Lightning Detector   DVLD-1

The DVLD-1 is designed to give advance warning of the presence and approach of potentially hazardous lightning activity in the vicinity of a transmission site.

It uses a sophisticated statistical algorithm to provide an estimation of the distance to the storm and to reject potential man-made disturbers.

When connected to a Davicom Remote Monitoring and Control Unit*, it can be used to switch to an auxiliary power source (UPS) or to temporarily shut down critical equipment during a thunderstorm.

The DVLD-1 has a fully isolated (2500Vrms) 4-wire RS-485 interface and it is provided with the Davicom USB-RS485LD USB to RS-485 adapter. The DVLD is powered from the Davicom unit USB port and is provided with a 15-meter long waterproof Cat5E cable.

DVLD-1: Outdoor lightning probe

Specifications	
Max. Detection Radius	40 km
Detection steps	14 steps from 40 km down to 1 km
Lightning type	Cloud-to-Ground, Cloud-to-Cloud
Power	(USB) 5V, 65mA

*requires firmware version 5.54 or higher.

USB-RS485LD: USB to RS-485 adapter

INSTALLATION AND CONFIGURATION

1. You must install the DVLD outdoors and secure it to a wall or post using the PVC clamp provided with the unit (or Tie-Wraps). The DVLD must be installed vertically so that the cable exits from the bottom of the unit. We recommend that the sensor be installed at a height of at least 6' from the ground and at a distance of at least 12" from a metallic structure. We do not recommend installation directly on the transmission tower.

⚠️ For safety and optimum detection performance, make sure that the Davicom unit is properly grounded.

2. Run the DVLD cable from the probe to the interior of the building.

3. Secure the USB-RS485LD to the equipment rack or panel.

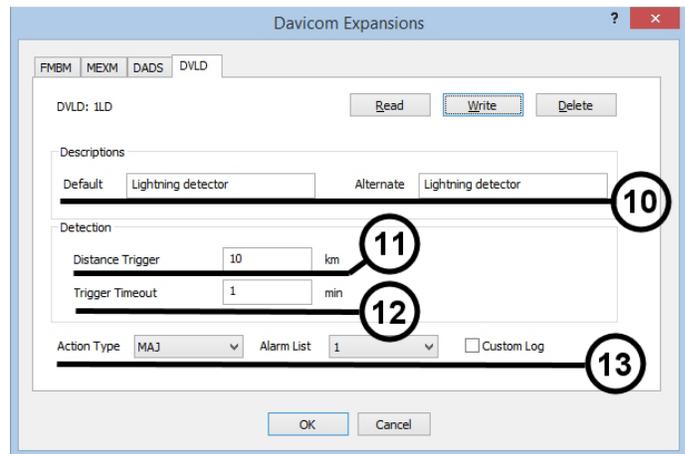4. Connect the DVLD cable to the connector labeled DVLD-1 on the USB-RS485LD.

5. Connect one end of the USB cable to the USB connector on the USB-RS485LD.

6. Connect the other end of the USB cable to the USB connector located on the rear panel of the Davicom unit.

7. Log-On to the Davicom unit using the Davlink software.

8. In the Davlink software, go to the configuration menu by clicking on the configuration icon 🔧 or select *Unit* from the main menu and *Unit Configuration* from the dropdown list.

9. Click on *Devices.* Next, click on the *Davicom Expansions* tab and finally click on the *DVLD* tab.

10. If necessary, change the Default and Alternate text descriptions.

11. Set the Distance Trigger parameter to any value between 5 km and 40 km. Lightning activity outside this range will not be logged. Default value is 10 km.

12. Set the Trigger Timeout (delay before returning to normal conditions after the last detected lightning activity). Default value is 10 min. Note that **this is in addition** to the 17 minutes delay that is internal to the DVLD.

13. Select the Action Type, the Alarm List number and check the Custom log box if the alarms need to be logged.

14. Click OK and confirm the changes.

15. Use the 1LD01 flag with logical operators in Davlink's workspace to perform actions when lightning activity is detected. Refer to Davicom's Reference manual for more details.