



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEX KEM 08.0006X</b>	Page 1 of 5	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 2	Issue 1 (2014-10-31) Issue 0 (2008-07-10)
Date of Issue:	2021-10-01		
Applicant:	<b>Fluidwell B.V.</b> Voltaweg 23 5466 AZ Veghel <b>Netherlands</b>		
Equipment:	<b>Indicator Model F0...-..</b>		
Optional accessory:			
Type of Protection:	<b>Ex ia</b>		
Marking:	Ex ia IIC T4 Ga Ex ia IIIC T <sub>200</sub> 100 °C Da		

Approved for issue on behalf of the IECEx  
Certification Body:

**R. Schuller**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:

2021-10-01

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**Meander 1051**  
**6825 MJ Arnhem**  
**Netherlands**





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Manufacturer: **Fluidwell B.V.**  
Voltaweg 23  
5466 AZ Veghel  
**Netherlands**

Additional  
manufacturing  
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[NL/KEM/ExTR08.0006/02](#)

Quality Assessment Report:

[NL/DEK/QAR12.0019/06](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The range of Indicators includes the following basic models with different signal input types:

Model F0..-P-XI, indicators with digital input (coil, switch, npn, pnp, active or Namur);  
Model F0..-A-XI, indicators with analog input ((0)4 ... 20 mA);  
Model F0..-U-XI, indicators with analog input (0 ... 10 V);  
Model F0..-A-PL-XI, indicators with loop powered analog input (4 ... 20 mA);  
Model F0..-T-XI, indicators with PT100 input;  
Model F0..-H-XI, indicators with thermocouple input.

The indicators are supplied by an internal battery and/or by an external supply or by the circuit supply (Model F0..-A-PL only). Optionally, the indicators can be equipped with a pulse output, a sensor supply output, an analog output (with HART) and an input for backlight supply.

The enclosure of the indicator made of aluminium alloy, stainless steel or non-metallic materials GRP or ABS provides a degree of protection of at least IP 65 in accordance with IEC 60529.

Ambient temperature range: -40 °C to +70 °C, only for EPL Da the maximum ambient temperature is limited to 50 °C, see specific conditions of use.

The maximum temperature of the enclosure  $T_{200}$  100 °C is referred to an ambient temperature of 50 °C and a maximum dust layer thickness of 200 mm.

When used in a potentially explosive atmosphere requiring apparatus of EPL Db, the equipment may be used with a maximum dust layer thickness of 5 mm.

## Electrical data

See Annex 1 to Report No. NL/KEM/ExTR08.0006/02.

## Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

When the enclosure of the indicator is made of aluminium alloy, when used in a potentially explosive atmosphere requiring apparatus of equipment protection level Ga, the indicator shall be installed so, that even in the event of rare incidents, an ignition source due to impact or friction sparks between the enclosure and iron/steel is excluded.

For EPL Da the ambient temperature  $T_a$  shall not exceed 50 °C.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

Update using IEC 60079-0: 2017

Removal IEC 60079-26



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**Additional information:**

Ex component present:

Replaceable battery pack FW-LiBat-xxx with IECEx KEM08.0005U is accepted.

Standards applied: IEC 60079-0:2007, IEC 60079-11:2006 and IEC 60079-26:2006.

Technical Differences evaluated and found satisfactory - for details see ExTR.

**Annex:**

[225850900 ExTR08.0006.02 - Annex 1\\_1.pdf](#)

	<b>Model F0..-P-XI</b>	<b>Model F0..-A-XI Model F0..-U-XI</b>	<b>Model F0..-A-PL-XI</b>	<b>Model F0..-T-XI Model F0..-H-XI</b>
<b>Internal supply</b> Type -PC (connector)	for use with the certified replaceable battery type FW-LiBAT-... or to another certified non rechargeable battery in type of protection intrinsic safety Ex ia IIC/IIIC, with the following maximum values:			
	$U_i = 4 \text{ V}$ $I_i = 50 \text{ mA}$ $P_i = 200 \text{ mW}$ $L_i = 0 \text{ mH}$ $C_i = 0 \text{ }\mu\text{F}$			
<b>Signal input circuit</b>	Pulse input circuit (terminals 1 and 2)	Analog input circuit (terminals 1 and 2)	Loop Powered analog input circuit (terminals 1 and 2)	Temperature input circuit (terminals 1, 2, 3 and 4)
	in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values:			
	$U_i = 30 \text{ V}$ $I_i = 150 \text{ mA}$ $P_i = 0.92 \text{ W}$ $L_i = 0 \text{ mH}$ $C_i = 0 \text{ nF}$	$U_i = 30 \text{ V}$ $I_i = 150 \text{ mA}$ $P_i = 0.92 \text{ W}$ $L_i = 0 \text{ mH}$ $C_i = 0 \text{ nF}$	$U_i = 30 \text{ V}$ $I_i = 93 \text{ mA}$ $P_i = 0.92 \text{ W}$ $L_i = 0 \text{ mH}$ $C_i = 0 \text{ nF}$	Not applicable
	in type of protection intrinsic safety Ex ia IIC/IIIC, with the following maximum values:			
	$U_o = 5.4 \text{ V}$ $I_o = 2.4 \text{ mA}$ $P_o = 3.2 \text{ mW}$ $L_o = 1 \text{ H}$ $C_o = 65 \text{ }\mu\text{F}$	Not applicable	Not applicable	$U_o = 5.4 \text{ V}$ $I_o = 62 \text{ mA}$ $P_o = 252 \text{ mW}$ $L_o = 9.2 \text{ mH}$ $C_o = 62 \text{ }\mu\text{F}$
<b>Reference output circuit</b> (terminal 3 and 1 or 2)	in type of protection intrinsic safety Ex ia IIC/IIIC, with the following maximum values:			
	$U_o = 5.4 \text{ V}$ $I_o = 2.1 \text{ mA}$ $P_o = 2.9 \text{ mW}$ $L_o = 1 \text{ H}$ $C_o = 65 \text{ }\mu\text{F}$	Not applicable	Not applicable	Not applicable
From the safety point of view the circuits shall be considered to be connected to earth.				

	Model F0..-P-XI	Model F0..-A-XI Model F0..-U-XI	Model F0..-A-PL-XI	Model F0..-T-XI Model F0..-H-XI
<b>External supply input circuit</b> Type -PD, -PX	(terminals 4 and 5)			(terminals 5 and 6)
	in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values: $\begin{array}{lcl} U_i & = & 30 \text{ V} \\ I_i & = & 200 \text{ mA} \\ P_i & = & 1.2 \text{ W} \\ L_i & = & 0 \text{ mH} \\ C_i & = & 0 \text{ nF} \end{array}$			
<b>External supply output circuit</b> Type -PD (terminals 6 and 1, 2, 7 or 8)	in type of protection intrinsic safety Ex ia IIC/IIIC, with the following maximum values:			
	$\begin{array}{l} U_o = 8.7 \text{ V} \\ I_o = 12 \text{ mA} \\ P_o = 72 \text{ mW} \\ L_o = 240 \text{ mH} \\ C_o = 5.9 \text{ }\mu\text{F} \end{array}$	The maximum output parameters are equal to the parameters of the external supply input circuit (terminals 4 and 5)		Not applicable
<b>Pulse output circuit</b> Type -OT (terminals 7 and 8)	in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values:			
	$\begin{array}{lcl} U_i & = & 30 \text{ V} \\ I_i & = & 200 \text{ mA} \\ P_i & = & 1.2 \text{ W} \\ L_i & = & 0 \text{ mH} \\ C_i & = & 0 \text{ nF} \end{array}$			
<b>Backlight supply input circuit</b> Type -ZB (terminals 9 and 10)	in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values:			
	$\begin{array}{lcl} U_i & = & 30 \text{ V} \\ I_i & = & 200 \text{ mA} \\ P_i & = & 0.75 \text{ W} \\ L_i & = & 0 \text{ mH} \\ C_i & = & 0 \text{ nF} \end{array}$			
<b>Analog output</b> (with HART) Type -AH (terminals 11 and 12)	in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values:			Not applicable
	$\begin{array}{lcl} U_i & = & 30 \text{ V} \\ I_i & = & 100 \text{ mA} \\ P_i & = & 0.75 \text{ W} \\ L_i & = & 0 \text{ mH} \\ C_i & = & 6.1 \text{ nF} \end{array}$			
From the safety point of view the circuits shall be considered to be connected to earth.				