

## vent-captor Type 3201.- -

vent-captor air flow monitors are solid state switching 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 the harshest environmental conditions.

### Sensing Data

Switching range	adjustable from 1 m/s to 10 m/s
Set-point ex works	approx. 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

- Compact air flow monitor
- Repeatable alarm
- Adjustable set-point
- Temperature independent
- Universally applicable

# vent-captor

Type 3201.- -, 3204.- -  
Air flow monitors



### Typical Applications:

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.

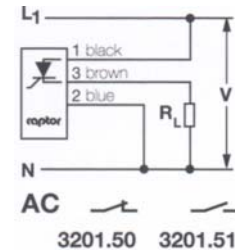
This thermal principle provides for a switching delay to permit a continuous and reliable signal even under turbulent conditions. During initial start-up, the vent-captor indicates flow for a short period regardless of the actual flow condition, eliminating the need for additional circuit logic.

### Electrical Data

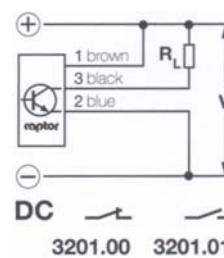
Electrical outputs	.00	.01	.02	.03	.50	.51
Voltage supply	24 V DC +10 %/-15 %				115 or 230 V AC* 120 or 240 V AC*	
Residual ripple	20 %				—	
Power consumption	approx. 1 Watt					
Solid-state output max. switching current	500 mA				200 mA	
Solid-state output at no flow state	NPN	NPN	PNP	PNP	Thyr.	Thyr.
	●	○	●	○	●	○
O absence of current	● current bearing *tolerance +6 % / -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

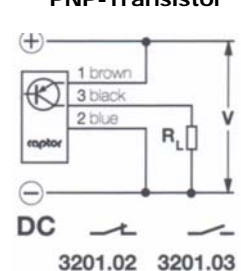
#### Thyristor output



#### NPN-Transistor



#### PNP-Transistor

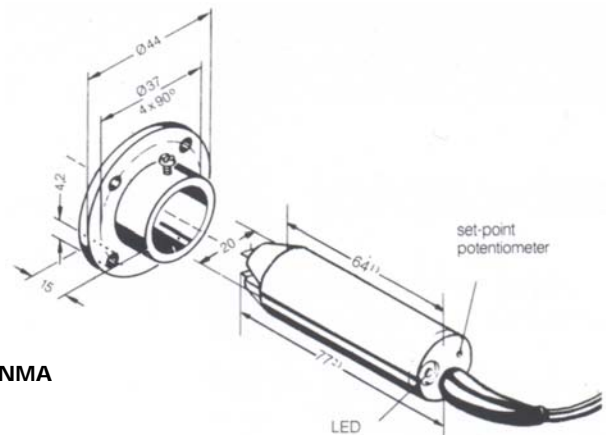


### Mechanical Data

Material	Sensor probe	Housing
	Ceramic	Ultradur
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 mm <sup>2</sup>	
Protection standard	IP 64	
Mass	130 g	

### Dimensions in mm

#### Type 3201.- -

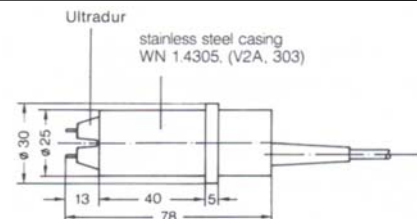


#### Extended housing

Type 3201.- - NMA, 3204.- - NMA  
Length: 1) 74 mm  
2) 87 mm

#### Type 3204.- -

Technical Data as 3201.- -  
Max. pressure 10 bar  
Installation with union nut  
G1A, SW 37 mm, DIN 259, ISO 228  
Mass approx. 200 g without nut



weber

Cascadia Instrumentation Inc.

Suite 383  
7360 - 137 Street

Surrey BC V3W 6M2  
Phone: 778-578-7956 Fax: 778-578-7986

www.cascadia-instrumentation.com  
sales@cascadia-instrumentation.com