

# MTL5113P AND 5114P FAILSAFE SWITCH/PROXIMITY DETECTOR INTERFACE

LFD option



With the MTL5113P/5114P, a fail-safe switch/proximity detector located in the hazardous area can control an isolated fail-safe electronic output. The MTL5113P units provide line-fault detection alarm contacts. The MTL5113P and MTL5114P are for use with P + F TÜV approved fail-safe sensors.

## SPECIFICATION

(For both MTL5113P and MTL5114P unless otherwise indicated.)

See also common specification

### Number of channels

One

### Location of switches

Zone 0, IIC, T6 hazardous area  
Div. 1, Group A hazardous location

### Location of proximity detector

Zone 0, IIC, T4-6, hazardous location  
Div 1, Group A, hazardous location

### Voltage applied to sensor

8.6V dc max from 1k $\Omega$

### Input/output characteristics

Input value in sensor circuit	Fail-safe output	Operation	LFD contacts (MTL5113x only)
MTL5113P, MTL5114P 2.9mA < $I_s$ < 3.9mA	ON	Normal	CLOSED
MTL5113P, MTL5114P $I_s$ < 1.9mA & $I_s$ > 5.1mA	OFF	Normal	CLOSED
MTL5113P $I_s$ < 50 $\mu$ A	OFF	Broken line	OPEN
MTL5113P $I_s$ > 6.6mA	OFF	Shorted line	OPEN

Note:  $I_s$  = sensor current

### Fail-safe electronic output

Output on: > 22.8V  
Output off: 0V dc, max < 5V dc  
Load: 2.4k $\Omega$  to 10k $\Omega$   
Maximum on-state current: 11mA  
Short-circuit current: 25mA

### Line fault detection (LFD), MTL5113P only

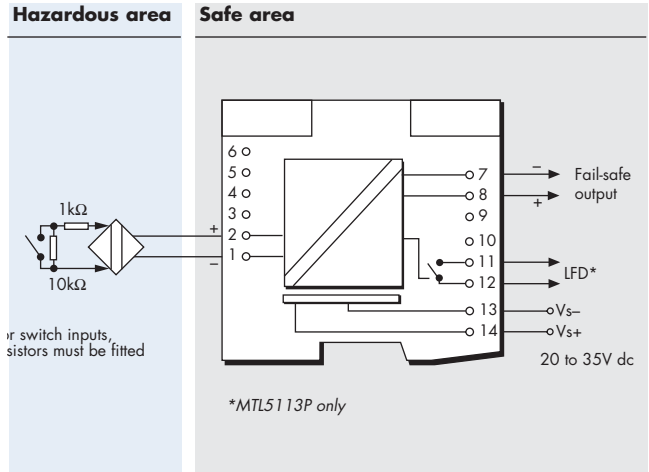
Relay output for line fault (contacts open when line fault detected)  
Switch characteristics: 0.3A 110V ac/dc, 1A 30V dc, 30W/33VA

### LED indicators

Amber: one provided for output status, ON when fail-safe output is energised  
Green: one provided for power indication  
Red: one provided for LFD, ON when line fault is detected (MTL5113P only)

### Power requirements, Vs

MTL5113P	MTL5114P	
80mA	70mA	at 20V dc
70mA	60mA	at 24V dc
65mA	45mA	at 35V dc



Terminal	Function
1	Input -ve
2	Input +ve
7	Output -ve
8	Output +ve
11	LFD (MTL5113P only)
12	LFD (MTL5113P only)
13	Supply -ve
14	Supply +ve

### Power dissipation within unit

MTL5113P	MTL5114P	
1.4W	1.2W	at 20V dc
1.5W	1.3W	at 24V dc
2.0W	1.4W	at 35V dc

### Safety description

9.7V, 30mA, 70mW,  $C_i$ =33nF,  $L_i$ =0mH

### Weight

160g approx.

Note: switch-type sensors must be fitted with resistors as shown

