


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| SP.NO. | Yamatake Corporation | | | | 製品仕様書 SPECIFICATIONS | | | |
| | 1. GENERAL DESCRIPTION | | | | | | | |
| | RT300 Series is a Infrared Radiation Temperature Thermometer which measures the temperature of objective without contact and transmits linear DC4-20mA output signal corresponding to the temperature with built in transducer. Wiring method is 2-wire type. | | | | | | | |
| | 2. MODEL SELECTION GUIDE | | | | | | | |
| | RT300 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | | | | | | |
| | (1) (2) | | | | | | | |
| | (1) Basic Model No. RT300 Radiation Thermometer | | | | | | | |
| | (2) Measuring Wavelength and Temperature Range (Refer to Measuring Wavelength Table and Temperature Range Table) | | | | | | | |
| | 7 | | | | | | | |
| | 6 | | | | | | | |
| 5 | | | | | | | | |
| 4 | | | | | | | | |
| 3 | | | | | | | | |
| 2 | | | | | | | | |
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| 作成DR. T. Yasuda Oct. 20 '94 |  | 尺度 SCALE ~ | 記入のない公差TOL.UNLESS NOTED ~ |
| 検図CHK J. Schuda Oct. 20 '94 | 形番 MODEL | RT300 SERIES | |
| 認可APPD. J. Schuda Oct. 20 '94 | 名称 NAME | RADIATION THERMOMETER | |
| 日付DATE Oct. 20 '94 | 図番 NO. | 2850E | 改番REV 01 |

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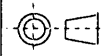
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Table 1. Measuring Wavelength and Temperature Range

| Measuring Temperature (°C) | Measuring Wavelength (μm) | | | | |
|----------------------------|---------------------------|---------|---------|-----|------------|
| | 7 to 20 | 8 to 14 | 7 to 10 | 7.9 | 4.8 to 5.2 |
| 0 to 100 | A01 | B01 | | | |
| 0 to 150 | A02 | | | | |
| 0 to 300 | A03 | B03 | K03 | F03 | |
| 100 to 400 | | | | F04 | |
| 100 to 500 | A05 | B05 | K05 | | |
| 200 to 1000 | A10 | B10 | | | |
| -40 to 100 | A07 | | | | |
| 50 to 300 | | | | | E11 |
| 100 to 600 | | | | | E15 |
| 150 to 600 | | | | F06 | |
| 300 to 800 | | | | | E19 |
| 300 to 1300 | | | | | E35 |

| Measuring Temperature (°C) | Measuring Wavelength (μm) | | | | |
|----------------------------|---------------------------|------------|------------|------|------|
| | 0.78 to 1.06 | 0.9 to 1.8 | 2.0 to 2.6 | 3.86 | 4.50 |
| 220 to 400 | | Q12 | | | |
| 250 to 450 | | | P13 | | |
| 300 to 550 | | | P14 | | |
| 300 to 600 | | Q16 | | | |
| 350 to 700 | | | P18 | | |
| 400 to 800 | | Q20 | P20 | | |
| 500 to 800 | H23 | | | | |
| 550 to 900 | H25 | | | | |
| 300 to 1000 | | | | D26 | |
| 600 to 1000 | H27 | | | | |
| 400 to 1100 | | | | | L29 |
| 500 to 1100 | | Q30 | P30 | | |
| 700 to 1200 | H33 | | | | |
| 800 to 1300 | H36 | | | | |
| 900 to 1600 | H37 | | | | |
| 750 to 1650 | | | P38 | | |
| 600 to 1750 | | | | D39 | |
| 1100 to 2000 | H40 | | | | |
| 600 to 2200 | | | | | L41 |
| 1500 to 3000 | H42 | | | | |

作成DR. T. Yanada Oct. 20 '94  尺度 SCALE 記入のない公差TOL.UNLESS NOTED ~ ~

検図CHK S. Shida Oct. 20 '94 形番 MODEL RT300 SERIES

認可APPD. S. Shida Oct. 20 '94 名称 NAME RADIATION THERMOMETER

日付DATE 図番 NO. 2850E 改番REV. 00 2/7

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3. SPECIFICATIONS

Detection Element:

| Measuring Wavelength (μm) | Detection Element |
|---------------------------|-------------------|
| 0.78 to 1.06 | Silicone |
| 0.9 to 1.8 | Germanium |
| Others | Thermopile |

Accuracy:

±0.75%FS or ±1.7°C except followings

±1.5%FS for up to 450°C/0.9 to 1.8μm wavelength

Resolution:

±0.1%FS except followings

±0.4%FS for up to 100°C

for up to 800°C/0.78 to 1.06μm wavelength

for up to 400°C/0.9 to 1.8μm wavelength

Repeatability:

±0.25%FS

Emissivity Calibration: 0.1 to 0.99 adjustable 0.01 step

Power Supply: DC18 to 38V (Recommended: DC24V)

Drift by Power Supply Voltage Change: ±0.01%FS/V

Drift by Load Resistance Change: ±0.0005%FS/Ω (Recommended load resistance 100Ω)

Drift by Ambient Temperature: ±0.027%FS/°C (at 25±25°C)

Response Speed:

| Measuring Wavelength (μm) | Response Time |
|---------------------------|---------------|
| 0.78 to 1.06 | 10ms |
| 0.9 to 1.8 | 10ms |
| Others | 100ms |

Note: Changeable by internal DIP switch

300ms, 1s, 3s and 10s

Wiring:


2-wire

Output:

DC4 to 20mA

Maximum Load Resistance:

| | | | | | | | |
|--------------------------|-----|-----|-----|-----|-----|------|------|
| Power Supply Voltage (V) | 18 | 20 | 24 | 28 | 32 | 36 | 38 |
| Max. Load Resistance (Ω) | 100 | 200 | 400 | 600 | 800 | 1000 | 1100 |

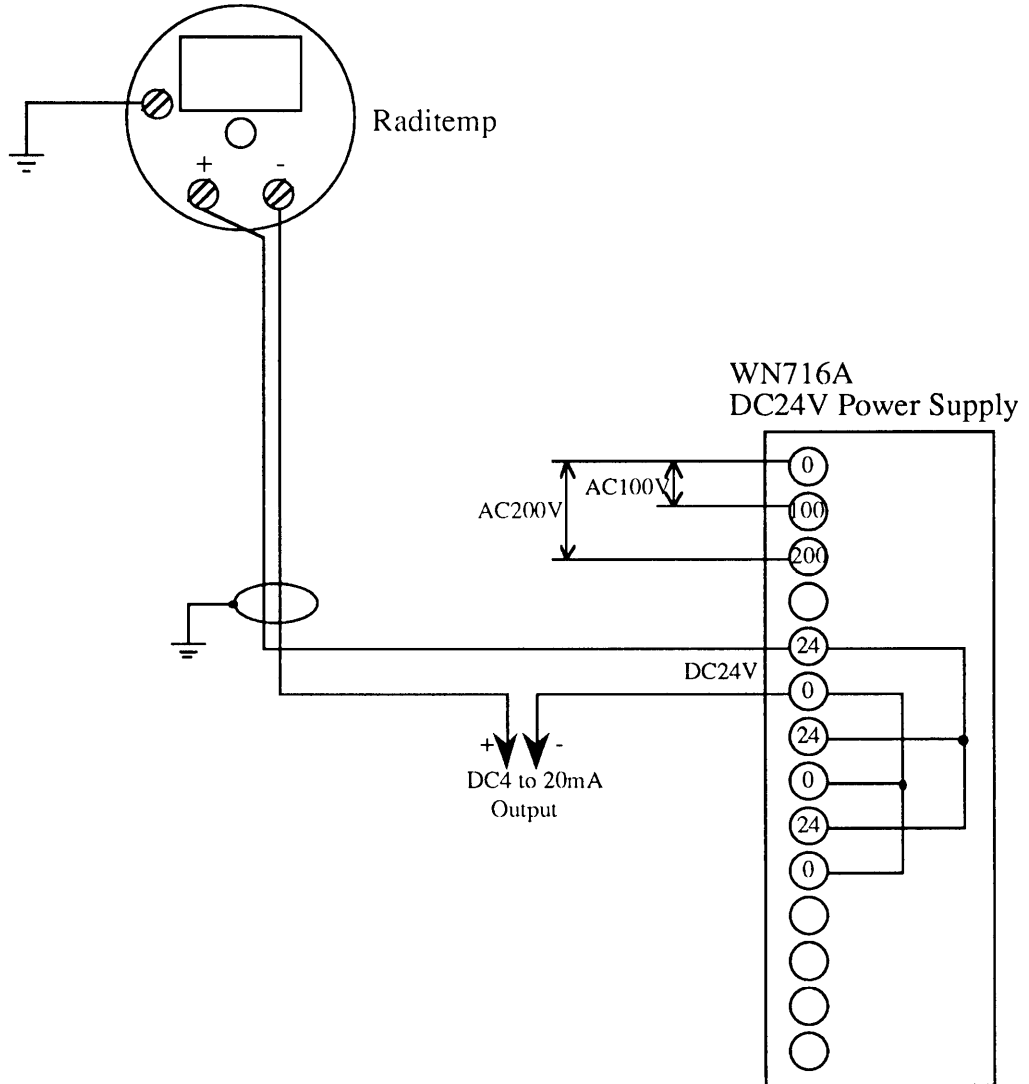
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| 作成DR. T. Yamada Oct. 20 '94 |  | 尺度 SCALE ~ | 記入のない公差TOL UNLESS NOTED ~ |
| 検図CHK S. Schuda Oct. 20 '94 | 形 番 MODEL | RT300 SERIES | |
| 認可APPD. S. Schuda Oct. 20 '94 | 名 称 NAME | RADIATION THERMOMETER | |
| 日付DATE: Oct. 20 '94 | 図 番 NO. | 2850E | 改番REV 00 3/7 |

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DATE担 当
BY検 閲
APPD.

SP.NO.

4. WIRING



| | | | |
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| 作成DR. T. Yamada Oct. 20 '94 | | 尺度 SCALE ~ | 記入のない公差TOL.UNLESS NOTED ~ |
| 検図CHK S. Schida Oct. 20 '94 | 形番 MODEL | RT300 SERIES | |
| 認可APPD. S. Schida Oct. 20 '94 | 名称 NAME | RADIATION THERMOMETER | |
| 日付DATE Oct. 20 '94 | 図番 NO. | 2850E | 改番REV 00 / 5/7 |

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Measuring Distance and Target Size

| Type | Measuring Distance and Target Size | Applicable Wavelength and Range |
|------|--|--|
| I | <p>Measuring distance (cm): 0, 38.1, 91 Target size (mm): $\phi 25$, $\phi 25$, $\phi 96$</p> | A <input type="checkbox"/> B <input type="checkbox"/> K <input type="checkbox"/> F <input type="checkbox"/> E <input type="checkbox"/> |
| II | <p>Measuring distance (cm): 0, 75, 150 Target size (mm): $\phi 25$, $\phi 25$, $\phi 127$</p> | P <input type="checkbox"/> D <input type="checkbox"/> L <input type="checkbox"/> |
| III | <p>Measuring distance (cm): 0, 150, 300 Target size (mm): $\phi 25$, $\phi 25$, $\phi 76$</p> | Q <input type="checkbox"/> |
| IV | <p>Measuring distance (cm): 0, 240, 360, 480 Target size (mm): $\phi 13$, $\phi 29$, $\phi 56$, $\phi 83$</p> | H <input type="checkbox"/> |

| | | | |
|-----------------------------------|-------------|-----------------------|---------------------------|
| 作成DR. T. Yanada Oct. 20 '94 | | 尺度 SCALE | 記入のない公差 TOL. UNLESS NOTED |
| 検図CHK S. Shida Oct. 20 '94 | 形番 MODEL | RT300 SERIES | |
| 認可APPD S. Shida Oct. 20 '94 | 名称 NAME | RADIATION THERMOMETER | |
| 日付 DATE Oct. 20 '94 | 図番 NO. | 改番 REV. | 2850E 00 6/7 |

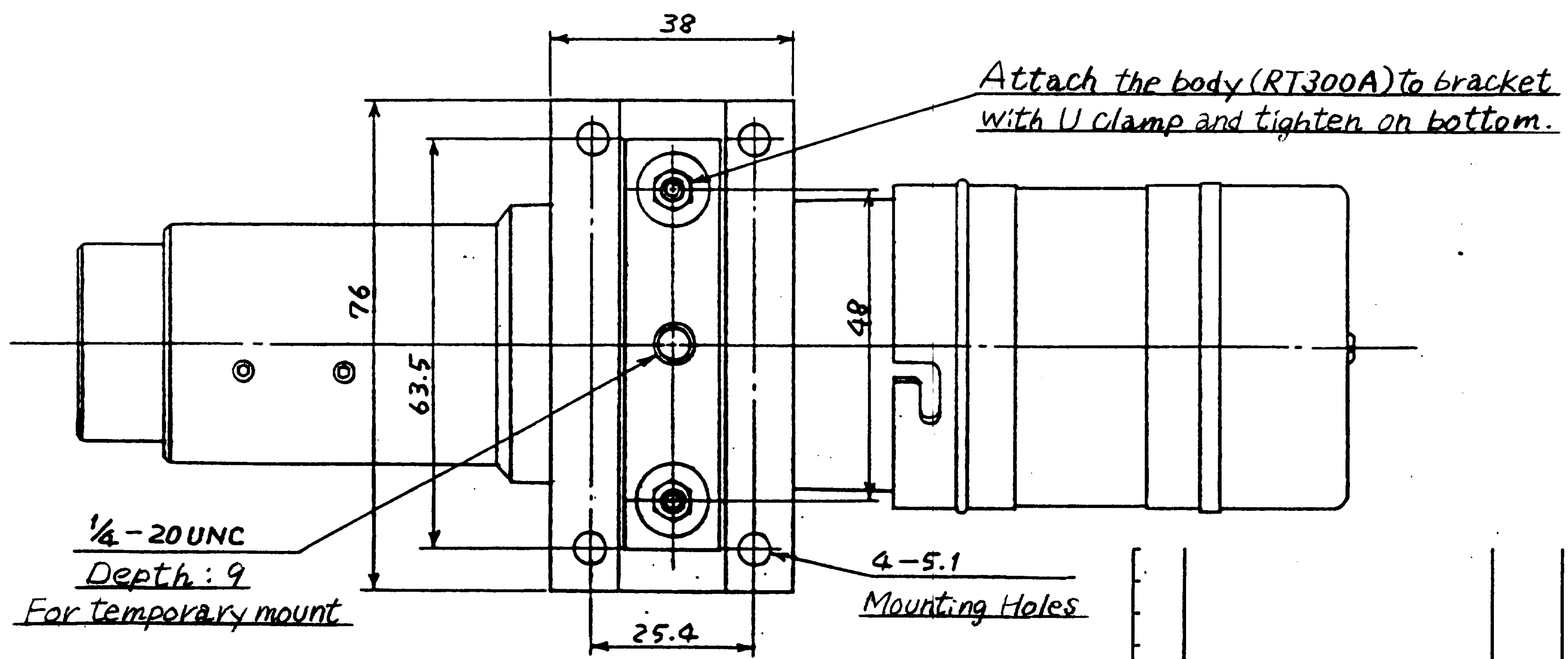
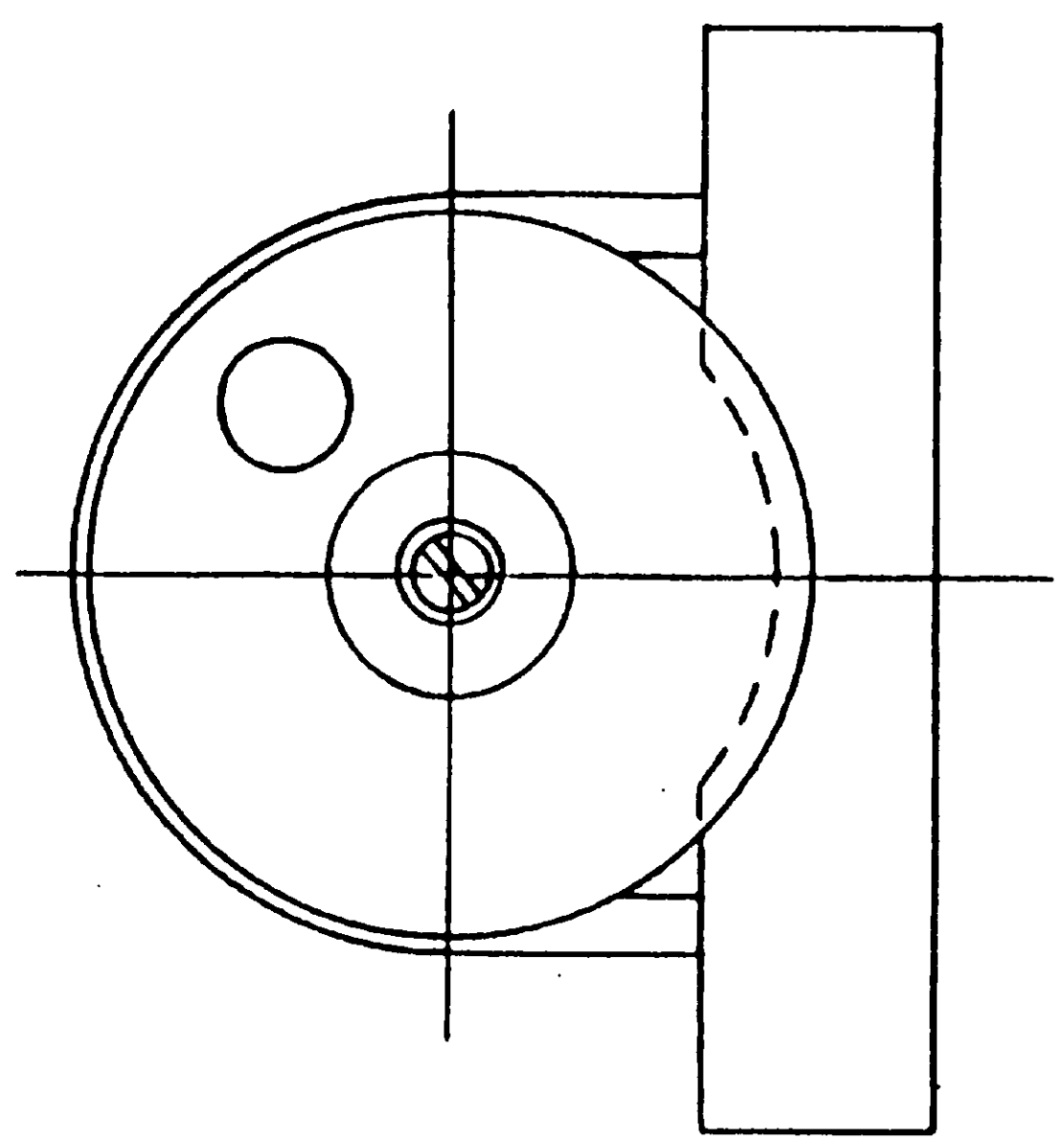
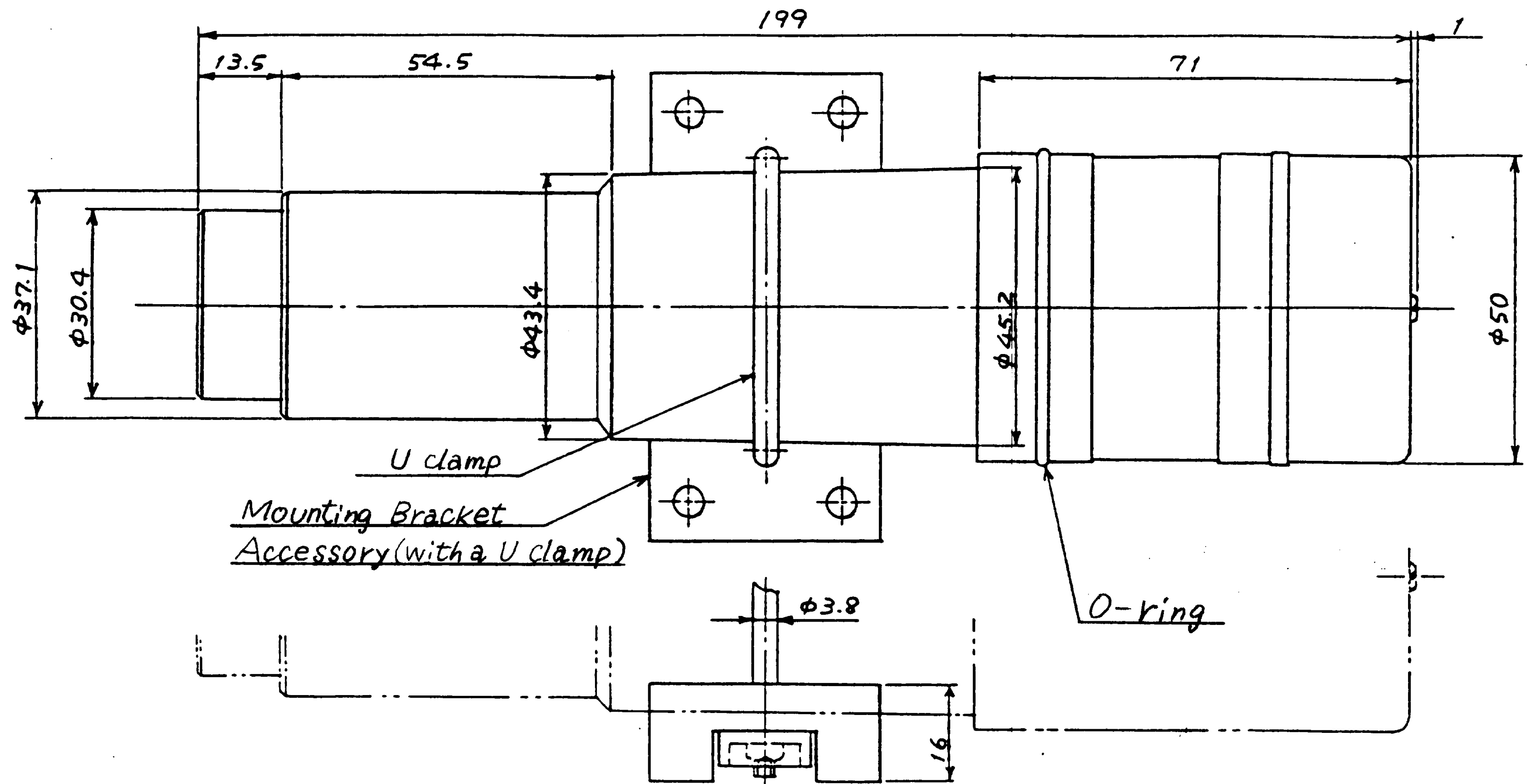
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|----------------------------------|---------------------------------|---------------------------------|-----------------------|----------------|---------------------------|
| 作成DR. M. Sahiyama 10.17.94 | 検図CHK T. Akinoto 10.18.94 | 認可APPD K. Murata 10.18.94 | 日付DATE Oct. 20, 94 | 尺度SCALE 1:1 | 記入のない公差 TOL. UNLESS NOTED |
| 形番 MODEL | RT300 SERIES | | | | |
| 名称 NAME | RADIATION THERMOMETER | | | | |
| 図番 NO. | 2850E | | | | 改番REV. 00 |

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