

# + Quick Guide

## EE364 - Moisture in Oil Sensor



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in sensor  
technology.

### **i** PLEASE NOTE

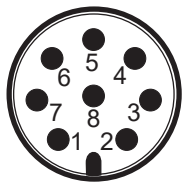
Find this document and further product information on our website at [www.epluse.com/ee364](http://www.epluse.com/ee364).

## Electrical Connection

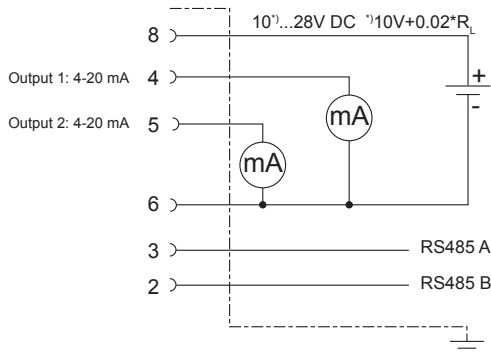
### **⚠** WARNING

Incorrect installation, wiring or power supply may cause overheating and can therefore lead to personal injuries or damage to property. For correct cabling of the device, always observe the presented wiring diagram for the product version used. The manufacturer cannot be held responsible for personal injuries or damage to property as a result of incorrect handling, installation, wiring, power supply or maintenance of the device.

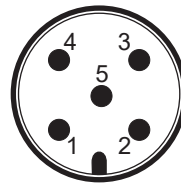
### EE364



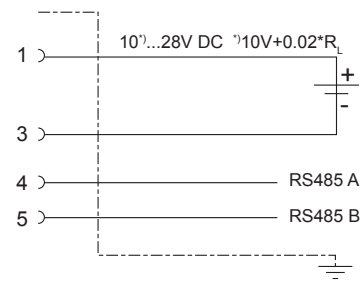
M12 device plug  
(Front view)



### EE364 OEM Style (RS485 only)



M12 device plug  
(Front view)



### **i** PLEASE NOTE

In order to comply with the EMC Directive 2014/30/EU, a shielded cable must be used.

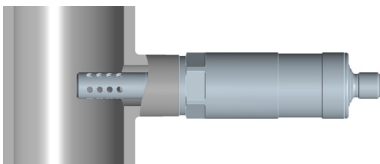
## Setup and Adjustment

The EE364 is ready to use and does not require any user configuration. The factory setup of EE364 corresponds to the type number ordered. If needed, the user can change the factory setup or make an adjustment with the help of the optional Modbus configuration adapter and the free PCS10 Product Configuration Software ([www.epluse.com/pcs10](http://www.epluse.com/pcs10)).

## Installation

### **i** PLEASE NOTE

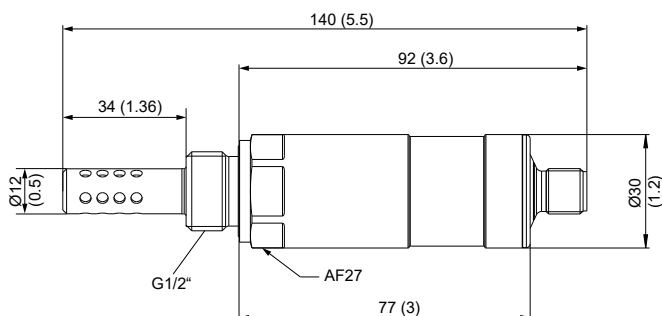
Continuous oil flow allows for short response time. In such installations, place the sensor with the perforated filter at least partially within the oil.



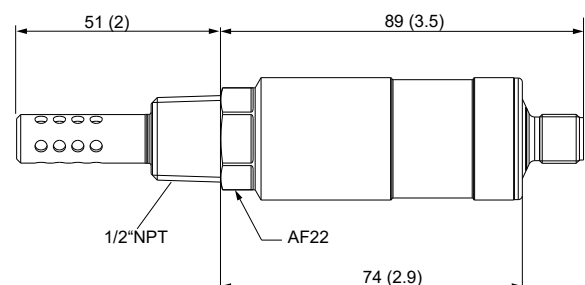
## Dimensions

Values in mm (inch)

### ISO



### NPT



## Modbus Setup

	Factory settings	User selectable values (via PCS10)
Baud rate	9600	9600, 19200, 38400, 57600, 76800
Data bits	8	8
Parity	Even	None, odd, even
Stop bits	1	1, 2
Modbus address	243	1...247

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

- PCS10 Product Configuration Software and the the Modbus configuration adapter HA011013.  
The PCS10 can be downloaded free of charge from [www.epluse.com/pcs10](http://www.epluse.com/pcs10).
- Modbus protocol in the register 1 (0x00) and 2 (0x01).  
See Application Note Modbus AN0103 (available at [www.epluse.com/ee364](http://www.epluse.com/ee364)).

The serial number in ASCII format is located in read-only register 1 - 8 (16 bits per register). The firmware version is located in register 9 (bit 15...8 = major release; bit 7...0 = minor release). The sensor name is located in register 10 (0x09).

### Communication settings (INT16)

Parameter	Unit <sup>1)</sup>	Register number <sup>2)</sup> [DEC]	Register address <sup>3)</sup> [HEX]
Write register: function code 0x06			
Modbus address <sup>4)</sup>	-	1	00
Modbus protocol settings <sup>4)</sup>	-	2	01

1) The choice of measurement units (metric or non-metric) must be done according to the ordering guide, refer to EE364 datasheet.

Switching from metric to non-metric or vice versa by using the PCS10 is not possible.

2) Register number (decimal) starts from 1.

3) Register address (hexadecimal) starts from 0.

4) For Modbus address and protocol settings refer to Application Note Modbus AN0103 (available at [www.epluse.com/ee364](http://www.epluse.com/ee364)).

## Modbus Register Map

### FLOAT32

Parameter	Unit <sup>1)</sup>	Register number <sup>2)</sup> [DEC]	Register address <sup>3)</sup> [HEX]
Read register: function code 0x03 / 0x04			
Water activity aw	-	52	33
Water content x	ppm	54	35
Temperature T	°C/°F	26	19
Oil parameter A	-	224	DF
Oil parameter B	-	226	E1
Oil parameter C <sup>4)</sup>	-	228	E3
Oil parameter D <sup>4)</sup>	-	230	E5
Oil parameter E <sup>4)</sup>	-	232	E7
Write register: function code 0x10			
Oil parameter A <sup>5)</sup>	-	101	64
Oil parameter B <sup>5)</sup>	-	103	66
Write register: function code 0x10 (with firmware V2.0.22 or higher)			
Oil parameter A <sup>6)</sup>	-	224	DF
Oil parameter B <sup>6)</sup>	-	226	E1
Oil parameter C <sup>6)</sup>	-	228	E3
Oil parameter D <sup>6)</sup>	-	230	E5
Oil parameter E <sup>6)</sup>	-	232	E7

1) The choice of measurement units (metric or non-metric) must be done according to the ordering guide, refer to the [EE364 datasheet](#).

Switching from metric to non-metric or vice versa by using the PCS10 is not possible.

2) Register number (decimal) starts from 1.

3) Register address (hexadecimal) starts from 0.

4) With device firmware version 2.0.22 or higher.

5) If parameters A and B are written with these addresses, parameters C, D and E are automatically set to 0.

Examples: Writing Parameter A -2663.30005 decimal: F3 10 00 64 00 02 04 74 CD C5 26 A4 4A

Writing Parameters A and B -1663.30005 and 7.3705 decimal: F3 10 00 64 00 04 08 E9 9A C4 CF DB 23 40 EB BF 6E

If two parameters are to be uploaded, it is recommended to write them with a single command.

6) Example: A= -100, B=10, C=-110, D=11, E=1

F3 10 00 DF 00 0A 14 00 00 C2 C8 00 00 41 20 00 00 C2 DC 00 00 41 30 00 00 3F 80 22 0A.

