

Extended temperature inductive proximity sensors

AVOID WELD-CELL DOWNTIME DUE TO HIGH TEMPERATURE- RELATED SENSOR FAILURE

Industrial automation regularly requires object detection in high-temperature settings, but increased heat can lead to rapid failure of conventional inductive proximity sensors.

Balluff alleviates these concerns with a family of extended-temperature proximity sensors offering reliable, non-contact object detection in ambient temperatures from 130 °C / 266 °F to 150 °C / 302 °F — more than double the rating of standard sensors that are typically limited to maximum temperatures of 70 °C / 158 °F.

With all electronic components fully integrated inside the sensor's housing, installation is simplified compared to remote-amplifier alternatives. All materials used in construction, from the sensing face to the conductor insulation

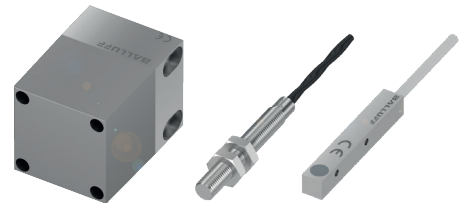
and cable jacket, have been selected to continuously withstand the sensor's rated operating temperature.

Three of the four models offered can be flush-mounted, allowing fully embedded, protective mounting methods to be employed. This minimizes the potential for impact damage to sensors from part loading or other movement in confined areas. To address space-constrained presence-detection challenges, these sensors are available in M8 tubular and compact block styles to fit neatly into compact fixtures and tooling.

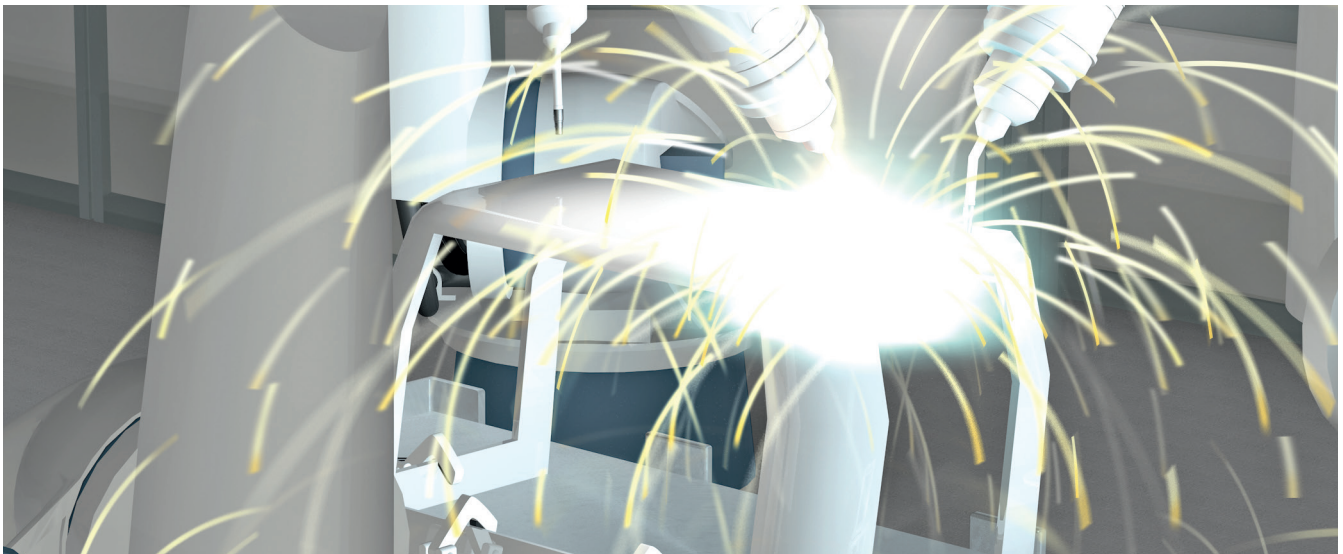
A larger 40x40 mm block style long-range sensor, while not flush-mountable, offers 25mm / 1" of sensing range to operate out of harm's way. This model is available with a detachable, temperature-rated M12 cordset (order separately).

Features

- Maximum temperature ratings of 130 °C, 140 °C, or 150 °C depending on variant
- Three flush-mount M8 and compact block-style housings fit into tight mounting spaces
- One 40x40 mm non-flush-mount block style provides extended sensing distance
- Fully self-contained with all electronic components integrated into the housing
- Sensor face composed of high-temperature Liquid Crystal Polymer (LCP)
- Temperature-rated PTFE or silicone cables, depending on housing style



CE EAC



INDUCTIVE
HIGH TEMPERATURE
SENSORS



	BES05N9	BES05FN	BES05N7	BES05N8
Size	40 × 40 mm	M8 × 1	8 × 8 mm	12 × 12 mm
Dimension	40 × 40 × 70.7 mm	Ø 8 × 60 mm	8 × 8 × 55 mm	12 × 12 × 59 mm
Installation	for non-flush mounting	for flush mounting	for flush mounting	for flush mounting
Switching output	PNP normally open	PNP normally open	PNP normally open	PNP normally open
Rated operating distance	25 mm	2 mm	2 mm	4 mm
Operating voltage	10...35 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Ambient temperature	0...+150 °C	0...+140 °C	-25...+140 °C	-25...+130 °C
IP rating	IP67	IP50	IP65	IP65
Approval/conformity	CE, EAC	CE, EAC	CE, EAC	CE, EAC
Material sensing surface	LCP	LCP	LCP	LCP
Housing material	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Connection	M12 male, 4-pole	5 m PTFE cable, 3 × 0.22 mm ²	5 m silicone cable, 3 × 0.14 mm ²	5 m silicone cable, 3 × 0.14 mm ²

CONNECTIVITY



	BCC0K7T
Connector	M12 female, straight, 5-pole
Cable	5 m TPE-O cable, electron beam cross-linked
Ambient temperature	Fixed routing: -55...+155 °C Flexible routing: -40...+155 °C
IP rating	IP68