

Vane Operated Flow Switch **131**

**131 Issue
D.1**

- **Air Flow.**
- **2.5 to 12.5 m/sec.**
- **(500 to 2500 ft/min).**
- **ATEX and IECEx.**

Performance **characteristics**

Enclosure

- IP66 Protection

Wetted parts

- Mild steel backplate – aluminium or stainless steel vane.

Standard Electrical ratings

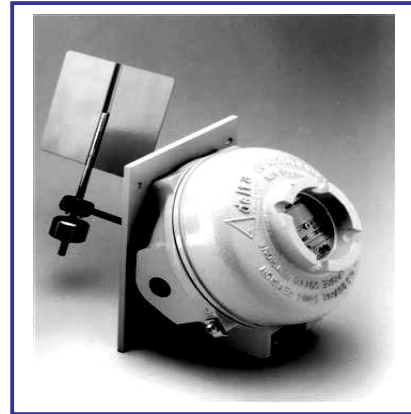
- Refer to table 6

Process connection

- Duct mounting.

Unit weight

- 4.6kg – 9.4kg /10.2lb – 20.7lb



Product **applications**

The 131 is suitable for a wide range of applications in many Industry sectors:

- Oil & Gas
- Chemical
- Petrochemical
- Refining
- Power
- Food Industry

How can we **help you?**

Delta Controls' range of reliable pressure and temperature measurement instruments can be customised to meet individual requirements. For technical advice or to discuss your application please contact us on +44 (0) 20 8939 3500

Enclosure

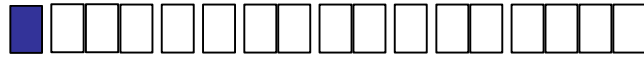
FINISH



Light grey epoxy resin paint.

INTRINSIC SAFETY

Because of the low voltages and currents of I.S. circuits, we recommend using gold contacts.

TABLE 1



FLAMEPROOF ENCLOSURES (ZONE 1)	Code
EExd IIC T6 (-60 to +40°C), T4 (-60 to +80°C) II 2 G D Gravity die-cast enclosure in aluminium-silicon alloy. BASEEFA certified to CENELEC EN50 014 and EN50 018. Suitable for outdoor use, IP66. <div style="text-align: center;">  </div>	H
EExd IIC T6 (-60 to +40°C), T4 (-60 to +80°C) II 2 G D As Code H, but sand cast in high quality grey iron. <div style="text-align: center;">  </div>	K

Models

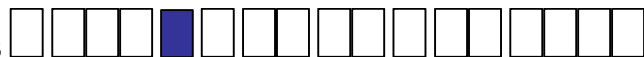
TABLE 2



	Code
Vane Operated Flow Switch	131

Electrical Entry

TABLE 3



	Code
Enclosures H & K: M20 x 1.5 ISO thread	0
Enclosures H & K: M20 x 1.5 ISO thread, dual entry	5
Enclosures H & K: ¼ NPT Internal	3
Enclosures H & K: ¼ NPT Internal, dual entry	6

Material of Wetted Parts

TABLE 4



	Code
Mild Steel Backplate / St.St. Counterbalance / Aluminium Vane	V
Mild Steel Backplate / St.St. Counterbalance / St.St. Vane	W

Ranges

TABLE 5

	Max Flow	Code
5 to 12.5 m/s (115 mm sq vane)	17.5 m/s	V1
2.5 to 6 m/s (180mm sq vane)	12.5 m/s	V2

Switching Options

TABLE 6

Model 131									
UL/CSA Rating (RESISTIVE) §SEE NOTE	IEC 947-5-1/EN 60947-5-1 Rating							Contact	Code
	Designation & Utilization Category	Rated operational current I _e (A) at rated operational voltage U _e	U _i	U _{imp}	VA Rating				
					Make	Break			
5 Amps @ 110/250V AC & 2 Amps @ 30V DC General purpose precision	AC14 D300	0.6/0.3A @ 120/240V AC	250V	0.8kV	432	72	SPDT DPDT	02 03	
	DC13 R300	0.22/0.1A @ 125/250V DC			28	28			
1 Amp @ 125V AC & §100mA @ 30V DC gold alloy contacts for low voltage switching	1 A @ 125 VAC RESISTIVE (IEC 1058-1/EN 61058-1)						SPDT DPDT	04 05	

The electrical rating is dependent on the microswitch fitted to the instrument. The electrical ratings defined by each approval that the microswitch complies with and is shown on the product nameplate, ie UL/CSA, or IEC. It should be noted that the instrument must be used within the electrical rating specified from the approval you require. This table lists the actual IEC ratings against the Designation & Utilization Category marked on the nameplates. In the absence of any verification by UL/CSA the microswitch § manufacturer's rating is stated in *italics and bold*. **If in doubt seek guidance from the factory.**

NOTE: For low energy circuits e.g. 30V and up to 100mA, we recommend using gold alloy contact switches.
 U_i = rated insulation voltage U_{imp} = rated impulse withstand voltage across contacts.

Process Connection

TABLE 7

	Code
Duct Mounting	Y

Options & Treatments

TABLE 8



Combinations available, apply for details.

	Code
Tagging - Variety of tagging methods are available	APPLY FOR DETAILS
Applies when – no option is required and selection is made from special engineering.	00

Special Engineering

TABLE 9



FEATURE	Code
Please consult Delta sales engineering for special requirements	TBA

Technical Data

AMBIENT TEMPERATURE RANGE

All models are suitable for operating within a range of ambient temperature from -25 to $+60^{\circ}\text{C}$ (-13 to $+140^{\circ}\text{F}$). Special build available for temperatures down to -60°C (-76°F)

CAUTION:

Moving parts have been treated with a water repelling lubricant before leaving factory. Occasional inspection and the application of a water repelling lubricant is recommended to ensure moving parts remain free under all conditions.

OPERATING TEMPERATURE (PROCESS)

0 to 60°C

ELECTRICAL CONNECTIONS

Terminal Block

Cable entry is to a non-pinching block made of a non-Hygroscopic thermosetting plastic, suitable for cables up to $2.5\text{mm}^2/14\text{AWG}$.

Earthing/Grounding

An earthing facility is provided

Dielectric Strength

The electrical assembly is capable of withstanding 2kV between live parts and earth/ground and 500V between open contacts.

Electrical Entry

Standard options are listed in Table 3. Other threads can be accommodated by adaptors. Dual entry available.

Pollution degree (EN60947-5-1)

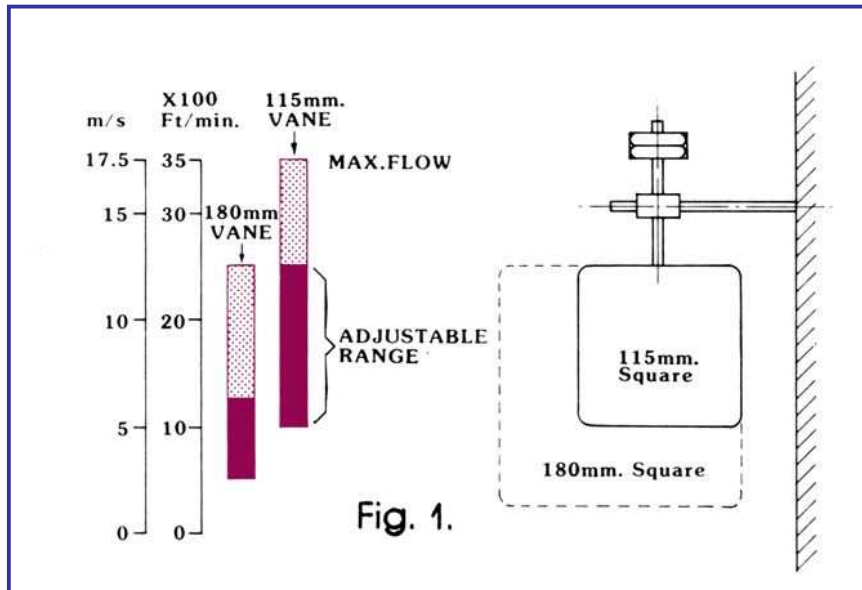
All products are suitable for use in pollution degree 3. For extreme conditions where condensation may readily form, then sealed contacts should be used.

Electrical Isolation

These products are not suitable for electrical isolation. Always isolate circuit separately to carry out any electrical work.

RANGE OF ADJUSTMENT


By means of control springs accessible with the instrument in situ, the set point may be adjusted between 2.5 and 12.5 meters per second.



Unit Weights

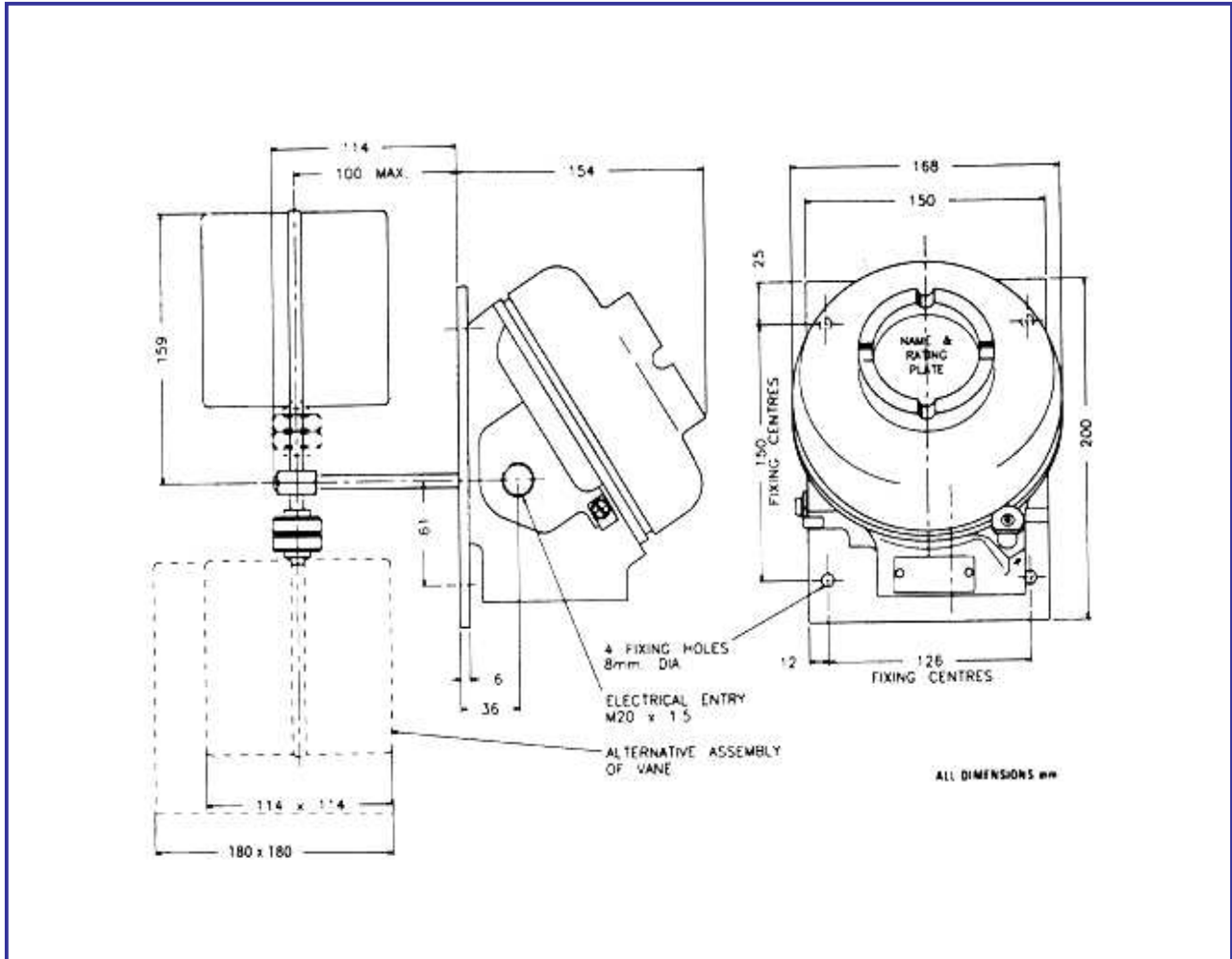
Enclosures (Approx)	
H	4.6 kg / 10.2lb
K	9.4kg / 20.7lb

Approvals

<p>CENELEC/ATEX Certified to CENELEC EN50 014 and EN50 018. For use in Zone 1 hazardous areas EEx d IIC T6 (-40° to +60°C) T4 (-40° to +85°C)</p>	
<p>Enclosure Codes H and R and all models (see Table 1) Certificate number BAS0IATEX2426X</p>	
<p>IECEX APPROVAL for use in Zone 1 hazardous areas Exd IIC certified to IEC 60079-0 and IEC60079-1 Cert No. IECEXITS04 0006X</p>	

Dimensions

All dimensions mm (Inches)



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