OSMOS TECHNOLOGY

OSMOS E.D.A.S V5.2
Optical Acquisition Unit (OSMOS EDAS)
OAS-STA-V52-DAU3-220V

OSMOS E.D.A.S V5.2

The OSMOS E.D.A.S V5 developed by OSMOS integrates in real-time and continuously all behavioral data from the structure and allows a remote real-time (24/7) access to data via internet 3G/4G connection (or locally via Ethernet connection, e.g. optical fiber network).

The acquisition unit is made up of a smart system to which a network of paralel wired sensors is connected. Each sensor can accommodate up to 12 optical sensors, 12 configurable 4-20mA/0-10V sensors (100 Hz), 6 4-20mA sensors (10 Hz) and 12 temperature probes with a limit of 20 analog input connectors (4-20mA, 0-10V and PT1000). Two relays are used to switch warning components (rotating beacons, siren, etc).

The unit is designed for remote operation via an Internet connection or local network (3G/4G wireless modem or Ethernet port).

OSMOS E.D.A.S V5 features

- Connection of all sensors (OSMOS Optical Strands & 4-20mA/0-10V sensors) to one common acquisition unit

- Real-time and continuous multi-channel simultaneous measurement recordings of all connected sensors

- Time synchronisation of all sensors at 10 ms

- Constant-24 hour (24/7) connection for real-time data & measurements consultation via wireless 3G/4G GSM or Ethernet connection

- Automatic sending of data to a single database (every 30s) via wireless 3G/4G GSM connection or Ethernet LAN connection e.g. connection to optical fiber network

- 64GB memory for saving data at local acquisition station (e.g. signal loss) / Send of data when connectivity is achieved

- Static (periodic) and Dynamic (after exceedance of preset threshold) measurements for holistic behavioral analysis of structure

- Frequency sampling rate of 100Hz

- Incorporated automatic alert system via SMS and email after defined threshold exceedance

- Real time synchronization with OSMOS Cloud

- Online wireless access to acquisition station for operation and data overview

- Compatible with 4-20mA/0-10V sensors available on the market

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OSMOS E.D.A.S V5.2 ACQUISITION UNIT

Material	Galvanized steel
Dimensions with hopper (mm)	780 x 400 x 200 mm
Weight	25 kg
Protection rating	IP65
Attachment	Double wall mounting NSYAEFPFSC
Operating temperature	-25°C +50°C
Storage temperature	-50°C +85°C
Overvoltage category	CAT II
Supply Voltage	100 – 260 Vac
Frequency	50 / 60Hz
Current	10A max
Emergency power	24 VDC, 10 A
Signal processing	Real-time detection multi-channels at 100Hz, pre-trig and post-trig event recording Static recordings, variable time step from 1s to 1 hour
Recording (Data storage)	Static measurements: Standard recording every selected interval (1s to 3600s) Dynamic measurements: Threshold exceedance recording of entire dynamic event with a selection of up to 1000 measurement points before and after the dynamic event (with 100Hz recording – 10 seconds before and 10 seconds after event) Dynamic Multi-triggering: Exceedance of dynamic threshold by one sensor triggers the recording of all connected sensors at the monitoring station
Alerts	Dynamic and Static alerts settable by channel, three layers of thresholds per channel, with instant automatic sending of e-mail, SMS (configurable) at every exceedance of preset dynamic or static thresholds
Data transmission	Automatically sending of measurements to single database every 30 s (customi- zable) via 3G/4G GSM connection
Data retrieval	Via OSMOS database online server or directly from station via LAN Cable
Data representation	Online interface SAFE works, 24/7 connection to station (via GSM/Web or LAN connection) for real-time dashboard & table representation of measurements at user interface
Communication	https, TCP/IP, SMS
Hard Drive (Memory)	64GB
Inputs	12 optical sensors, resolution 1 micrometer, 100 Hz acquisition frequency 12 inputs 0,10V or 4-20mA, 100Hz acquisition frequency 12 PT1000 temperature sensors , resolution 0,1 °C 6 optional additional sensors for inputs 4-20mA, sampling frequency 10 Hz, shared channels with the 12 PTs 2 USB Ports 2.0
Outputs	2 relays Ethernet 10/100/1000 Base T interface

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