

FREQUENCY TO CURRENT CONVERTER

The input pulses entering the frequency to current converter are shaped to a particular amplitude and then integrated. The resultant PC Programmable current output 0-20mA is directly proportional to the input set frequency. This analogue output can be read as a 0-20mA signal proportional to 0-100% value of input frequency (Speed of a motor). The unit can be used to trip the motor.

FEATURES :

- * Intrinsically Safe circuit is isolated from both main input and output control circuitry-**1500V, 50Hz.**
- * Suitable for connection to 2 wire Proximity Switches of NAMUR type.
- * Wide input frequency range from 0.001Hz. upto 10 Hz.
- * P C Programmable to match 0-20mA or 4-20mA corresponding to different input frequencies (i.e., to match different speeds of motors).
- * Under speed ,over speed and zero speed monitoring.

METHOD OF ACTUATION

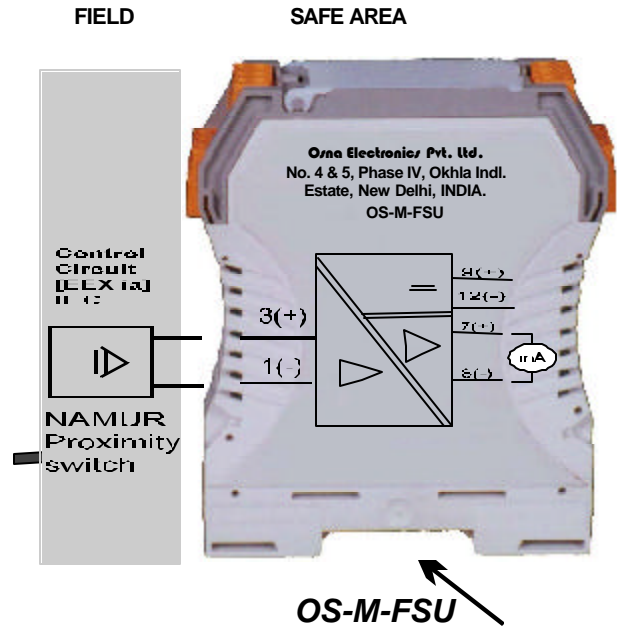
- * N-type Proximity Switches.
- * Contact closure.
- * Passive Switched Transistors.

APPLICATION :

As converter for digital frequency signals to analog current signals, speed indicators, flow rate indicator, display driver.

OPERATION :

INPUT FREQUENCY CALIBRATION IN HERTZ
 This unit can be programmed easily on 0-100 % value of input frequency and propotional output 0/4-20mA.(or spacific)



Clip onto 35mm rail as per DIN 46277

Fig.1

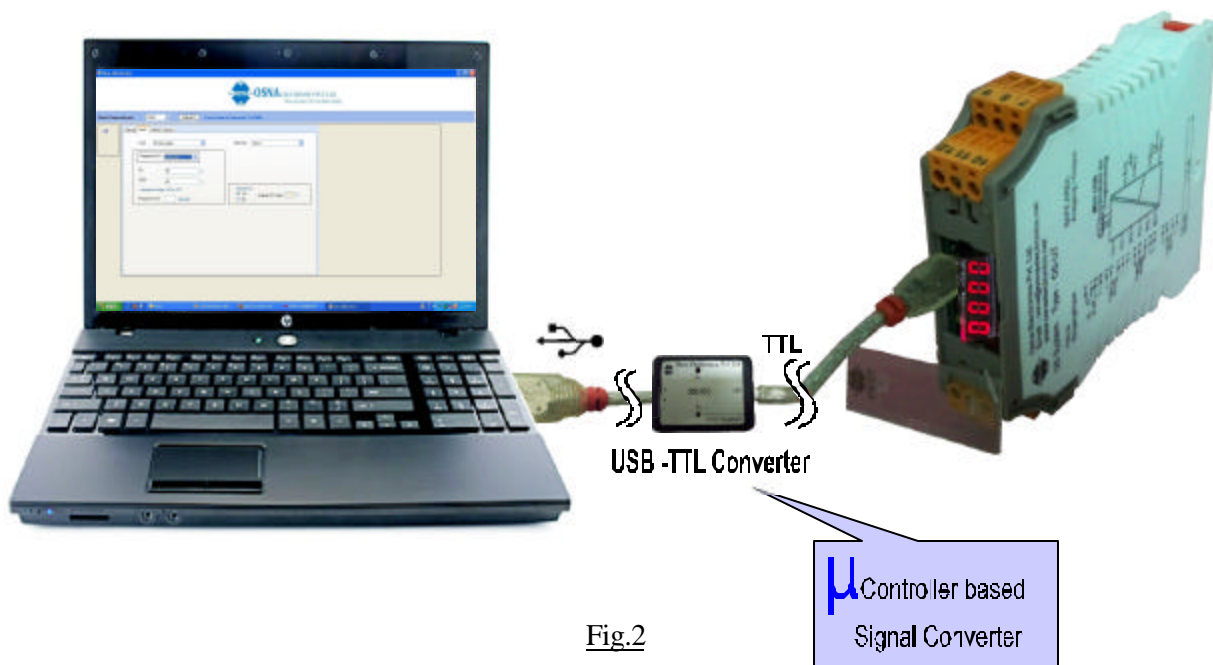


Fig.2

Technical Details

Number of channels one
Location of signal source field
Input signal Frequency (0.001 to 10 KHz)

Power Supply

Supply Voltage 24V DC,9+, 12(-)
 Current Consumption approx. 1.99 W
 Ripple $\leq 10\%$

Hazardous Area Section

Inputs (Intrinsically Safe)
 Nominal data as per DIN 19234 equipment with suffix **NAMUR**
 Open circuit voltage approx. 8 V.DC
 short circuit current approx. 8 mA
 Switching point / Hysteresis 1.2 mA...2.1 mA / ?0.2 mA
 Lead breakage LED RED
 Input Frequency 0.001 to 10 KHz
 LED Indication LED Green (Power Supply)
 RED (LB incase of NAMUR sensor)

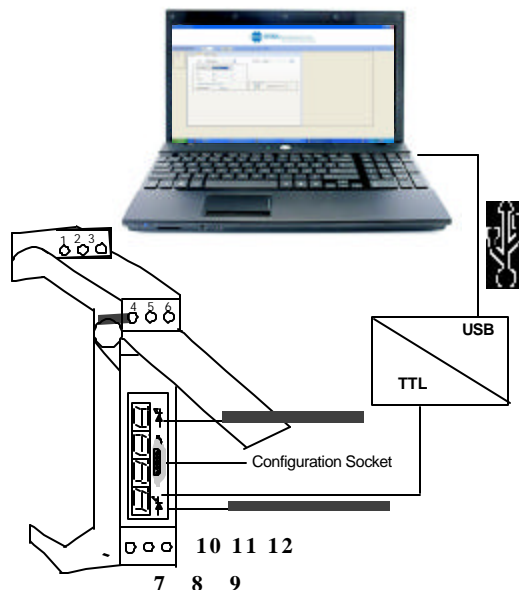


Fig.3

Safe Area Section

Output
 Analog Output Current 0/4-20mA / 0-10V DC (Programmable)
 Analog Output Load 0-1000 Ohm
 Analog Output Response time 0-60 sec. (max.)

P C Programming Section
 P C Interface via TTL Converter

Fail Safe maximum Voltage U_m 250V r.m.s
 Not Nominal Supply

Transfer Characteristics

After calibration
 Output mA accuracy $\pm 0.1\%$ at 20mA
 Temperature drifts at mA / V $\pm 0.01\%$ / °C
 measurement value
 Max. Ambient Temperature Max. -20.....60°C

Weight ca.150g

Dimensions 105 x 92 x 22.5 mm

Accessories TTL / USB Converter (Model No.-USB-TTL)

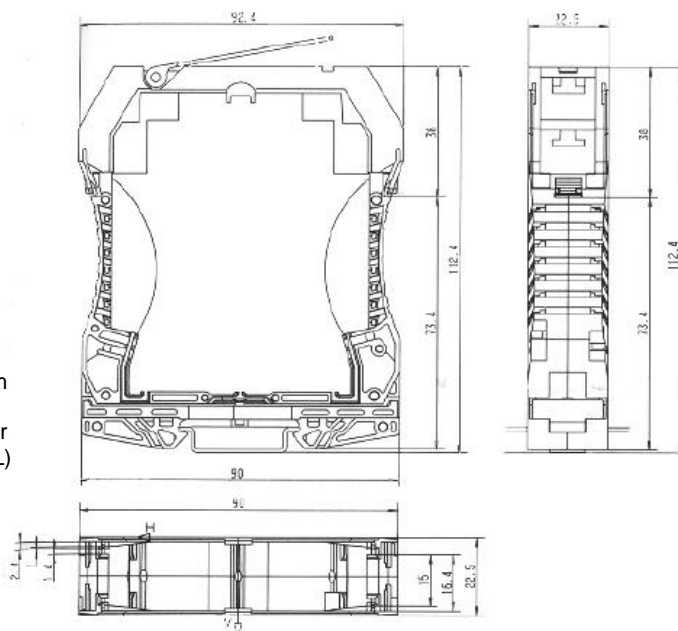


Fig.4