



## OMC-4XX Temperature Sensors

The Temperature humidity range consists of several sensors and accessories, for measuring air temperature, sea water temperature and relative humidity. As standard an OMC-406 is used for measurement of temperature and humidity. This sensor is supplied with two 4..20 mA outputs and should be mounted into a radiation shield. When only air temperature is required the OMC-443 may be applied. This sensor is also used on board ships for sea water temperature. In this last case the sensor is mounted into a the sea water inlet using a thermo well.

### Features

- OMC-406
  - Combined temperature and humidity sensor
  - High accuracy
  - 4...20 mA outputs
- OMC-443
  - Temperature sensor
  - High accuracy (A class)
  - 4...20 mA output
- OMC-422
  - Multiplate radiation shield
  - Used for air temperature and/or rel. humidity measurement

On request Ex sensors are available



*Cruise ship*



*Met station near dam*

## GENERAL

### OMC-406

The air temperature and humidity probe OMC-406 provides accurate and precise measurements of both temperature and humidity in two 4...20 mA outputs. The temperature sensor within this probe is a Pt100 element while the principle of humidity measurement is based on a capacitive measuring device.

### OMC443/448

The air temperature sensor OMC-443/448 provides an accurate measurement of temperature using a Pt100 sensing element. A build-in amplifier is provided with a 4...20 mA output. This corresponds with -40 to +60 deg. C. Of course other ranges are available on request.

The OMC-443 has a 1" NPT connection and fits in the OMC-422 (air temperature). The OMC-448 has a 1/2" NPT connection and fits in the OMC-449 (water temperature).

### OMC-422

The OMC-422 multiplate anti-radiation shield is a naturally ventilated shield, designed for ambient temperature and relative humidity sensors. The convenient size and weight of this type make it useful for a wide range of applications.

### OMC-449

The OMC-449 Thermowell is made of stainless steel 316 and has a 1/2" NPT connection.

## DATA SUMMARY

### OMC-406

#### HUMIDITY

- Measuring range 0 to 100% RH
- Accuracy at 23 deg. C  $< \pm 1.5\%$  RH between 10 to 95%
- Reproducibility  $< \pm 0.5\%$  RH
- Hysteresis for a 4 hour cycle  $< 1\%$  RH
- Time constant at 23 deg. C  $< 15$  sec.
- Temperature error  $\pm 0.5\%$  RH
- Linear output 4...20 mA = 0...100 %



Rietdekkerstraat 6  
2984 BM Ridderkerk

P.O. Box 60  
2980 AB Ridderkerk  
The Netherlands

Phone +31 (0)180 463 411  
Telefax +31 (0)180 463 530  
E-mail info@observator.com  
www.observator.com

## TEMPERATURE

- Measuring range -40 to +60 deg. C
- Accuracy  $< \pm 0.5$  deg. C.
- Reproducibility  $< \pm 0.1$  deg. C.
- Time constant 15 sec.
- Linear output 4...20 mA
- Measuring system Pt100, 1/3 DIN

## GENERAL

- Power supply 10 to 30 Vdc, 50 mA
- Protection of the sensors wire mesh filter
- Dimensions L. 265 mm, 25 mm dia
- Net weight 0.17 kg

### OMC-443/448

#### TEMPERATURE

- Measuring range -40 to +60 deg. C.
- Accuracy  $< \pm 0.3$  deg. C.
- Reproducibility  $< \pm 0.1$  deg. C.
- Time constant 10 sec.
- Linear output 4...20 mA
- Measuring system Pt100, DIN class A
- Connection 2-wire

## GENERAL

- Power supply 10 to 30 Vdc
- LED indication for proper connection
- Dimensions L. 225 mm, 65mm dia
- Net weight 0.25 kg

### OMC-422 RADIATION SHIELD

- Dimensions overall 12 cm dia, height 27 cm, plates 2 mm thick, 11 mm spacing.
- Mounting V-block and U-bolt fit vertical pipe 25,50 mm dia.
- Net weight 0.7 kg

