

OMRON

NEW

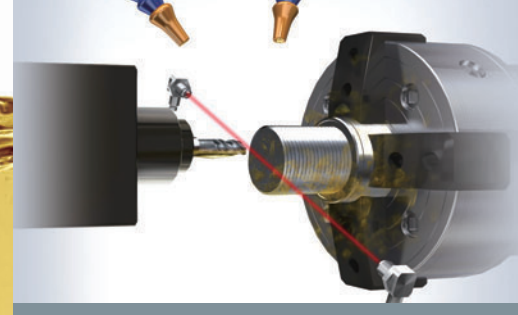
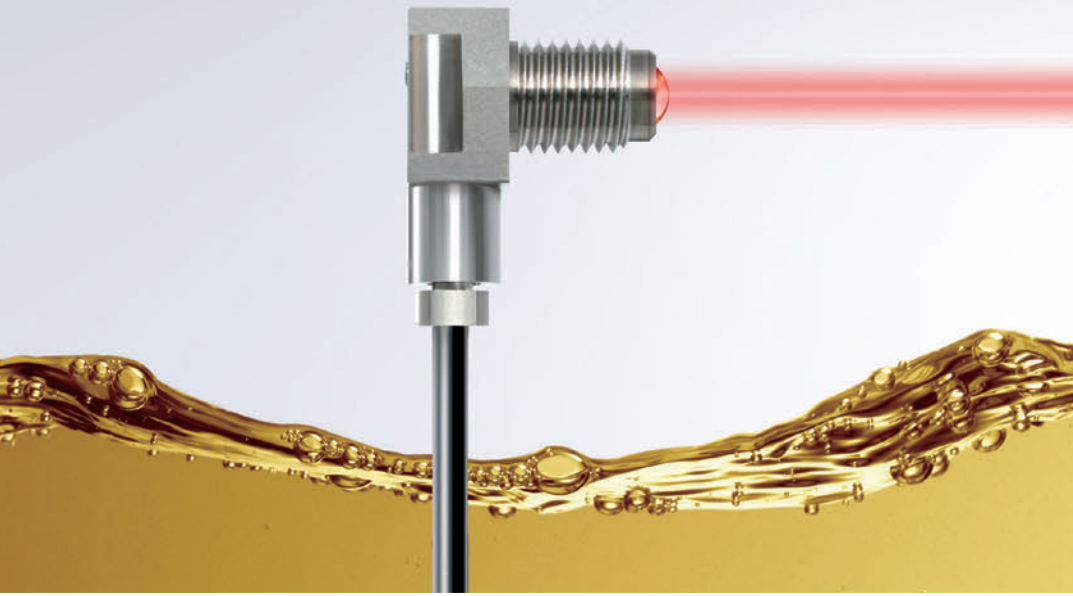
Oil-resistant Fiber Unit E32-T11NF



The Ultimate Fiber Sensor for
an Oily Environment



realizing

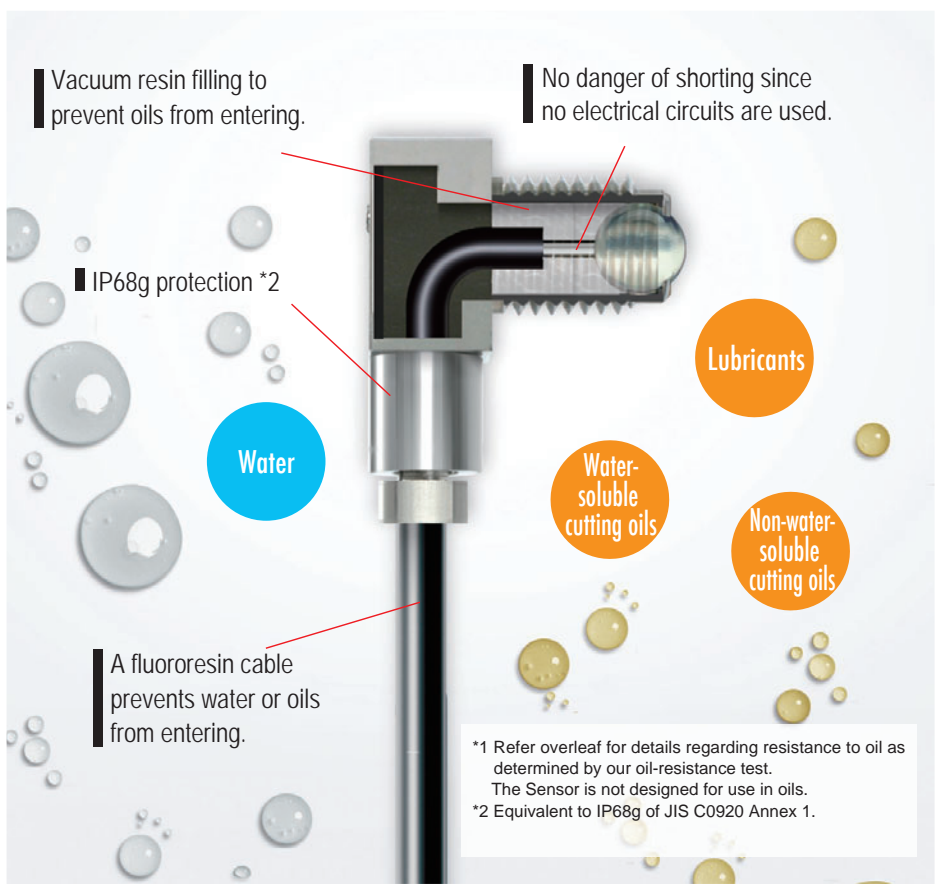


Blade breakage detection

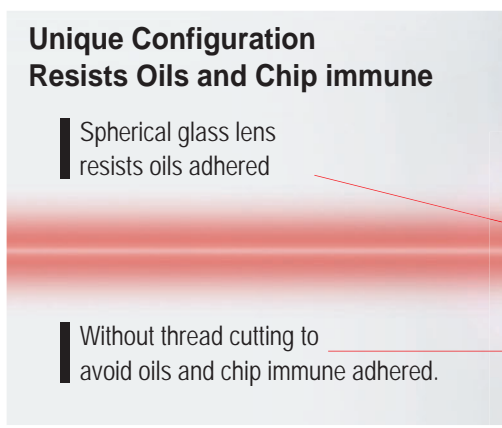
The Ultimate Fiber Unit for Reliable,

Best oil resistance in FA factory realized through the

Reliable Optical Fiber
Prevents Damage from Oils ^{*1}

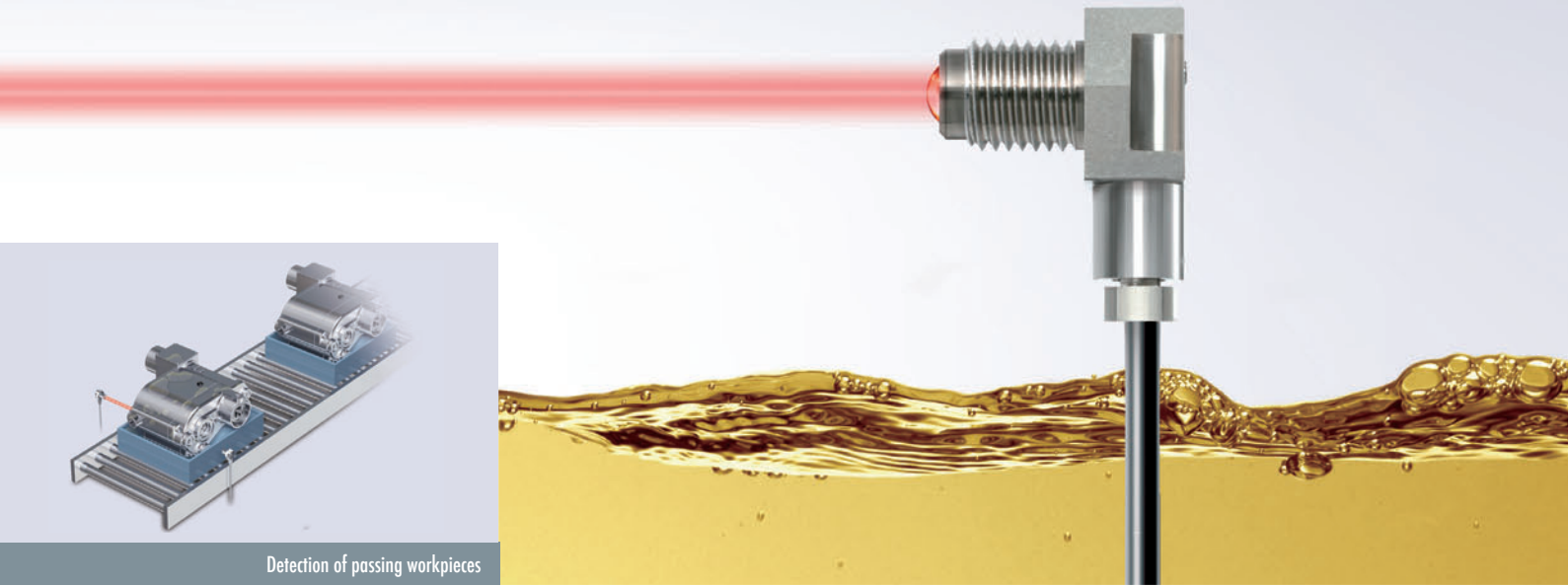


Stable Reduces False
Due to Oils



Maintains high-power output even when covered in oils





Detection of passing workpieces

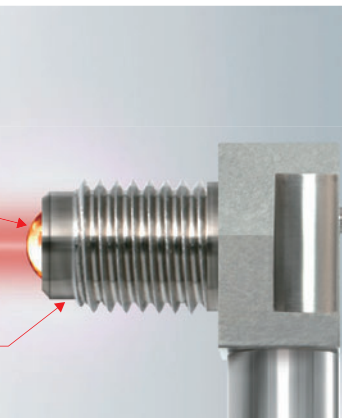
Stable Operation in Oily Environments

use of fluoresresin and overwhelming optical power.

Detections

Affordable

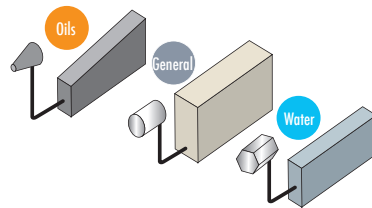
Optical Fiber Lowers Total Cost



Only the workpiece to be accurately detected!

Optical Fiber Enables Using the Same Amplifiers to Reduce the Needs for Spare Equipments

FROM Different models for different applications and environments.



TO Unified specifications through the use of standard fiber Amplifier Units.

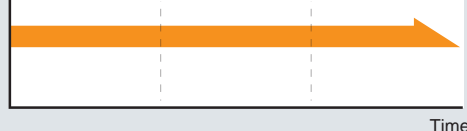


Reduces Replacement Costs

FROM Frequent replacements required due to malfunctions.

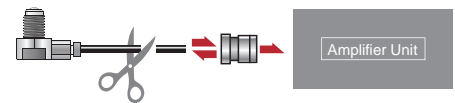


TO Longer replacement cycles without malfunctions.



Reduces Time Spent Changing Cable Lengths

FROM Connector processing also required.



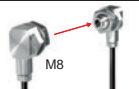
TO Connector processing not required by just a cutting the cable.




*Use the Fiber Cutter provided.

Standard Models

Fiber Units

Sensing method	Appearance	Model
Through-beam		E32-T11NF 2M
		E32-T11NF 5M

Amplifier Units

Appearance	Model	
	NPN output	PNP output
	E3X-HD11 2M	E3X-HD41 2M

Ratings and Specifications

Item	Model	E32-T11NF 2M	E32-T11NF 5M
Sensing distance		4 m*1	10 m
Standard sensing object		Opaque : 4-mm dia. min.	
Aperture angle		Approx. 20°	
Ambient temperature range		Operating: 25 to 70°C, Storage: 40 to 70°C (with no icing or condensation)	
Ambient humidity range		Operating: 35% to 85%, Storage: 35% to 95% (with no condensation)	
Degree of protection		IEC IP68 *2, oil resistance to OMRON in-house standard (equivalent to IP68g of JIS C0920 Annex 1) , Amplifier Units: IP50.	
Accessories		2 hexagonal nuts (M8, thickness: 5 mm,width:13 mm), 2 toothed washers, Fiber Cutter	
Materials		Fiber exterior covering: Fluororesin, Sensing head: SUS303, Sensing surface: Glass, Hexagonal nuts: SUS-XM7, Toothed washers: SUS304	

*1 When Giga Power Mode is used on the E3X-HD11 and E3X-HD41, the sensing distance is given as 4 m since the fiber length is 2 m on each side.
The actual power is greater than the value given here.

*2 We performed 100 heat shock cycles with 5°C cold water and 70°C hot water, and then checked to confirm that the variation in the digital value was within ±20%.
However, the Sensor is not designed for use in water.

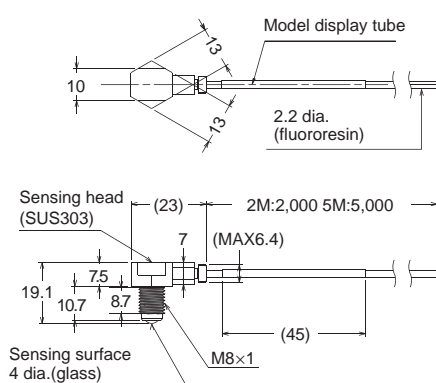
Oil Resistance*

The Sensor was submerged in the oils listed in the following table for 1,000hours at 55 and then passed a test that the variation in the digital value remained within ±20%. Use the results in the following table as a guide when using the Sensor in environments containing oils not listed in the table. Additives in the oil may also affect performance. Always test applicability in advance. However, the Sensor is not designed for use in oils.

Test oil type	Product name	Kinetic viscosity (mm ² /s) at 40°C	pH (dilution rate)
Lubricants	Velocity Oil No. 3	2.02	—
	Syntilo 9954	—	8.5(x20)
Water-soluble cutting oils	Yushiroken S50N	—	8.6(x50)
	Yushiron Cut Abas KZ216	7	—

Dimensions

(Unit: mm)





Fiber cable	Bending radius	R1 mm
	Free cutting	Available
	Unbendable length of cable at connection to sensing head	10 mm
	Tensile strength	29.4 N
Sensing head	Tightening torque	12 N·m
	Recommended mounting holes size	8.5 dia. + 0.50/0

*The Sensor cannot be mounted to a moving part.

<Reference>

Right-angle Fiber Units for General Environments

Sensing method	Appearance	Model
Through-beam		E32-T11N 2M
Reflective		E32-C11N 2M

Visit our website (www.ia.omron.com) for more details.

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