Oil-Resistant IP67G Sensors

Rugged durability for harsh environments

- Minimize unexpected downtime
- Eliminate oil ingress by any path
- Lower overall cost of ownership
Eliminate oil ingress by any path

Fluororesin cable sheaths provide stronger resistance to deterioration

Omron-developed rubber provides more protection at joints and moving sections
- No oil ingress at gaps between dissimilar materials
- No oil penetration at joint surfaces
- Patented laser welding without adhesives

Patented Smartclick™ structure + O-ring seal
- Eliminates screw torque tightening
- Eliminates screw loosening due to vibration
- Single-motion locking seals and blocks oil ingress
New IP67G* industrial rating provides long life oil-resistant sensor solutions

We thoroughly analyzed the ingress paths of water-soluble cutting oils to develop our unique, oil-resistant sensor series.
- Exceeds IP67G* of JIS C0920
- Passed Omron oil-immersion testing
- Resists oil ingress for up to 4 years

~30% of component failures are caused by cutting oil ingress

*IP67G indicates protection against dust and water immersion up to 1 m. The G indicates a resistance to oil.

Patent pending fluororesin materials provide maximum protection
- HNBR (hydrogenated nitrile butadiene rubber) protects against damage caused by swelling
- Fluororubber protects against damage caused by deterioration or cracking
- Omron’s unique, patented compound combines HNBR and fluororubber
- Provides best-in-class resistance to both swelling and deterioration caused by cutting oils

Cable sheath: PVC or PUR

Cable sheath: fluororesin

No ingress of cutting oil into fiber core

Fiber covering (fluororesin)

Fiber core

Cutting oil

Fiber covering (polyethylene)

Cutting oil

Fiber core

Cable sheath

IP67G* standard oil-drop test

Omron extended life test
Product Lineup

**IP67G Oil-resistant Photoelectric Sensors – Model E3ZR-C**
- Fluororesin outer cable sheath
- Patented compound combining HNBR and fluororubber
- Laser sealing without adhesive

**IP67G Oil-resistant Proximity Sensors – Models E2ER and E2ERZ**
- Fluororesin outer cable sheath
- Heat-welded with a fluoro component
- Standard and chip-immune models available
IP67G Oil-resistant Limit Switches – Model D4ER-□N

- Fluororesin outer cable sheath
- Patented compound combining HNBR and fluororubber
- Same mounting pitch as D4E-N switches

IP67G Oil-resistant Fiber Unit – Model E32-T11NF

- Fluororesin outer cable sheath
- Mechanical seal combines set screw and fluororesin
- Resists cutting chips

IP67G Oil-resistant Connectors – Model XS5□R

- Fluororesin outer cable sheath
- Smartclick™ structure + O-ring
- Omron technology combines forming and sealing methods with surface bonding techniques
Authorized Distributor:

Controllers & I/O
- Machine Automation Controllers (MAC) • Motion Controllers
- Programmable Logic Controllers (PLC) • Temperature Controllers • Remote I/O

Robotics
- Industrial Robots • Mobile Robots

Operator Interfaces
- Human Machine Interface (HMI)

Motion & Drives
- Machine Automation Controllers (MAC) • Motion Controllers • Servo Systems
- Frequency Inverters

Vision, Measurement & Identification
- Vision Sensors & Systems • Measurement Sensors • Auto Identification Systems

Sensing
- Photoelectric Sensors • Fiber-Optic Sensors • Proximity Sensors
- Rotary Encoders • Ultrasonic Sensors

Safety
- Safety Light Curtains • Safety Laser Scanners • Programmable Safety Systems
- Safety Mats and Edges • Safety Door Switches • Emergency Stop Devices
- Safety Switches & Operator Controls • Safety Monitoring/Force-guided Relays

Control Components
- Power Supplies • Timers • Counters • Programmable Relays
- Digital Panel Meters • Monitoring Products

Switches & Relays
- Limit Switches • Pushbutton Switches • Electromechanical Relays
- Solid State Relays

Software
- Programming & Configuration • Runtime