Quick Guide

EE671 - Miniature Air Flow Probe

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PLEASE NOTE

Find this document and further product information on our website at www.epluse.com/ee671.

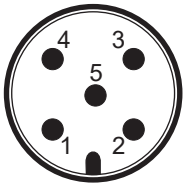
Electrical Connection

WARNING

Incorrect installation, wiring or power supply may cause overheating and result in personal injury or property damage. Cables must not be under voltage during electrical installation and connection or disconnection, especially at terminal connections on circuit boards. For correct cabling, always observe the presented wiring diagram for the product version used. The manufacturer cannot be held responsible for personal injury or damage to property caused by incorrect handling, installation, wiring, power supply or maintenance of the device.

PLEASE NOTE

- The device may only be powered with a power supply class III (Europe) or with a class 2 supply (North America).
- EE671 is an ESD-sensitive device. It is neither short-circuit-proof, nor surge-proof. The digital communication lines may not be connected to the supply lines.



M12 device plug front view

Pin number	Wire colour	Function	Digital Interface
1	Grey	SDA (digital setup interface E2)	V+ = Supply voltage
2	Brown	GND	RS485 B (D-)
3	Green	AV = Analog output	GND
4	Yellow	SCL (digital setup interface E2)	RS485 A (D+)
5	White	V+ = Supply voltage	n.c.

Modbus Register Map

FLOAT32

Parameter	Unit[1]	Register number[2] [DEC]		Register address[3] [HEX]	
Read register: function code 0x03 / 0x04					
		6)	7)	6)	7)
Temperature	°C	1003	26	3EA	19
	°F	1005	28	3EC	1B
	K	1009	30	3F0	1D
Air velocity	m/s	1041	32	410	1F
	ft/min	1043	34	412	21

INT16

Parameter	Unit[1]	Scale[4]		Register number[2] [DEC]		Register address[3] [HEX]	
Read register: function code 0x03 / 0x04							
5)		6)	7)	6)	7)	6)	7)
Temperature	°C	100	100	4002	46	FA1	2D
	°F	50	100	4003	47	FA2	2E
	K	50	100	4005	48	FA4	2F
Air velocity	m/s	100	100	4021	49	FB4	30
	ft/min	1	10	4022	50	FB5	31

1) The choice of measurement units (metric or non-metric) must be done according to the ordering guide, see EE671 datasheet. Switching from metric to non-metric or vice versa by using the EE-PCS is not possible.
2) Register number (decimal) starts from 1.
3) Register address (hexadecimal) starts from 0
4) Examples: For scale 100, the reading of 2550 means a value of 25.5. For scale 50, the reading of 2550 means a value of 51.
5) Please observe correct scaling for used registers.
6) Measured values available in both registers - left column E+E standard registers, right column legacy registers.
7) Registers in right column not intended for new design (0026...0050 / 0x19...0x31) - left column E+E standard registers, right column legacy registers.

Modbus Setup

	Factory settings	User selectable values (via PCS10)
Baud rate	9600	9600, 19200, 38400, 57600, 76800, 115200
Data bits	8	8
Parity	Even	None, odd, even
Stop bits	1	1, 2
Modbus address	238	1...247

The recommended settings for multiple devices in a Modbus RTU network are 9600, 8, Even, 1. The EE671 represents 1 unit load in a Modbus network.

Device address, baud rate, parity and stop bits can be set via:

- PCS10 Product Configuration Software and the the appropriate configuration cable HA011018.
  The PCS10 can be downloaded free of charge from www.epluse.com/pcs10.
- Modbus protocol in the register 1 (0x00) and 2 (0x01).
  See Application Note Modbus AN0103 (available at www.epluse.com/ee671).

The serial number as ASCII-code is located in read-only registers 1 - 8 (0x00 - 0x07, 16 bits per register).
The firmware version is located in register 9 (0x08) (bit 15...8 = major release; bit 7...0 = minor release).
The sensor name as ASCII-code is located in read-only registers 10 - 17 (0x09 - 0x11, 16 bits per register).

Communication settings (INT16)

Parameter	Register number[1] [Dec]	Register address[2] [Hex]	Size[3]
Write register: function code 0x06			
Modbus address[4]	1	00	1
Modbus protocol settings[4]	2	01	1

Device information (INT16)

Parameter	Register number[1] [Dec]	Register address[2] [Hex]	Size[3]
Read register: function code 0x03 / 0x04			
Serial number (as ASCII)	1	00	8
Firmware version	9	08	1
Sensor name (as ASCII)	10	09	8

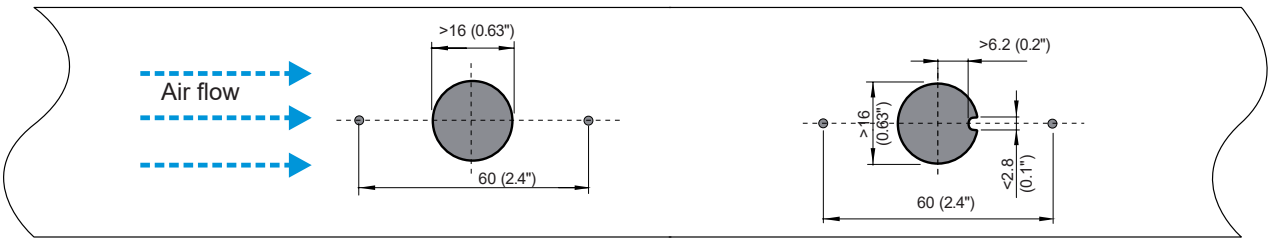
1) Register number (decimal) starts from 1.
2) Register address (hexadecimal) starts from 0.
3) Number of registers.
4) For Modbus address and protocol settings see Application Note Modbus AN0103 (available at www.epluse.com/ee671).

Drilling Pattern

PLEASE NOTE

By leaving out a key notch, the flange can only be fitted in the correct direction.

Conventional drilling: **Laser cutting:**



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