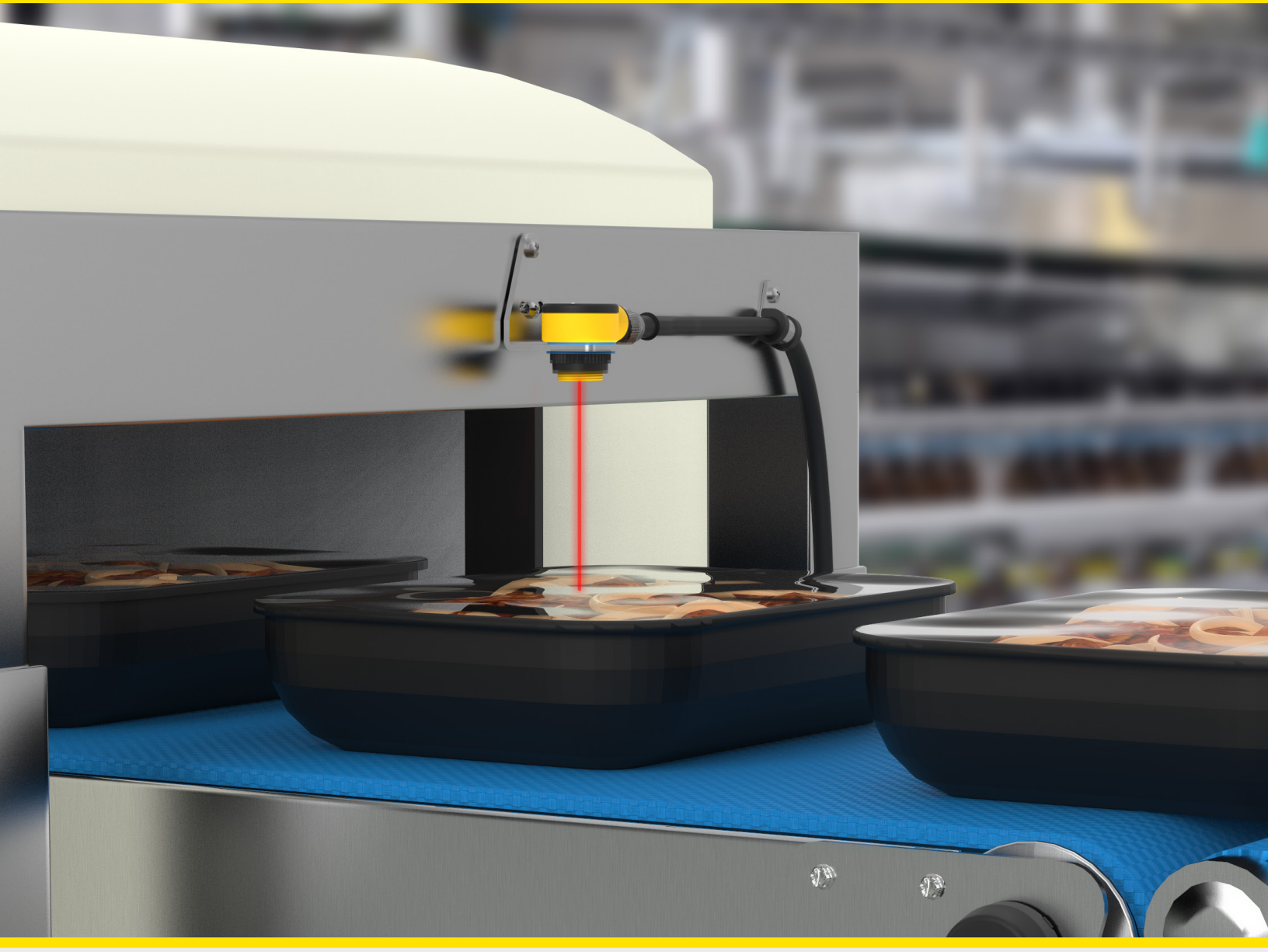
T18-2 Washdown Sensors



Washdown Sensors for Harsh Environments

- IP69K epoxy encapsulated for maximum reliability in wet, thermal shock environments
- ECOLAB™ certified FDA grade plastic housing
- Ultrasonically welded joints for superior sealing and durability
- Improved hygienic design for easier cleaning

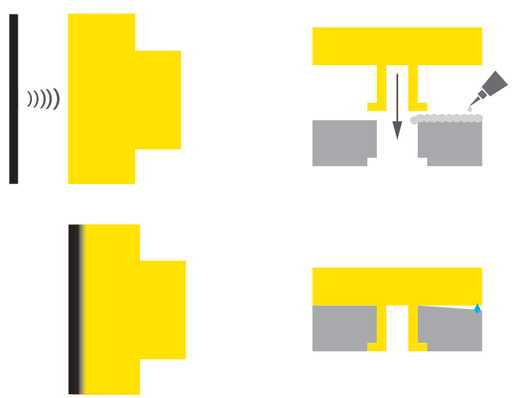
BANNER®

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Next Generation of Washdown Sensors



Advantage of All Plastic Housing vs. Metal



- ✓ Two parts become one solid piece of plastic with ultrasonic welding
- ✓ No chance for leaks
- ✗ Plastic and metal expand/ contract at different rates
- ✗ Glued housings can separate
- ✗ Susceptible to water ingress

Emitter/Receiver

Type	Range (m)	Output	Model*
Emitter	25 m (82 ft)	None	**T18-2NAEL-Q8**
	25 m (82 ft) with beam inhibit		**T18-2NAEJ-Q8**
	25 m (82 ft) with LED adjustment potentiometer		**T18-2NAES-Q8**
Receiver	25 m (82 ft)	Complementary NPN	**T18-2VNRL-Q8**
		Complementary PNP	**T18-2VPRL-Q8**
	25 m (82 ft) with gain adjustment potentiometer	Complementary NPN	**T18-2VNRS-Q8**
		Complementary PNP	**T18-2VPRS-Q8**

Fixed Field

Range (m)	Output	Visible Red Emitter Models*	Infrared Emitter Models*
30 mm	Complementary NPN	**T18-2VNFF30-Q8**	**T18-2VNFF30IR-Q8**
	Complementary PNP	**T18-2VPFF30-Q8**	**T18-2VPFF30IR-Q8**
50 mm	Complementary NPN	**T18-2VNFF50-Q8**	**T18-2VNFF50IR-Q8**
	Complementary PNP	**T18-2VPFF50-Q8**	**T18-2VPFF50IR-Q8**
75 mm	Complementary NPN	**T18-2VNFF75-Q8**	**T18-2VNFF75IR-Q8**
	Complementary PNP	**T18-2VPFF75-Q8**	**T18-2VPFF75IR-Q8**
100 mm	Complementary NPN	**T18-2VNFF100-Q8**	**T18-2VNFF100IR-Q8**
	Complementary PNP	**T18-2VPFF100-Q8**	**T18-2VPFF100IR-Q8**
150 mm	Complementary NPN	**T18-2VNFF150-Q8**	**T18-2VNFF150IR-Q8**
	Complementary PNP	**T18-2VPFF150-Q8**	**T18-2VPFF150IR-Q8**
200 mm	Complementary NPN	**T18-2VNFF200-Q8**	**T18-2VNFF200IR-Q8**
	Complementary PNP	**T18-2VPFF200-Q8**	**T18-2VPFF200IR-Q8**

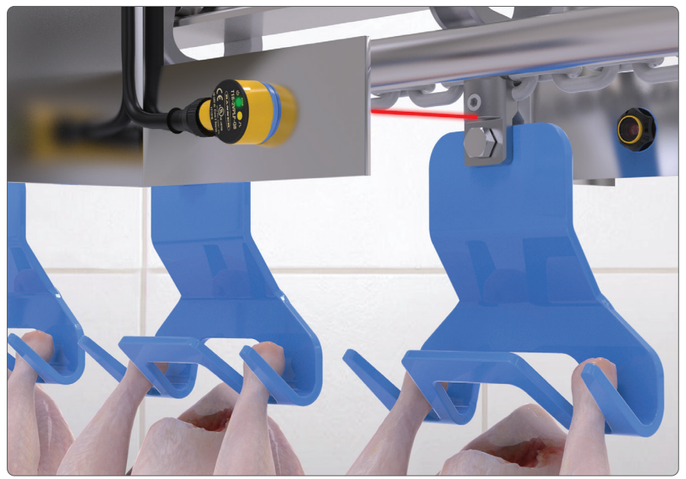
Polarized Retroreflective

Range (m)	Output	Model*
6 m (19.7 ft) with BRT-84 reflector	Complementary NPN	**T18-2VNLP-Q8**
	Complementary PNP	**T18-2VPLP-Q8**
6 m (19.7 ft) with BRT-84 reflector, with gain adjustment potentiometer	Complementary NPN	**T18-2VNLPC-Q8**
	Complementary PNP	**T18-2VPLPC-Q8**

* Integral 4-pin M12/Euro-style quick disconnect models are listed.
- To order the 2 m (6 ft) cable model, replace the suffix "-Q8" with "-2M"
- To order the 9 m (30 ft) cable model, replace the suffix "-Q8" with "-9M"

Diffuse

Range (m)	Output	Model*
750 mm (29.5 in) with adjustment	Complementary NPN	**T18-2VNDL-Q8**
	Complementary PNP	**T18-2VPDL-Q8**
300 mm (11.8 in) with gain adjustment potentiometer	Complementary NPN	**T18-2VNDS-Q8**
	Complementary PNP	**T18-2VPDS-Q8**



Challenge

- 1500 psi high pressure water washdown
- Harsh chemicals used in cleaning can deteriorate certain materials over time
- Temperature cycling; sensors are cleaned with 80 °C water and returned to cool environment creating condensation in the sensor
- Temperature cycling causes expansion and contraction of materials

Solution

- IP67/IP69K rating with ultrasonically welded joints to prevent water ingress
- FDA approved housing passed ECOLAB™ submersion testing for 28 days in a range of chemicals
- Fully epoxy potted to eliminate internal air gaps that allow condensation
- Plastic materials, that expand and contract at the same rate and are ultrasonically welded, will not weaken due to temperature cycling

Specifications



Supply Voltage	10 V dc to 30 V dc for ambient temperature ≤ 55 °C 10 V dc to 24 V dc for ambient temperature > 55 °C
Construction	PBT Polyester: Housing, M12 QD, cover, indicator cover and gain pot driver PMMA Acrylic: Indicator light pipes
Indicators	Two LEDs (1 green, 1 amber) Green Solid: Indicates power applied and sensor ready Green flashing: Indicates marginal sensing signal Amber solid: Indicates Pin-4 (black wire) conducting
Environmental Rating	IEC IP67 per IEC60529 IEC IP68 per IEC60529 IEC IP69K per DIN 40050-9
Operating Conditions	Temperature: −40 to +70 °C
Certifications	

Accessories



SMB18A



SMBAMS22P
add -SS to model number for stainless steel models



SMB18FA



ACC-T18-2-GSK-FDA-10
sold in packs of 10



BRT-2X2



BRT-84



4-Pin Euro-Style
Straight connector models listed; for right-angle models, add **RA** to the end of model number (example, **MQDC-406RA**)

MQDC-406
2 m (6.5')
MQDC-415
5 m (15')
MQDC-430
9 m (30')



4-pin M12 Euro-Style Washdown IP69K
Straight stainless steel connector models listed

MQDC-WDSS-0406
2 m (6.5')
MQDC-WDSS-0415
5 m (15')
MQDC-WDSS-0430
9 m (30')

Banner Engineering Corp.
9714 10th Avenue North • Minneapolis, MN 55441 • 1-888-373-6767 • www.bannerengineering.com

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