

SICE NAVIGATION AID SYSTEM SAFE AREA VISIBILITY METER (FOG DETECTOR)



Visibility Sensor PWD20 is an optical sensor that measures visibility (meteorological optical range, MOR). The sensor measures visibility using the principle of a forward scatter measurement.

With a measurement range of 10...20,000 meters, this Visibility Sensor, type PWD20, offers long-range visibility measurement for several applications covering harbors, coastal areas, heliports, windmill parks- indeed, any locations or areas where visibility measurement is necessary.

The PWD20 Visibility sensor is compact, low weight and less than one meter long. It is equipped with a cable and connector for easy installation, and can be mounted in many ways on any existing mast.

SICE includes, in the Visibility meter kit, a mechanical fixing bracket, complete with connecting junction box that is suitable to mount this equipment on an existing pipe of 1-½", as for following drawing.



Recommended Location of PWD20:

The receiver and transmitter optics should not point towards powerful light sources. It is recommended that the receiver will point north in the northern hemisphere, and south in the southern hemisphere. The receiver circuit may become saturated in bright light, in which case the built-in diagnostics will indicate a warning. Bright daylight will also increase the noise level in the receiver.

PWD20 has been calibrated at the factory. Thus, no initial calibration is required. Periodic maintenance includes the following:

- ✓ Cleaning the transmitter and receiver lenses and hoods.
- ✓ Checking the visibility calibration and calibrating it, if necessary.

PWD20 is designed to operate continuously for several years without other maintenance than cleaning of the lenses.

Main technical data:

✓ Type	: PWD20
✓ Manufacturer	: VAISALA
✓ Range	: 10m to 20km
✓ Accuracy	: +/-10% for range from 10m to 10km; +/-15% for range from 10m to 20km
✓ Relative humidity	: 0-100%
✓ Working voltage	: from 12 V DC to 50 V DC (electronics)
✓ Power consumption	: 3W approx.
✓ Operating temperature	: -40°C + 60°C (with optional heater for extended range -40°C)
✓ Output (standard)	: control relay (fog/no fog) and diagnostic relay (ok/alarm)
✓ Output (available)	: 4-20mA (for visibility range measurement)
✓ Mechanical protection	: IP66
✓ Weight	: 3kg (excluded fixing bracket)
✓ Hardware	: Included (AISI 316 stainless steel)
✓ Calibration KIT	: optional
✓ Fixing bracket	: included, type SICE SVM-PWD20, made in AISI 316L stainless steel
✓ Connecting junction box	: included, type Glass Reinforced Polyester, IP66

Available optional summary:

- ✓ Calibration KIT
- ✓ Heaters for extended range -40°C

SICE NAVIGATION AID SYSTEM SAFE AREA VISIBILITY METER (FOG DETECTOR)



- TOP SIDE VIEW

OBSTACLE-FREE ZONE
(APPROX. 2 METERS AT 360 DEGREES)

VISIBILITY METER JUNCTION BOX – INTERNAL TERMINAL STRIP LAYOUT

PWD20 VISIBILITY METER (FOG DETECTOR)
SICE TYPICAL INSTALLATION WITH FIXING BRACKET TYPE SVM-PWD20
DIMENSIONAL DRAWING

Main data:

- ✓ *Visibility Meter type: PWD20 (VAISALA)*
- ✓ *Mounting bracket type: SVM-PWD20 (SICE)*
- ✓ *Junction box type: E016269 (TECHNOR)*
- ✓ *Mounting bracket material: AISI 316L stainless steel*
- ✓ *Junction box material: Glass Reinforced Polyester (black)*
- ✓ *Mounting bracket weight: 7kg (including junction box)*
- ✓ *Assembling total weight: 10kg*
- ✓ *Fixation accessories: included (A4)*

SICE Pesaro (ITALY)