■ Specification

Model	HMPD9000	HMPD9001
Detection method	CCD scanning	
Detectable temperature	680℃ or higher	
Field of view	800㎜ / 1m	400㎜ / 1m
Resolution capacity	Field of view ×1 / 256	
Diameter of minimum detectable object	Field of view ×2 / 256 or more	
Power supply	24 VDC ±10% ripple 10% or less	
Current consumption	200mA or less	
Output mode — Analog voltage	Rated voltage: 0 to 10 VDC, ±5% Output impedance: 47Ω	
Output mode — Control output (Work presence output)	NPN open collector 2 outputs Rated voltage: Sink current 100mA (30 VDC) or less ※Automatic reset fuse	
Operational mode	Voltage output in proportion to the position of radiation	
Response time	10 ms or less Control (work presence) output 1, 2	
Indicators	Power indicator (Green LED) Work presence indicator (Red LED)	
Adjustment function	Operation check switch SENS1 input (sensitivity setting) SENS2 input (sensitivity setting)	
Monitoring function	Video monitor output, Slice timing monitor output	
Material	Enclosure: aluminum Lens: glass	
Connection	Connector (twisted pair cable)	
Weight	Approx. 5 kg	
Accessories	Instruction manual	

■ Environmental specification

Ambient illuminance	500 l x or less
Ambient temperature	−10 to +55℃ (no freezing, no condensation) At water-cooling: +80℃
Ambient humidity	35 to 85%RH
Protection structure	I P 66
Anti-vibration	10 to 55Hz, double amplitude 1.5㎜ X, Y, Z directions, 2 hours each

■ System Configuration

Amplifier unit	Air purge hood
HMPD9000 HMPD9001	F800 F880 Air purge hood (dust-resistant construction)

Acrylic protector	Attenuation filter	Dedicated metal mounting base
PD801-PT Protects optical surfaces	PD9000-PT12 PD9000-PT25 Reduces disturbance light	IMAHL1
	Cable with connector 5m PD801-H5	

■ Dimensions (Units: ㎜)

HMPD9000
HMPD9001

Typical combination of air purge hood and dedicated metal mounting base

Air purge hood: F800 / Dedicated metal mounting base: IMAHL1 / Acrylic protector: PD801-PT

A-A' view

Air purge hood: F880 / Dedicated metal mounting base: IMAHL1 / Acrylic protector: PD801-PT

A-A' view

Cable with connector 5m
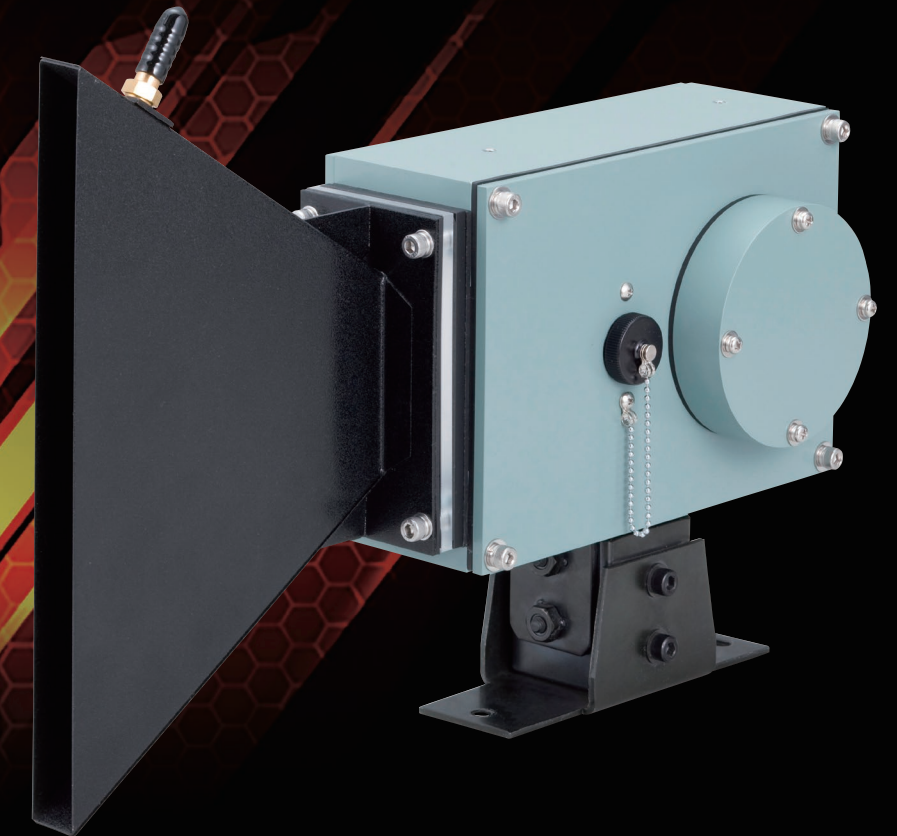
A-magnified view

Distributed by
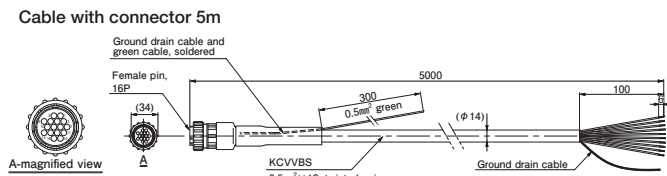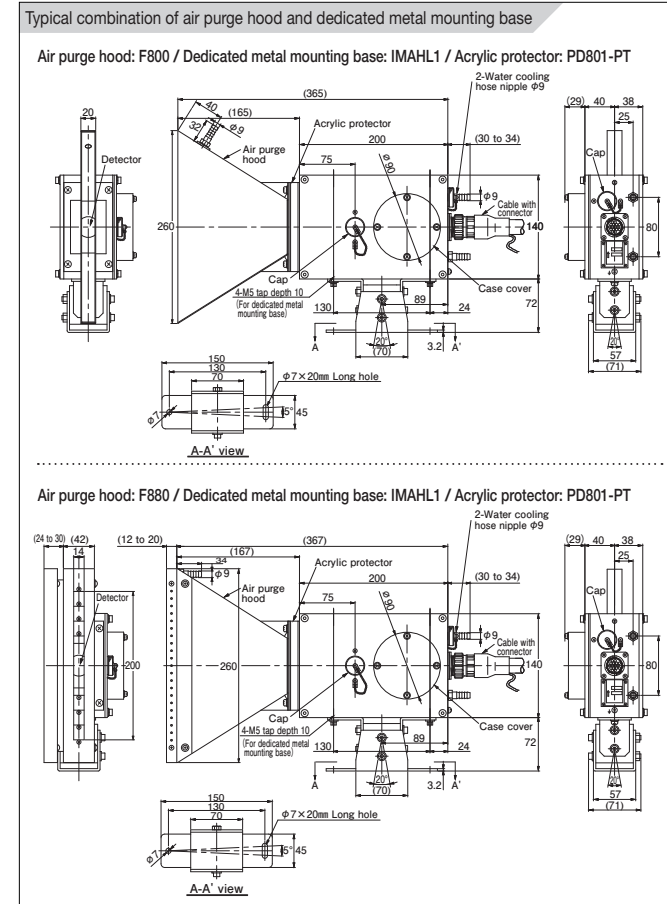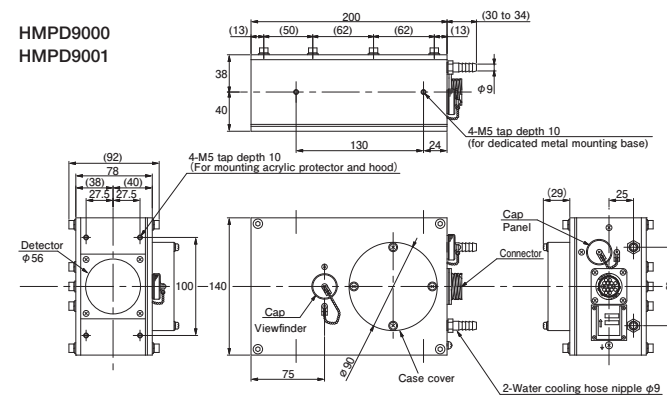
TAKEX

Hot Material Position Detector

HMPD9000 / 9001

CE

Best Suitable for Slack Detection and Loop Control of Hot Rolled Steel Bars / Wire Rods

■ **Improved Detection Capability**

■ **Backward Compatible with our Prior Model**

■ **Conforms to EU Directives**

■ **Easy Maintenance**

Image Sensor sensing infrared light emitted from hot wire or steel bars
The hot wire rod position is incrementally scalable by the analog output voltage

HMPD (Hot Material Position Detector)

HMPD, Hot Material Position Detector is a dedicated sensor used in the manufacturing process of hot steel bars and other steel products in the steel industry. The sensor detects the location of infrared light emitted from hot materials, and outputs an analog signal corresponding to their positions. In the upper process of a rolling mill, HMPD sensors are used for slack detection and loop control of hot rolled steel bars or wire rods.
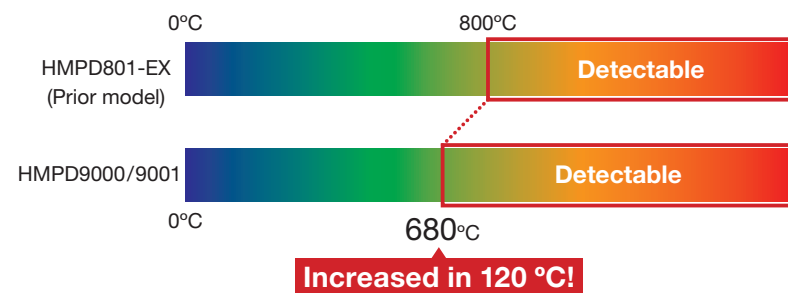
HMPD9000/9001

Redesigned from the prior HMPD801-EX model but with more advanced technology, HMPD9000/9001 has improved detection performance without compromising its compatibility specifications. This enables detection of hot materials at a wider range of temperatures, now down to 680 °C which the prior model could not detect.
Optimized optical system and electronics further clearly capture the bounding edges of hot materials, which also contributes to an improved accuracy in the actual position information of the bar materials and a faster response time, realizing even better loop control precision.

Improved Detection Capability

Detectable minimum temperature: 680 °C
Approximately 18% increase in the detection range compared to our prior model (specified at 800°C), meaning installation is now practical as part of downstream processes in which temperatures are lower.

| HMPD801-EX (Prior model) | 0°C ... 800°C | Detectable |
| HMPD9000/9001 | 0°C ... 680°C | Detectable |

Increased in 120 °C!

Backward Compatible with our Prior Model

Compatibility assured; the prior model HMPD801-EX can be updated via a simple process.
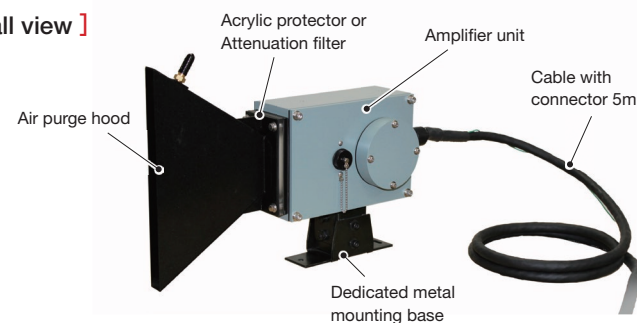
Conforms to EU Directives

CE certificated, in response to user requests

Easy Maintenance

Easy maintenance, as there are no mechanical systems which require periodical replacement/inspection

[Overall view]

- Acrylic protector or Attenuation filter
- Amplifier unit
- Cable with connector 5m
- Air purge hood
- Dedicated metal mounting base

*See System Configuration for details.

FD-A320 series

Detects the radiant infrared energy from hot material when exiting a furnace. The dual screen display, shows the amount of light received and a threshold value, enabling numerical monitoring at the manufacturing sites.

Loop Control

Rolling mill

A machine to pass high temperature metal billets through rotating rollers to gradually reduce the thickness for a uniform level
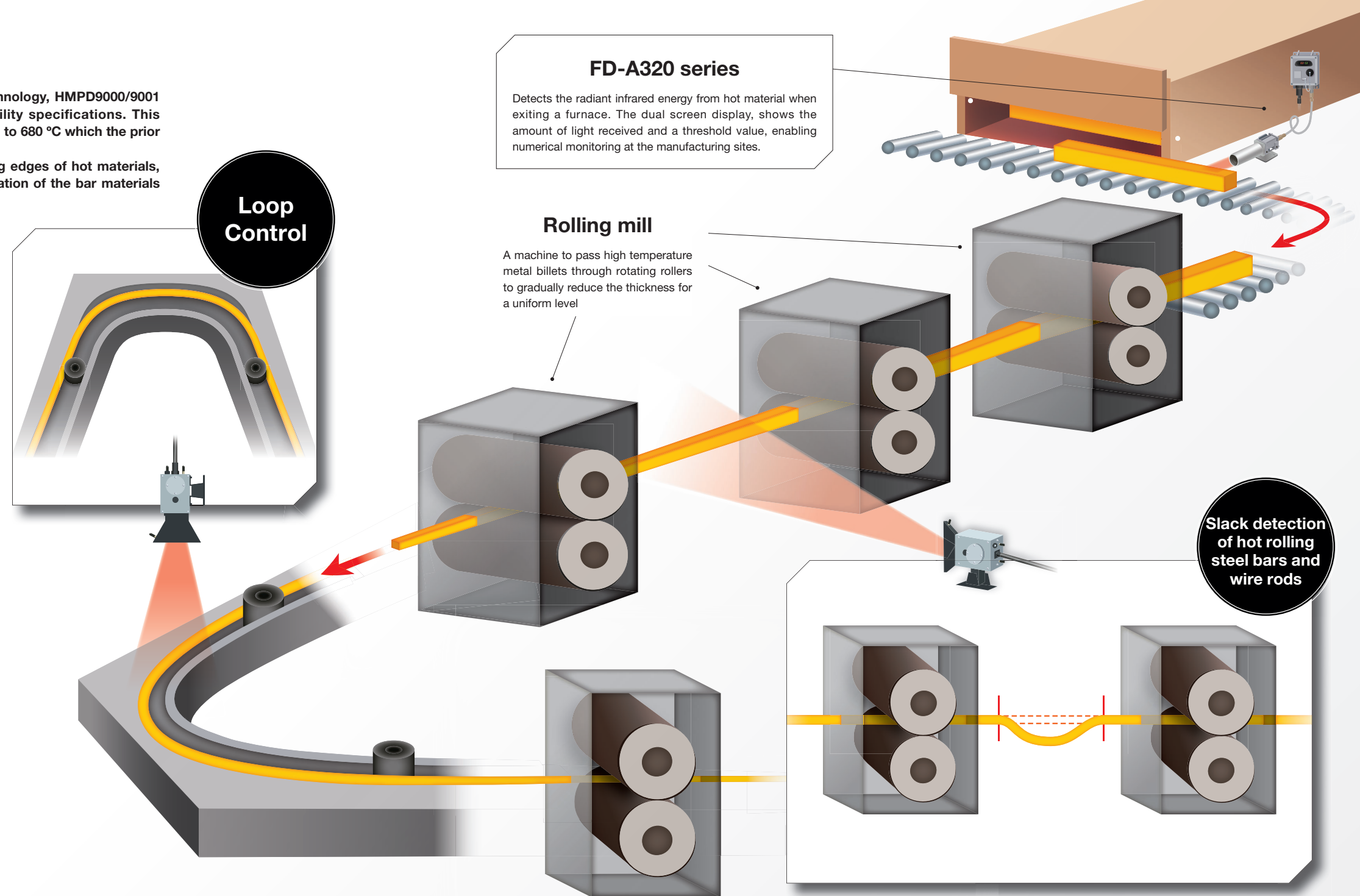
Slack detection of hot rolling steel bars and wire rods