

KDG

Rotameter Series 2760 Variable-Area Flow Alarms

Data sheet
1714



Features

- Gives alarm signal when flow falls below preset value
- Ideal for coolant water circuits
- Low pressure loss
- In situ tube removal
- Fail safe construction
- Optical switch ratings

Description of Operation

The prime element consists of a stepped bore glass tube mounted vertically and a self guiding disc-headed float within it. Upward flow of fluid at the normal rate lifts the float to the position where the disk is hovering between the lower small bore and the larger bore at the top of the tube. When the flow falls to the critical alarm value the float sinks to its bottom stop.

Alongside the tube is a reed switch actuated when float sinks to bottom stop.

Table 2 : Relation of pressure drop to flow

Size	Alarm	Normal flow with water
20	700 l/hr (p.d. = 150 cm w.g.) 70 l/hr (p.d. = 35cm w.g.)	Up to 1.20m ³ /hr (p.d. = 370 cm w.g.) Up to 730 l/hr (p.d. = 160 cm w.g.)
47	700m ³ /hr (p.d. = 49 cm w.g.) 700 lhr (p.d. = 31 cm w.g.)	Up to 10m ³ /hr (p.d. = 63 cm w.g.) Up to 5m ³ /hr (p.d. = 33 cm w.g.)
Std. stock alarm flow rates	20	72 135 210 270 420 540 690 810 l/hr
	47	1 2 4 6 m ³ /hr

Special Models

A range of all-metal instruments is also available to meet applications involving temperatures and/or pressures which are too high for the glass tube instruments, and a typical unit is illustrated in Figure 2. The principle of operation is the same as for the glass instruments, and the characteristics are given in Tables 3 and 4.

Accuracy of alarm setting

This is determined in a similar manner to that previously described for the glass instrument, the flow rate at the sinking speed of 1 cm/second being verified to within 10% of the required value, with the additional tolerance of 0.01 m³/hour for size 20 and 0.06m³/hour for sizes 34 and 55.

Construction

The instruments are normally constructed with all wetted parts in 316 stainless steel with internally screwed connections . they can be produced in other non-magnetic alloys for special applications, and can also be supplied with flanged, if preferred. The standard switching device is the reed switch, as fitted to the glass instruments.

Fig. 2. All-metal model

(Threaded End connection type)

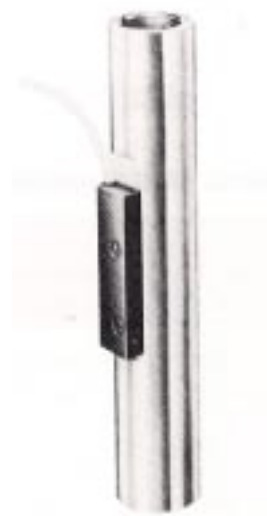


Table 3 : Alarm setting ranges

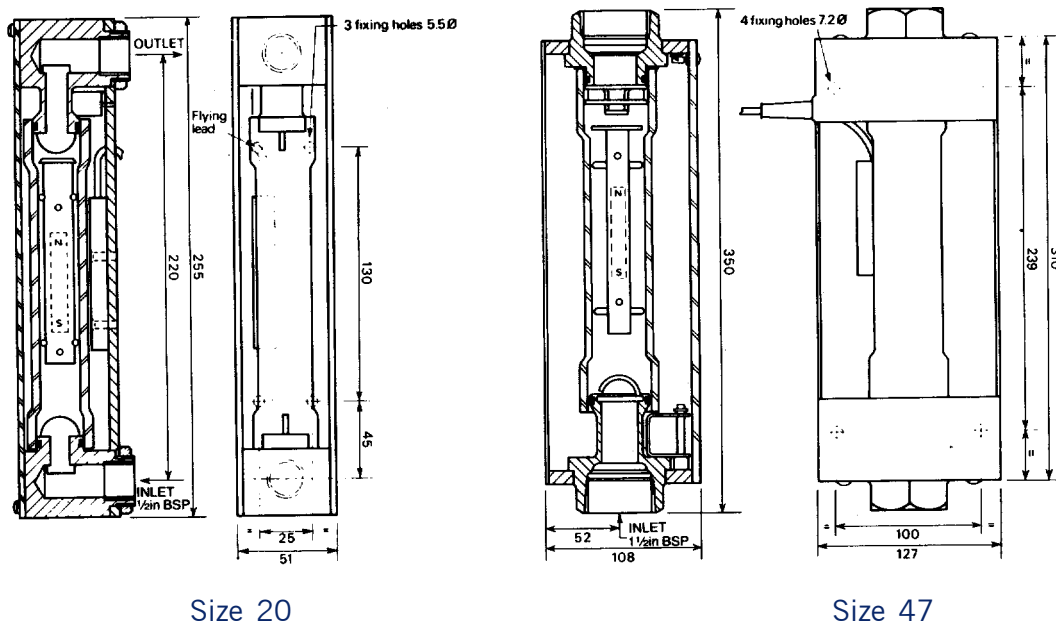
Alarm flow with water

Size	Minimum	Maximum
20	40 l/hour	810 l/hour
34	150 l/hr	2.50 m ³ /hour
55	350 l/hour	7.00 m ³ /hour

Table 4 : Alarm setting ranges

Size	Alarm	Normal flow with water
20	750 l/hr (p.d. = 39 cm w.g.) 40 l/hr (p.d. = 29 cm w.g.)	Up to 1.5 m ³ /hr (p.d. 56 cm w.g.) Up to 800 l/hr (p.d. 30 cm w.g.)
34	2.60 m ³ /hr (p.d. = 34cm w.g.) 150 l/hr (p.d. = 23 cm w.g.)	Up to 5.5 m ³ /hr (p.d. 50 cm w.g.) Up to 3.0 m ³ /hr (p.d. 29 cm w.g.)
55	7.00 m ³ /hr (p.d. = 25 cm w.g.) 350 l/hr (p.d. = 20 cm w.g.)	Up to 10.0 m ³ /hr (p.d. 30 cm w.g.) Up to 3.5 m ³ /hr (p.d. 21 cm w.g.)

Fig. 3 : Installation dimensions - glass tube models



Size 20

Size 47

Ordering Information

2760	
Code	Size and Type
20G	Size 20 Glass tube nylon connections 1/2" BSPP
47G	Size 47 Glass tube bronze connections 1 1/2" BSPT
20M	Size 20 Stainless steel construction threaded
34M	Size 34 Stainless steel construction threaded
55M	Size 55 Stainless steel construction threaded
20F	Size 20 Stainless steel construction threaded flanged BS4504/16
34F	Size 34 Stainless steel construction threaded flanged BS4504/16
55F	Size 55 Stainless steel construction threaded flanged BS4504/16
Code	
S	Fail safe switch contacts open at alarm and low flow
C	Switch contacts close at alarm and low flow
Code	
*	Alarm flow rate l/hr or m ³ /hr
Code	
Z	Special requirements

2760 47G S 4 * Typical ordering code

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