

HE 5760 Filter cleaning system



The complete system for ‚plug-and-play‘

The HE 5760 is a filter cleaning system for industrial dedusting systems based on a master-slave system. It consists of a main control unit HE 5760 and up to 48 valve control units HE 5725, each with 12 valve outputs to be controlled. In addition, up to two analogue values from pressure sensors can be evaluated via the HE 5725.

The individual control units master HE 5760 and slaves HE 5725 control units communicate via an internal CAN bus system and are connected to each other with a corresponding communication cable.

Customer system descriptions, such as number of chambers, number of valves, pressure tanks, etc. are used to create an overall concept for the cleaning system. AXXERON HESCH electronics uses this application-specific information to develop an overall concept that is customised to the individual application.

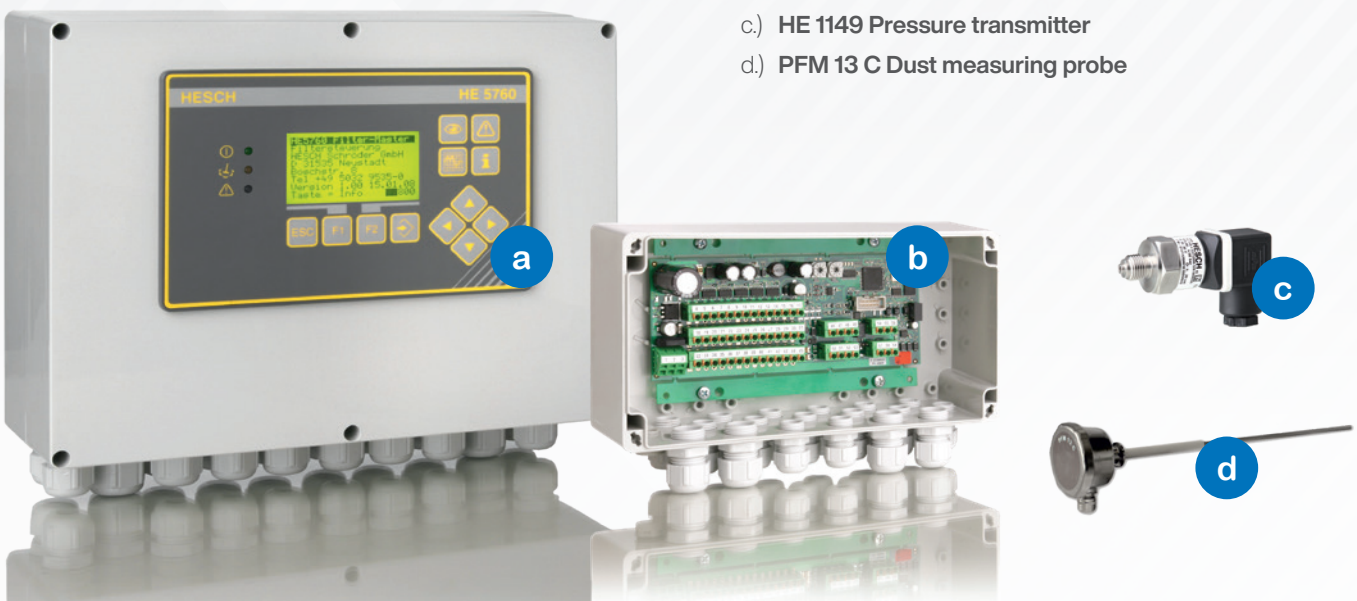
The user receives a complex, pre-wired cleaning system with prepared connection cables for the individual valves and sensors, as well as preset parameter values in the HE 5760 central control unit.

On site, the individual control units are then professionally mounted on the filter, communication connections and power supplies are connected, the pre-assembled valve and sensor cables are plugged in and the system is put into operation.

A software tool, which is available free of charge in a loader version, can be used for support during commissioning. With the Basic and Expert software versions, which are subject to a charge, you can go even deeper into the process to change and manage the corresponding data records in the HE 5760 control unit. It is possible to connect the cleaning system to a higher-level control system.

Technical data for the individual components can be found on the following pages 2-5.

- a.) HE 5760 Cleaning controller
- b.) HE 5725 Valve control unit
- c.) HE 1149 Pressure transmitter
- d.) PFM 13 C Dust measuring probe



a.) HE 5760 Cleaning controller

The HE 5760 is a master-slave controller consisting of a main control unit and several valve control units for the cleaning process of industrial dedusting systems.

The HE 5725 valve control units, each of which controls 12 valves, are used to expand the system into a complete dedusting control system. Up to 48 valve control units can be centrally controlled as CAN „slaves“ by the HE 5760. The valves are assigned to filter chambers. The control unit is set to the existing number of chambers and valves using the configuration menu.



Technical data			
Supply voltage	24 V DC (18...30 V DC)		
Display	Graphic LC display: 240 × 64 pixels, 133 × 39 mm Colour: green, backlight: LED		
Control elements	Membrane keypad, 16 function keys, customised designation. Numeric keypad, cursor/control block		
Real-time clock	Date, time (power failure buffer: approx. 1 year)		
µ Processor	Siemens C167CR		
Memory	256 kByte static RAM · 512 kByte FLASH Data · 512 kByte FLASH Programm · 8 kByte parallel EEPROM		
Inputs (on board)	4 × analogue: 4...20 mA, block galvanically isolated, 8 × digital: 24 VDC galvanically isolated		
Outputs	8 × digital: 24 V DC galvanically isolated, short-circuit-proof		
CAN bus	according to ISO 11898, max. 1 Mbit/s · Specification: 2.0A · Supply: galvanically isolated		
Profibus-DP	according to EN 50 170, max. 12 Mbit/s · Automatic baud rate detection · RS 485		
Serial interface	RS 232 and RS 422 or RS 485 Baud rate selectable via software max. 38400 bit/s		
Housing	Panel mounting Protection class: front IP54, rear IP20		
Dimensions	295 × 200 × 40 mm (W × H × D) Required cut-out: 265 × 170 mm		
Jumper	CAN bus termination (bus termination). Must not be carried out if the termination has already been carried out on the outside of the connector.		
Humidity	Permanent 75 % rel. humidity, non-condensing		
Shock resistance	DIN 40046 IEC68-2-69		
EMC	EN 61000-6-3 (2007) + A1	EN 61000-6-2 (2005)	
Connection technology	Via plug/screw plug-in terminals (max. cross-section 2.5 mm ²)		
Climatic environmental conditions	Storage	Operation	Relative humidity
	- 20 °C ... + 70 °C	0 °C ... + 50 °C	permanent 75 % non-condensing
Switch box version	Dimensions	Material	Protection class
	760×760×300 mm (W × H × D)	Steel plate RAL 7035, Powder-coated	IP55 (higher on request)

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b.) HE 5725 Valve control unit

The HE 5725 valve control unit is part of a fieldbus valve control system. The control unit is completely pre-wired, configured and tested. It does not require any further settings or configurations. The CAN cable and the power supply must be connected.



Technical data	
Supply voltage	24 V DC; -10/+15 % 100... 240 V AC or 90 ... 250 V DC (with AC/DC Converter)
Power input	-
EMC	-
Shock / vibration resistance	-
Output signals valves	Voltage: 24V DC; 1 A, Quantity: 12, short-circuit proof
CAN-Bus	CAN interface, galvanically isolated, 50 kBit/s
Display	4 × LED for operation, Puls, CAN, Error
Connection technology	Push-In clamps
Storage temperature	-20 ... +70 °C
Operating temperature	0 ... + 60 °C
Relative humidity	Permanent 75 % humidity, no condensation allowed
Housing dimensions (W × H × D)	300 × 150 × 80 mm
Type	Sheet steel RAL 7035, powder-coated
Protection class	IP55 (Higher upon request)
UL	Possible upon request
Valve cable	Sensor/actuator cable 3-pole, free cable end on valve connector
Materials	Control cable halogen-free, black-grey RAL 7021
Connector plug valve	Typ-A DIN 43650-A / ISO 4400 (sharpened)

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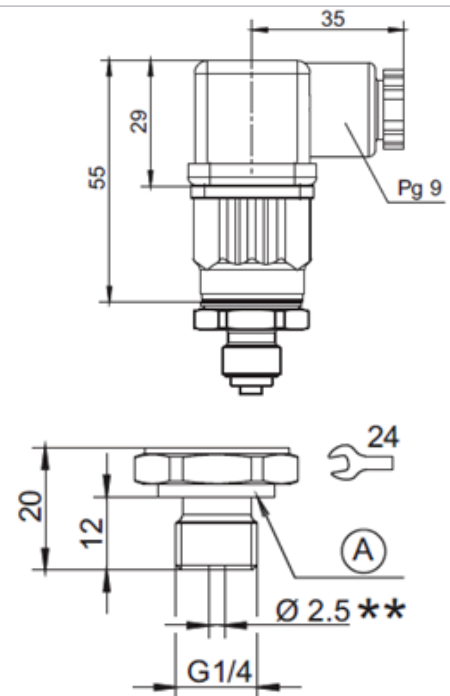


c.) HE 1149 Pressure transmitter

The pressure transmitter HE 1149 is used for recording e.g. the system pressure in compressed air tanks or filter cleaning systems. It supplies a 4...20 mA two-wire measuring signal. The pressure transmitter has a robust stainless steel housing, long-term stability and high overload capacity. All parts in contact with the medium are made of stainless steel. The high process reliability is ensured by a seal-less, welded measuring system.



Technical data	
Measuring principle	Thick film DMS
Pressure measuring ranges	6/10 bar relative (other measuring ranges upon request)
Reaction time T90	< 5 ms
Overload capacity	3 × Nominal pressure
Parts in contact with medium, housing	1.4305
Supply voltage	4 ... 30 V DC
Output signal	4 ... 20 mA Two-wire technology, with reverse polarity protection
Power input	approx. 25 mA
Electrical connection	Angle plug DIN 43650 with screw connection for 8 mm connection cable
Process connection	G1/4"
Protection type	IP65
Overall accuracy	+/-1% End of measuring range
Temperature error zero point	< 0.004 % /K
Temperature error final value	< 0.004 % / K
Medium and ambient temperature Operation	-20 ... +85 °C
Storage temperature	-40 ... +125 °C
Humidity	90 % non-condensing
Vibration resistance	20 g at 10 to 2000 Hz, acc. to IEC 60068-2-6
Shock resistance	50 g for 11 ms, 100 g for 1 ms, acc. to IEC 60068-2-27
Certification	CE



A: Profile seal in material FKM

► Other versions e.g. process connection, electrical connection upon request.

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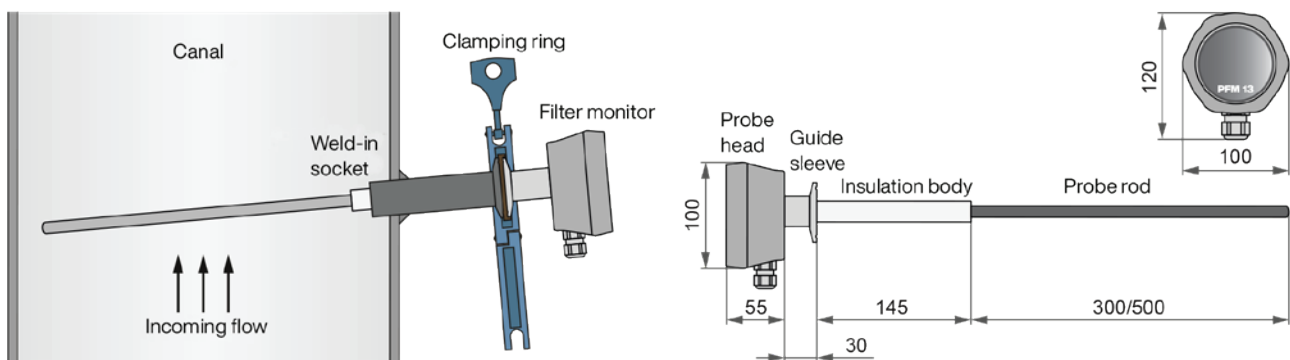
d.) PFM 13 C Dust measuring probe

The PFM 13 C is used for permanent monitoring of dust emissions in conjunction with the valve controllers HE 5750 and 5760. Used as a filter monitor, the device is an effective tool for detecting and locating damage on filtering separators at an early stage. Configured as a dust monitor, it can be used for continuous monitoring of clean pure gas and dust contents of filtering separators.



► Special versions are possible upon request.

Technical data	
Housing	Compact device (integrated graphic display with operation); IP65; protection class 1
Dimensions	approx. 100 mm × 100 mm × 530/730 mm (W × H × D)
Weight	approx. 1.0 kg
Probe	Triboelectric probe consisting of probe rod and probe head; Probe rod: electrically insulated from the housing, length: 300 mm or 500 mm (can be shortened mechanically); Immersion depth: 400 mm or 600 mm (depending on application)
Ambient temperature	-20 ... +50 °C
Air humidity	No special sensitivity
Dew point difference	min. +5 K
Measuring gas temperature	max. 280 °C
Flow rate	from approx. 3 m/s
Dust measuring range	0 ... 100 %
Amplification levels	4
Ready for use	immediately after connecting the power supply
Analogue output	4 ... 20 mA, 2-wire transmitter, galvanically isolated from device ground, max. load 150 Ω
Process connector	Weld-in socket with Tri-Clamp fastening
Cable gland/ clamping range	M20 x 1.5 / 9...13 mm
Voltage supply	via 2-wire transmitter (4...20 mA); min. 15 V DC / max. 30 V DC



Änderungen vorbehalten | 11/2023 | Version 1.0

