

RS400 Rollover Sensor

The RS400 is the fourth generation of Liquip Rollover Sensor and symbolises Liquip’s constant drive for safety and continuous improvement.

Rollovers can occur in the blink of an eye. By installing the RS400 Rollover Sensor the severity of an incident will be significantly reduced, should a rollover occur.

In the event of a rollover, the RS400 is a safe and effective way to ensure electrical sources of product ignition are isolated. This helps to reduce potential driver injury and impacts to the public and the environment.

Key Features

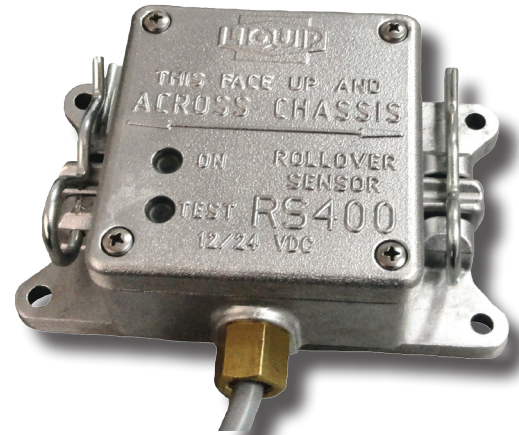
- Complies with AS2809 - Vehicle Rollover Device.
- Solid state 3 axis accelerometer determines when a rollover has occurred and activates the battery isolation switch to shutdown power sources.
- The device will not be activated at less than 45° to the vertical.
- Inbuilt filter prevents accidental shutdowns by rejecting any readings that would not result in a rollover e.g. bumps.
- Same footprint as previous models for ease of replacement and/or installation.
- Resistant to power surges.
- If the sensor loses power, it won’t actuate the emergency mains switch.
- Integrated hinge and indicator lights for easy in situ testing.
- 2 metres of colour coded cable for ease of installation.
- Power input is reverse polarity protected and solid state outputs are fault current limited to protect against incorrect installation.
- Can also be used to operate a Liquip engine strangler to ensure the vehicle engine stops.

Design Codes

Designed and manufactured to be compatible with all trucks.

Specifications

Operating voltage range	9V to 32V DC, 1.5W maximum
Operating temperature range	-20°C to +60°C
Ingress Protection Rating	IP66 rated
Standards	Meets AS2809-2008
Weight	2.2 kg
Warranty	12 months on manufacturing faults
Contact current rating	10A DC switching current (NOHP to 0V) 0.15A DC switching current (NO/NC to COM)
Mounting/Installation	Installation instructions supplied



The RS400 installed position



The RS400 allows for easy testing

Dismantle

Not user serviceable.

Adjustment or Service

Sensor testing is recommended when standard maintenance is carried out on the tanker (typically every six months).

A humping base is provided to allow simple testing of the sensor. With the vehicle in park and handbrake applied, remove one of the humpback pins from the RS400 and tilt the sensor body until it reaches the stop. At this point electrical circuits will have no voltage and truck engine will stop (if engine strangler fitted). After testing replace the sensor and secure it with the humpback pin.

A unique "self diagnosis" tool indicates rollover sensor functionality. A steady bright green LED indicates the rollover sensor is horizontal and functional. A steady bright red LED indicates the rollover sensor is tilted past its activation angle. During in situ testing red LED will turn off once power has been isolated.

If the RS400 is powered and it is observed that both red and green LED are off at the same time, or if either LED is flashing, then the RS400 should be replaced.

It is recommended that the 4 screws holding the lid are periodically checked that they are tightened to 2Nm each. Retightening is necessary due to compression set in the gasket.

Materials of Construction

- Base, body and lid are cast aluminium.
- Humpback pins are zinc plated steel.
- All electronic components are encased in epoxy.
- Lenses are acrylic.

Cable Signal Description

CABLE COLOUR	SIGNAL NAME	SIGNAL DESCRIPTION
RED	V+	POSITIVE POWER INPUT
GREEN/YELLOW	0V	NEGATIVE POWER INPUT
BLACK	0V	NEGATIVE HIGH POWER INPUT
BROWN	NOHP	POSITIVE HIGH POWER INPUT
WHITE	NO	NORMALLY OPEN LOW POWER CONTACT
GREY	COM	COMMON LOW POWER CONTACT
BLUE	NC	NORMALLY CLOSED LOW POWER CONTACT
VIOLET	TX	RS232 TRANSMIT
PINK	RX	RS232 RECEIVE

Associated Documentation

Installation instructions P59097. Wiring must be in accordance with AS2809.

Associated Equipment

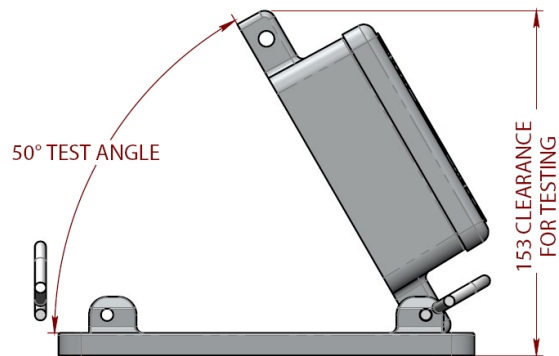
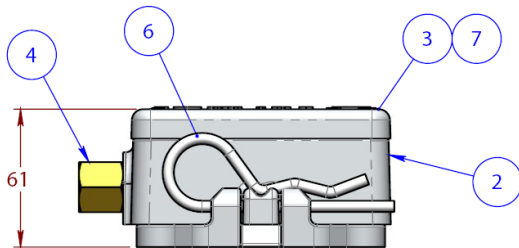
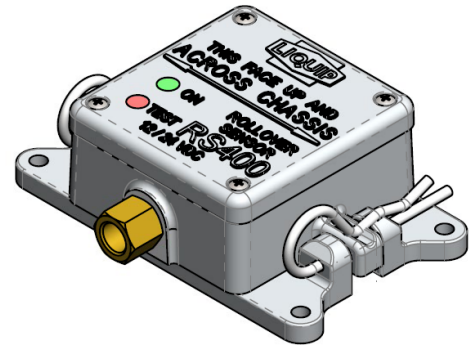
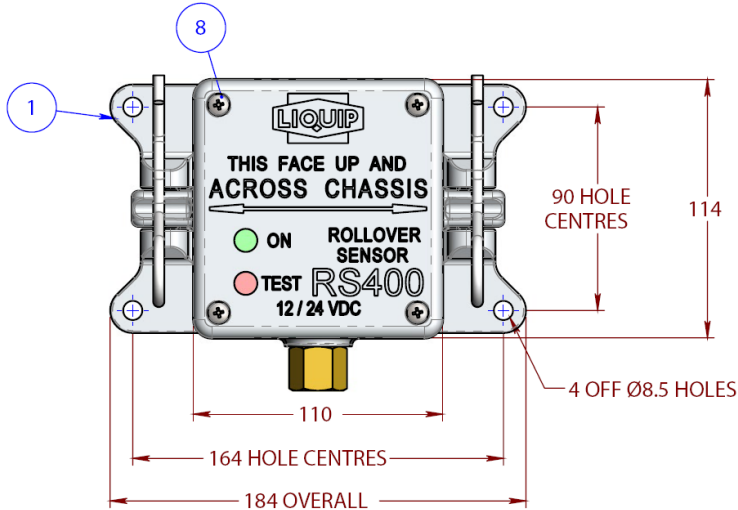
- **MES3:** 3" Mechanical Engine Strangler.
- **MES5:** 5" Mechanical Engine Strangler.
- **TSW12K:** Manual 500amp Isolation Switch 12V and Harness Kit.
- **TSW24K:** Manual 500amp Isolation Switch 24V and Harness Kit.
- **HM001:** Single position mounting bracket.

Overall dimensions shown on the drawing overleaf.



LIQUIP

RS400 ROLLOVER SENSOR



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	MATERIAL
1	RS201-1	BASE - HINGING	1	ALUMINIUM
2	RS400-2	BODY ROLLOVER SENSOR	1	ALUMINIUM
3	RS400-3	LID	1	ALUMINIUM
4	ERP200-3	ADAPTOR	1	BRASS
5	RS400-4	GROMMET	1	VITON
6	0880	HUMPBACK PIN	2	Z/P STEEL
7	4249	GASKET	1	NBR CORK
8	55069	SCREW METRIC	4	ST STEEL
9	59097	RS400 INSTALLATION INSTRUCTION	1	PAPER

X1051312

Issue: B

METERS - VALVES - VENTS - MANHOLES - PUMPS - HOSEREELS - OVERFILL PROTECTION - LOADING ARMS - ELECTRONIC DIPSTICKS



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