Test Certificate

CERTIFICATE No: TRA033581CC04

ISSUE: A

DATE: 13/02/2017

PURPOSE OF TEST:	Ingress Protection
CLIENT ORDER No:	P37645
CLIENT:	FT Technologies (UK) Ltd, Church Lane, Teddington, Middlesex, GB. TW11 8PA.
EQUIPMENT UNDER TEST:	Wind Sensor Serial No.: 9001-002 Part Number FT742-D-SM Element Stores Number TRA-033581-S24 Serial No.: 9000-349 Part Number FT742-A-DM Element Stores Number TRA-033581-S21 Receipt date: 14/11/2016
TEST SPECIFICATIONS:	In accordance with Element quotation TRA-033581-01 dated 10th October 2016, also in accordance FT Technology Document No. A9450, Issue 1 BS EN 60529:1992
TEST DATE:	7th December to 8th December 2016
TEST LOCATION:	Element Materials Technology, Rothwell Road, Warwick, Warwickshire, CV34 5JX

WRITTEN BY: APPROVED BY:

Sam Bannan
Environmental Test Engineer

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Verification Controller

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TESTS CARRIED OUT:

IP4X - Protected Against Access to Hazardous Parts and Against Solid Foreign Objects

Probe:	$1.0^{+0.05}_{-0}$ mm diameter x 100mm wire
Force:	1N ± 10%

There were no components which were removable without the use of a tool.
The 100mm access probe was applied to assess if the 1mm diameter probe could gain access to the openings of the enclosure at a force of 1N.

IP6X - Protected Against Access of Solid Foreign Objects - Dust Tight

Tested in accordance with FT Technologies Document No. A9450, Issue 1, Section 10.1, which refers to BS EN 60529:1992+A2:2013

Duration:	If extraction rate is 40-60 volumes per hour, duration is 2 hours. If extraction rate is less than 40 volumes per hour at a depression of ≤ -20mbar, test is continued until 80 volumes have been drawn through or 8 hours elapsed.
Maximum Flow rate:	60 times the volume of the specimen per hour
Maximum Vacuum:	≤ -20mbar

Note: All enclosures with first characteristic numeral 6 shall be deemed category 1.

IPX7 – Temporary Immersion in Water

Tested in accordance with FT Technologies Document No. A9450, Issue 1, Section 10.2, which refers to BS EN 60529:1992+A2:2013

Water Level:	1 metre above lowest point of enclosure
Duration:	30 minutes
Configuration:	Non-Operational.
Water Temperature:	Within ±5ºC of equipment temperature

IPX6 - Protected Against Powerful Water Jets

Tested in accordance with FT Technologies Document No. A9450, Issue 1, Section 10.3, which refers to BS EN 60529:1992+A2:2013

Nozzle:	12.5 mm diameter
Flow Rate:	100 litres per minute ± 5%
Duration:	1 minute per m² of surface area of enclosure from all practicable directions (3 minutes each)
Distance:	2.5 to 3 metres
Water Temperature:	Within ±5ºC of equipment temperature

TEST RESULTS:

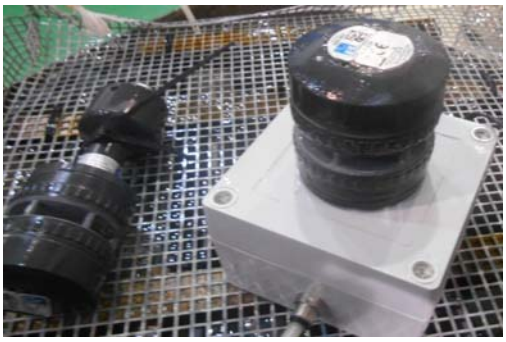
IP4X - Protected Against Access to Hazardous Parts and Against Solid Foreign Objects

The specimen was found to have no openings that could be penetrated by the access probe of 1 mm Ø reducing adequate clearance between the access probe and hazardous parts.

IP6X - Protected Against Access of Solid Foreign Objects - Dust Tight
IPX7 – Temporary Immersion in Water
IPX6 - Protected Against Powerful Water Jets

Upon completion of all of the tests, the specimens were inspected. There was no water or dust ingress found. The specimens S21 and S24 therefore satisfies the requirements of BS EN 60529:1992+A2:2013, IP66 and IP67.

IP X6



IP X7

IP 6X

IP6X