Digital MAURER Pyrometer

KTRD 1105-HS

Measuring range 0 to 500 °C

HIGH SPEED 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: 8 – 14 µm
- Short response time with 20 ms
- Emissivity from 100 – 10 %, adjustable directly at the pyrometer or via interface
- Available with either light beam aiming device (LED / Laser)
- 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 digital and 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

1. 0 – 100 °C
2. 0 – 500 °C

- Special measuring ranges upon request -

Scope of Applications

Processing of ceramics, rubber, paper, wood, food, asphalt, building material, electronic components, plastics, as well as plastic deep-drawing, lacquering drying, drying processes etc.

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Technical Data

Device type	KTRD 1105-1-HS
Target marking	Light beam aiming device (green LED/Laser)
Response time	20 ms
Measurement uncertainty	0,5 % ± 1 °C (ε = 1, Tu = 23°C, T 95 = 1 s)
Temperature dependence	0,05 % / °C
Reproducibility	0,3 % ± 1 °C (ε = 1, Tu = 23°C, T 95 = 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 or 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 optic: KTRD 1105
- 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	

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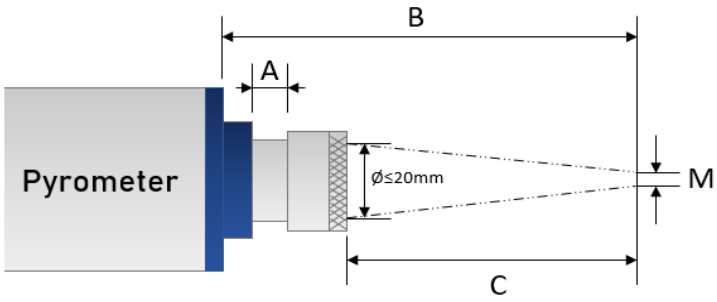
Optic table

MAURER OPTOELEKTRONIK

Optics for MAURER Pyrometer

KTRD 1105

OVERVIEW



Legend

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

Optics	IR 1040		
Lense	F 1,5", Ø 1"		
Measuring aperture	Ø 1,0 mm		
B [mm]	C [mm]	A [mm]	M [mm]
150	116,0	13,0	3,0
200	170,8	8,2	4,0
300	273,9	5,1	6,8
400	375,2	3,8	9,5
500	476,5	2,5	12,2
600	577,3	1,7	15,5
700	677,7	1,3	17,3
800	778,2	0,8	20,6
900	878,6	0,4	24,2
1000	979,0	0,0	29,4

Optics	IR 1060-N		
Lense	F 2,5", Ø 1"		
Measuring aperture	Ø 1,0 mm		
B [mm]	C [mm]	A [mm]	M [mm]
300	244,0	13,0	3,4
350	298,0	9,0	4,0
400	350,6	6,4	4,9
450	402,3	4,7	6,0
500	454,0	3,0	6,6
550	505,0	2,0	7,7
600	556,0	1,0	8,5
650	607,0	0,0	9,3
700	657,0	0,0	10,0
900	857,0	0,0	22,2

Optics	IR 1060-T		
Lense	F 2,5", Ø 1"		
Measuring aperture	Ø 1,0 mm		
B [mm]	C [mm]	A [mm]	M [mm]
440	384,0	13,0	5,4
500	444,8	12,2	6,1
600	547,3	9,7	7,8
700	649,1	7,9	8,6
800	750,2	6,8	10,4
900	851,0	6,0	12,0
1000	951,3	5,7	13,6
1500	1452,2	4,8	21,0
2000	1952,6	4,4	29,8
3000	2954,5	2,5	42,0
4000	3955,6	1,4	60,0
5000	4956,0	1,0	75,0

Optics	IR 1040-M		
Lense	F 1,5", Ø 1"		
Measuring aperture	Ø 1,0 mm		
B [mm]	C [mm]	A [mm]	M [mm]
103	60,0	0,0	1,5

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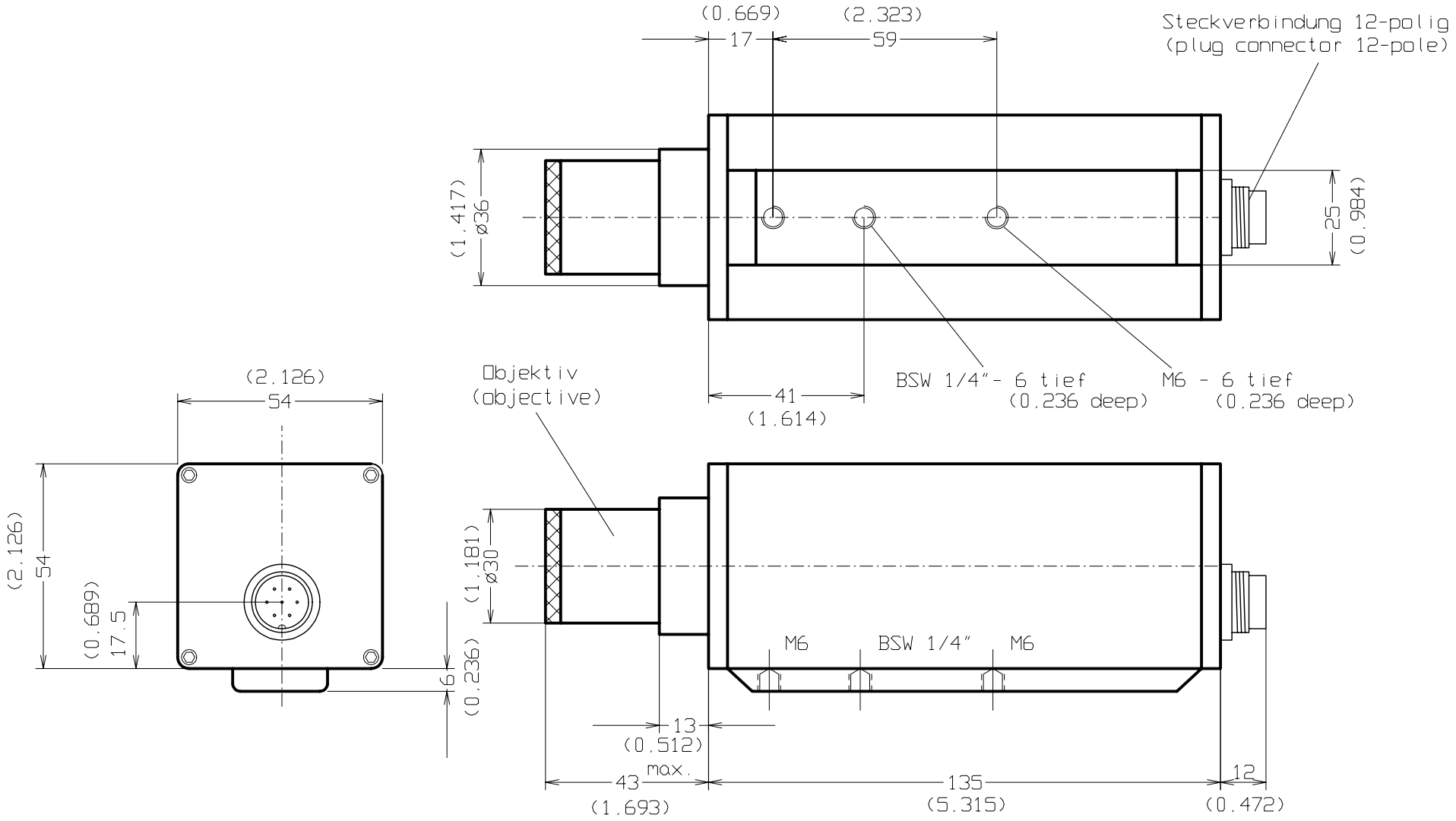

(xxx) - MaBe in Zoll
(dimensions inch)

					Datum	Name
				Bearb	25.02.10	Schlotterb.
				Gepr		
				Norm		
Zust	Änderung	Datum	Name			

MaBstab 1:1

Fa.Dr. Maurer GmbH

STANDARDGEHÄUSE (standard case)
KTRD 1000-1

100205

Blatt
Bl.