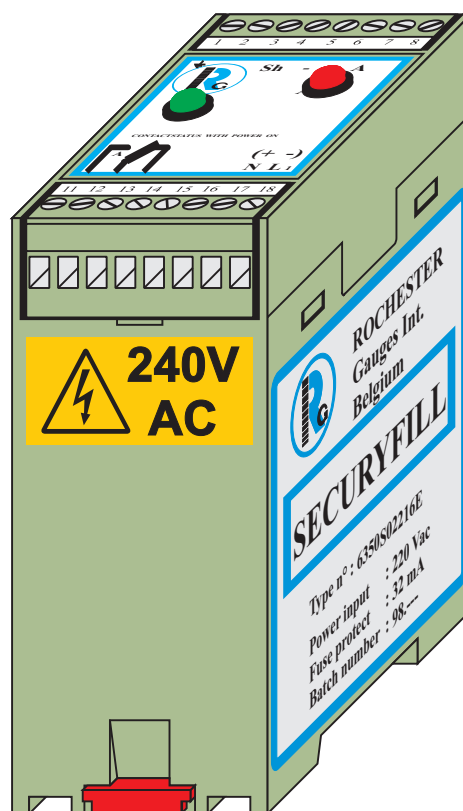
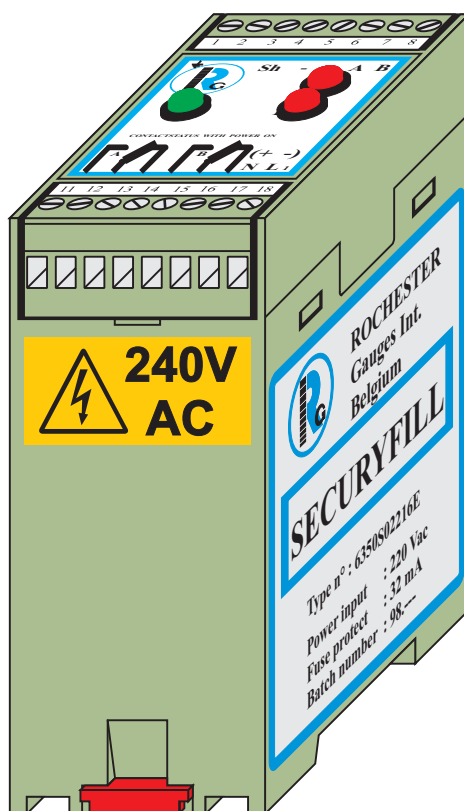




Receiver SECURYPILL II



TECHNICAL INFORMATION



03/10

ROCHESTER GAUGES INTERNATIONAL S.A.

Z.I. WAVRE NORD - Av. Lavoisier, 6 - B-1300 WAVRE (Belgium)

Tel. (010) 24.10.10 - Fax (010) 22.81.39

<http://www.rochester-gauges.be>



Optoswitch Transmission Unit (Optoswitch and Securyfill II)

DESCRIPTION :

This Optoswitch transmission unit provides up to (2) factoryset level detectors and consists of a transmitter and a receiver. Designed to be mounted behind the Magneteldial or on a 7290 serie gauge, the transmitter consists of an explosion proof EExd IIBT6, IP65 aluminium housing including up to 2 opto-electronic switches and 2 powerful magnets mounted on the supporting shaft of the switch paddle. This arrangement allows to maintain the direct reading on the tank. The transmitter is supplied with its cable and with a 2m double insulated, shielded 3x0.75mm² or 4x0.75mm² (liYCY-OB) cable (depending of the model). The transmitter signal is processed by the receiver "Securyfill II" which incorporates the output relays.



Optoswitch on 7293 gauge



Securyfill II

GENERAL DATA OF TRANSMITTER :

Up to 2 optoswitch factoryset level detectors.
Shock proof, can be used on trucks.

- Power supply : 40mA max. / 2Vdc
- Mechanical rotation : 360°
- Conformity : ± 1%
- Hysteresis : ± 1.5%
- Number of cycle : > 10⁷ revolutions
- Operating temperature : -20° to +40°C
- EExd IIB T6 approval : ISSeP00ATEX021X

6 3 0 * S * 2 2 * * *

- **Type de jauge**
 - C Magnetel centerline mounted
 - P Senior gauge with strong magnet
 - S Gauge 7290 or 7293
 - X Magnetel straddel mounted
- **Number of low level set points ***
 - 0 no low level
 - 1 one low level
 - 2 two low level
- **Number of high level set points ***
 - 0 no high level
 - 1 one high level
 - 2 two high level
- * Maximum two level set points in total**
- **Gauge dial type**
 - 0 8" Magnetel 3-97%
 - 1 8" Magnetel 5-95%
 - 4 4" serial 7290 5-95%
 - 5 4" Magnetel 5-95%
 - 6 Senior gauge 5-95%
 - 7 Special (redundancy, ...)
- **Type of enclosure**
 - 3 Explosion proof EExd II B T6
 - 4 With cryogenic extension **
- ** Length and Thread to be specified**

GENERAL DATA OF RECEIVER :

Receiver is enclosed in a ABS box (45x75x105mm) to be mounted on DIN rail. Output on volt free inverters 250Vac-3A. Relays are deenergised when level setpoints are reached (below or above as required). Status of relays shown by Led (Led glows when associated levelsetpoint is reached). Receiver to be installed in control room outside Ex area or to be mounted in a explosion proof EExd enclosure with a good ventilation.

- Connections : screw terminals 2.5mm²
- Input voltage : 24Vac^{+10%}/50Hz, 24Vdc^{+10%} or 230Vac^{+10% -15%}/50Hz
- Power rate : ± 1.2VA

6 3 5 0 S * 2 * 1 * E

- **Number of relay**
 - 111 One relay inverter
 - 216 Two relays inverters
- **Power supply**
 - 0 230Vac^{+10% -15%}/50Hz
 - 3 24Vdc^{+10%}
 - 4 24Vac^{+10%}/50Hz



ROCHESTER GAUGES INTERNATIONAL S.A.

Z.I. WAVRE NORD - Av. Lavoisier, 6 - 1300 WAVRE (Belgium)

Tel. +32 (0)10 241010 - Fax +32 (0)10 228139

<http://www.rochester-gauges.be>

Truth tables for receivers with 2 outputs contacts

MIN - MIN

Power	Levels (L)	Leds "red"		Output relays	
		LA	LB	RA	LB
OFF	X	OFF	OFF	OFF	OFF
ON	$L > A$	OFF	OFF	ON	ON
ON	$B < L \leq A$	ON	OFF	OFF	ON
ON	$L \leq B$	ON	ON	OFF	OFF

MIN - MAX

Power	Levels (L)	Leds "red"		Output relays	
		LA	LB	RA	LB
OFF	X	OFF	OFF	OFF	OFF
ON	$B < L < A$	OFF	OFF	ON	ON
ON	$L \geq A$	ON	OFF	OFF	ON
ON	$L \leq B$	OFF	ON	ON	OFF

MAX - MAX

Power	Levels (L)	Leds "red"		Output relays	
		LA	LB	RA	LB
OFF	X	OFF	OFF	OFF	OFF
ON	$L < B$	OFF	OFF	ON	ON
ON	$L \geq A$	ON	ON	OFF	OFF
ON	$B \leq L < A$	OFF	ON	ON	OFF

Truth tables for receivers with 1 output contact

MIN

Power	Levels (L)	LA	RA
OFF	X	OFF	OFF
ON	$L > A$	OFF	ON
ON	$L \leq A$	ON	OFF

MAX

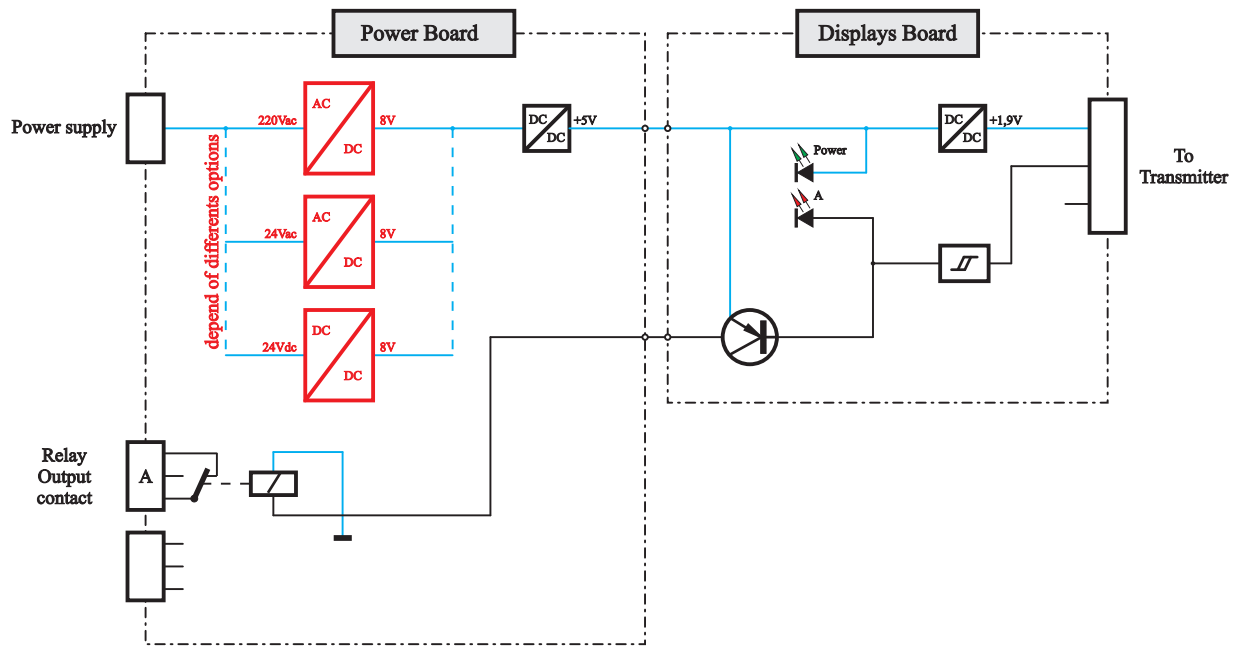
Power	Levels (L)	LA	RA
OFF	X	OFF	OFF
ON	$L < A$	OFF	ON
ON	$L \geq A$	ON	OFF



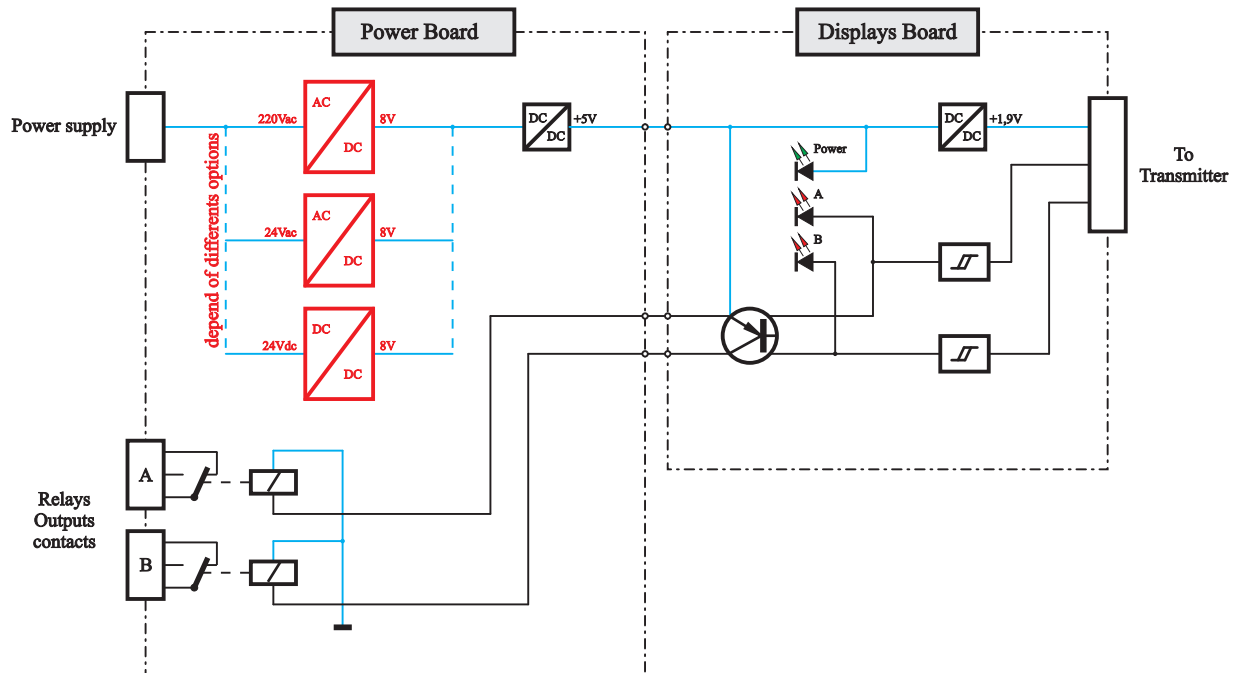
ROCHESTER GAUGES INTERNATIONAL S.A.
 Z.I. WAVRE NORD - Av. Lavoisier, 6 - 1300 WAVRE (Belgium)
 Tel. +32 (0)10 241010 - Fax +32 (0)10 228139
<http://www.rochester-gauges.be>

BLOCK DIAGRAMS

With one output contact



With two output contacts





ROCHESTER GAUGES INTERNATIONAL S.A.

Z.I. WAVRE NORD - Av. Lavoisier, 6 - 1300 WAVRE (Belgium)

Tel. +32 (0)10 241010 - Fax +32 (0)10 228139

<http://www.rochester-gauges.be>

Cable technical data Li-YCY(OB) 0.75mm²

Controls and signalisation multiconductors screened cable with :

- Stranded conductors of bare copper
- PVC insulation
- Twisted
- Polyester foil taped
- Colour code in accordance with DIN 47100. Outer sheath of grey PVC
- Total screening with tinned copper braid, 85% minimum coverage.

TEMPERATURE RANGE :

Mounting and servicing -10°C à +80°C

Transport and storage -30°C à +80°C

USE :

Measuring, control regulation applications

Electronics control

STANDARDS LIYCY-OB :

Manufacturing in accordance with VDE 0295, 0250, 0271, 0812, 0814, 0817

In accordance with CEI 20-22, IEC 332 (fire resistance)

CABLE DESCRIPTION :

wire	: Red copper, 24 wire of 0.22 mm diameter
insulation	: PVC Coloured following DIN 47100, PVC 105°C, diameter 2.2
twisted	: by layers
assembly	: Mylar sheet
screening	: tinned copper braid (density 85%)
outer sheath	: RAL 7032 grey PVC, flame retardant NPI CEI 20-22

CABLE SPECIFICATIONS:

operating voltage	: 375 V
insulation	: 20MΩ/Km
testing voltage	: more than 2KV
Bending radius	: 15 x Ø

ELECTRICAL DATA AT 25°C :

conductor resistance	: maximum 26Ω/Km
capacity	: 130pF/Km at frequency 800Hz
load	: maximum 13A

MECHANICAL DATA :

number of conductors [mm ²]	outer diameter [mm]	total weight [Kg/Km]
2 x 0.75	6.0	57.0
3 x 0.75	6.2	70.0
4 x 0.75	8.0	87.0
6 x 0.75	8.6	125.0

COLOUR MARKING DIN 47100 :

Number	Colour
1	white
2	brown
3	green
4	yellow
5	grey
6	pink



ROCHESTER GAUGES INTERNATIONAL S.A.

Z.I. WAVRE NORD - Av. Lavoisier, 6 - 1300 WAVRE (Belgium)

Tel. +32 (0)10 241010 - Fax +32 (0)10 228139

<http://www.rochester-gauges.be>

[illegible]

HAZARDEOUS ZONE

SAFE ZONE

LiYCY-OB 3 x 0.75mm²

Brown - GND trans.
White - Vcc trans.
Green - A contact

Optoswitch transmitter 6303S72210*



HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

HH

Optoswitch transmitter
6303 S * 22 ***

Brown - GND trans.
White - Vcc trans.
Green - A contact
Yellow - B contact

LiYCY-OB 4 x 0.75mm²

Equipotential connection

Local
ground

Local
ground

Power input

SECURITYFILL
with 2 contacts
6350 S * 2216 E

SECURITYFILL
with 1 contact
6350 S * 2111 E

Terminal numbers

- | | |
|------------------|----------------------------|
| 1 - Local ground | 11 - A NO |
| 2 - Not used | 12 - A Common |
| 3 - Not used | 13 - A NC |
| 4 - Shield | 14 - B NO |
| 5 - GND trans. | 15 - B Common |
| 6 - Vcc trans. | 16 - B NC |
| 7 - A contact | 17 - N (Vac) or GND * |
| 8 - B contact | 18 - L1 (Vac) or + (Vdc) * |

* Depends of model (different power supply)

Note :

Output contacts are shown in powered position.
They change over when correspondent level is
reached or overreached or when power drops down.

Date		Name	Material
Drawn	28-02-95	DS	
	16-07-07	DS	
Transfer.			
Modif.			

Scale :

SECURITYFILL II

(2) levels set points L, H with redundancy HH

Typical installation diagram

Computer file :

INST-4-AN (H).cdr

H

PC

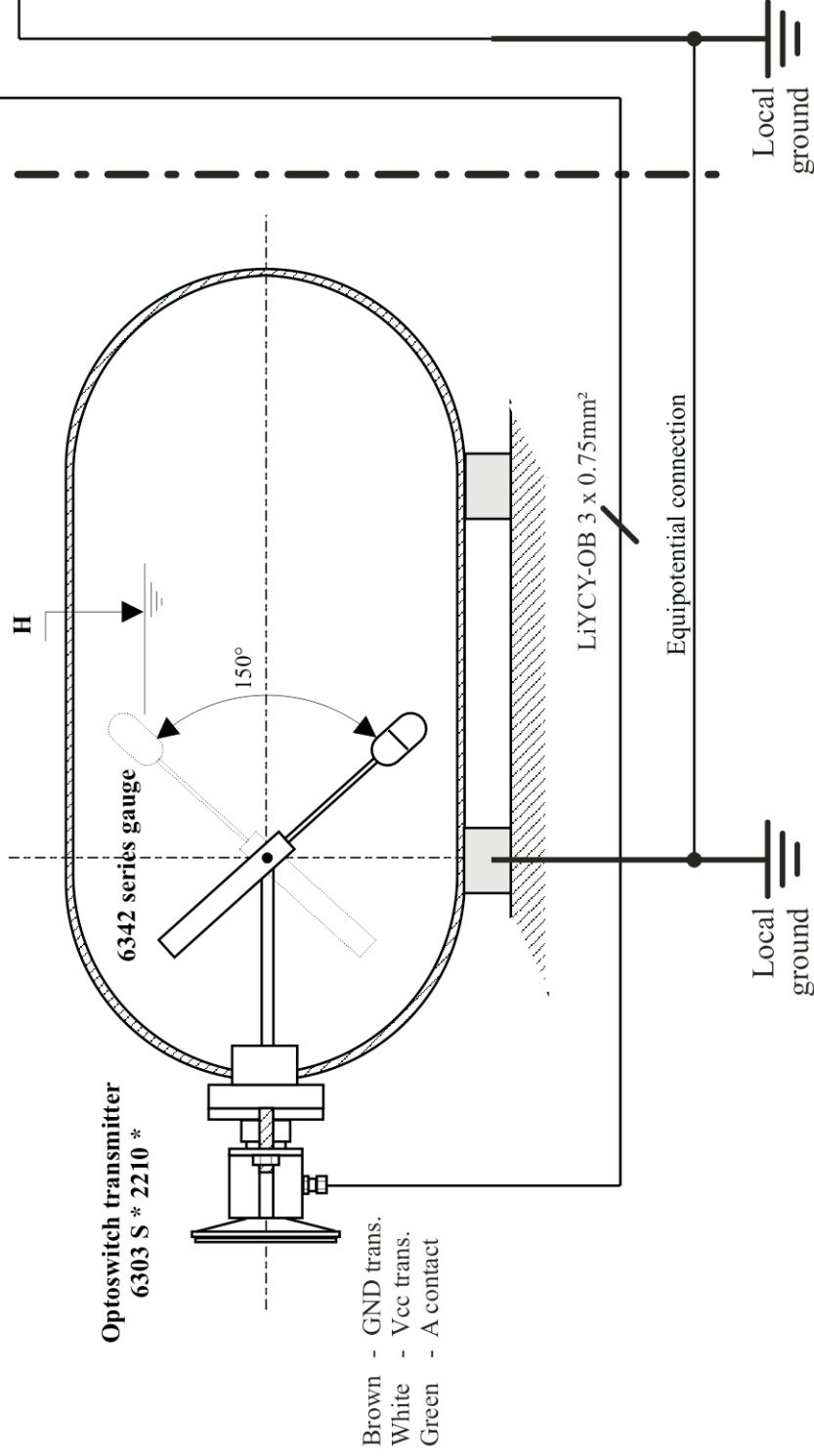


ROCHESTER GAUGES INT. S.A.

BELGIUM

HAZARDEOUS ZONE

SAFE ZONE



Brown - GND trans.
White - Vcc trans.
Green - A contact

Terminal numbers

- | | |
|------------------|---------------------------|
| 1 - Local ground | 11 - A NO |
| 2 - Not used | 12 - A Common |
| 3 - Not used | 13 - A NC |
| 4 - Shield | 14 - Not used |
| 5 - GND trans. | 15 - Not used |
| 6 - Vcc trans. | 16 - Not used |
| 7 - A contact | 17 - N (Vac) or GND * |
| 8 - Not used | 18 - L1 (Vac) or + (Vdc)* |

* Depends of model (different power supply)

Note :

Outputcontact is shown in powered position.
He change over when correspondent level is
reached or overreached or when power drops down.

	Date	Name	Material
Drawn	02-07-97	DS	
Transfer.			
Modif.	16-07-07	DS	

Scale :

SECURIFYLL II

(1) high level set point

Typical installation diagram



ROCHESTER GAUGES INT. S.A.

BELGIUM

Computer file :

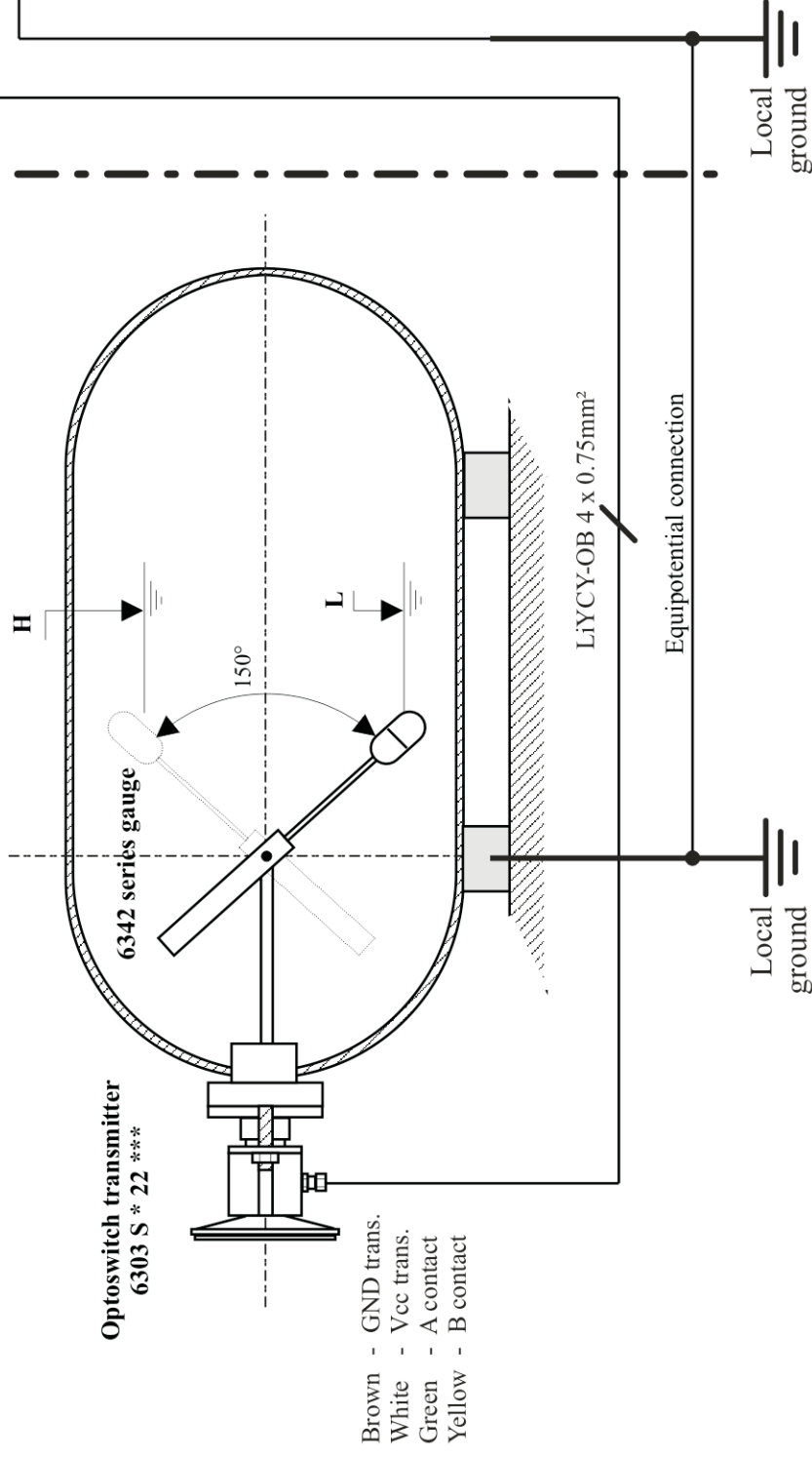
INST-4-AN (F).cdr

F

PC

HAZARDEOUS ZONE

SAFE ZONE



Brown - GND trans.
White - Vcc trans.
Green - A contact
Yellow - B contact

Terminal numbers

- | | |
|------------------|----------------------------|
| 1 - Local ground | 11 - A NO |
| 2 - Not used | 12 - A Common |
| 3 - Not used | 13 - A NC |
| 4 - Shield | 14 - B NO |
| 5 - GND trans. | 15 - B Common |
| 6 - Vcc trans. | 16 - B NC |
| 7 - A contact | 17 - N (Vac) or GND * |
| 8 - B contact | 18 - L1 (Vac) or + (Vdc) * |

* Depends of model (different power supply)

Note :

Output contacts are shown in powered position.
They change over when correspondent level is reached or overreached or when power drops down.

Drawn	Date	Name	Material
Transfer.	07-04-98	DS	
Modif.	16-07-07	DS	

Scale :

SECURIFYLL II

(2) levels set points L, H

Typical installation diagram



ROCHESTER GAUGES INT. S.A.

BELGIUM

Computer file :

INST-4-AN (F).cdr

F

PC