



Air Speed Active Transmitters

HD29... SERIES - AIR SPEED, TEMPERATURE & RELATIVE HUMIDITY TRANSMITTERS

INTRODUCTION

The **HD29...** series of transmitters sets the standard for air speed monitoring in HVAC, BEMS, and a wide range of specialized environments. Engineered for the pharmaceutical sector, museums, clean rooms, industrial facilities, and even households, these devices are essential wherever precision air monitoring is critical. Whether it's crowded spaces like cafeterias, gymnasiums, and auditoriums or agricultural applications such as livestock farms, the HD29 series delivers dependable performance.

Equipped with advanced sensors and high-precision electronics, this family of transmitters ensures accurate and reliable measurements over time. With options for fixed or cable-connected probes, and compatibility with robust mounting accessories, the HD29 series is designed to adapt to diverse installation scenarios.

FEATURES

Advanced Sensors and Electronics

Integrated sensors paired with cutting-edge electronics deliver long-term measurement accuracy.

Durable Materials

The AISI304 stainless steel stem and the wire mesh filter ensure performance even in harsh environments.

Flexible Probe Options

Duct probe fixed to the electronics enclosure for streamlined installations or cable-connected probe available with different cable lengths for flexible installation in complex setups.

Easy Installation

Graduated scale engraved along the stem for precision positioning to simplify accurate depth and orientation of the probe in ventilation ducts.

CONFIGURATION & MEASUREMENT

Output Range Selection

Available output versions: Active 4...20 mA (HD29A...), 0...10 Vdc (HD29V...), and RS485 Modbus-RTU or ASCII proprietary protocol (HD29S...).

Integration Time Setting

Select between FAST or SLOW response times based on turbulence conditions.

Factory Calibrated for Immediate Use

Pre-calibrated transmitters ensure out-of-the-box reliability, with recalibration required only when replacing probes.



BUILT FOR ANY ENVIRONMENT

The AISI304 stainless steel probes and rugged components ensure reliable performance even in demanding industrial and environmental conditions.



FLEXIBLE INSTALLATION OPTIONS

Choose between fixed or cable-connected probes, with graduated scales and optional accessories for precise and seamless setup.



PRECISION YOU CAN TRUST

Advanced sensors and electronics ensure accurate, reliable air speed, temperature, and humidity measurements over time.



EFFORTLESS CONFIGURATION

Easy to configure via DIP switch or digital command.



READY TO USE OUT OF THE BOX

Factory-calibrated transmitters require no additional adjustments, ensuring immediate and hassle-free operation

Measurement specifications

Sensor

Speed **Thermal**
 Temperature **NTC**
 RH **Capacitive**

Measuring range

Speed **Configurable in HD29A... and HD29V... models:**
 Range 1: 0.05...1 m/s
 Range 2: 0.1...2 m/s
 Range 3: 0.2...10 m/s
 Range 4: 0.2...20 m/s

0.05...20 m/s in HD29S... models

Temperature **-10...+60 °C**
 RH **0...100%**

Accuracy

Speed **HD29A... and HD29V... models:**
 @ 50% RH Range 1: $\pm(0.1 + 3\% \text{ of measured value})$ m/s
 @ 1013 hPa Range 2: $\pm(0.15 + 3\% \text{ of measured value})$ m/s
 Range 3: $\pm(0.5 + 3\% \text{ of measured value})$ m/s
 Range 4: $\pm(0.7 + 3\% \text{ of measured value})$ m/s

HD29S... models:
 $\pm(0.1 + 3\% \text{ of measure})$ m/s @ $V \leq 1$ m/s
 $\pm(0.15 + 3\% \text{ of measure})$ m/s @ $1 \text{ m/s} < V \leq 2$ m/s
 $\pm(0.5 + 3\% \text{ of measure})$ m/s @ $2 \text{ m/s} < V \leq 10$ m/s
 $\pm(0.7 + 3\% \text{ of measure})$ m/s @ $10 \text{ m/s} < V \leq 20$ m/s

 Temperature **± 0.3 °C**
 RH **$\pm 1.5\%$ (10...90%) / $\pm 2\%$ (remaining range) @ $T = 15...35$ °C
 (1.5 + 1.5% of measured value)% @ $T = \text{remaining range}$**

Resolution (HD29S...)

Speed **0.01 m/s**
 Temperature **0.1 °C**
 RH **0.1%**

Air temperature compensation for speed measurement **0...+80 °C**

Ordering codes

HD29

Cable length (only ...TC models)	
02	= 2 m
05	= 5 m
10	= 10 m
Type of probe and stem length (L)*	
TC1 = horizontal fixed probe, short stem	
TC2 = probe with cable, medium stem	
TC3 = probe with cable, long stem	
TO1 = horizontal fixed probe, short stem	
TO2 = horizontal fixed probe, medium stem	
TO3 = horizontal fixed probe, long stem	
Measured quantities	
300 = air speed only	
370 = air speed and temperature	
371 = air speed, temperature and relative humidity	
Type of output	
A = active 4...20 mA analog output	
V = 0...10 V analog output	
S = RS485 digital output	

Fixing accessories and PC connecting cable must be ordered separately.



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Technical specifications

Output

- Active 4...20 mA (HD29A...)
- 0...10 Vdc (HD29V...)
- RS485 Modbus-RTU or ASCII proprietary protocol (HD29S...)

Power supply

- 24 Vac $\pm 10\%$ or 18...40 Vdc (HD29A... and HD29V...)
- 18...30 Vdc (HD29S...)

Power consumption

< 100 mA (+ current of outputs in HD29A... models)

Electrical connections

Screw terminal block, max 1.5 mm², PG9 cable gland

Operating conditions

-10...+60 °C (transmitter housing) /
 -30...+100 °C (probe)
 Speed sensor: clean air, RH<80%

Storage temperature

-10...+70 °C

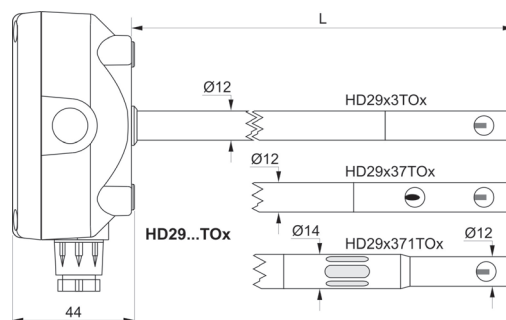
Materials

Housing: ABS
 Front labels: polycarbonate
 Probe stem: stainless steel

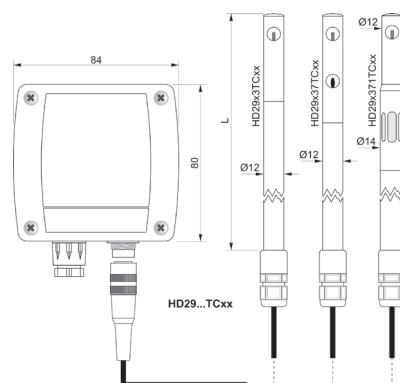
Protection degree

IP65

Versions with horizontal probe



Versions with probe with cable



* The stem length depends on the measured quantities and the type of probe (in mm)

	TC1	TC2	TC3	TO1	TO2	TO3
HD29x300	145	245	345	150	250	350
HD29x370	175	275	375	180	280	380
HD29x371	215	415	565	215	415	565

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