Vaisala Thunderstorm Warning System TWX300

In the main application, lightning warning areas and electric field mills are monitored in real-time. Remote alarm displays, email notifications, and relays are triggered once a lightning warning is issued by the TWX300 workstation.

Features and Benefits

- Diagnostic replay to analyze past events and improve operational efficiencies

- Lightning density display mode

- Email notification of warnings and all clears

- Time-controlled email notification and relay settings

- Auto-screen image capture to distribute display information on an Intranet

- Alarm file viewer for a visual timeline of warnings

- Supports Vaisala's secondary data format for use of total lightning information

- Track cloud-to ground and/or cloud data approaching and leaving the area of concern

- Measure electrostatic field levels for reliable monitoring of lightning development overhead

- High-resolution GIS mapping from MapInfo®

- Create multiple warning areas of any size or shape

- Automatically triggers alarms and all-clears throughout facility

Proactive Lightning Risk Management

Vaisala Thunderstorm Warning System TWX300 uses real-time lightning information from Vaisala's scientifically validated lightning detection networks in combination with on-site electric field mills to monitor approaching thunderstorms and those that may develop overhead. Operations and safety managers rely on Vaisala Thunderstorm Warning System TWX300 to support safety goals, improve operational efficiency, and eliminate the subjective nature of ceasing activities due to lightning in the area of concern.

TWX300 is designed for working environments that are most vulnerable to the hazards of lightning and need up-to-the second 24/7 lightning tracking, and automated lightning warnings including:

- Airports
- Explosives testing
- Mining and blasting operations
- Munitions depots
- Refineries
- Sporting facilities
- Outdoor events

Vaisala Remote Alarm Displays (RADS) display the warning levels in red, amber, and green LED arrays and sound 90 decibel audio alarms throughout a facility.

Up to 7 on-site Vaisala Electric Field Mills can be added to monitor overhead lightning potential. Vaisala Electric Field Mills measure the actual electrostatic charge in the local atmosphere to show when conditions are ideal for lightning to occur.

Technical Data

TWX300 Workstation

Provided by Vaisala with the Microsoft Windows 7 operating system (minimum), TWX300 software, Vaisala Lightning Data Server (VLDS), Watchdog Timer and Card, and optional Relay Card.

TWX300 Software

Includes the Main Application, Diagnostic Replay, Central Data File Viewer, EFM Data File Viewer, Alarm File Viewer, Configuration File Viewer, and TWXS1200 Central Data File Converter.

TWX300 Interfaces

Local Sensors – 0 to 7 Vaisala Electric Field Mill EFM550s

Alarm Distribution – Remote Alarm Display System (RADS) via RS232/Ethernet Device Server or Modem; Email notification via Ethernet; or Relays via RS232, RS232/Ethernet Device Server, or Modem.

Threat Display – Remote Alarm Display System (RADS) and TWX300 software RADS Display Window

Lightning Data Source

U.S. National Lightning Detection Network®, Canadian Lightning Detection Network, Vaisala Global Lightning Dataset GLD360, or from any lightning detection network using Vaisala Thunderstorm Central Processor TLP and preceding central processors CP7000, CP8000, LP (IMPACT) and CPS (SAFIR).

Electric Field Mill EFM550

Range	+/- 10,000 V/m max.
Mount Height	30 in. (76.2 cm) min.

See Vaisala Electric Field Mill EFM550 Data Sheet for more detailed specifications

Remote Alarm Display System (RADS)

Basic Display - Three colored (red, amber, green) 20 dual-LED light panels support up to five combinations of threat condition Reliability Features – Visually alerts user to outage of TWX300 processor or communications. Built-in battery backup.

Relay Kit
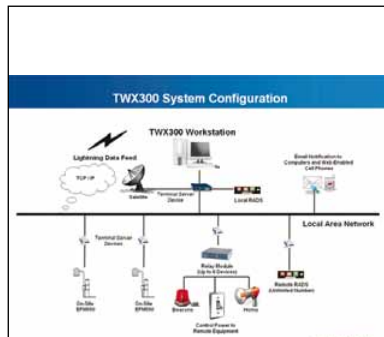
Relays	8 form C relays rated for 15A at 24DC and 120VAC, and 10A at 240VAC
Load Rating	5A for all three voltage ranges

Support Services
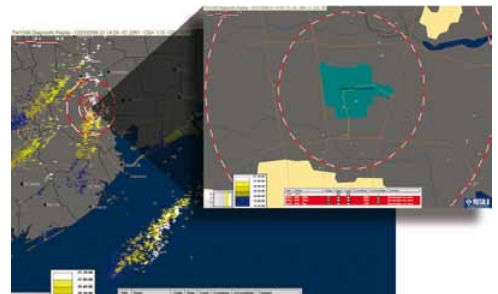
Training, technical support, and spare parts services are available for maintaining optimal system performance. Contact your Sales Representative for Vaisala Lifeguard TWX300 service agreement information. Vaisala provides a manufacturers warranty for one-year from the date of delivery.

Cloud-to-ground lightning from Vaisala's U.S. National Lightning Detection Network® is used by weather forecasters and operations managers to closely monitor thunderstorm development, strength, and paths for more accurate severe weather forecasting and for issuing warnings.

The typical Vaisala Thunderstorm Warning System TWX300 installation leverages an existing local area network to connect to the central lightning network and local electric field mill data sources. Alarms are distributed through the remote alarm displays (RADS), email notification, and relays.

An example of the TWX300 warning areas in alert as lightning strikes the property of George H. Bush Intercontinental Airport in Houston.

VAISALA

For more information, visit www.vaisala.com/TWX300 or contact us at thunderstorm.sales@vaisala.com

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