ALM fiber monitoring solution

Adtran

Data Sheet

ALM – Cabinet Door Sensor

Fiber-based passive sensor for remote access detection

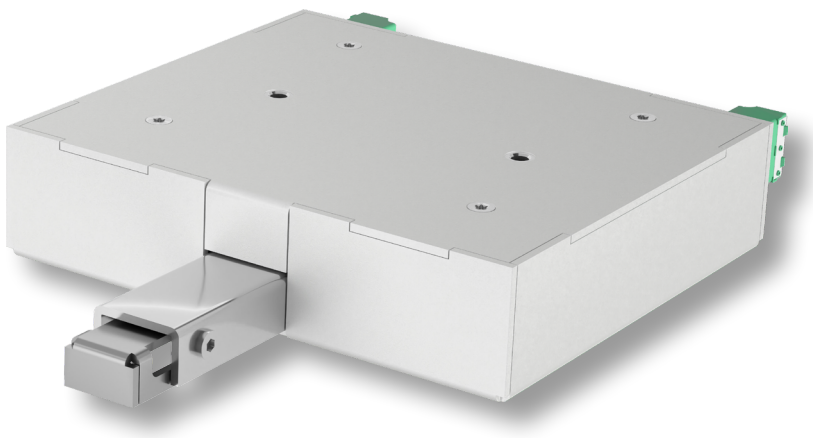
Benefits

- **Simplified installation**
  Completely passive solution connects directly to fiber optic cable for monitoring of remote locations
- **Zero maintenance**
  No power or battery replacement requirements, eliminating outages and downtime
- **Ease of operation**
  No wireless or protocol dependencies or setup needed
- **Improved security**
  Passive design eliminates opportunity to "jam" monitoring operations
- **Wide network coverage**
  Links up to 100km are supported with multiple sensors, providing end-to-end network coverage
- **Management visibility**
  24/7 location monitoring via Adtran's Ensemble Controller with Fiber Director as well as third-party GIS platforms

Overview

Maintaining and monitoring the fiber plant infrastructure has never been as important as it is today. Monitoring physical access to enclosure locations is a critical aspect of maintaining network operations and protecting fiber assets against acts of vandalism and terrorism. Our passive cabinet door sensors provide operations teams with invaluable support in getting the necessary visibility and real-time status of access points throughout their network.

Our cabinet door sensors are completely passive and are an extension of the ALM fiber assurance product solution set. When the cabinet door is closed, the cabinet sensor reflects light back to the remotely located ALM and thereby the ALM can confirm that the cabinet door is closed. Whenever the cabinet door is opened, the reflection disappears and the ALM can identify the location of the cabinet door that was opened. Any changes in the sensor status are reported by the ALM in seconds, allowing the end user to quickly pinpoint the change and alerting the operations team to the specific location being accessed. Multiple sensors can be "daisy chained" together supporting fiber links up to 100km and further simplifying installation, monitoring and operations. The event information provided by the ALM can then be viewed on a network management system such as Adtran's Ensemble Controllor with Fiber Director or a number of third-party NMS/GIS systems.



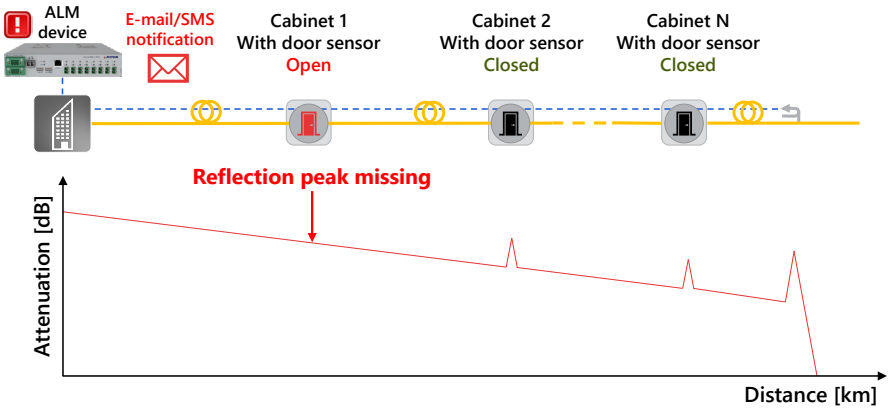
ALM – CABINET DOOR SENSOR

High-level technical specifications

	Parameter	Specification	Units
Mechanical specification			
Dimensions	H x W x D with plunger compressed and fiber connectors	23.75 x 125.45 x 92	mm
	H x W x D with plunger open and fiber connectors	23.75 x 146.45 x 92	mm
Dimensions for mounting options	Screw type	M4	
	Max screw length	6	mm
	Mounting holes placement	52	mm
Weight		180	grams
Plunger force	Minimum - maximum	3 - 8	newtons
Cycle count		20,000	
Optical specification			
Reflection	Reflect band wavelength	1638~1700	nm
	Insertion loss including connectors (typical)	0.6	dB
	In closed state - In openned state	>-27 - <-35	dB
Long range mode performance	Maximum fiber length	100	km
	Maximum fiber loss (including all sensors on link)	32	dB
	Minimum spacing between sensors	200	meters
Short-range mode performance	Maximum fiber length	20	km
	Maximum fiber loss (including all sensors on link)	28	dB
	Minimum spacing between sensors	5	meters
Temperature specification			
Temperature range		-35 to +75	°C
Certification and RoHS compliance	Description	Compliance	
	Protection class IP20	Compliant	
	Directive 2011/65/EU and Delegated Directive (EU) 2015/863	Compliant	

Applications in your network

- Improve network reliability and security with instant event notifications
- Continuous real-time monitoring of cabinet and facility doors from a central location
- Precise detection and location information reporting for events
- Monitor unstaffed remote locations to reduce operational expenses



How does it work?

- The illustration nearby shows multiple sensors deployed in a fiber optic network on a single fiber.
- The ALM monitoring device is located in the central office and continuously monitors the optical link. Each door or cabinet location is equipped with a passive sensor that generates a reflection peak.
- In the event that a door is opened the ALM will generate an alarm identifying which of the sensors experienced a change in status.

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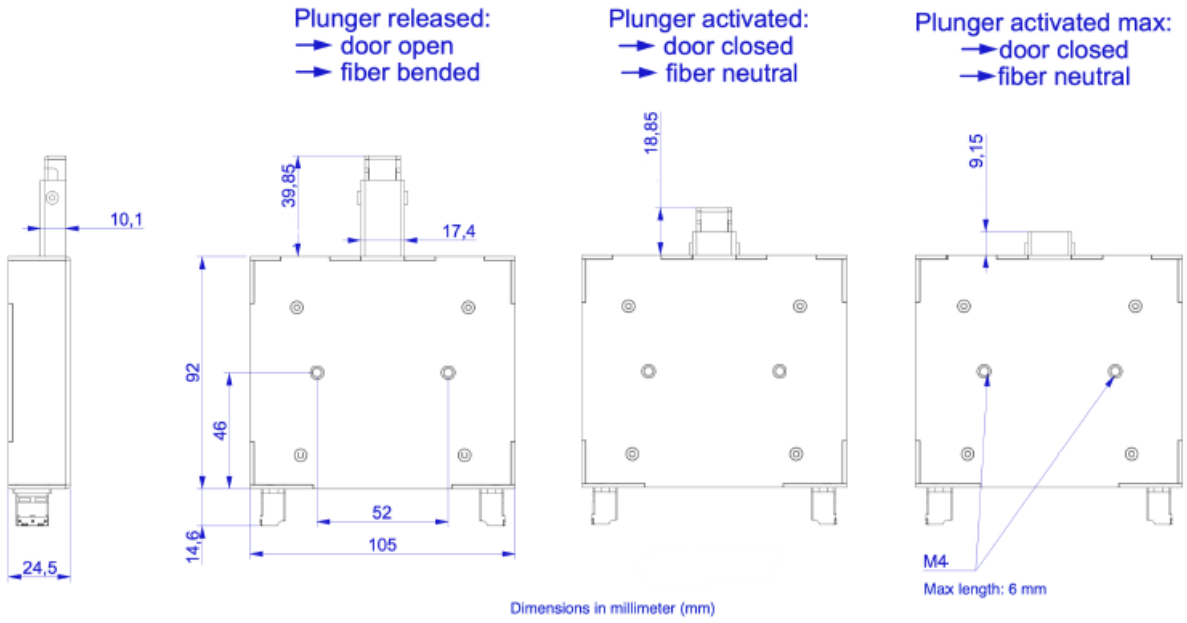
Product specifications

Mechanical Drawing



Ordering information

Product code	Product name	Product description
1043709876-01	ALM/DS	Sensor for door or cabinet, LC/APC connectors