Indigo 520 Transmitter

For Vaisala smart probes



Features

- Universal transmitter for Vaisala Indigo compatible probes
- Supports 2 detachable probes simultaneously
- Touchscreen display
- IP66 and NEMA 4 rated metal enclosure
- 4 configurable galvanically isolated analog outputs
- 2 relays
- Ethernet connection with web interface for remote access
- Modbus TCP/IP protocol
- Multiple powering options, including Power over Ethernet and AC (mains) power
- EU RO Mutual Recognition type-approved for maritime use

Vaisala Indigo 520 Transmitter is an industrial-grade, robust transmitter that accommodates 1 or 2 Vaisala Indigo compatible probes for humidity, temperature, dew point, carbon dioxide, hydrogen peroxide, and moisture in oil measurements. The transmitter can display measurements on the spot as well as transmit them to automation systems through analog signals, relays, or Modbus TCP/IP protocol.

Variety of probe options

Indigo 520 transmitters are the most versatile option for use with Indigo compatible smart probes such as:

- Humidity and temperature probes: HMP3, HMP4, HMP5, HMP7, HMP8, HMP9, and TMP1
- Dew point probes: DMP5, DMP6, DMP7, DMP8
- CO_2 probes: GMP251, GMP252
- Vaporized hydrogen peroxide probes: HPP271, HPP272
- MMP8 moisture in oil probe

The probes are interchangeable, self-contained measurement instruments that are easily detachable from the transmitter for calibration and maintenance. The probes are connected using a cable that can be extended with a standard instrumentation cable to allow up to 30 m (98 ft) distance between the transmitter and the probe.

For more information on the Indigo product family, see www.vaisala.com/indigo.

Analog and digital interfaces

The transmitter has 4 analog channels that can be configured to mA or voltage type, and 2 configurable relays. Any of the output parameters from the connected probes can be assigned to control the analog channels and relays.

The digital output protocol is Modbus TCP/IP over Ethernet.

Besides Modbus TCP/IP, the transmitter's Ethernet connection provides a web interface and cybersecurity that meets modern standards.

Robust design

The transmitter has a wide operating temperature range, an IP66-rated corrosion-resistant metal enclosure and a touchscreen display made of chemically strengthened (IK08) glass. The transmitter withstands commonly used cleaning chemicals and performs even in the harshest conditions.

The standard mounting options include mounting on a wall and on a DIN rail. With an adapter plate, the transmitter can be installed to replace an HMT330, DMT340, and MMT330 series transmitter. A pole mounting kit is also available as an accessory.

Technical data

Compatible Indigo smart probes

Measurement type	Probe models
Humidity and temperature	HMP3, HMP4, HMP5, HMP7, HMP8, HMP9
Temperature	TMP1
Dew point	DMP5, DMP6, DMP7, DMP8
CO_2	GMP251, GMP252 [1]
Vaporized hydrogen peroxide	HPP271, HPP272
Moisture in oil	MMP8

1) *All GMP251 and GMP252 probes manufactured from 2017 onwards (serial numbers starting with the letter N or later in alphabetical order) have full Indigo compatibility.*

Transmitter options

Display	• Touchscreen display
Powering	• Protective extra low voltage (15 ... 35 VDC, 24 VAC ± 20%) • AC (mains) power (100 ... 240 VAC 50/60 Hz) • Power over Ethernet (no analog outputs or relays)

Inputs and outputs

Operating power	
Protective extra low voltage (PELV) version [1]	15 ... 35 VDC, 24 VAC ±20 %, max. current 2 A
AC (mains) power version [1]	100 ... 240 VAC 50/60 Hz, max. current 1 A
Power over Ethernet version [1]	50 VDC PoE+, IEEE 802.3 at PD
Analog outputs	
Number of analog outputs	4, galvanically isolated from voltage supply
Selectable voltage output types	0 ... 1 V, 0 ... 5 V, 0 ... 10 V, scalable
Selectable current output types	4 ... 20 mA, 0 ... 20 mA, scalable
External loads:	
Current outputs	R_L < 500 Ω
0 ... 1 V output	R_L > 2 kΩ
0 ... 5 V and 0 ... 10 V outputs	R_L > 10 kΩ
Max. wire size	2.5 mm^2 (14 AWG)
Accuracy of analog outputs at +20 °C	±0.05 % full scale
Temperature dependence	±0.005 % / °C full scale
Relay outputs	
Number and type of relays	2 pcs, SPDT
Max. switching power, current, voltage	30 W, 1 A, 40 VDC / 28 VAC
Max. wire size in PELV version	2.5 mm^2 (14 AWG)
Max. wire size in AC (mains) version	1.5 mm^2 (16 AWG)
Ethernet interface	
Supported standards	10BASE-T, 100BASE-TX
Connector	8P8C (RJ45)
Supported protocols	Modbus TCP/IP (port 502), HTTPS (port 8443)

1) *The power supply option is selected when ordering the transmitter.*

Operating environment

Operating temperature	−20 ... +55 °C (−4 ... +131 °F)
Storage temperature	−40 ... +70 °C (−40 ... 158 °F)
Maximum operating altitude	3000 m (9843 ft)

Compliance

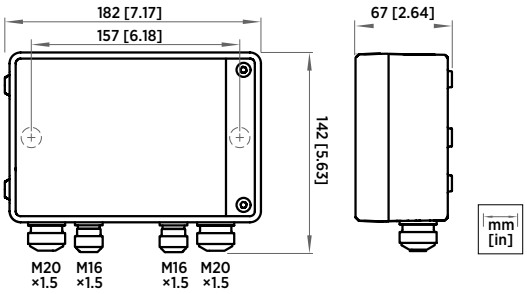
Safety standard	IEC/UL/EN 61010-1
EMC compliance	EN 61326-1, Industrial Environment
Maritime compliance	EU RO Mutual Recognition
FCC compliance	FCC Part 15 Compliance Statement for Class B Unintentional Radiators

Mechanical specifications

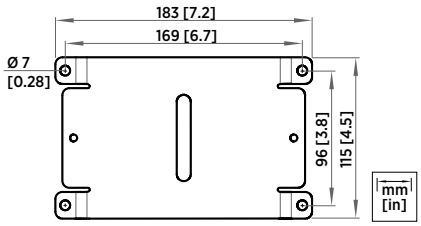
Housing classification	IP66, NEMA 4, IK08, DIN EN ISO 11997-1: Cycle B
Housing material	AlSi10Mg (DIN 1725)
Display window material	Chemically strengthened glass (IK08)
Weight	1.5 kg (3.3 lbs)
Dimensions (H×W×D)	142×182×67 mm (5.63×7.17×2.64 in)
Cable diameters for cable glands	
M20×1.5 glands	5.0 ... 8.0 mm (0.20 ... 0.31 in)
M16×1.5 glands	2.0 ... 6.0 mm (0.08 ... 0.24 in)

Accessories

Adapter plate	DRW252186SP
Installation kit for pole or pipeline	215108
Probe connection cables	
Probe connection cable, 1 m	CBL210896-1MSP
Probe connection cable, 3 m	CBL210896-3MSP
Probe connection cable, 5 m	CBL210896-5MSP
Probe connection cable, 10 m	CBL210896-10MSP



Indigo 520 dimensions and lead-through sizes



Indigo 520 adapter plate dimensions

VAISALA

www.vaisala.com

Published by Vaisala | B211735EN-A © Vaisala 2020

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.