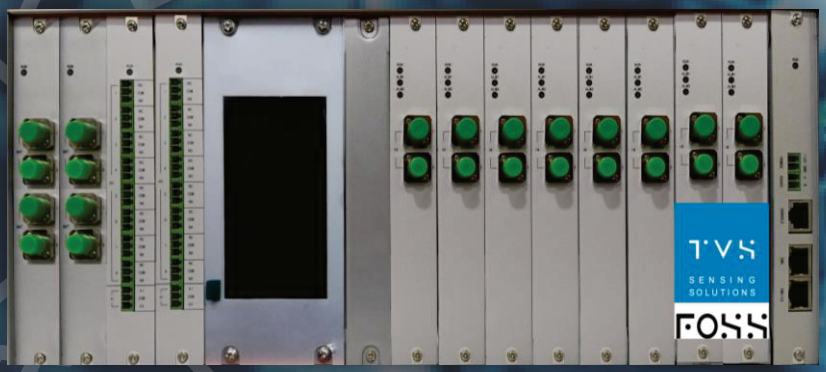
FO-PIDS MULTI ZONE



SAFEMAX
FIBER OPTIC PERIMETER INTRUSION
DETECTION SYSTEM (MULTI ZONE)

MIDFIELD ESTATE, MIDSTREAM
NETWORKSENSE.TECH

CONTACT: **083 376 8427**
INFO@**NETWORKSENSE.TECH**
JOHN@**NETWORKSENSE.TECH**

NETWORK SENSE AFRICA

PIONEERING ADVANCED FIBER OPTIC SENSING TECHNOLOGY

TECHNOLOGICAL FEATURES

COMPACT & RACK-MOUNTABLE DESIGN

Designed for efficiency, the system features a 19-inch 4U rack-mountable form factor, ensuring easy integration into existing infrastructure.

HIGH-QUALITY OPTICAL CONNECTIVITY

Equipped with FC/APC optical connectors, the system provides low-loss, high-reliability connections for seamless data transmission.

FLEXIBLE ZONE CONFIGURATIONS

Supporting 2, 4, 8, and up to 16 zones, the system allows for customizable security coverage to meet varying operational needs.

SCALABLE WITH MULTIPLE DEVICE CASCADING

The multiple device cascading option enables seamless expansion, ensuring scalability for larger or more complex installations.

ZONE-WISE DRY CONTACT OUTPUTS

Each zone is equipped with dry contact outputs (NO/NC) for precise alarm triggering and enhanced security automation.

RELIABLE TCP/IP INTERFACE

With a TCP/IP interface, the system ensures fast, secure, and remote access, enabling real-time monitoring and integration with client applications.

SPECIFICATIONS & DETAILS

OPTICAL INTERFACE

CONNECTOR:	FC / APC
LAUNCHED POWER:	+ 3 to + 5.5 (dBm)
WAVELENGTH:	1550 nm
RECEIVE SENSITIVITY:	-16 (dBm)

ENVIRONMENT

WORKING TEMPERATURE:	-40°C to 70°C
RELATIVE HUMIDITY:	<95%: no condensation
STORAGE TEMPERATURE:	-40°C to 85°C
HOST DIMENSION:	330mm x 178mm x 482mm

POWER REQUIREMENTS

POWER SUPPLY:	AC 220V | DC-48V
DC POWER INPUT RANGE:	-36 to -72V DC
AC POWER INPUT RANGE:	176 to 264 V
POWER CONSUMPTION:	3W ± 10%
SURGE PROTECTION:	4 000 V
MEAN TIME BETWEEN FAILURES:	100 000 hours

ALARM OUTPUT INTERFACE

OUTPUT TYPE:	Contact closure output
CONNECTOR:	Phoenix terminal
OUTPUT NUMBER:	16
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

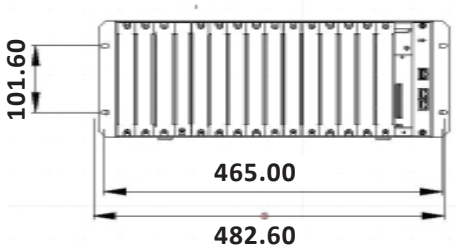
CONNECTOR:	RJ45
BAUD RATE:	19 200 bps
BITS:	8
STOP BIT:	1
PARITY CHECK:	None

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. *Alarm relay time is configurable between 1 to 10 seconds (default: 3 sec).*
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	External PC / laptop RJ45 / Ethernet connectivity Operating System: Windows 7 and above RAM: Minimum 4GB System Type: 64-bit operating system



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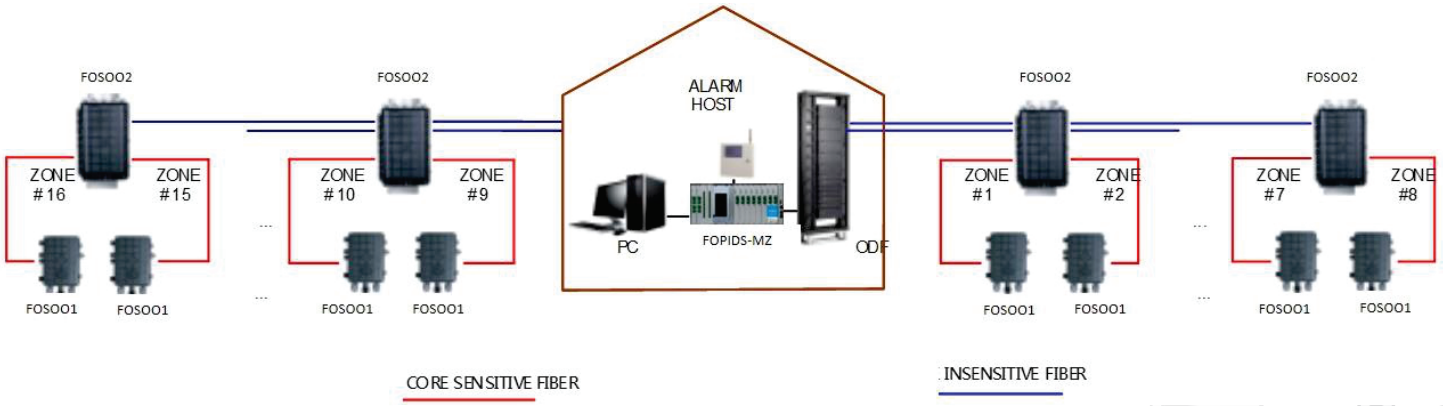
FIBER OPTIC PERIMETER INTRUSION DETECTION SYSTEM



- 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 | 4 | 8 | 16	
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 x120mm
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 / nm².km
POLARISATION MODE DISPERSION	≤ 0.20 ps / vkm
MODE FIELD DIAMETER	**At 1310 nm**: 9.2 ± 0.4 µm
	At 1550 nm: 10.4 ± 0.5 µm
CLADDING DIAMETER	125 ± 0.7 µm
COATING DIAMETER	**Uncoloured**: 245 ± 10 µm
OPERATION / INSTALLATION / STORAGE TEMPERATURE	-30 °C to 70 °C

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
FO-IDS-ZONE2	2-Zone Monitoring System
FO-IDS-ZONE4	4-Zone Monitoring System
FO-IDS-ZONE8	8-Zone Monitoring System
FO-IDS-ZONE16	16-Zone Monitoring System
FO-RFM001-JC-IP65	FOS001: Optical Splitter
FO-RFM003-JC-IP65	FOS002: Optical Splitter
UNIT OF MEASUREMENT (UOM):	Each

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