# Mobrey Squitch-2

## Ultrasonic liquid level switch

- No moving parts
- Simple 2 wire installation
- Mount in any position
- LED status indicator
- 316 Stainless steel wetted parts
- Works in most clean liquids

**Options**
Squitch is available with a variety of mounting options including threads and hygienic couplings. See ordering information inside for full details.

**Description**
A compact, self contained ultrasonic iquid level switch with 316 stainless steel wetted parts and 240V switching capability. Squitch is a 2 wire product - that is, it requires only 2 electrical connections, using standard instrument wire.
The Squitch is connected in series with the load (contactor, starter, relay, etc.) and acts as a simple switch, operated by liquid presence.

Squitch may also be interfaced directly to a PLC using simple instrument cable. For this purpose, a PLC terminal is provided in the housing.

**Operation**
Squitch is an ultrasonic gap sensor switch. When a liquid fills the sensor gap an ultrasonic signal is transmitted across the gap and the presence of liquid is signalled. When the sensor gap is filled with air there is no signal transmitted and a "dry" state is signalled.

Squitch may be set on site with a selector switch to energise on either wet or dry.
When Squitch is 'off' a small current of less than 4.5mA is drawn through the load and a red LED viewed through a window in the end cover will flash approximately once per second.
When Squitch is 'on', the full load current (0.5A max.) flows, and the L.E.D is on constantly. In this way there is always an indication that Squitch is "alive and well".
Squitch may be installed in any position in the vessel.

Squitch should not be used in aerated liquids such as carbonated drinks or in liquids with high concentrations of suspended solids such as liquid chocolate.

# Level

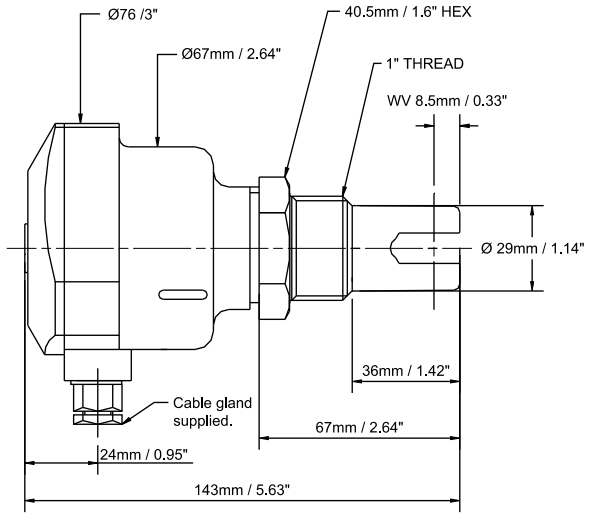
**Specification sheet**
IP207
August 2010

## Specification

| | |
|---|---|
| Wetside material | Stainless steel 316 |
| Dryside material | Glass filled nylon, housing yellow, end cap black |
| Protection class | IP66/IP67 / NEMA 4X  Housing is rotatable 330° on sensor |
| Max. operating pressure | 20 bar / 290 psi |
| Operating temp | -40°C to +125°C / - 40°F to +257°F |
| Ambient temp | -40°C to +50°C / - 40°F to +122°F (up to 125°C / 257°F on wetside) |
| Power supply | 24V - 240V DC or AC (50-60Hz) |
| Cable entry | Via cable gland supplied |
| Terminals | 2.5mm$^2$ / 14 AWG wire size |
| Max. switched load | 500mA continuous |
| Min. switched load | 7.5mA continuous ( see voltage drop ) |
| Max. peak load | 5 A for 40ms max |
| Current drawn: load off: | <4.5mA continuous |
| Voltage drop | 4.5V @ 500mA  10V @ 7.5mA |
| Time delay/response | 1 S wet to dry  150mS dry to wet (water) |
| Switching hysteresis | ± 1mm / ± 0.04" |
| Viscosity | 5000cs max ( at 25°C  / 77°F) |

## Dimensions

Standard Squitch

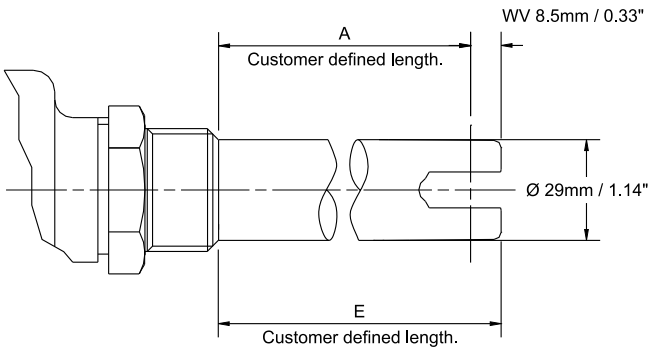



Cable gland supplied

Weight: 0.43 kg / 0.95lbs

WV = switching point, Squitch-2 mounted vertical

Extended Squitch




Specify dims. A & E when ordering:
E = A + 8.5mm / 0.33"
Maximum: E = 3000mm / 118"
Minimum: E = 150mm / 5.91"

**Specification sheet**
IP207
August 2010

# Level

### Ordering Information

| Code | Product |
|---|---|
| 8 | Squitch |

| Code | Size |
|---|---|
| 3 | 1" |
| 5 | 2" (or 51mm): use with Tri-clover clamp fitting only |

| Code | Fitting |
|---|---|
| 0 | BSPT thread (1" only) |
| 4 | BSPP Outside fitting (1" only) |
| 5 | NPT Outside fitting (1" only) |
| 7 | Tri-Clover clamp (2" only) |

| Code | Material |
|---|---|
| SD | 316 Stainless steel |

| Code | Enclosure |
|---|---|
| S | Yellow Squing housing |

| Code | Use |
|---|---|
| 0 | Safe area use only (see note below) |

| Code | Output |
|---|---|
| 0 | Direct load switching (24-240V ac/dc) |

| Code | Finish |
|---|---|
| 0 | Electropolish or glass bead on flanged/ extended length models |

| Code | Material Certs : |
|---|---|
| 0 | Typical (on request only) |

| Code | Length |
|---|---|
| E**** | Extended length. (3000mm / 118" max.) 1" & flange only |
| L | Fixed length. E = 92mm / 3.6" |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 3 | 0 | SD | S | 0 | 0 | 0 | 0 | E2000 | Typical part number |

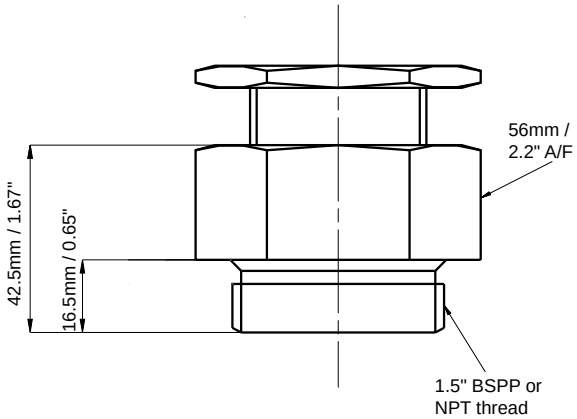
### Adjustable gland kit

An adjustable gland is available to allow site adjustment of the switching level for top mounted extended length Squitch. The gland is ordered as a separate item as below and may be used with any Squitch with extended length greater than 300mm / 12".

| | | |
|---|---|---|
| Material: | Body | 316 Stainless steel |
| | Seal | Silicone rubber |
| Maximum pressure | | 1.3 bar / 18.9 psi |
| Maximum temperature | | 125°C / 257°F |

Order part number:

| | |
|---|---|
| SK304 | 1.5" BSPP thread |
| SK462 | 1.5" NPT thread |



# Level

## Accessories

| | |
|---|---|
| Adjustable clamp gland<br>Maximum operating pressure:<br>1.3 bar / 19psi<br>Maximum operating temperature:<br>125ºC / 257°F | SK304 / SK462<br>For use with 1" thread extended length Squitch<br>Manufactured from 316 stainless steel with a silicone rubber clamp seal.<br>Allows Squitch to be adjusted to optimum operating level and clamped in place. |
| Tri-clover mounting kit<br>Maximum operating pressure:<br>30 bar / 435psi<br>Maximum operating temperature:<br>90°C / 194°F | SK266<br>For use with Tri-clover Squitch type 857<br>Comprises vessel fitting and clamp ring in 316SS plus NBR Nitrile rubber seal |

Note: Standard Squitch can NOT be used in a hazardous area. For hazardous area use, select the Mobrey Electrosensor model (332SDS0 typical model number) from the comprehensive range of gap sensor systems detailed in data sheet IP201.



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