

## TECHNICAL DATASHEET

FIBER OPTIC PERIMETER INTRUSION DETECTION  
SYSTEM[MULTIZONE]

## Features:

- 19 inch 4U rack mountable
- Optical connectors: FC/APC
- 2,4 ,8 to 16 zones
- Multiple Device cascading option
- Dry contact output zone wise(NO/NC)
- TCP/IP interface



safeMAX

OPTICAL INTERFACE		POWER REQUIREMENTS	
Connector	FC/APC	Power supply	AC 220V /DC-48V
launched power	+3 to +5.5 (dBm)	DC power input range	-36~- -72V DC
Wavelength	1550 nm	AC power input range	176~264 V
Receive sensitivity	-16 (dBm)	Power consumption for each card	3W±10%
ALARM OUTPUT INTERFACE		Surge protection	4000 V
Output type	Contact closure output	Mean time between failures	100000 hours
Connector	phoenix terminal	ENVIRONMENT	
Output number	16	Working temperature	-40~ 70°C
Alarm responding time	<3 sec	Relative Humidity	≤95%, no condensation
Alarm relay time	From 1sec~10 sec, the default is 3 sec.	Storage temperature	-40~ 85°C
Relay contact rating	1 A 30 V DC 0.5 A 125 V AC	Host dimension	330mm x 178mm x 482mm
ETHERNET COMMUNICATION INTERFACE (EMU)			
Connector	RJ45		
Bit rate	10 Mb/s or 100 Mb/s auto negotiation		
CONSOLE INTERFACE			
Connector	RJ45		
Baud rate	19200 bps		
bits	8		
Stop bit	1		
parity check	None		

ALARM INDICATORS	DESCRIPTION		
RUN	Running indicator: green	Blink: Running normally	ON/OFF: Running abnormally
ALM1& ALM2	Alarm indicator of zone#1&2, red. ON: The fiber is broken. ON for 3sec: intrusion or tamper alarm. OFF: No alarm. Note: the alarm relay time can be configured from 1sec~10sec, the default is 3sec.		
Voice Alarm	Siren sound using buzzer /voice descriptions for each type of alarm in software		

CONTACT CLOSURE OUTPUT INTERFACE FOR ZONE#1 TO 16, ADOPTS PHOENIX TERMINAL			
Alarm terminal for zone#1 to zone #16	NC	Normally closed, it will be open when alarm triggers.	Note: No alarm: NC is closed, NO is open. Power down or fiber broken alarm: NC is open for long time, NO is closed for long time.
	COM	Common terminal	
	NO	Normally open, it will be closed when alarm triggers.	

## SOFTWARE SPECIFICATIONS:Centralised Alarm Management Software

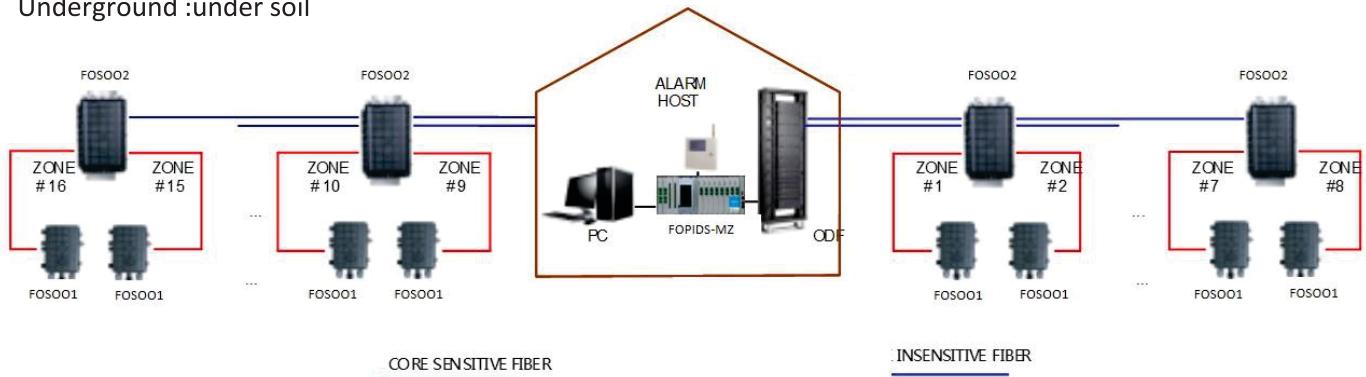
Centralised Alarm Management Software can be interfaced with Third Party Command Control Systems

Device Interface	TCP/IP-HTTP web interface		
Device Interface port	Ethernet port- RJ45 connector		
Alert information updates	1. Date of alarm	2. Time of Alarm	
	3. Zone of Alarm	4. Log info	
	5. Zone Info		
GUI	Region Map	Buzzer	LED
Real time indication	1. Zone representation blink indication (Green to Red) 2. Selected Voice/ sound alarm		
System requirement	External PC/laptop RJ45/Ethernet connectivity Operating system: Windows 7 and above RAM :minimum 4 GB System type: 64-bit operating system		



# FIBER OPTIC PERIMETER INTRUSION DETECTION SYSTEM

- Deployment: Over ground and Underground
- Passive single mode optical fiber sensor
- Integrates with camera surveillance system
- Multiple hardware zones
- Over ground: Fence, wall
- Underground :under soil



## ZONE SPECIFICATION

Number of zone per device	2 or 4 or 8 or 16	
Typical Zone length	250 meters	
Type of deployment	<b>Over ground</b>	<b>Underground</b>
Deployment scenarios	Fence, Walls	Under soil/concrete
Depth	Depends on height of fence /wall	1.5 feet below soil
Events Detected	Climbing Fence Cutting Fence Cutting Fiber Tampering fence/Wall Drilling wall	Digging Normal walking Running Drilling ground Excavations
Deployment Patterns	Parallel Lines Wave	Parallel Line Wave /Dolphin

## SYSTEM COMPONENTS

Optical splitter



FOS 001



FOS 002

Specifications	1x2 fused splitter FOS 001	1x4 PLC splitter FOS 002
Insertion loss	<=3.7dB	<=7.40 dB
Uniformity	<=0.70 dB	<=0.80 dB
Reflectance	<= -50 dB	
Band Pass	1310 and 1550 nm +/- 40 nm	
Operating Temperature	-20 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	ABS engineering Plastic



Fiber Optic Sensor cable

Description	Specification	
Fiber Type	G.652D (OS2):Single Mode	
Attenuation	at 1310 nm	$\leq 0.38 \text{ dB/km}$
	at 1550 nm	$\leq 0.25 \text{ dB/km}$
	at 1625 nm	$\leq 0.26 \text{ dB/km}$
Chromatic Dispersion	1285 - 1330 nm	$\leq 3.5 \text{ ps/nm.km (min)}$
	1550 nm	$\leq 18 \text{ ps/nm.km}$
	1625 nm	$\leq 23 \text{ ps/nm.km}$
Zero Dispersion Wavelength	1300 - 1324 nm	
Zero Dispersion Slope	$\leq 0.092 \text{ ps/nm}^2.\text{km}$	
Polarisation Mode Dispersion	$\leq 0.20 \text{ ps/vkm}$	
Mode field Diameter	at 1310 nm	$9.2 \pm 0.4 \mu\text{m}$
	at 1550 nm	$10.4 \pm 0.5 \mu\text{m}$
Cladding Diameter	$125 \pm 0.7 \mu\text{m}$	
Coating Diameter(Uncolored)	$245 \pm 10 \mu\text{m}$	
Operation/installation/storage temperature	$-30^\circ\text{C} \text{ to } +70^\circ\text{C}$	

## ORDERING INFORMATION

Part Number	Description	Unit Of Measurement (UOM)
FO-IDS-ZONE2	2 Zone	Each
FO-IDS-ZONE4	4 Zone	Each
FO-IDS-ZONE8	8 Zone	Each
FO-IDS-ZONE16	16 Zone	Each
FO-RFM001-JC-IP65	FOS001: Optical Splitter	Each
FO-RFM003-JC-IP65	FOS002:Optical Splitter	Each