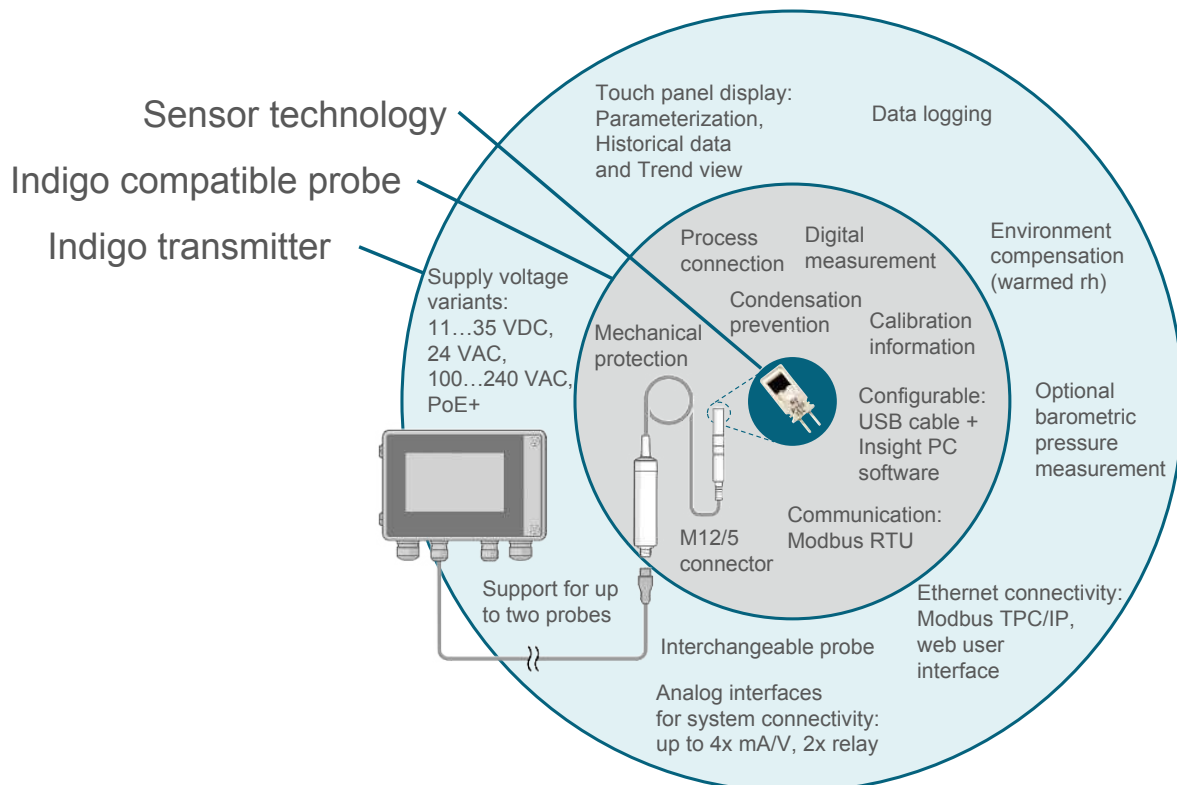# VAISALA

Indigo smart probe platform – the true value of a measurement comes from a combination of sensor technology and usability

The main purpose of an industrial measurement instrument is to provide information from the physical world to help in decision making. The typical use for this information is often related to energy savings and quality improvement. The optimum target can only be reached if the measurement data is reliable.

Vaisala instruments are designed and manufactured to utilize our own in-house sensor technology. This sensor technology is the foundation on which other features of a product are built. Features such as interchangeable probes improve the product usability and lower the threshold for maintaining the best possible measurement performance. Gaining the best value from the measuring device is achieved by choosing the right measuring technology and considering usability and maintenance aspects. This is what the Vaisala Indigo platform is all about.

The Indigo platform is built on top of the core sensor technology. An Indigo-compatible probe provides the measurement and basic functionality, meaning the probe can be used as a standalone measurement instrument. Extended features, and often the best usability, are achieved by connecting the probe with an Indigo transmitter. The following table highlights some of the essential functions and features of a standalone probe compared to the combination with a transmitter.

Comparison of Indigo transmitters and Indigo compatible probes for humidity applications
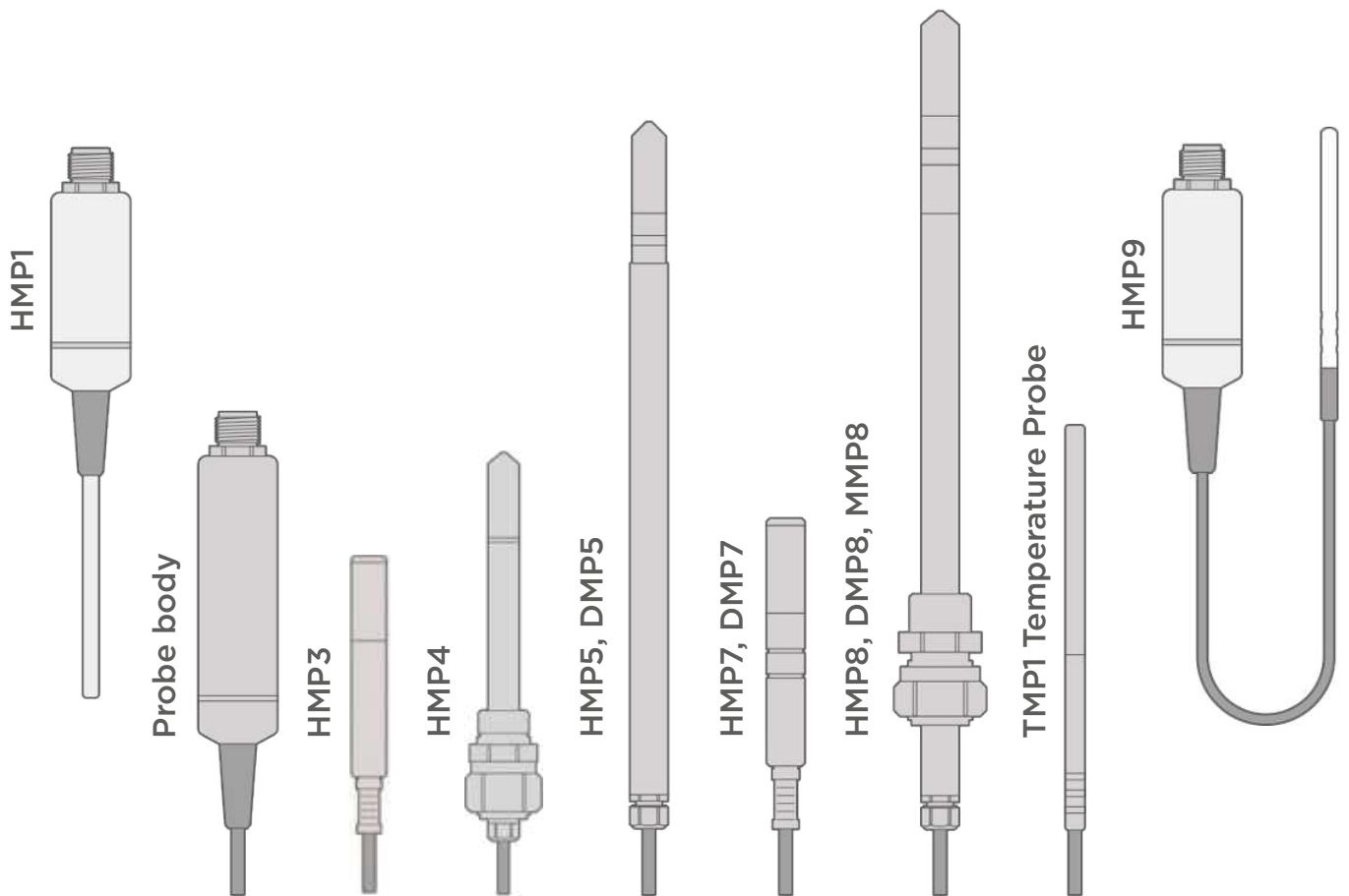
FEATURES AND FUNCTIONALITIES				
	HMP, DMP, MMP probes	**Indigo201, Indigo202**	**Indigo300**	**Indigo510, Indigo520**
Probe connection	Interchangeable probe with M12 5-pin connector	Directly to the host, or with intermediate M12 5-pin cable	M12 5-pin cable or Fixed cable	M12 5-pin cable
Display	-	Indigo201: Optional Indigo202: Standard	Standard	Optional
Human-machine interface	-	*Push button	Push button	*Touchscreen
Connectivity to PC	USB-cable + Free Insight PC software	USB-cable + Free Insight PC software	USB-cable + Free Insight PC software	RJ45-ethernet cable + built-in web server
Analog outputs	-	Indigo201: 3 outputs Indigo202: none	3 outputs	Indigo510: 2 outputs Indigo520: 4 outputs
Relays	-	2 relays	-	Indigo510: none Indigo520: 2 relays
Digital communication	Modbus RTU	Indigo202: Modbus RTU	-	Modbus TCP/IP
Galvanically isolated signal	Not isolated	Not isolated	Not isolated	Standard
Operating temperature	-40 ... +60 °C	-40 ... +60 °C * -20 ... +60 °C	-20 ... +60 °C	Indigo510: -40...+60 *-20...+60 Indigo520: -40...+60 *-20...+55
IP rating	IP66	IP65	IP65	IP66
Housing	Metal	Plastic	Metal	Metal
Operating voltage	Standalone: ** 15 ... 30 VDC Otherwise powered by the host device	** 15 ... 30 VDC, 24 VAC	** 15 ... 30 VDC, 24 VAC	Indigo510: 11 ... 35 VDC / 24 VAC Indigo520: Configurable in order phase: 15 ... 35 VDC / 24 VAC, 100 ... 240 VAC, PoE+
Signal and supply voltage connections	M12 5-pin connector	Screw terminals	Screw terminals with configurable cable glands and conduit fittings	Screw terminals with configurable cable glands and conduit fittings
Data logging	-	-	-	Standard

* With display
** Minimum voltage for HMP7 is 18 VDC

PROBES FOR HUMIDITY APPLICATIONS

Application / Technology	Normal to high humidity / HUMICAP® HMPX	Dry conditions / DRYCAP® DMPX	Moisture in oil / HUMICAP® MMPx
Fixed/wall installation	HMP1	-	-
General purpose probe	HMP1, HMP3, HMP9	DMP7	MMP8
High pressure/vacuum	HMP4, HMP8	DMP8	MMP8
High humidity	HMP7	-	-
High temperature	HMP5	DMP5, DMP6	-

HMP1

Probe body

HMP3

HMP4

HMP5, DMP5

HMP7, DMP7

HMP8, DMP8, MMP8

TMP1 Temperature Probe

HMP9