



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 3171</b>	26-Jun-2017	Number 3	Issue date 26-Apr-2019	30-Apr-2020
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## Product designation

**System Sensor, WFDN Series, waterflow detectors**

(Refer to the Schedule/enclosures for further specified details)

## Agent/distributor

FireSense Pty Ltd  
18-20 Brookhollow Avenue, BAULKHAM HILLS, NSW, AUSTRALIA, 2153

## Registrant

System Sensor, Ltd  
3825 Ohio Avenue, ST CHARLES, IL, UNITED STATES, 60174

### Producer

System Sensor  
3820 Stern Avenue, ST CHARLES, IL, UNITED STATES, 60174

## Conformance criteria and evaluation

The System Sensor, WFDN Series, waterflow detectors has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Underwriters Laboratories Standard UL 346, 'Standard for Waterflow Indicators for Fire Protective Signaling Systems'.
2. Underwriters Laboratories - Evaluation and listing, 'UL listing'.
3. Approval Standard FM Class Number 1043, 'Water Flow Detector Testers'.
4. Factory Mutual - Evaluation and approval, 'FM approval'.

## Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. Compatibility of this signaling device with new or existing control and indicating equipment should be verified prior to installation.

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

David Whittaker  
Executive Officer – ActivFire Scheme



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## Producer's description

The System Sensor, WFDN Series, waterflow detectors are designed for both indoor and outdoor use, with the available temperature range, from 0°C to 66°C (32°F to 150°F)

They suitable for a range of pipe schedules, sizes 50 mm (2 in). through 200 mm (8 in).

This equipment is are equipped with tamper-resistant cover screws to prevent unauthorized entry.

Inside, two sets of SPDT (Form C) synchronized switches are enclosed in a durable terminal block with new layout designed to make wiring easy with wire ready terminals, COM terminals are on a different elevation, large barrier between switches and easy to read raised textured lettering all make wiring easy. An optional cover tamper switch is available, securely snaps into place, no tools required.

The WFDN series incorporates a mechanical time delay feature, which minimizes the risk of false alarm due to pressure surges or air trapped in the fire sprinkler system. The larger and easy to turn timer dial makes setting the waterflow detector easy with high contrast pad printed markings. The dial offers three tabs to help with turning, with one larger tab located on the dial position for approximately 60 seconds, a notch is also indicated on the dial to locate approximately 30 seconds making setting the detector in dimmly lit locations easy.

This equipment is designed for accuracy and repeatability with improved performance during vibration in riser applications where detectors are exposed to a large in rush of water.

## Technical specification

The following details are a representative extract of the technical specification for the System Sensor, WFDN Series, waterflow detectors and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

### Schedule of variant designations

The following is a schedule of validated variant designations of the certified/listed equipment.

Variant		Nominal pipe size	Pipe schedule suitability
Type	Ident.		
Model	WFD20N	50 mm (2 in.)	7 through 40
	WFD25N	65 mm (2½ in.)	
	WFD30N	80 mm (3 in.)	
	WFD40N	100 mm (4 in.)	
	WFD50N	125 mm (5 in.)	10 through 40
	WFD60N	150 mm (6 in.)	
	WFD80N	200 mm (8 in.)	

### Schedule of properties/characteristics

The following schedule is an extract of physical and operational properties/characteristics of the certified/listed equipment.

Static pressure rating	3100 kPa (450 psi)
Maximum surge	5.5 m/s (18 feet per second (fps))
Triggering threshold bandwidth (flow rate)	15.14–37.85 l/m (4–10 USgpm)
Conduit entrances	Two openings for ½ in. conduit. One open, one knock-out type
Contact ratings	Two sets of SPDT (Form C) 10.0 A, ½ HP @ 125/250 Vac 2.5 A @ 6/12/24 Vdc
Operating temperature range	0°C to 66°C (32°F to 150°F)
Enclosure rating*	NEMA 4 – suitable for indoor/outdoor use
Cover tamper switch	Optional, part no. CTS
Accessories	
FS-RT	Delay mechanism and switch assembly
CTS	Tamper-proof switch kit
WFDW	Tamper-proof wrench for cover

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## Supplementary information

### Schedule of relevant articles

The following schedule is an extract of articles significant and/or related as evidence of conformity.

Reference		Title / description	Date issued (or date validated)	Source
Ident. type	Ident.			
File ref.	USQT.S739	USQT.S739 Extinguishing System Attachments (ul_w3_USQT.S739_v_2015-07-17.pdf)	16-Feb-2016	Underwriters Laboratories Inc., US; Certifications Directory
Extract	fm_w3_WFDxx_v_2016-02-16.pdf	Waterflow Detectors, Vane Type Models WFDxxN, WFDxxVN, WFDxxNA, WFDxxEN, WFDxxEPN (fm_w3_WFDxx_v_2016-02-16.pdf)		FM Approvals, US
Data sheet	WFDS36702	System Sensor WFDN Series Waterflow Detector	Jul-2014	System Sensor, IL, US
Instructions	SS-200-025 I56-4045-001R	System Sensor INSTALLATION AND MAINTENANCE INSTRUCTIONS WFDN Vane-type Waterflow Detectors	-	