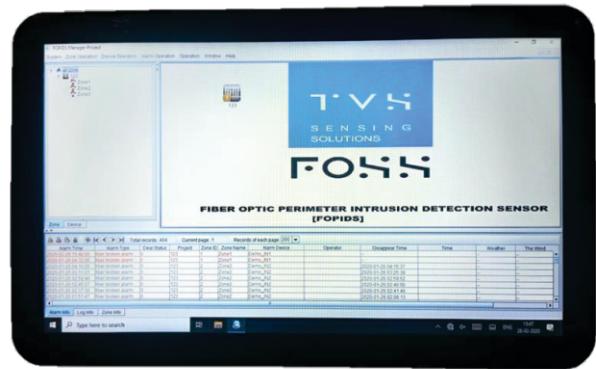


FIBER OPTIC PERIMETER INTRUSION DETECTION SYSTEM[TWO ZONE]

Features:

- 15.6 inch capacitive touch screen
- Optical connectors: FC/APC
- Two zone device
- Stand alone unit
- 4GB,Windows 10 integrated embedded system



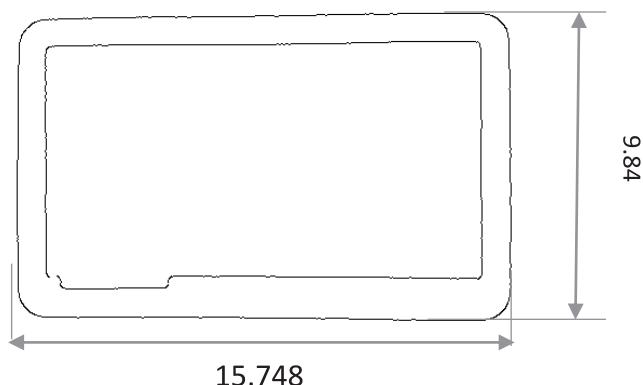
safeFENCE

| OPTICAL INTERFACE | | CONSOLE INTERFACE | |
|--|---|----------------------------|-----------------|
| Connector | FC/APC | Connector | RJ45 |
| Launched power for z1&z2 | +3 to 5.5 dBm | Baud rate | 19200 bps |
| Wavelength | 1550 nm | bits | 8 |
| Receive sensitivity | -20 (dBm) | Stop bit | 1 |
| ALARM OUTPUT INTERFACE | | parity check | |
| Output type | Contact closure output | None | |
| Connector | phoenix terminal | POWER REQUIREMENTS | |
| Output number | 2 | Power supply | AC 230V /+12VDC |
| Alarm responding time | <3 sec | DC power input range | -36~ -72V DC |
| Alarm relay time | From 1 sec~10sec, the default is 3 sec. | AC power input range | 176~264 V |
| Relay contact rating | 1A 30 V DC 0.5A 125 V AC | Power consumption | 30W±10% |
| ETHERNET COMMUNICATION INTERFACE (EMU) | | Surge protection | 500 V |
| Connector | RJ45 | MEAN TIME BETWEEN FAILURES | |
| Bit rate | 10 Mb/s or 100 Mb/s auto negotiation | 100000 hours | |
| ENVIRONMENT | | ENVIRONMENT | |
| Working temperature | | -40~ 70°C | |
| Relative Humidity | | ≤95%, no condensation | |
| Storage temperature | | -40~ 85°C | |
| Host dimension | | 400mm x 250mm x 60mm | |

| 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 | | |
| Alarm terminal for zone#1 & zone #2 | CONTACT CLOSURE OUTPUT INTERFACE FOR ZONE#1 and ZONE 2, ADOPTS PHOENIX TERMINAL | | |
| | 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. | |

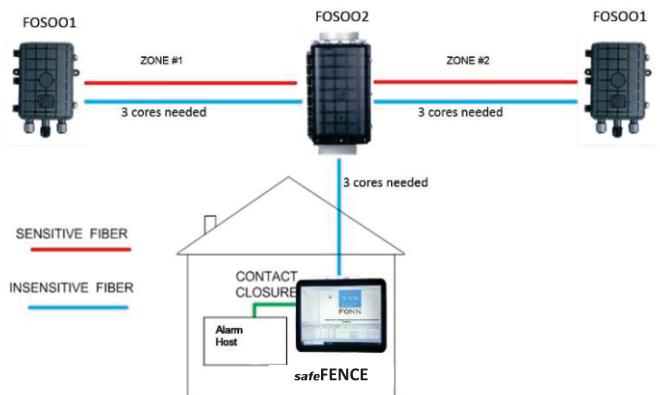
SOFTWARE SPECIFICATIONS:Centralised Alarm Management Software

| | | | |
|---------------------------|---|------------------|-----|
| 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 | Embedded computer Internal 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
- Two hardware zones
- Over ground: Fence, wall
- Underground :under soil



ZONE SPECIFICATION

| | | |
|---------------------------|---|--|
| Number of zone per device | 2 | |
| Typical Zone length | 250 meters | |
| Type of deployment | Over ground | Underground |
| 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 |
| Optical splitter | | |
| 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 °C to + 70 °C | |

ORDERING INFORMATION

| Part Number | Description | Unit Of Measurement (UOM) |
|-------------------|-----------------------------|---------------------------|
| FO-CPTV-2Z | 2 Zone Device | Each |
| FO-RFM001-JC-IP65 | 1x2 Optical Splitter FOS001 | Each |
| FO-RFM003-JC-IP65 | 1x4 Optical Splitter FOS002 | Each |