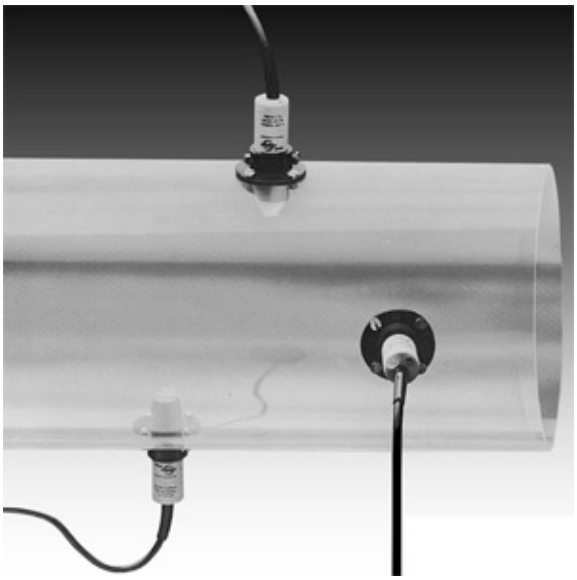
Air Flow Switch for DC/ AC Voltage Supplies (Type 3201.-/3204.-)



Benefits and Features

- solid state
- self-contained
- adjustable set-point
- simple to install
- temperature independent
- repeatable alarm
- universally applicable

Switching range :

- Adjustment range: from 1 m/s to 10 m/s
- Set-point ex works: 3 m/s
- Switching hysteresis: < 30 %
- Starting override time: max. 90 s
- Medium temperature: -20 °C to + 70 °C - 4 °F to +160 °F
- Temperature drift: <0,5%/K
- Accuracy: N/A
- Repeatability: < 3 %

General Description

vent-captor air flow monitors are solid state switch and monitoring devices for use in industrial air handling applications. vent-captor air flow monitors are self-contained switching devices without any mechanical moving parts, which convert flow conditions into electrical switching signals. vent-captor air flow monitors can be simply installed into any air flow and perform reliably even under most harsh environmental conditions.

Typical Application :

vent-captor air flow monitors can be applied wherever air operates as an industrial medium, e.g. air conditioning, ventilation, air filter monitoring, extraction fans, blowers, damper regulators and controlling air flow rates in energy conservation systems. The vent-captor is also ideal for monitoring air flow in thyristor cabinets, motor/generators and shipping containers.

Operating principle:

The vent-captor operation is based on advanced calorimetric technology. One of the two ceramic sensor probes is slightly heated while an identical sensor probe tracks the medium temperature. The heated probe is cooled proportional to flow such that the temperature difference between the probes is relative to the flow velocity. This temperature difference is measured electronically and converted into the desired electrical switching signal.

This thermal principle provides for a switching delay to permit a continuous and reliable signal even under turbulent conditions. During initial start-up, the ventcaptor indicates flow for a short period regardless of the actual flow condition, eliminating the need for additional circuit logic.

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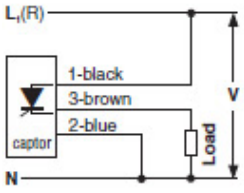
Electrical Data

Electrical outputs	.00	.01	.02	.03	.50	.51
Voltage supply	24 V DC*				110 or 220 V AC*	
Residual ripple	20%				-	
Power consumption	approx. 1W					
Solid state output max. switching current	500 mA				200 mA	
Solid state output at no flow state	● npn	❍ npn	● pnp	❍ pnp	● Thyristor	❍ Thyristor
	❍ absence of current		● current bearing		*tolerance: +10%, -15%	
LED signal with flow	off	on	off	on	off	on
Switching delay	min. 3 s / max. 100 s (depends on set-point adjustment)					

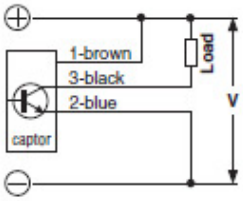
Connection Diagrams:

Thyristor output



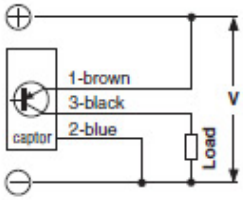
AC 3201.50 3201.51

NPN-transistor output



DC 3201.00 3201.01

PNP-transistor output



DC 3201.02 3201.03

Mechanical Data

Material	Sensor probe	Housing
	Ceramic	Ultradur® (PBTP)
Installation	with supplied mounting flange or PG 21	
Ambient temperature	-20 °C to +70 °C (-4 °F to +160 °F)	
Electrical connection	2 m moulded oilflex cable / 3 x 0,5 mm²	
Protection standard	IP 64 (Equivalent to NEMA 4)	
Mass	130 g	

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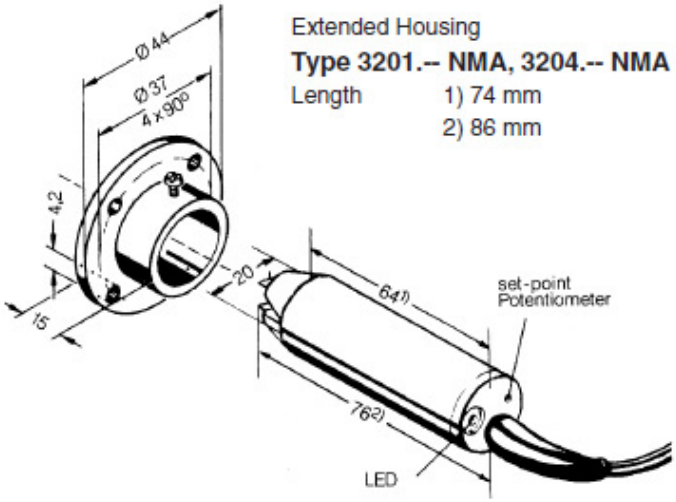
Dimensions

Dimensions in mm



Extended Housing

Type 3201.-- NMA, 3204.-- NMA

Length 1) 74 mm
2) 86 mm

Type 3204.-- (stainless steel)
Technical Data as 3201.-- except:
Max. pressure 10 bar
Installation with union nut
G1A SW 37 mm, DIN 259, ISO 228
Mass approx. 200 g