CellaTemp® PA 83
Pyrometer for molten metal streams

For non-contact temperature measurement of molten metal pouring stream at continuous casting lines

- Temperature range: 650 – 1600 °C
- Optical design with square target spot ensures reliable readings even when pour stream position varies
- Through-the-lens sighting with target marker
- Dual wavelength technique yields accurate readings despite ambient smoke or dust
- Pour stream function automatically records a temperature for each cast object
- Large LED display
- USB and bus interface

PROFI PROCESS FIELD BUS **BUS**

TÜV CERT DIN EN ISO 9001 : 2000 08 100 969557

KELLER HCW

:

02- 2636- 0009   02- 2636- 4753 www.gilwoo.co.kr giltron@chol.com

3   40- 2   703

CellaTemp® PA 83

CellaTemp PA 83 was specially developed to measure the temperature of molten metal pouring stream at continuous casting lines.

The dual-wavelength technique provides reliable temperture data despite potentially interfering factors such as ambient dust and steam or a dirty lens.

A special feature of CellaTemp PA 83 is the square-shaped target spot. Even when the position of the pour stream varies within the pyrometer's field of view, the instrument will detect the molten metal stream and produce accurate readings.

The focusable optics are infinitely adjustable for distances from 400 mm to ∞. Parallax-free precision lenses enable exact alignment to the target.

Another important feature is the integrated function which automatically detects the beginning of the casting process. Influencing factors such as flames or molten drip will not impede the signal or impair the measurement. After the end of each pour, a temperature reading is produced for each cast object. The temperature data is transmitted via analogue output and serial interface. If required, the values can also be viewed from a separate digital display unit, visible from a greater distance. As an option, an alarm horn can be used to provide an audible signal when temperature limits are violated.

Date can be recorded with the customer's own data logging system or documented and archived using CellaMevis PC Software.

CellaTemp PA features two analogue outputs. The user can define how he would like to configure them. Two switching outputs are available as well for highly versatile configuration.

The temperature data shown at the pyrometer's LED display panel is easy to read from a distance of several meters. Measurement parameters can be set using the rear keypad or from a PC vis USB interface.

Technical Data

Temperature range:
650 - 1600 °C

Sensor:
Photo diode

Spectral sensitivity:
0.95 / 1.05 µm

Focusing range:
Standard lens: 400 mm - ∞

Distance ratio:
horizontal: 40 : 1
vertical: 200 : 1

Sighting device
Through-the-lens sighting with target marker

2 Analogue outputs:
0(4) - 20 mA linear,
switchable, scaleable

Load:
max. 500 Ω

2 switching inputs / outputs:
Open collector 24 V, ≤ 30 mA

Data communication:
- USB
- RS 485
(integrated menu-driven user interface to set parameters and transmit data to a PC)

Response time t_{98}:
≤ 10 ms

Resolution
Current output:
0.2 K + 0.03 % of selected range
Temperature reading:
1 K
USB / RS 485:
0.1 K in terminal mode

Measurement uncertainty:
1 % of temp. reading, at least 4 K
(at ε = 1 and Ta = +23 °C)

Repeatability:
2 K

Temperature coefficient:
≤ 0.05 %/K of temp. reading [°C]
(Deviation to 23 °C)

LED Display:
4-digit (digit height 8 mm)

Power requirement:
24 V DC +10% / -20%
Current input ≤ 135 mA
Ripple ≤ 200 mV

Permissible humidity:
95 % r.H. max.
(non-condensing)

Ambient temperature:
0 - 65 °C (without cooling)
Storage temperature:
-20 - +80 °C
Dimensions:
65 x 220 mm (incl. connector)
Housing material:
Stainless steel
Protection:
IP65 according to DIN 40050

Adjustable Parameters

- Measuring range
- Adjustment of analogue outputs scale
- Alarm contacts
- Smoothing function
- Max. value memory/peak picker
- simulation of current and temperature for diagnostics
- Emissivity
- Transmission factor
- Data storage mode

Accessories

- Protective mounting device PZ 83-001

- Protective window for lens 71146
- Connecting cable VK 02/A
- Calibration Certificate according to DIN ISO 9001
- Digitial display device
- Alarm horn

:

02- 2636- 0009   02- 2636- 4753   www.gilwoo.co.kr   giltron@ chol.com

3 40- 2   703

KELLER HCW

GROUPE LEGRIS INDUSTRIES