



Order form  
Orderer \_\_\_\_\_

Valid from December 2015

Order no. \_\_\_\_\_

## MMT317 Moisture and Temperature Transmitter

|  | 1  | 2                                    | 3                          | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--|--|--------------------------------------|----------------------------|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| <b>Vaisala HUMICAP® Moisture and Temperature Transmitter for Oil</b> <b>MMT310</b> |  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 1. Probe code  | MMT317   | small pressure tight probe           | 7                          |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 2. Transmitter type  | aw+T   |                                      |                            | F |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | aw+T+ppm   | for mineral transformer oil only     |                            | M |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | %RS + T + ppm  | mineral transformer oil only         |                            | P |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | aw+T+ppm**)  | specific transformer oil type: _____ |                            | X |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 3. Mounting  | Mounting plate (72.5 x 115 mm)   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 4. Power supply  | no (24 VDC)  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 5. Signal output   | Analog output channel (Ch1&Ch2)  |                                      | 4... 20 mA & RS232C        |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Analog output channel (Ch1&Ch2)  |                                      | 0... 20 mA & RS232C        |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Analog output channel (Ch1&Ch2)  |                                      | 1... 5 V & RS232C          |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Analog output channel (Ch1&Ch2)  |                                      | 0... 5 V & RS232C          |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Analog output channel (Ch1&Ch2)  |                                      | 0... 10 V & RS232C         |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 6. Analog output signals   | Analog outputs disabled  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 7. for Ch1 and Ch2   | Temperature (choose range in next section)   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | aw (0...1)   | (0...1)                              |                            |   |   |   |   | A |   |    |    |    |    |    |    |    |    |
|  | ppm (0...100)  | (0...100)                            |                            |   |   |   |   | C |   |    |    |    |    |    |    |    |    |
|  | %RS (0..100)   | (0..100)                             |                            |   |   |   |   | T |   |    |    |    |    |    |    |    |    |
| SPECIAL:   | Define quantity for CH1: _____ CH2: _____  |                                      |                            |   |   |   |   | U |   |    |    |    |    |    |    |    |    |
|  | Define scale for CH1: _____ CH2: _____   |                                      |                            |   |   |   |   | U |   |    |    |    |    |    |    |    |    |
|  |  |                                      |                            |   |   |   |   | W |   |    |    |    |    |    |    |    |    |
|  |  |                                      |                            |   |   |   |   | X |   |    |    |    |    |    |    |    |    |
| NOTE:  | - Choose A for both channels if you don't use analog outputs   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  |  |                                      | Ch1                        |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  |  |                                      | Ch2                        |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 8. Analog output range   | No range   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| for temperature  | -60...+60 °C   | (-76...+140 °F)                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | -40...+60 °C   | (-40...+140 °F)                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | -40...+120 °C  | (-40...+248 °F)                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | -40...+180 °C  | (-40...+356 °F)                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | -20...+60 °C   | (-4...+140 °F)                       |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | -20...+80 °C   | (-4...+176 °F)                       |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | -20...+120 °C  | (-4...+248 °F)                       |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| NOTE:  | - Choose A when T is not desired   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | 0...+60 °C   | (+32...+140 °F)                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | 0...+100 °C  | (+32...+ 212 °F)                     |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  |  | special                              |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 9. Output units  | metric   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | non-metric   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 10. Interface connection   | Connector (M12, 8-pin), no plug  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Connector (M12, 8 pin) and plug with 5 m cable   |                                      | spare 5 m cable: 212142    |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Connector (M12, 8 pin) and plug with 10 m cable  |                                      | spare 10 m cable: 210964SP |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Connector (M12, 8 pin) and plug with screw terminals   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 11. Operating manual language  | no manual  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | english see latest manual online: <a href="http://www.vaisala.com/mmt310">www.vaisala.com/mmt310</a> |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 12. Probe  | with 0.5 m cable   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | with 2 m cable   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | with 5 m cable   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | with 10 m cable  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 13. Moisture sensor type   | special sensor for fluids  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | spare: HUMICAP180L2  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 14. Sensor protection in probe   | stainless steel grid (for applications with high flow speed, >1 m/s)                                 |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | spare: 220752SP  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | stainless steel grid (standard)  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | spare: HM47453SP   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 15. Special features   | none   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 16. Installation kit   | Swagelok ISO 1/2"  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | spare: SWG12ISO12  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Swagelok NPT 1/2"  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | spare: SWG12NPT12  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | Swagelok ISO 3/8"  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | spare: SWG12ISO38  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 17. Calibration certificate  | calibration at room temperature  |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|  | standard service calibration: 216989   |                                      |                            |   |   |   |   |   |   |    |    |    |    |    |    |    |    |

Selections in bold are included in the prices of the basic versions.

Selections in italic are available at an extra price.

**Options and accessories:**

238607 USB Service cable  
ASM211103 Rain Shield

Example of order code with typical settings:

|        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| MMT310 | 7 | F | 5 | A | 1 | C | T | K | 1 | 4  | B  | P  | 2  | F  | 1  | K  | 2  |

End customer: \_\_\_\_\_

\*\*) Check the availability and special delivery time from your local Vaisala representative.  
This model is always needed with silicone based transformer oils.

## MMT318 Moisture and Temperature Transmitter

|   | 1  | 2  | 3                   | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|--|--|---------------------|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| <b>Vaisala HUMICAP® Moisture and Temperature Transmitter for Oil MMT310</b> |  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 1. Probe code   | MMT318   | for pressurized pipelines  | 8                   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 2. Transmitter type   | aw+T   |  |                     | F |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | aw+T+ppm   | for mineral transformer oil only   |                     | M |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | %RS + T + ppm  | mineral transformer oil only   |                     | P |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | aw+T+ppm**)  | specific transformer oil type: _____   |                     | X |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 3. Mounting   | Mounting plate (72.5 x 115 mm) 5   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 4. Power supply   | no (24 VDC) A  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 5. Signal output  | Analog output channel (Ch1&Ch2)  |  | 4... 20 mA & RS232C | 1 |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Analog output channel (Ch1&Ch2)  |  | 0... 20 mA & RS232C | 2 |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Analog output channel (Ch1&Ch2)  |  | 1... 5 V & RS232C   | J |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Analog output channel (Ch1&Ch2)  |  | 0... 5 V & RS232C   | 4 |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Analog output channel (Ch1&Ch2)  |  | 0... 10 V & RS232C  | 5 |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 6. Analog output signals  | Analog outputs disabled A A  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 7. for Ch1 and Ch2  | Temperature (choose range in next section) C C   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | aw (0...1)   | (0...1)  |                     | T |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | ppm (0...100)  | (0...100)  |                     | U |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | %RS (0..100)   | (0..100)   |                     | W |   |   |   |   |   |    |    |    |    |    |    |    |    |
| SPECIAL:  | Define quantity for CH1: _____   | CH2: _____   |                     | X |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Define scale for CH1: _____  | CH2: _____   |                     | X |   |   |   |   |   |    |    |    |    |    |    |    |    |
| NOTE:   | - Choose A for both channels if you don't use analog outputs                           |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   |  |  | Ch1                 |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   |  |  | Ch2                 |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 8. Analog output range  | No range A   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| for temperature   | -60...+60°C  | (-76...+140°F)   |                     | B |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | -40...+60°C  | (-40...+140°F)   |                     | C |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | -40...+120°C   | (-40...+248°F)   |                     | D |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | -40...+180°C   | (-40...+356°F)   |                     | E |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | -20...+60°C  | (-4...+140°F)  |                     | F |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | -20...+80°C  | (-4...+176°F)  |                     | G |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | -20...+120°C   | (-4...+248°F)  |                     | H |   |   |   |   |   |    |    |    |    |    |    |    |    |
| NOTE:   | 0...+60°C  | (+32...+140°F)   |                     | J |   |   |   |   |   |    |    |    |    |    |    |    |    |
| - Choose A when T   | 0...+100°C   | (+32...+ 212°F)  |                     | K |   |   |   |   |   |    |    |    |    |    |    |    |    |
| is not desired  | special  |  |                     | X |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 9. Output units   | metric 1   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | non-metric 2   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 10. Interface connection  | Connector (M12, 8-pin), no plug 0  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Connector (M12, 8 pin) and plug with 5m cable  | spare 5 m cable: 212142  |                     | 4 |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Connector (M12, 8 pin) and plug with 10 m cable  | spare 10 m cable: 210964SP   |                     | 7 |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | Connector (M12, 8 pin) and plug with screw terminals                                   |  |                     | 5 |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 11. Operating manual language   | no manual A  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | english  | see latest manual online: <a href="http://www.vaisala.com/mmt310">www.vaisala.com/mmt310</a> |                     | B |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 12. Probe type  | 226 mm probe   | with 2 m cable   |                     | S |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | 226 mm probe   | with 5 m cable   |                     | T |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | 226 mm probe   | with 10 m cable  |                     | U |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | 448 mm probe   | with 2 m cable   |                     | V |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | 448 mm probe   | with 5 m cable   |                     | W |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | 448 mm probe   | with 10 m cable  |                     | Z |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 13. Moisture sensor type  | special sensor for fluids spare: HUMICAP180L2 2  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 14. Sensor protection in probe  | stainless steel grid (for applications with high flow speed, >1 m/s) spare: 220752SP E |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | stainless steel grid (standard) spare: HM47453SP F                                     |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 15. Special features  | none 1   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 16. Installation kit  | ball valve set spare: BALLVALVE-1 E  |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | fitting body ISO1/2, no leak screw spare: DRW212076SP G                                |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|   | fitting body NPT1/2, no leak screw spare: 212810SP H                                   |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
| 17. Calibration certificate   | calibration at room temperature standard service calibration: 216989 2                 |  |                     |   |   |   |   |   |   |    |    |    |    |    |    |    |    |

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Selections in *italic* are available at an extra price.

**Options and accessories:**  
238607 USB Service cable  
ASM211103 Rain Shield

Example of order code with typical settings:

|        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| MMT310 | 8 | F | 5 | A | 1 | C | T | K | 1 | 4  | B  | S  | 2  | F  | 1  | E  | 2  |

End customer: \_\_\_\_\_

\*\*\*) Check the availability and special delivery time from your local Vaisala representative.  
This model is always needed with silicone based transformer oils.