



PSM INSTRUMENTATION LTD

# KD30

Float level switch

## User Manual

Issue A date: 28/04/08

Burrell Road Industrial Estate  
Haywards Heath, West Sussex RH16 1TW, UK  
Tel: +44 (0)1444 410040 Fax: +44 (0)1444 410121  
[Http://www.psm-sensors.co.uk](http://www.psm-sensors.co.uk) E-mail: [sales@psm-sensors.co.uk](mailto:sales@psm-sensors.co.uk)

Doc Ref: Man 43

## Specification

Mounting method as confirmed by shipyard (top or side)

Mounting size: As confirmed by shipyard (JIS or DIN, others)

Materials: Body as per order  
Float SUS 304, SUS 316L  
Flange SS41, SUS304, SUS 316L  
Sensor Pipe SUS 304, SUS 316L

## Operating Principle

Level switches of the KD30 series have reed switches mounted within a sealed tube inserted via the top of the storage tank.

One or more float assemblies are arranged on the sealed tube and contain a magnet which operates the reed switch in the event that the liquid level rises (high alarm) or falls (low alarm) past the level of the reed switch

## Testing

Ensure the system is connected to the correct power source

Check the float level switch operates (contacts close) by lifting the test lever (high level) or by pushing down the lever (low level)

When the sensors have been tested ensure the test levers are set back to their normal positions

## Fault finding if installed

Is the liquid already at alarm level?

Is the power connected and working?

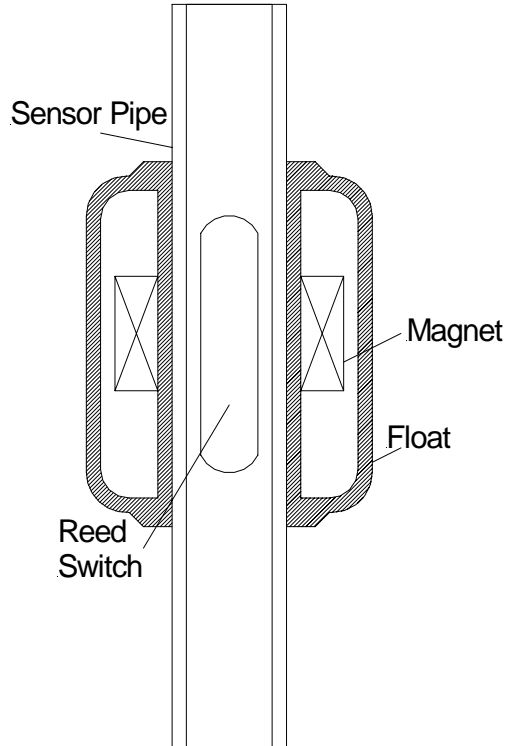
Check operation with the test lever

## Installation

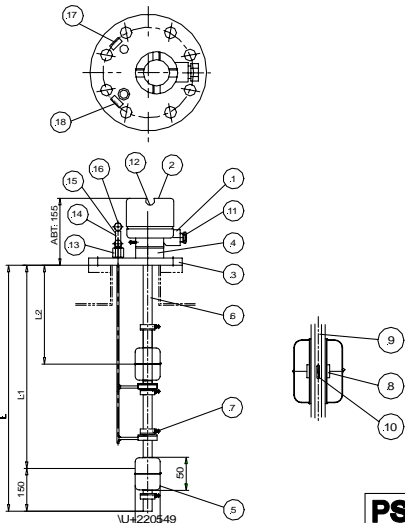
Check instrument for any duty tags to confirm the switch is being installed at the correct location and as intended for either high (make on rise) or low (make on fall)

Ensure the switch test levers are set in their normal operational position

When installing the float level switch in the tank take care not to damage the floats or sensor pipe.



SALES DRAWING ONLY  
NOT TO BE USED FOR MANUFACTURE



**SPECIFICATION**

1. MAX. PRESSURE : 10bar
2. MAX. TEMPERATURE : 120°C
3. MOUNTING : TOP FLANGE
4. SWITCH : REED SWITCH TYPE
5. VOLTAGE : 250V, 0.5A
6. ENCLOSURE : IP56
7. APPLICATION : WATER & OIL

18	NAME PLATE		.1	LOW ALARM
17	NAME PLATE	SUS304	.1	HIGH ALARM
16	CAP		.1	
15	SPRING	SUS304	.1	
14	TEST LEVER	SUS304	.1	LOW
13	TEST LEVER	SUS304	.1	HIGH
12	NAME PLATE	BC	.1	MAKER
11	CABLE GLAND	BC	.1	
10	REED SWITCH		2	
9	PLATE	PCB	.1	
8	MAGNET	FERRITE	4	
7	STOPPER	SUS304	4	
6	SENSOR PIPE	SUS304	1	ø21.7
5	FLOAT	SUS304	2	
4	SOCKET	SUS304	.1	
3	FLANGE	SUS304	.1	DIN100
2	COVER	ALC	.1	
1	BODY	ALC	.1	

SCALE  
NTS

UNLESS OTHERWISE STATED DIMENSIONS ARE IN  
MILLIMETRES / INCHES

**PSM** Instrumentation Ltd

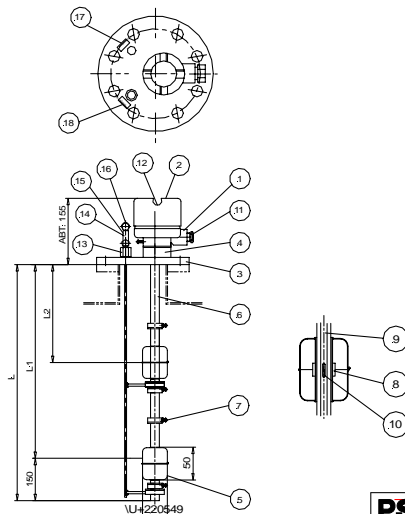
Haywards Heath, West Sussex RH16 1TW  
ph: 44 (0) 1444 410040 f: 44 (0) 1444 410121  
<http://www.psm-sensors.co.uk>

TITLE  
Float Switch  
KD30 2A-W-T

DRAWING NO  
S-001287-SW-GA

**A4** SH1 OF 1

SALES DRAWING ONLY  
NOT TO BE USED FOR MANUFACTURE



**SPECIFICATION**

1. MAX. PRESSURE : 10bar
2. MAX. TEMPERATURE : 120°C
3. MOUNTING : TOP FLANGE
4. SWITCH : REED SWITCH TYPE
5. VOLTAGE : 250V, 0.5A
6. ENCLOSURE : IP56
7. APPLICATION : WATER & OIL

18	NAME PLATE		.1	HIGH ALARM
17	NAME PLATE	SUS304	.1	HIGH ALARM
16	CAP		.1	
15	SPRING	SUS304	.1	
14	TEST LEVER	SUS304	.1	HIGH HIGH
13	TEST LEVER	SUS304	.1	HIGH
12	NAME PLATE	BC	.1	MAKER
11	CABLE GLAND	BC	.1	
10	REED SWITCH		2	
9	PLATE	PCB	.1	
8	MAGNET	FERRITE	4	
7	STOPPER	SUS304	4	
6	SENSOR PIPE	SUS304	1	ø21.7
5	FLOAT	SUS304	2	
4	SOCKET	SUS304	.1	
3	FLANGE	SUS304	.1	DIN100
2	COVER	ALC	.1	
1	BODY	ALC	.1	

SCALE  
NTS

UNLESS OTHERWISE STATED DIMENSIONS ARE IN  
MILLIMETRES / INCHES

**PSM** Instrumentation Ltd

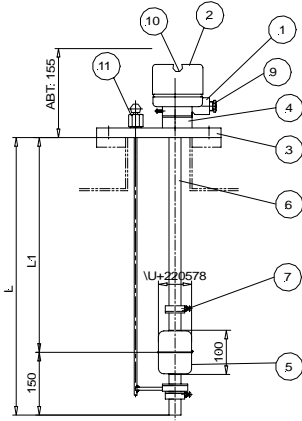
Haywards Heath, West Sussex RH16 1TW  
ph: 44 (0) 1444 410040 f: 44 (0) 1444 410121  
<http://www.psm-sensors.co.uk>

TITLE  
Float Switch  
KD30 2A-W-T

DRAWING NO  
S-001288-SW-GA

**A4** SH1 OF 1

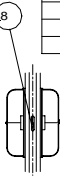
SALES DRAWING ONLY  
NOT TO BE USED FOR MANUFACTURE



**SPECIFICATION**

1. MAX. PRESSURE : 10bar
2. MAX. TEMPERATURE : 120°C
3. MOUNTING : TOP FLANGE
4. SWITCH : REED SWITCH TYPE
5. VOLTAGE : 250V, 0.5A
6. ENCLOSURE : IP56
7. APPLICATION : WATER & OIL

.11	TEST LEVER	SUS304	.1	HIGH
.10	NAME PLATE	SUS304	.1	
.9	CABLE GLAND	BC	.1	
.8	REED SWITCH		.1	
.7	STOPPER	SUS304	2	
.6	SENSOR PIPE	SUS304	.1	ø21.7
.5	FLOAT	SUS304	.1	
.4	SOCKET	SUS304	.1	
.3	FLANGE	SUS304	.1	DIN100
.2	COVER	ALC	.1	
.1	BODY	ALC	.1	



**PSM Instrumentation Ltd**

Haywards Heath, West Sussex RH16 1TW  
ph: 44 (0) 1444 410040 f: 44 (0) 1444 410121  
<http://www.psm-sensors.co.uk>

SCALE NTS

UNLESS OTHERWISE STATED DIMENSIONS ARE IN MILLIMETRES /  $\frac{1}{16}$ "

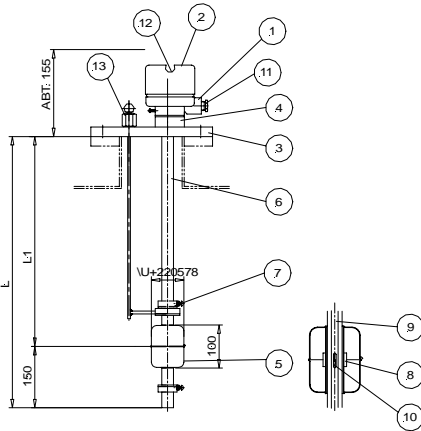
TITLE Float Switch  
KD30 1A-W-T

DRAWING NO S-001289-SW-GA

**A4** SH1 OF 1

DATE: / /  
ISSUE: / /  
DRAWN: / /  
CHECKED: / /  
DESIGNED: / /

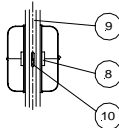
SALES DRAWING ONLY  
NOT TO BE USED FOR MANUFACTURE



**SPECIFICATION**

1. MAX. PRESSURE : 10bar
2. MAX. TEMPERATURE : 120°C
3. MOUNTING : TOP FLANGE
4. SWITCH : REED SWITCH TYPE
5. VOLTAGE : 250V, 0.5A
6. ENCLOSURE : IP56
7. APPLICATION : WATER & OIL

.13	TEST LEVER	SUS304	.1	LOW
.12	NAME PLATE	SUS304	.1	
.11	CABLE GLAND	BC	.1	
.10	REED SWITCH		.1	
.9	PLATE	PCB	.1	
.8	MAGNET	FERRITE	2	
.7	STOPPER	SUS304	2	
.6	SENSOR PIPE	SUS304	.1	ø21.7
.5	FLOAT	SUS304	.1	
.4	SOCKET	SUS304	.1	
.3	FLANGE	SUS304	.1	DIN100
.2	COVER	ALC	.1	
.1	BODY	ALC	.1	



**PSM Instrumentation Ltd**

Haywards Heath, West Sussex RH16 1TW  
ph: 44 (0) 1444 410040 f: 44 (0) 1444 410121  
<http://www.psm-sensors.co.uk>

SCALE NTS

UNLESS OTHERWISE STATED DIMENSIONS ARE IN MILLIMETRES /  $\frac{1}{16}$ "

TITLE Float Switch  
KD30 1A-W-T

DRAWING NO S-001290-SW-GA

**A4** SH1 OF 1

DATE: / /  
ISSUE: / /  
DRAWN: / /  
CHECKED: / /  
DESIGNED: / /

Burrell Road Industrial Estate  
Haywards Heath, West Sussex RH16 1TW, UK  
Tel: +44 (0)1444 410040 Fax: +44 (0)1444 410121