Leased Line Modem DXL421

Features

- Support for standard DIN-rail mounting
- Compact housing
- Suitable for both sensor sites and central sites
- Suitable for 2-wire or 4-wire point-to-point or multi-point applications

Vaisala Leased Line Modem DXL421 is designed for leased-line modem connections between the central site and sensor sites.

For use in leased-line modem connections

DXL421 is a leased-line modem for weather stations and other systems and sensors. For example, modem unit in the transmitting end can be inside the weather station enclosure and the modem unit in the receiving end can be inside the central data unit rack.

Connections and standards

DXL421 can be used to connect the weather station to the leased-line 2-wire or 4-wire point-to-point or multi-point application. It is equipped with LED indicators for channel detection and data communication.

DXL421 supports, for example, the following standards:

- V.21 300/300 bps frequency shift keying (FSK)
- V.22 1200/1200 bps differential phase shift keying (DPSK)
- V.23 1200/1200 bps FSK

You can select the operation mode and settings with the DIP switch and jumpers.

Mounting

The DXL421 unit is compact:
80 × 76 × 25 mm (3.15 × 2.99 × 0.98 in).
It can be mounted on a standard DIN-rail inside a weather station enclosure, a large field sensor enclosure, or to the Vaisala Device Mounting and Powering Frame MDF101.

Technical data

DXL421 operating environment

Operating temperature	−40 … +55 °C (−40 … +131 °F)
Storage temperature	−60 … +75 °C (−76 … +167 °F)
Operating humidity	0–100 %RH, non-condensing
IP rating	IP30
UL 50E/NEMA rating	Type 1

DXL421 inputs

Supply voltage	5–30 V DC
Power consumption	0.09 W
Fuse	0.5 A PTC
Transient protection	Yes, transil diode
Reverse connect protection	Yes
Connector	2-position screw terminal
Indicator	Green power LED

DXL421 serial RS-232 interface

Topology	EIA/TIA-232-F (RS-232C) interface
Serial port speed	300–57 600 bps
Connector	6-position screw terminal
Indicators	3 orange LEDs: **CD**, **TxD**, and **RxD**

DXL421 PSTN interface

Modem compatibility	• V.21 300/300 bps FSK • V.22 1200/1200 bps DPSK • V.23 1200/1200 bps FSK • 2-wire or 4-wire, point-to-point or multi-point
Transient protection	Yes, 350 V surge protector, PTC fuses, SIDACtor®
Isolation	1500 V
Connector	4-position screw terminal

DXL421 mechanical specifications

Housing material	Aluminum (EN AW-1050A), gray anodized
Dimensions (H × W × L)	80 × 76 × 25 mm (3.15 × 2.99 × 0.98 in)
Weight	94 g (3.31 oz)

DXL421 compliance

EU directives and regulations	EMC Directive (2014/30/EU) RoHS Directive (2011/65/EU) as amended by 2015/863
EMC emissions	CISPR 32 / EN 55032, Class A
Vibration (random)	IEC 60068-2-64 Fh, 10–500 Hz, up to 2.0 g
Free fall	IEC 60068-2-32 Ed, fall height 1000 mm (39 in)
Cold	IEC 60068-2-1, −40 °C (−40 °F) 16 hours
Dry heat	IEC 60068-2-2, +55 °C (+131 °F) 16 hours
Slow change of temperature, 1 °C/min	IEC 60068-2-14, −40 … +55 °C (−40 … +131 °F), 2 cycles
ESD	EN 61000-4-2, contact dis. 4 kV, air dis. 8 kV
RF field	EN 61000-4-3
Fast transient bursts (EFT)	EN 61000-4-4
Transient surges	EN 61000-4-5 [1)]
Conducted RF	EN 61000-4-6

1) With external surge protection for power input when used as a standalone component.

VAISALA

B211347EN-C © Vaisala 2026

All rights reserved. Any logos and/or product names are trademarks of Vaisala or its individual partners. Any reproduction, transfer, distribution or storage of information contained in this document is strictly prohibited. All specifications — technical included — are subject to change without notice.