

DIGITAL PROCESS MONITOR DMP 06

metallic tensiometers

for tensiometric sensors

| INPUT SIGNALS | |
|------------------|---------------------------------------|
| Metallic sensors | 0 – 27 mV DC@10V (0 - 2,7mV / V) |

| OPTIONAL ACCESSORIES | |
|-------------------------------------|---|
| 2 relays outputs | |
| relay output L3 a L4 | 230 VAC @ 5A Independent. set |
| Isolated analogue output | |
| CURRENT | 0 – 20 mA DC 4 – 20 mA DC |
| due wirrings | active / passive |
| VOLTAGE | 0 – 10 V DC |
| RS232 serial output | |
| 2400 to 57600 bauds | |
| Excitation power supply | |
| 10 VDC @ 200mA (max. 8 tenz @ 350Ω) | |

| TECHNICAL DATA | |
|-------------------------------|--|
| DISPLAY | +/- 29 999 – red LED 14,2 mm |
| POWER SUPPLY | 24 VAC or 24 VDC toleration: -15% / +20% |
| POWER CONSUMPTION | 2,5 W – monitor without accessories + 0,7 W – 2 relays output <i>Device has a fuse T500mA</i> + 0,7 W – isolated analogue output + 3,0 W – excitation power supply |
| SCALE RANGE | in full scale range for certain gauge : n = Max / e (Max = A_03) |
| INPUT RESIST. | more than 1 MΩ |
| WIRE RESISTAN. | max input wire resistance 20Ω |
| SAMPLING | 33 / 16,7 meas./sec – internal measuring 4 meas/sec – for display |
| DIGITAL RESOLUTION | analogue input – 20 bits analogue output – 14 bits |
| ACCURACY | 0,1 % from full range |
| DIGITAL FILTERS | standart 50Hz filtration moving average, trend filter, old vs. new value 2nd order polynomial filter for frequencies : 0.1 Hz , 0.25 Hz , 0.5 Hz , 0.75 Hz , 1 Hz , 2 Hz , 5 Hz and higher |
| TEMP.COEFFIC. | 60 ppm |
| ISOLATION STRENGTH | 510 V eff / 1 min <i>input X output ; power supply X input, output</i> |
| OUTPUT IMPEDANCE | 0 – 10 V DC : more than 5 kΩ 0/4 – 20 mA : less than 600 Ω |
| RELAYS OUPUT | 2 or 4 switching contacts 230 VAC @ 5A |
| LIMITS L3 & L4 | adjustable in full range of scale (+/- 29 999) |
| LIMITS L3 & L4 HYSTERESIS | value –adjustable in range 0 to 29 999 timing – adjustable in range 0,0 to 299,9 sec |
| LIMITS L3 & L4 LOG. FUNCTION | direct indirect |
| RS 232 OUTPUT | 2400, 4800, 9600, 19200, 38400 or 57600 bauds 33 (16) samples per second |
| PANEL CUTOUT | 91 x 44 mm (w x h) |
| DIMENSIONS | 96 x 48 x 85 mm (w x h x d) |
| ENCLOSURE | IP40 |
| WIRING CONNECTION | terminal strip <i>max. conductor cross-section is 2,5mm</i> |
| WEIGHT | 270 g – with all optionals (2limits,Exc.supply,AO) |
| STABILISATION | 5 minutes |
| OPERATING TEMPERATURE | 0 °C to +50 °C |
| OPERATION | continuous |
| SITE ALTITUDE | max. 2000 metres above the sea level |
| EMC resistivity due standarts | ČSN EN 61000-4-2,3,4,5,6,11 ČSN EN 55081-1 |
| EMC immunity influence | max. +/- 0,2% from full signal with unshielded wires |
| ELECTRICAL SAFETY | due ČSN EN 61010-1 + A2 safety class II |

INTRODUCTION

Digital process monitor **DMP 06** displays measured value from tensiometer sensors on user set scale. To control technological processes, process monitor could be equipped with optional relays output. By adding optional isolated analogue output measured signal could be pass on into e.g. control system, analogue card, etc... Otherwise could be used RS 232 serial output for digital measured value transmission.

FUNCTIONS

- DISPLAYING** measured physical value
- SCALE SETUP** in full range by user
- RELAYS FUNCTIONS** selectable by user
 - **limit value** – for each relay adjustable independently
 - **limit value hysteresis** – for each relay adjustable independently
 - **limit time hysteresis** – for each relay adjustable independently
 - **direct / indirect function** – relays closes / opens when value reach limit
- OUTPUT SIGNAL SELECTION** by user
- COMMUNICATION SPEED and UNIT** selection by user
- DISPLAY BRIGHTNESS** selection in two levels
- DIGITAL FILTERS** for measured signal
 - without filter (standart 50Hz filtration)
 - moving average, trend filter, old vs. new value
 - 2nd order polynomial filter for frequencies : 0.1 Hz , 0.25 Hz , 0.5 Hz , 0.75 Hz , 1 Hz , 2 Hz , 5 Hz a higher
- HARDWARE FILTER** for measured signal
 - 2nd order low pass filter
- DISPLAY DIGIT STEP** adjustable by user
- ZERO INDICATION** by LED diode
- OPERATING ZERO ADJUST**
 - by buttons on front panel
 - by external input
- GALVANIC ISOLATION**
 - power supply from: input and output signal
 - input signal is galvanically isolated from output signal
 - relays outputs are galvanically isolated

DESCRIPTION

Device is controlled by **four buttons** located on front panel . All settings are **stored in EEPROM memory**. Digital process monitor is built into industrial standart box, which is intended to panel mounting into switch board. Terminal strip is located on the rear side of device. Red display is default, on customer request is green display possible

| ORDER CODE | |
|---------------------------|---|
| DMP 06 - | |
| A B C D | |
| A | Pwr. supply 1 – 24 VAC / VDC , -15 to +20 % |
| B | Relays outputs 0 – without relays outputs 1 – 2 relays outputs |
| C | Analogue / serial output 0 – without analogue output 1 – with analogue output 2 – RS 232 output 3 – RS 232 and analogue output |
| D | Excitation power supply 0 – without excitation power supply 1 – exc.power supply 10 VDC@200 mA |

| TERMINAL STRIP | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|--|----|---------------------------------|----|-----------------------|-----|--------|-----|--------------------------------|----|--|--|
| TERMINAL STRIP | | | | | | | | | | | | | | | |
| input | | | | Exc. PWR | | oper.zero adjust EXTERNAL 24VDC | | AO voltage | | RS-232 | | PWR 24VDC 24VAC | | | |
| - | + | - | + | - | + | - | + | - | + | | | | | | |
| 1 | 2 | 3 | 4 | 16 | 17 | 24 | 25 | 15u | 14u | 14i | 15i | TX | RX | | |
| | | | | | | | | | | | | | | | |
| LEGENDA: | | | | | | | | | | | | | | | |
| □ strips 1 - 4 | | | | analogue input (AI) | | | | □ strips 18 - 23 | | | | relay outputs | | | |
| □ strips 18, 19, 20 | | | | relay Re3 (limit L3) | | | | □ strips 21, 22, 23 | | | | relay Re4 (limit L4) | | | |
| □ strips 14 i, 15 i, 14 u, 15 u | | | | analogue output (AO) | | | | □ strips 16, 17 | | | | excitation power supply (Exc.) | | | |
| □ strips 24, 25 | | | | external operational zero adjust (EXT) | | | | □ strips Tx, Rx a COM | | | | RS 232 output (RS) | | | |
| □ strips I, II | | | | power supply | | | | | | | | | | | |

| ORDER EXAMPLE | |
|----------------------|------------------------------|
| DMP 06 – 1101 | |
| - | Power supply 24 VAC / VDC |
| - | 2 relays output |
| - | without analogue output |
| - | with excitation power supply |

