



Water test for IPX9 ZAURAC 4-30



VTT Expert Services Ltd

| Requested by: Five Watts Oy

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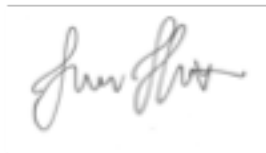
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Assignment IPX9 test according to the publication IEC 60529 (2013- 08).

Summary Based on the test results the protection provided by the casing of the ZAURAC 4-30 complies with the requirements stated for the protection class IPX9.

Espoo, 5.9.2017



Jami Heinonen
Product Manager



Jari Heikkinen
Expert

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1 General

The test place was VTT Expert Services Ltd and the test was carried out 28.8.2017. The EUT was ZAURAC 4-30.

2 Water test for IPX9

2.1 The test was carried out by spraying the specimen with a water jet hose nozzle (described in figure 7 in IEC 60529) from all practicable directions for a period of totally 3 minutes. The spraying angle was perpendicular to the tested surfaces. The test parameters were following:

- water temperature ($+80 \pm 5$) °C
- distance from the nozzle to the specimen (175 ± 25) mm
- flow rate of the water (15 ± 1) l/min

Ambient conditions: $+21^{\circ}\text{C}$ / 58%RH

The test equipment:

- Stanley 3m, 30-687 tape measure, IDN TL15182, calibrated 7.10.2016, valid 48 months.
- HiTrax timer, IDN TL03958, calibrated 5.10.2016, valid 36 months.
- Nilfisk Alto Poseidon 7-66 pressure washer, IDN TL16556, calibrated 21.4.2017, valid 12 months.
- VALK-160-3 special hot water dispenser, IDN TL09706
- Rotronic Hygro Palm Temperature / Humidity meter, IDN TL12780, calibrated 26.8.2017, valid 12 months

2.2 Test results

In the visual examination after the test no ingress of water was noticed.

Based on the test results the protection against high pressure and temperature water jets complies with the requirements stated for the protection class IPX9.

The test results relate only to the sample tested.