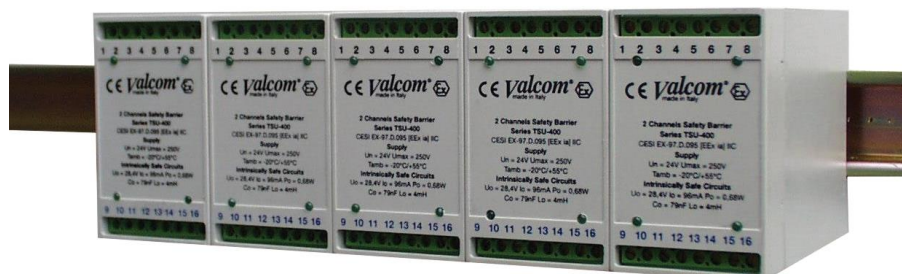


SERIES TSU



TSU series galvanically isolated safety barriers are designed for connection to ON-OFF sensors (two wires) with current (5 mA / 13 mA \pm 1 mA) or frequency (1,2 kHz / 3,8 kHz \pm 0,2 kHz) output.

Inputs are constantly monitored to reveal any possible wiring anomalies (such as short circuit, open circuit or dispersion to ground). The ON-OFF signals from the sensors are retransmitted to the output with the control signals separated for each channel. The presence of bicolor LED's in input and output circuits allows to locally monitor the status of barrier and sensors.

The small size of the housing and the presence of two channels per unit offer the possibility of a high density wiring on DIN rail 35mm.

APPLICATION FIELDS

TSU series barriers can be used in all applications where is requested an isolation between sensors for ON-OFF service (current or frequency output) and the power supply. TSU barriers are especially suitable for ships applications, and for hazardous areas installations being ATEX certified.

Great advantages are offered by the use of TSU series barriers interfaced with Valcom® level switches ASL & LSG series.



SCIGATE AUTOMATION (S) PTE LTD

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Web: www.scigate.com.sg

Business Hours: Monday - Friday 8.30am - 6.15pm

TECHNICAL FEATURES

Electrical parameters

Supply: 24 Vac/Vdc

Output: 4 separated Open Collector NPN or TTL outputs for ON-OFF & FAULT MONITOR signals

Input: 2 separated inputs from two wires ON-OFF transmitters, current(5/13 ± 1 mA)
or frequency(1,2/3,8 ± 0,2 kHz) signal


Environmental Conditions

Ambient temperature: -20 ÷ +55 °C

Storage temperature: -20 ÷ +55 °C

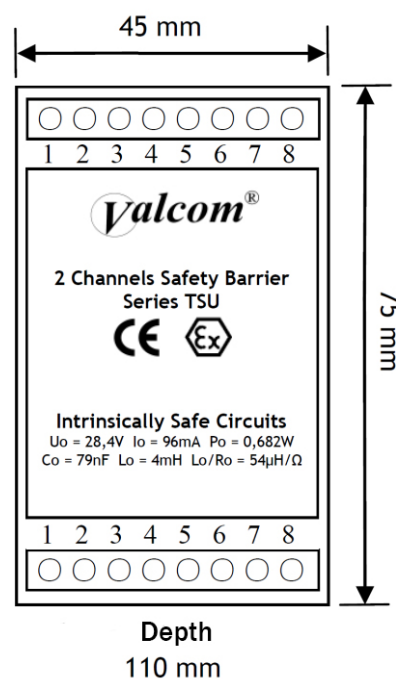
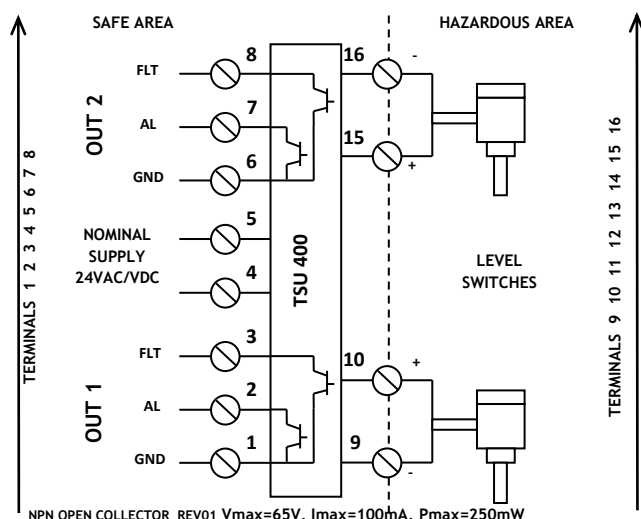
APPROVALS

Type approvals

Directive 2014/34/EU (ATEX)  II (1) G [Ex ia Ga] IIC, II (1) D [Ex ia Da] IIIC

Directive 2014/30/EU (EMC) Adequate level of electromagnetic compatibility

ELECTRICAL WIRING & HOUSING



VISUAL INDICATION

Other than NPN Open Collector outputs, TSU performs the following visual indications separated for the two channels:

Condition (Independent for each channel)	Alarm Indicators		Fault Indicators	
	Output AL	Alarm LED	Output FLT	Fault LED
Normal condition	Close	Green	Close	Green
Pre-alarm or alarm	Open	Red	Close	Green
Open or short circuit on sensor supply line	Open	Dark / Red	Open	Yellow
Sensor output signal failure (#)	Open	Red	Open	Yellow
Sensor supply isolation between wires or of wires towards earth < 4 Kohm	Open	Red	Open	Yellow
Sensor supply isolation of 1 wire towards earth < 10 Kohm (#)	Open	Red	Open	Yellow
Power supply failure	Open	Dark	Open	Dark

(#) Function available only when TSU is connected to ASL400 sensors with frequency output

ORDERING CODE

TSU Galvanic isolation barrier

01 Input & Output

FN1 Current input / open collector output
FN2 Frequency input / open collector output
FT1 Current input / open collector output
FT2 Frequency input / open collector output

02 Mounting

T1 DIN rail mounting
T2 Eurocard 19" mounting
T3 Eurocard 19" mounting with front panel

ACCESSORIES



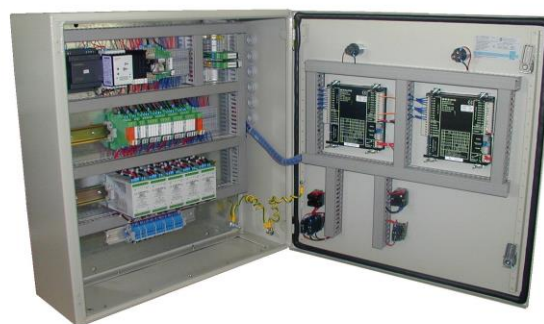
Cod. ASL
Ultrasonic Level Switch



Cod. LSG
Float Level Switch



Cod. STHOP
System for Tank High & Overfill Protection



Cod. WISE
Water Ingress System in Bulkheads



Cod. D1010
Analog Signal Converter and Trip Amplifiers



Cod. TSU Relè
Galvanic isolation barrier with relè output