % RH (non-condensing)
Analogue output	0 – 20 mA / 4 – 20 mA (Load max. 500 Ω)
1 limit output (open collector)	24 V 100 mA
Interface	RS 232 ± 50 V isolated <u>or</u> RS 485 ± 70 V isolated Optional: PROFIBUS, PROFINET, Ethernet, EtherCAT, USB 2.0
Maximum value memory	Maximum memory, peak value memory double, adjustable time and threshold value, erasing after time, external contact, by software, after every measuring object
Supply voltage	24 V DC ± 10 %
Power consumption	< 100 mA
Device connection	12-pol. plug connector
Dimensions (LxHxW) / Weight	54 x 54 x 147mm / 0,6 kg
IP Code	IP65

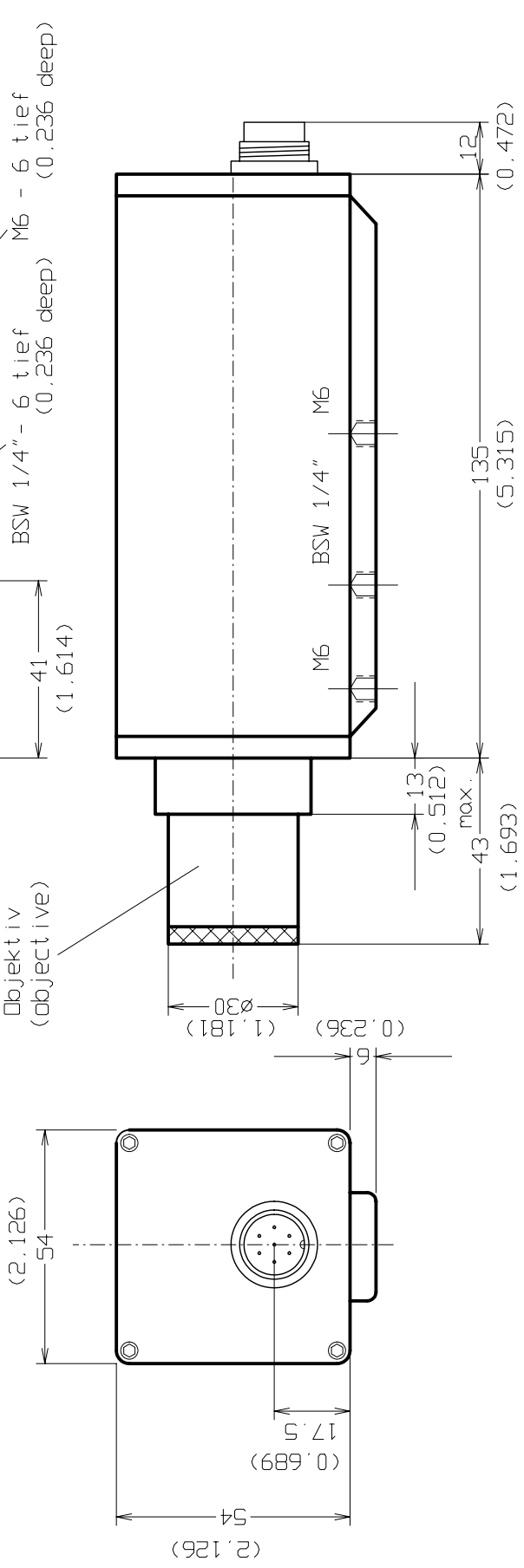
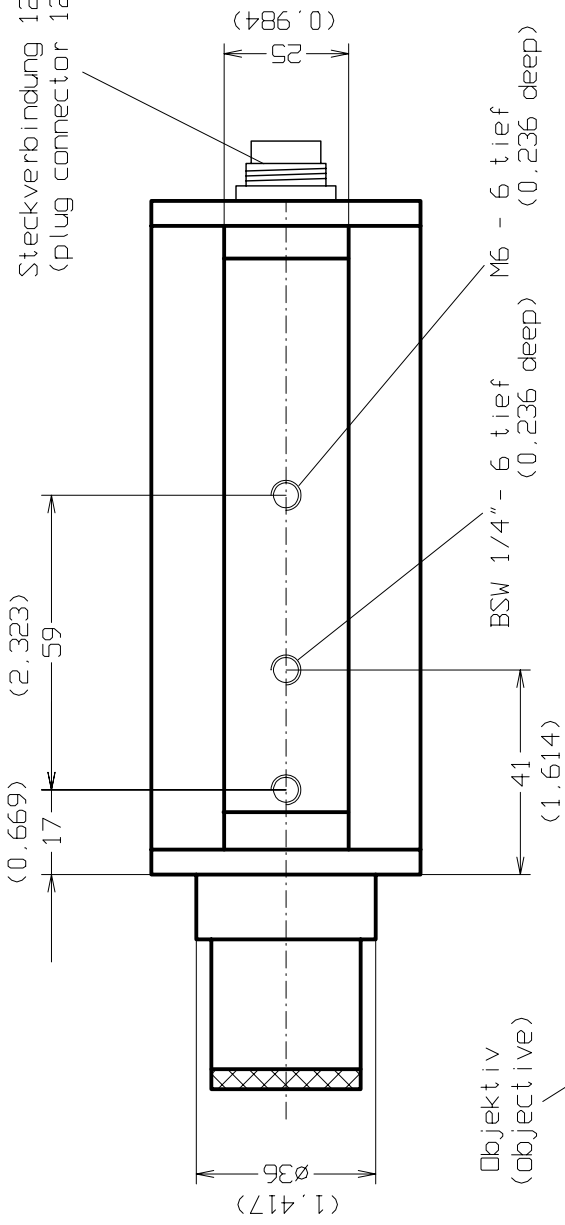
Configurations

- Version with fiber optic cable: KTRD 1485
- Built-in digital display on the backside of the pyrometer
- Extensive selection of objectives, suitable for your application

Main Equipment

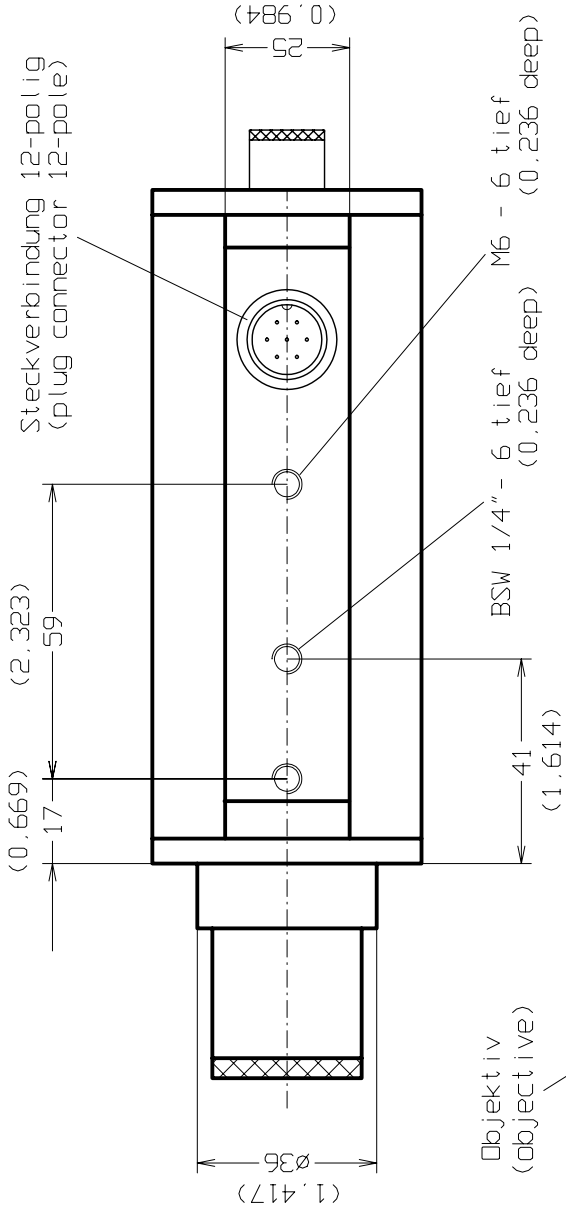
Electronic Equipment		Mechanical Equipment	
Connection cables	Power Supply 100-270 VAC – 24 VDC	Objectives	Mirror 90° for beam deflection
Electronic process units	PC-Box (USB-connection set)	Mounting parts	Blowing device
(Line-) Scanners		Cooling case	

Steckverbindung 12-polig
(plug connector 12-pole)



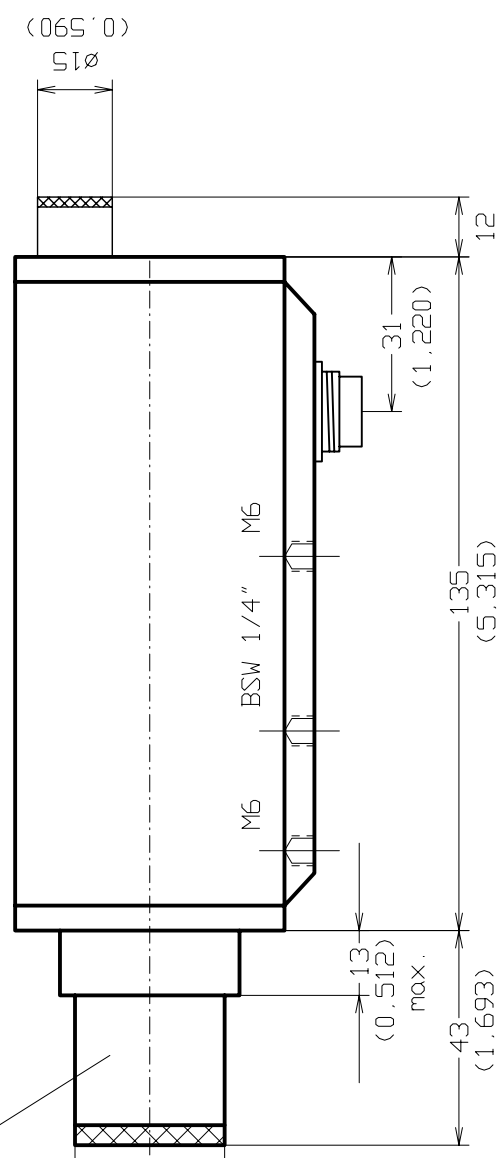
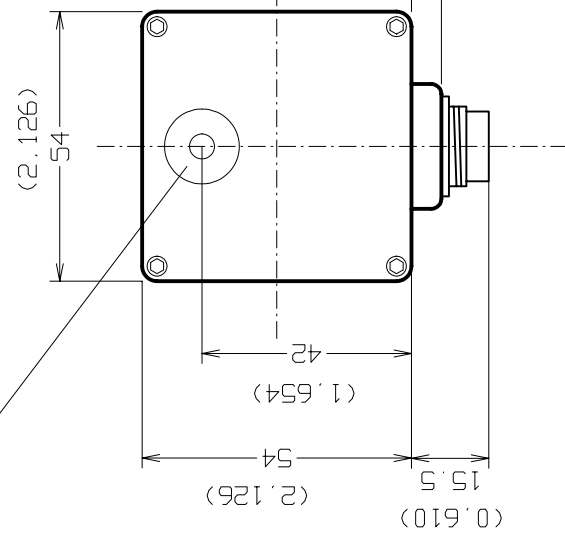
(xxx) - Maße in Zoll
(dimensions inch)

Maßstab 1:1		Fa. Dr. Maurer GmbH	
Bezeichnung		STANDARDGEHÄUSE (standard case)	
Norm		KTRD 1000-1	
Blatt		100205	
Zust.		Änderung	
Datum		Name	
Bearb		25.02.10	
Gepr		Schlotterb	
Norm			



Visiereinrichtung
(viewer)

Objektiv
(objective)



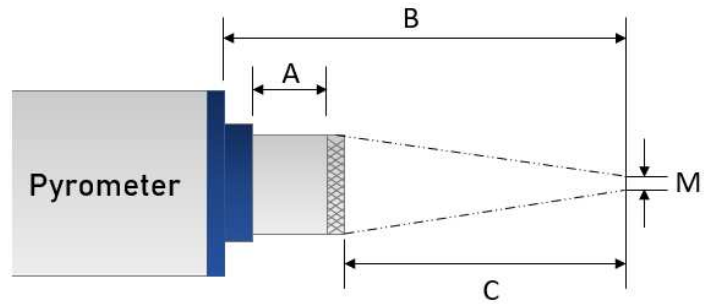
(xxx) - Maße in Zoll
(dimensions inch)

Maßstab 1:1		Fa. Dr. Maurer GmbH	
Bezeichnung		STANDARDGEHÄUSE (standard case)	
Drehzahl		KTRD 1000-2 Stecker 90° (connector 90°)	
Gepr.		Visiereinrichtung (viewer)	
Norm			
Datum		100207	
Name			
Blatt			
Zust.			
Änderung			
Datum			
Name			

Optics for **MAURER** Pyrometer

KTRD 1085

OVERVIEW



Measuring range starting

at 550 °C Measuring aperture = 0,5 mm Spot size = M x 0,5
at 600 °C Measuring aperture = 0,3 mm Spot size = M x 0,3

Special solutions upon request

Legend

A Optic extraction
B Measuring distance from housing
C Measuring distance from optic front edge
M Measuring spot size

Optics		A 1050-N1-8	
Lense		F 50, Ø 25,0mm	
Measuring aperture		Ø 1,0 mm	
B	C	A	M
[mm]	[mm]	[mm]	[mm]
190	147,0	13,0	2,6
200	161,3	8,7	2,8
210	173,5	6,5	3,0
220	185,6	4,4	3,4
230	197,2	2,8	3,6
240	208,1	1,9	4,0
255	225,0	0,0	4,2

Optics		A 1050-N2-8	
Lense		F 50, Ø 25,0mm	
Measuring aperture		Ø 1,0 mm	
B	C	A	M
[mm]	[mm]	[mm]	[mm]
210	154,0	13,0	3,0
220	166,1	10,9	3,2
240	188,9	8,1	3,8
260	210,5	6,5	4,4
280	232,1	4,9	5,0
300	253,4	3,6	5,4
320	274,4	2,6	6,0
340	295,2	1,8	6,4
360	315,9	1,1	7,0
380	336,5	0,5	7,4
400	357,0	0,0	8,0

Optics		A 1060-N1-8	
Lense		F 60, Ø 25,0mm	
Measuring aperture		Ø 1,0 mm	
B	C	A	M
[mm]	[mm]	[mm]	[mm]
285	229,0	13,0	3,2
300	245,5	11,5	3,6
350	299,7	7,3	4,4
400	352,5	4,5	5,2
450	404,4	2,6	6,2
500	455,7	1,3	7,2
550	506,7	0,3	8,2
570	527,0	0,0	8,8

Optics		A 1060-N2-8	
Lense		F 60, Ø 25,0mm NIR	
Measuring aperture		Ø 1,0 mm	
B	C	A	M
[mm]	[mm]	[mm]	[mm]
310	254,0	13,0	4,0
350	296,5	10,5	5,0
400	349,0	8,0	6,0
500	452,0	5,0	8,0
600	534,0	3,0	10,0
700	655,0	2,0	12,0
800	755,8	1,2	13,6
900	856,4	0,6	14,6
1000	957,0	0,0	17,6

Optics		A 1060-T-8	
Lense		F 60, Ø 25,0mm	
Measuring aperture		Ø 1,0 mm	
B	C	A	M
[mm]	[mm]	[mm]	[mm]
360	304	13,0	5,0
400	375,7	11,3	5,7
500	478,6	8,4	7,0
600	580,5	6,5	8,7
700	681,6	5,4	10,3
800	782,4	4,6	12,3
900	883,1	3,9	14,0
1000	983,7	3,3	16,0
1500	1485,0	2,0	24,3
2000	1985,5	1,5	33,0
3000	2986,2	0,8	50,0
4000	3986,5	0,5	68,3
5000	4986,7	0,3	86,7

Optics		A 1060-M-8	
Lense		F 60, Ø 25,0mm	
Measuring aperture		Ø 1,0 mm	
B	C	A	M
[mm]	[mm]	[mm]	[mm]
96	53	0,0	1,0