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DESIGN CONSULTANT & MANUFACTURER

- * ELECTRONIC CONTROL SYSTEMS
- * IMPORT SUBSTITUTION

DILIGENT **RATIOCON 4-20 I 16**

In continuous control of combustion process, it is required to adjust fuel and air in right proportion continuously according to the variation in the signal from pressure / temperature controller. However, relationship between fuel valve actuator and damper opening does not remain linear due to complex nature of combustion process. Hence, control signal received from controller has to be modified for optimum results of combustion. For this purpose, complete range is split in number of steps and each step can be multiplied by factor which is expected to give optimum combustion results. Multiplying factor can be set at any value between 0.5 – 1.5 independently for each step. Output signal is clamped to either minimum or maximum values whenever it tries to go beyond these values in any step. Diligent RATIOCON 4-20I 16 is one such controller designed by M/s Diligent Micro Controls to accept 4 – 20 mA dc signal from either pressure / temperature controller and provide modified signal which is also lying in 4 – 20 mA range.

This controller is housed in standard 96 x 96 mm plastic enclosure and it works on 230 V +/-10%, 50 hz, 1 ph ac supply.

1. Description:

‘Diligent Ratiocon 4-20 I 16’ accepts 4-20 mA signal at the input terminals on the rear panel of the box. This range is split in 16 steps and 16 presets are provided to modify each step independently with multiplier between 0.5 to 1.5. 16 LEDs are also provided and LED lights when the input signal crosses the step value. Modified output of 4-20 mA, is provided at the out put terminals on the rear panel of the box. When ever out put tries either to go below 4 mA or to go above 20 mA as a result of multiplying factor setting, internal circuit clamps output to 4 mA in the first case and 20 mA in the second case. Clamped status of <4 mA and > 20 mA is indicated by respective LED on the front panel. Rear panel has two terminals which have to be shorted together during Calibration Mode. Power supply Phase, Neutral & Earth are connected at the respective terminals on the rear panel. This could either be 230 V or 110 V +/-10%, 50 hz, 1 phase AC. RATIOCON has 3 digit display which normally indicates the out put current signal and when the switch on left top corner is pressed it indicates the input current; either actual or calibration.

2. Operation:

Diligent RATIOCON becomes operational as soon as the a.c. power supply is connected to it. RATIOCON has two modes of operation; namely Calibration Mode and Normal Mode.

