



Thunderstorm Warning System TWX300



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

Features

- Diagnostic replay to analyze past events and improve operational efficiencies
- E-mail notification of warnings and all-clears
- Time-controlled e-mail notification and relay settings
- Auto-screen image capture to distribute display information on an Intranet
- Alarm file viewer for a visual timeline of warnings
- Track cloud-to-ground and/or cloud data approaching and leaving the area of concern
- High-resolution GIS mapping from MapInfo®
- Automatically triggers alarms and all-clears throughout facility

Vaisala Thunderstorm Warning System TWX300 uses a combination of on-site electric field mills and real-time lightning information from Vaisala's scientifically validated lightning detection networks in order to monitor approaching thunderstorms and those that may develop overhead.

Benefits

- Diagnostic replay to analyze past events and improve operational efficiencies
- Supports Vaisala's secondary data format for use of total lightning information
- Measure electrostatic field levels for reliable monitoring of lightning development overhead
- Create multiple warning areas of any size or shape



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.

Proactive Lightning Risk Management

Operations and safety managers rely on 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 work 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

Technical Data



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.

TWX300 Workstation

Workstation and components provided by Vaisala.

Software and Hardware

Operating system	Microsoft® Windows® 7 (minimum) Microsoft® Windows® 10
TWX300 software	Main application Diagnostic replay Central data file viewer EFM data file viewer Alarm file viewer Configuration file viewer TWXS1200 central data file converter

Vaisala Lightning Data Server (VLDS)

Optional relay card

Electric Field Mill EFM550

Operating range	Max. ±10 000 V/m
Mount height	Min. 76.2 cm (30 in)

See Vaisala Electric Field Mill EFM550 Datasheet for more detailed specifications.

Remote Alarm Display System (RADs)

Basic display	3-colored (red, amber, green) 20 dual-LED light panels support up to 5 combinations of threat condition
Reliability features	Visually alerts user to outage of TWX300 processor or communications Built-in battery backup

Relay Kit

Relays	Turn on and off hardware such as lights, horns, and message boards, based on lightning alert conditions 8 Form C relays rated for: <ul style="list-style-type: none"> • 15 A at 24 DC and 120 VAC • 10 A at 240 VAC
Load rating	5 A for all three voltage ranges

Inputs and Outputs

Lightning data source

U.S. National Lightning Detection Network®
Canadian Lightning Detection Network
Vaisala Global Lightning Dataset GLD360
Or from any lightning detection network that uses:

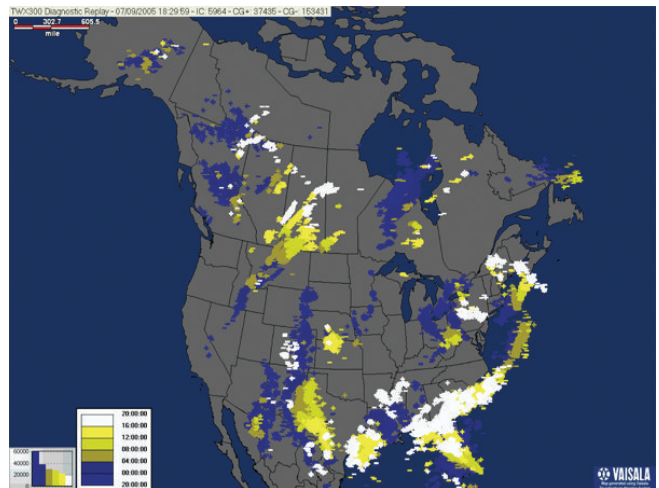
- Vaisala Thunderstorm Central Processor TLP
- Preceding central processors CP7000, CP8000, LP (IMPACT), and CPS (SAFIR)

TWX300 Interfaces

Local sensors	0 ... 7 Vaisala Electric Field Mill EFM550s
Alarm distribution	Remote Alarm Display System (RADs) via RS232/Ethernet Device Server or Modem E-mail notification via Ethernet or Relays via RS-232, RS-232/Ethernet Device Server, or Modem
Threat display	Remote Alarm Display System (RADs) TWX300 software RADs Display Window

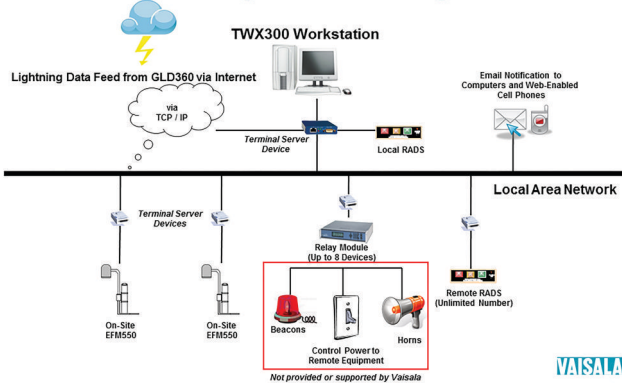
Support Services

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 1 year from the date of delivery.

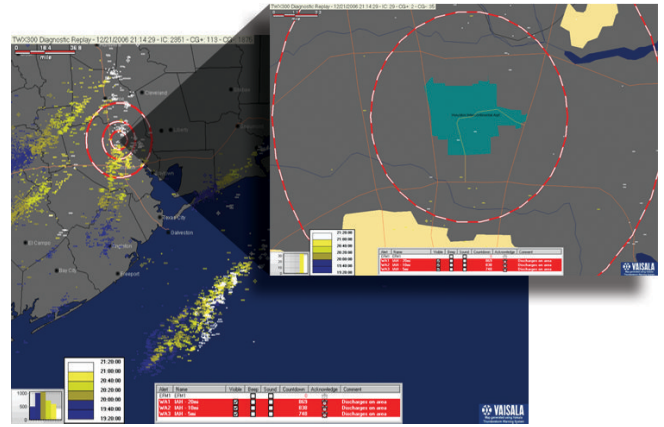


Weather forecasters and operations managers use cloud-to-ground lightning from Vaisala U.S. National Lightning Detection Network® to closely monitor thunderstorm development, strength, and paths for more accurate severe weather forecasting and for issuing warnings.

TWX300 System Configuration



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), e-mail 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.

