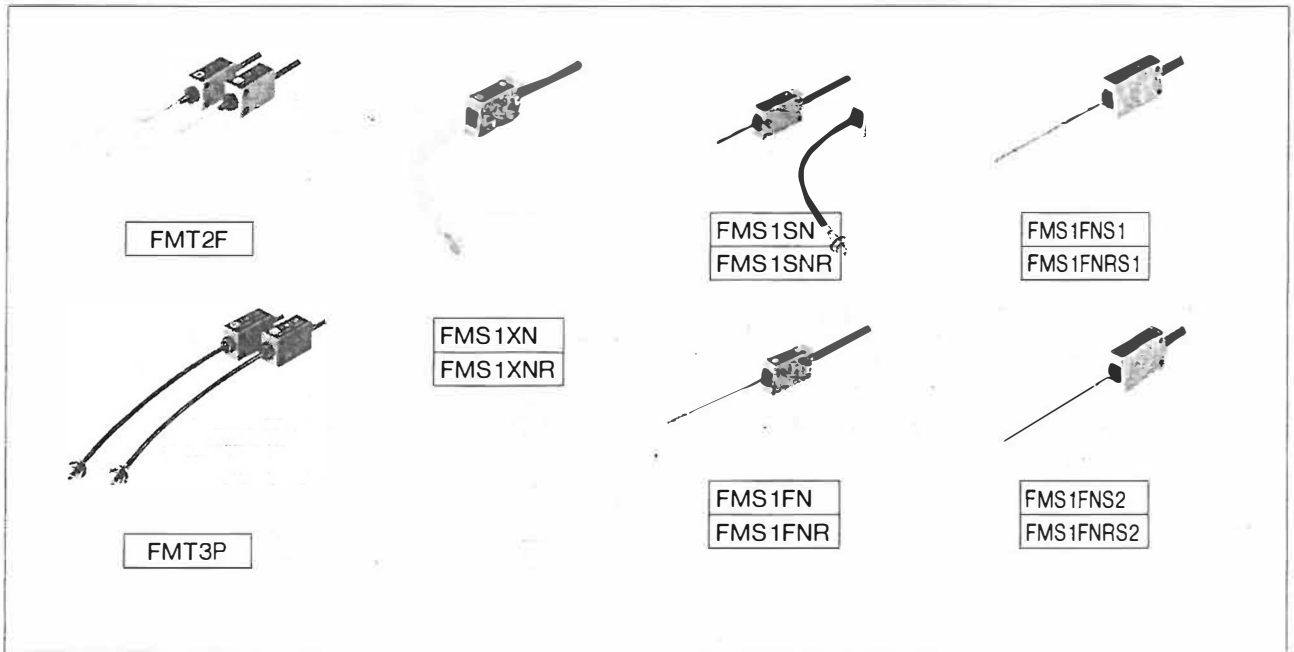


FM series

MINIATURE FIBER OPTIC SENSOR

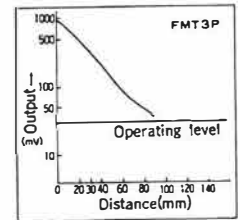
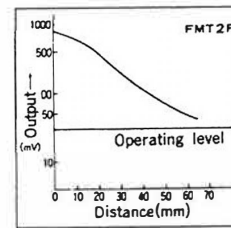
Super-miniature, waterproof fiber optic sensors for use in very space-restricted or washdown environments.



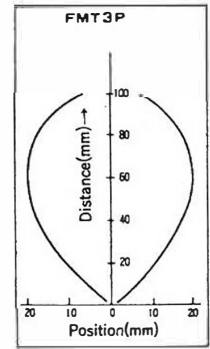
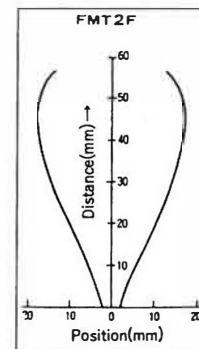
FEATURES

- Compact and waterproof in conformance with NEMA 4.
- Must be used in combination with a separate amplifier (PA, C series).
- The FMS1FNS1 (S2) and FMS1FNRS1 (S2) have a detection tip angled at 90 degrees; designed for applications where the object may be difficult to see.
- Models use glass fibers jacketed with an annealed stainless tube. Can be easily bent for installation, and does not require tip fixturing.
- All diffuse reflection types utilize modulated LED light sources and have RED LED indicators.

DISTANCE VS. OUTPUT CHARACTERISTICS



ACTIVE BEAM WIDTH



FM series

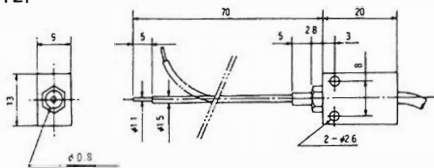
SPECIFICATIONS

| Models | Infrared LED | FMT2F | FMT3P | FMS1SN | FMS1FN | FMS1XN | FMS1FNS1 | FMS1FNS2 |
|--|---|---------|-------|---------------------------------------|---------|---------|-----------|-----------|
| | Red LED | — | — | FMS1SNR | FMS1FNr | FMS1XNR | FMS1FNRS1 | FMS1FNRS2 |
| Detection | Throughbeam | | | Diffuse reflection | | | | |
| Range (Max.) | Infrared LED | 20mm | 30mm | 10mm | | | | |
| | Red LED | | | 5mm | 2mm | 5mm | 2mm | 2mm |
| Sensing cell | Phototransistor | | | | | | | |
| Beam deviation | 10° | | | — | | | | |
| Fiber length | 70mm | 100mm | 30mm | 70mm | 100mm | 70mm | 70mm | |
| Fiber material | Glass | Plastic | Glass | | | | | |
| Bending radius | 10R | 30R | None | 10R | 30R | 10R | 10R | |
| Obj. resolution | Min. 1mm Dia | | | Min. 0.05mm Dia | | | | |
| Ambient light | Withstands 3,000Lux (Max.) | | | | | | | |
| LED indicators | — | | | Operation Light (Red) | | | | |
| Operating temp. | -25°C to +70°C | | | | | | | |
| Humidity | Withstands 85% RH | | | | | | | |
| Case protection | NEMA 4, IP67 (IEC), Aluminum, Waterproof | | | NEMA 4, IP67 (IEC), Resin, Waterproof | | | | |
| Vibration | 10~55Hz, 1.5mm Amplitude, 2HR, 3Axis Directions | | | | | | | |
| Shock | 50G, 3Axis | | | | | | | |
| Dielectric withstanding | AC 500V, 1Min | | | | | | | |
| Insulation resistance | DC 500V, 20MΩ | | | | | | | |
| Connection | Flying lead, 2m Length | | | | | | | |
| Weight (Max.) | Trns: 30g, Rcvr: 30g | | | 65g | | | | |
| | Recommended amplifier units | | | | | | | |
| PA60, PA60N, PA66, PA71, PA71F, PA72, PA80, CG10 | | | | | | | | |

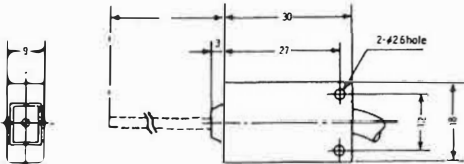
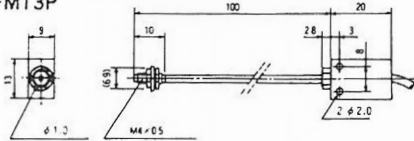
FM

DIMENSIONS

FMT2F



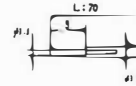
FMT3P



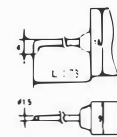
FMS1SN
FMS1SNR



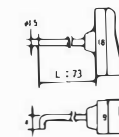
FMS1FN
FMS1FNr



FMS1FNS1
FMS1FNRS1



FMS1FNS2
FMS1FNRS2



FMS1XN
FMS1XNR

