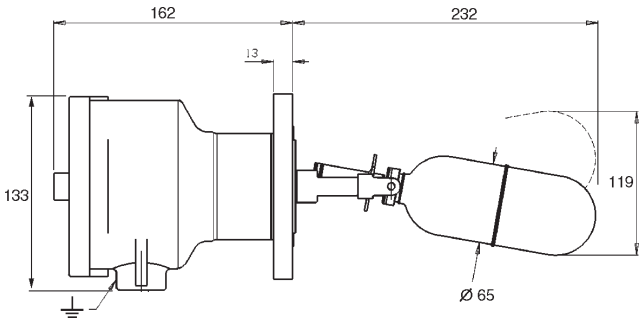
HAZARDOUS AREA APPLICATIONS

FLAME PROOF ZONE 1 GAS GROUP I & IIC MODELS



S250DA/F84
Weatherproof to IEC 144: IP66

Conduit entry thread
Gunmetal body 25mm
Aluminium body 20mm

For mining applications
S276 & S277 are supplied with flanged adaptor suitable for a barrier type cable gland, the use of which is obligatory

SPECIFICATIONS

Back flange (where fitted)	Carbon steel to BS 1501 : 224 : Grade 430B LT50. This material has guaranteed properties at both high (400°C) and low (-50°C) temperatures. Painted surfaces are stove paint finish whilst all unpainted surfaces are corrosion protected.
Wetside material	Stainless steel to BS 1504 : 316 C16 Max. working temp*: Aluminium body **400°C** Gunmetal body **350°C** Gunmetal to BS 1400: Grade LG2. Max. working temp*: S275 & S277 **200°C**
Enclosure/housing material	Aluminium alloy to BS1490: LM25 Finish is chromate phosphate treated and externally stove painted
	Gunmetal to BS1400: LG2 Natural finish
Ambient temperatures below 0°C	i) Down to -20° C standard enclosure/housing codes A or G are suitable. ii) Down to -60°C Specify enclosure/housing codes AX or GX which are as standard but with BASEEFA/ CENELEC certification to use to -60°C. Note : -50° C unless 'G' flange or low temperature back flange is specified.

*See page 4 for gasket temperature limits.

CERTIFICATION

Zone 1 Gas group IIC	
B.A.S.E.E.F.A. / CENELEC	Department of Trade and Industry (Health & Safety Executive) Certificate No. EX92C1510X (EX 811118X) to BS 5501 :Parts 1 & 5: 1977 : E Exd IIc T6. Certificate of Conformity CENELEC. EN50 014 & EN 50 018. For ambient temperatures +60°C to -60°C. Certificate No. Ex90C 1287 applies.
P.T.B.	Physikalish Technische Bundedsanstalt Certificate No. P.T.B. IIIB/S 1678. E Exd IIc T6 (Float in Zone 0)
C.S.A.	Canadian Standards Association Guide No 184-N-90.8 File No. LR 12965 Class 1: Group C.D.
S.A.A.	Standards Association of Australia Certificate No. EX 186 Exd IIB T6.
L.R.S.	Lloyds Register of Shipping Certificate No. 88/0226
J.I.S.	Certificate No. 39056 Code 3nG4
Gas Group I (Mining)	
M.E.C.S. (H & S.E.)	Health & Safety Executive Certificate No. FLP 81039 to BS 4683 Pt. 2.
N.C.B.	National Coal Board Acceptance No. 1410
G.M.E.	Government Mining Engineer (South Africa) S.A.B.S. 314 (1971) Certificate No. VM 1077 Class A : Groups 11A, 11B, 11C.

Note:<> For gas group 1 (mining) S276 & S277 only should be specified (includes obligatory flange adaptor)

ORDERING INFORMATION

CODE S	Switch for hazardous area applications, flameproof zone 1 gas group I and IIc models		
CODE	**Flange (Head) Size**	**Rating**	**Wetside**
250	Mobrey G	21 bar	Stainless steel
275	Mobrey G	21 bar	Gunmetal
276 <>	Mobrey G	21 bar	Stainless steel } Zone 1 gas group I models
277 <>	Mobrey G	21 bar	Gunmetal
256	3"	150 RF	To BS 1560 or ANSI B 16.5
257	4"	150 RF	
278	6"	150 RF	
251	3"	300 RF	
254	4"	300 RF	
260	3"	600 RF	
261	3"	900 RF	
253	DN 80	PN40	to BS 4504 or DIN 2635
255	DN 100		
269	DN 125		
272	DN 80	PN 64	To BS 4504 or DIN 2636
268	DN 100		
270	DN 125		
271	DN 150		

CODE	Switch Mechanism
D	4 Contact - General
P	4 Contact - Gold Plated Contacts
D6	6 Contact - General
P6	6 Contact - Gold Plated Contacts
H6	6 Contact - Hermetically Sealed

Note: The BASEEFA/CENELEC certification covering use -20°C to -60°C ambient temperature requires the hermetically sealed switch mechanism type H6 to be fitted.

CODE	Enclosure / Housing
A	Aluminium Alloy
G	Gunmetal (mandatory on gas group 1 switches: <>)
X	Suffix X must be specified for applications with ambient temperatures -20°C to -60°C

CODE	Float - Application Information
F84 **F185** **F98** **F106** **F107** **F96**	General purpose high alarms or low alarms or 2 off for pump control
F68/+ **F264**	Horizontal pump control Horizontal limited differential
F21/+	Vertical pump control or alarm
F104/+	Cranked arm: horizontal or vertical
F88	Interface duties

S	251	D	A	/	F96	Typical ordering information

+ Refer to pages 18, 19 and 20 for technical float details

Refer to page 14 for nozzle and stud lengths.

SWITCH/FLOAT COMBINATION CHART

F No. \ S No.	S250	S275	S276	S277	S256	S257	S278	S251	S254	S260	S261	S253	S255	S269	S272	S268	S270	S271
F84	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
F185	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
F98	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
F106	●	★	●	★	●	●	●	★	★	●	●	★	★	★	★	★	★	★
F107	●	●	●	●	●	●	●	●	●	★	★	●	●	●	●	●	●	●
F68/+	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
F21/+	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
F104/+	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
F88	★	★	★	★	★	★	★	★	★	●	●	★	★	★	★	★	★	★
F96	●	●	●	●	●	●	●	★	★	●	●	★	★	★	★	★	★	★
F264	●	★	●	★	●	●	●	●	●	●	●	●	●	●	●	●	●	●

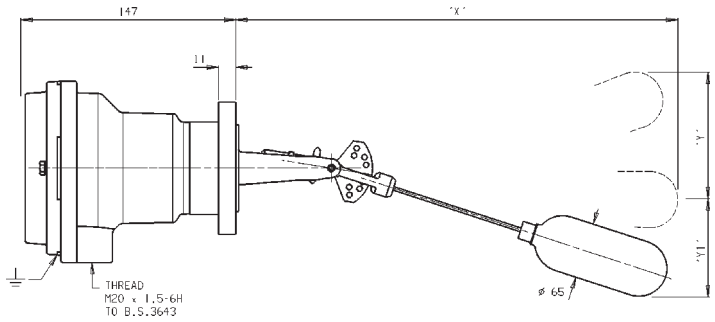
★ Preferred combination ● Non-preferred combination

POPULAR COMBINATIONS

Popular combinations	**S250DA/F84**	**S275DA/F84**
	S250DA/F104/1	**S275DG/F84**
	S276DG/F84	**S277DG/F84**

FLOAT SPECIFICATION

HORIZONTAL F68 PUMP CONTROL AND ALARM FLOAT



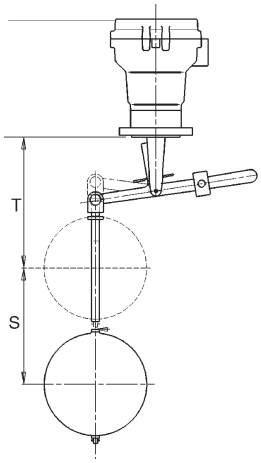
S36DA/F68/4 with rod cut to /3 dimension

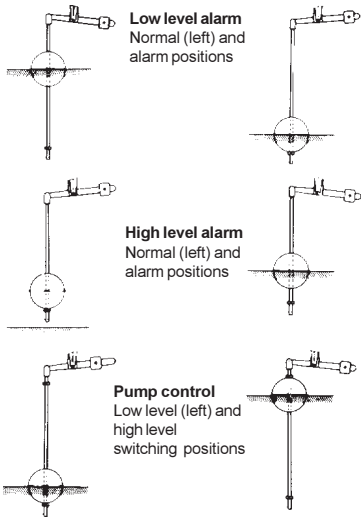
Switches fitted with F68 type float unit may be adjusted on site to meet pump control differential requirements.
The float is available as a F68/1 or F68/4.
The F68/4 has pre-drilled holes along the rod to allow the user to achieve the /2 and /3 differentials in the table below:

Maximum intrusion	F68/1	F68/2	F68/3	F68/4
Wetside (mm) x	360	470	590	643
Minimum SG	0.72	0.8	0.82	0.85
Minimum tank dimension above/below centre line (mm)	216	292	368	406
Maximum differential (mm)	247	360	483	555

Full details of the operating levels and differentials are in the manual. Note, these dimensions are approximate for cold water and will vary for liquids of different SG.

VERTICAL F21 PUMP CONTROL AND ALARM FLOAT





Note: Float assembly must be fitted from inside if for use in a vessel, or complete switch and float assembly may be mounted on a suitable bracket or manhole cover.

Float rod lengths available : F21/1: 1524mm (5')
F21/2: 3048mm (10')
F21/3: 4570mm (15') max.

Float rods may be cut to length on site and switches set to operate at required level in either pump control or alarm mode by following the setting instructions supplied.

Type Number	Pump Differential "S"	Alarm Levels	
		Minimum "T"	Maximum "S"
F21/*	13-4420*	172	4400*

* When maximum rod length specified