

FO-PIDS TWO ZONE



SAFEFENCE FIBER OPTIC PERIMETER INTRUSION DETECTION SYSTEM (TWO ZONE)

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PIONEERING ADVANCED FIBER OPTIC SENSING TECHNOLOGY

TECHNOLOGICAL FEATURES



DUAL-ZONE MONITORING

Designed for precision, this two-zone device ensures accurate detection and security across multiple areas.

RUGGED OUTDOOR PROTECTION

Housed in an IP65-rated enclosure, the system is built to withstand harsh outdoor environments, providing reliable operation in all weather conditions.

HIGH-QUALITY OPTICAL CONNECTIVITY

Equipped with an FC/APC optical connector, ensuring low-loss, high-efficiency signal transmission for superior performance.

FLEXIBLE DEPLOYMENT OPTIONS

Supports both overground and underground installations, offering versatility for different security applications.

STANDALONE OPERATION

Functions as a self-sufficient unit, eliminating the need for additional infrastructure while maintaining high reliability.

SEAMLESS NETWORK INTEGRATION

With TCP/IP connectivity, the system enables remote access, real-time monitoring, and easy integration into existing security networks.

SCALABLE & EXPANDABLE

Multiple devices can be cascaded within the same FOPIDS Manager software, allowing for seamless scalability and efficient management of large security setups.

AUTOMATED ALARM TRIGGERING

Features NO/NC dry contacts for each zone, enabling direct activation of third-party security devices such as hooters, sirens, PTZ cameras, or CCTV systems for instant threat response.

SPECIFICATIONS & DETAILS

OPTICAL INTERFACE

CONNECTOR:	FC / APC
LAUNCHED POWER:	+ 3 to + 5.5 (dBm)
WAVELENGTH:	1550 nm
RECEIVE SENSITIVITY:	-20 (dBm)

ENVIRONMENT

WORKING TEMPERATURE:	-40°C to 70°C
RELATIVE HUMIDITY:	<95%: no condensation
STORAGE TEMPERATURE:	-40°C to 85°C
HOST DIMENSION:	400mm x 250mm x 60mm

POWER REQUIREMENTS

POWER SUPPLY:	AC 230V +12 VDC
DC POWER INPUT RANGE:	-36 to -72V DC
AC POWER INPUT RANGE:	176 to 264 V
POWER CONSUMPTION:	3W ± 10%
SURGE PROTECTION:	500 V
MEAN TIME BETWEEN FAILURES:	100 000 hours

ALARM OUTPUT INTERFACE

OUTPUT TYPE:	Contact closure output
CONNECTOR:	Phoenix terminal
OUTPUT NUMBER:	2
ALARM RESPONSE TIME:	< 3 seconds
ALARM RELAY TIME:	From 1 - 10 seconds (default is 3 seconds)
RELAY CONTACT RATING:	1A 30 V DC 0.5A 125 V AC

ETHERNET COMMUNICATION INTERFACE (EMU)

CONNECTOR:	RJ45
BIT RATE:	10 Mb/s 100 Mb/s

CONSOLE INTERFACE

CONNECTOR:	RJ45
BAUD RATE:	19 200 bps
BITS:	8
STOP BIT:	1
PARITY CHECK:	None

ALARM INDICATORS & DESCRIPTIONS



INDICATOR	DESCRIPTION
RUNNING	Green light indicates the system status. BLINKING: System running normally. ON/OFF: System running abnormally.
ALARM1 & ALARM2	Red alarm indicators for Zone #1 & Zone #2. ON: Fiber is broken. ON (3 sec): Intrusion or tampering. OFF: No alarm. <i>Alarm relay time is configurable between 1 to 10 seconds (default: 3 sec).</i>
VOICE ALARM	Siren sound and voice descriptions for each type of alarm, configurable in the software.
ALARM TERMINALS FOR ZONE #1 TO ZONE #16	Contact closure output interface using a Phoenix terminal.
NC (NORMALLY CLOSED)	Default State: Closed. Alarm Triggered: Opens. No Alarm: NC remains closed, NO remains open. Power Down / Fiber Break: NC stays open, NO stays closed.
COM (COMMON TERMINAL)	Shared terminal for alarm connections.
NO (NORMALLY OPEN)	Default State: Open. Alarm Triggered: Closes.

SOFTWARE SPECIFICATIONS CENTRALIZED ALARM MANAGEMENT SYSTEM

CENTRALISED ALARM MANAGEMENT SOFTWARE CAN BE INTERFACED WITH THIRD PARTY COMMAND CONTROL SYSTEMS

DEVICE INTERFACE PORT: Ethernet port- RJ45 connector	DEVICE INTERFACE: TCP/IP-http web interface		
ALERT INFORMATION UPDATES	Date of alarm	Time of alarm	Zone of alarm
	Log Information	Zone Information	
GUI	Region Map	Buzzer	LED
REAL TIME INDICATION	Zone representation blink indication (Green to Red)		
	Selected voice / sound alarm		
SYSTEM REQUIREMENTS	Embedded computer		
	RJ45 / Ethernet connectivity		
	Operating System: Windows 7 and above		
	RAM: Minimum 4GB		
	System Type: 64-bit operating system		

FIBER OPTIC PERIMETER INTRUSION DETECTION SYSTEM

- Supports **above-ground** and **underground** installation.
- Uses a **passive single-mode optical fiber** for high-sensitivity monitoring.
- Seamlessly integrates with **camera surveillance systems** for enhanced security.
- Supports **customized zone configurations** for flexible security coverage.
- **Above-Ground Deployment:** Suitable for fences and walls.
- **Underground Deployment:** Designed for buried installation under soil.

ZONE SPECIFICATIONS

DEPLOYMENT TYPE	OVER GROUND	UNDERGROUND
NUMBER OF ZONES (PER DEVICE)	2	
TYPICAL ZONE LENGTH	250 m	
DEPLOYMENT SCENARIOS	Fence Walls	Under Soil Concrete
DEPTH	Depends on height of fence / wall	1.5 feet below soil
EVENTS DETECTED	Climbing fence	Digging
	Cutting fence	Normal walking
	Cutting fiber	Running
	Tampering fence / wall	Drilling ground
	Drilling wall	Excavations
DEPLOYMENT PATTERNS	Parallel lines Wave	Parallel lines Wave Dolphin

OPTICAL SPLITTER



FOS 001



FOS 002



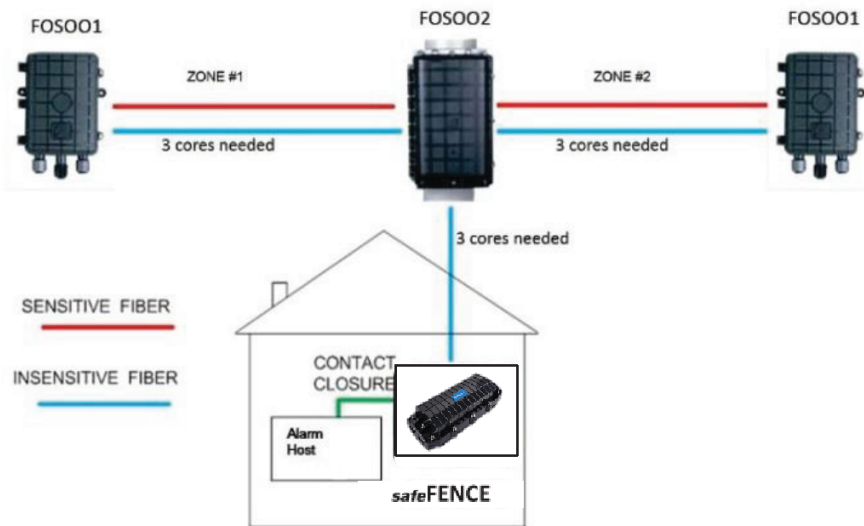
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SPECIFICATIONS	1X2 FUSED SPLITTER (FOS 001)	1X4 PLC SPLITTER (FOS 002)
INSERTION LOSS	≤ 3.7 dB	≤ 7.40 dB
UNIFORMITY	≤ 0.70 dB	≤ 0.80 dB
REFLECTANCE	≤ -50 dB	
BAND PASS	1310 and 1550 nm +/- 40 nm	
OPERATING TEMPERATURE	-20°C to 55°C	
CONNECTOR TYPE	None or FC/APC	
DEGREE OF PROTECTION	IP 65	IP 68
DIMENSION	240mm x 190mm x 89mm	385mm x 248mm x 120mm
MATERIAL	ABS engineering Plastic	

FIBER OPTIC SENSOR CABLE



DESCRIPTION	SPECIFICATIONS
FIBER TYPE	G.652D (OS2) Single Mode
ATTENUATION	At 1310 nm: ≤ 0.38 dB / km
	At 1550 nm: ≤ 0.25 dB / km
	At 1625 nm: ≤ 0.26 dB / km
CHROMATIC DISPERSION	At 1285-1330 nm: ≤ 3.5 ps / nm.km (min)
	At 1550 nm: ≤ 18 ps / nm.km
	At 1625 nm: ≤ 23 ps / nm.km
ZERO DISPERSION WAVELENGTH	1300 - 1324 nm
ZERO DISPERSION SLOPE	≤ 0.092 ps / nm ² .km
POLARISATION MODE DISPERSION	≤ 0.20 ps / vkm
MODE FIELD DIAMETER	At 1310 nm: 9.2 ± 0.4 μ m
	At 1550 nm: 10.4 ± 0.5 μ m
CLADDING DIAMETER	125 ± 0.7 μ m
COATING DIAMETER	Uncoloured: 245 ± 10 μ m
OPERATION / INSTALLATION / STORAGE TEMPERATURE	-30 °C to 70 °C



ORDERING INFORMATION

PART NUMBER	DESCRIPTION
FO-CPTV-2Z	2-Zone Device
FO-RFM001-JC-IP65	FOS001: Optical Splitter
FO-RFM003-JC-IP65	FOS002: Optical Splitter
UNIT OF MEASUREMENT (UOM):	Each

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