# OM 621BCD



# **DM** 621BCD

The OM 621BCD model is a 6-digit panel monitor of serial or parallel BCD/BIN signal and monitor of active transformer tapping lead, allowing for projection of transitional status and servomotor running.

The instrument is based on an 8-bit processor that secures high accuracy, stability and easy operation of the instrument.



- 6-DIGIT PROGRAMMABLE PROJECTION
- INPUT BC D/TR ANSFOR MER TAPPI NG LE AD
- SIZE OF DIN 96 X 48 MM
- POWER SUPPLY 80...250 V AC/DC
- Option
   Excitation Comparators Data output Analog output
   Power supply 9...50 V AC/DC

# **OM** 621BCD

MONITOR BCD AND ACTIVE TRANSFORMER TAPPING LEADS

# OPERATION

The instrument is set and controlled by five control keys located on the front panel. All programmable settings of the instrument are realised in two adjusting modes.

**CONFIGURATION MENU** (hereinafter referred to as CM) is protected by an optional number code and contains complete instrument setting.

**USER MENU** may contain arbitrary programming settings defined in "CM" with another selective restriction (see, change)

All settings are stored in the EEPROM memory (they hold even after the instrument is switched off).

# OPTION

**EXCITATION** is suitable for feeding of sensors and transmitters. It is isolated, with continuously adjustable value in the range of 2...24 VDC.

**COMPARATORS** are assigned to monitor one, two, three or four limit values with relay output. The user may select limits regime: LIMIT/DOSING/FROM-TO. The limits have adjustable hysteresis within the full range of the display as well as selectable delay of the switch-on in the range of 0...99,9 s. Reaching the preset limits is signalled by LED and simultaneously by the switch-on of the relevant relay.

**DATA OUTPUT** are for their rate and accuracy suitable for transmission of the measured data for further projection or directly into the control systems. We offer an isolated RS232 and RS485 with the DIN MessBus/ASCII protocol.

ANALOG OUTPUTS will find their place in applications where further evaluating or processing of measured data is required in external devices. We offer universal analog output with the option of selection of the type of output - voltage/current. The value of analog output corresponds with the displayed data and its type and range are selectable in menu.

# STANDARD FUNCTIONS

# PROGRAMMABLE PROJECTION

Calibration: the type of BCD/transformer lead input may be set in "CM" Projection: -99999....999999

# OUTPUT

Relays' functions: For the tapping leads display device it is possible to set the regime of relay switching - BCD (10=10000)/BIN (10=01010)



# TECHNICAL DATA

# INPUT

BCD display device Serial BCD: 4 data + 6 strobe; 8 data + 3 strobe; 12 data + 2 strobe; 4 data + 3 position + 1 strobe Paralel BIN/BCD: 20 data/24 data Level: 5...24 VDC, 10...60 VDC Addressing: up to 8 display devices Tapping leads display device

Input: 5...24 VDC, 10...60 VDC, 90...130 VDC, 190...250 VDC Number of tap. leads: 24 + 1 signalling (on request 27) Input resistance: 5,5 kD/V Output: relay BIN/BCD, 5 relays (250 VAC/50 VDC, 3 A)

# PROJECTION

Displayj: 999999, red or green 14-segment LED, digit height 14 mm Brightness: fixed

#### INSTRUMENT ACCURACY TK: 60 ppm/°C

Watch-dog: reset after 1,2 s Calibration: at 25°C and 40 % r.h.

# COMPARATOR

Type: digital, setting in menu, contact switch < 15 ms Limits: -99999...999999 Hysteresis: 0...99999 , Delay: 0...99,9 s Output: 2x (3) Form A relays and 2x Form C relays [250 VAC/50 VDC, 3 A] DATA OUTPUT

Data format: 7 bit + even parity + 1 stop bit (DIN Messbus) 8 bit + no parity + 1 stop bit (ASCII) Rate: 600...115 200 Baud RS 232: isolated RS 485: isolated, addressing (max. 31 instruments)

#### 

 $\ensuremath{\mathsf{Type}}\xspace$  isolated, programmable with resolution of max. 10 000 points, A0 corresponds with the displayed data, type and range are selectable in programming mode

# Non-linearity: 0,2% of range TK: 50 ppm/°C

 Rate:
 response to change of value < 40 ms</th>

 Ranges:
 0...2/5/10 V, 0...5 mA, 0/4...20 mA (comp. < 500 Ω)</th>

#### EXCITATION

Adjustable: 2...24 VDC/50 mA, isolated

### POWER SUPPLY

9..50 V AC//DC, ±10%, 13,5 VA, PF≥0,4, l<sub>sm</sub>< 40 A/11 ms 80...250 V AC//DC, ±10%, 13,5 VA, PF≥0,4, l<sub>sm</sub>< 40 A/11 ms Power supply is protected by a fuse inside the instrument

# MECHANIC PROPERTIES

Material: Noryl GFN2 SE1, incombustible UL 94 V-I Dimensions: 96 x 48 x 154 mm Panel cutout: 90,5 x 45 mm

# OPERATING CONDITIONS

Connection: connector terminal board, section < 2,5 mm<sup>2</sup> Stabilization period: within 15 minutes after switch-on Working temperature: -20°...60°C Storage temperature: -20°...85°C Cover: IP64 (front panel only) El. safety: EN 61010-1, A2 EL satery: EN BIDUEL, A2 Dielectric strength: 4 kVAC after 1 min between supply and input 4 kVAC after 1 min between supply and data/analog output 4 kVAC after 1 min between supply and relay output 2,5 kVAC after 1 min between input and data/analog output 
 Insulation resistance: for pollution degree II, measuring cat. III.

 Power supply > 600 V [2], 300 V [D]

 Input, output, Exc. > 300 V [2], 150 V [D]

 EMC: EN 61326-1

PI - Primary insulation, DI - Double insulation

### CONNECTION

|       | POWER N |        |        | - /    |        | - / -  | •      | ſ      | 5      | 1      | [      | -      | 1      | - / -  | <b>1</b> |  |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--|
| 0     | Ð       | 0<br>C |        | Ø □    | θ      | Ø      | Ð      | Øн     | 0      | 0      | Øĸ     | Ð      | Ø      | Øz     | 0        |  |
| 17    | 18      | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32       |  |
| 1     | 2       | 3      | 4      | 5      | 6      | 7      | 8      | Ŷ      | 10     | 11     | 12     | 13     | 14     | 15     | 16       |  |
| INP 8 | INP 9   | INP 10 | INP 11 | INP 12 | INP 13 | INP 14 | INP 15 | INP 16 | INP 17 | INP 18 | INP 19 | INP 20 | INP 21 | INP 22 | INP 23   |  |
|       |         |        |        |        |        |        |        |        |        |        |        |        |        |        |          |  |
| GND   | TxD/B   | RxD/A  | INP 0  | INP 1  | INP 2  | INP 3  | INP 4  | INP 5  | INP 6  | INP 7  | Sgn    | Adr 0  | Adr 1  | Adr 2  | GND      |  |
| GND   |         |        |        |        |        |        |        |        |        |        |        |        |        | Excit. | •        |  |

# ORDER CODE

| om 621BCD       | -                                |   |   |   |   |   |   |
|-----------------|----------------------------------|---|---|---|---|---|---|
| Power supply    | 950 V AC/DC                      | 0 |   |   |   |   |   |
|                 | 80250 V AC/DC                    | 1 |   |   |   |   |   |
| Input           | 525 VDC                          |   | А |   |   |   |   |
|                 | 1060 VDC                         |   | в |   |   |   |   |
|                 | 90130 VDC (110 VDC)              |   | С |   |   |   |   |
|                 | 190250 VDC (230 VDC)             |   | D |   |   |   |   |
| Comparators     | none                             |   |   | 0 |   |   |   |
|                 | 1 relays                         |   |   | 1 |   |   |   |
|                 | 2 relays                         |   |   | 2 |   |   |   |
|                 | 3 relays                         |   |   | з |   |   |   |
|                 | 4 relays                         |   |   | з |   |   |   |
| 5 relays BCD/BI | N (tapping leads display device) |   |   | 5 |   |   |   |
| Output          | none                             |   |   |   | 0 |   |   |
|                 | Analog output                    |   |   |   | 1 |   |   |
|                 | RS 232                           |   |   |   | 2 |   |   |
|                 | RS 485                           |   |   |   | 3 |   |   |
| Excitation      | no                               |   |   |   |   | 0 |   |
|                 | yes                              |   |   |   |   | 1 |   |
| Display color   | red                              |   |   |   |   |   | 1 |
|                 | green                            |   |   |   |   |   | 2 |

Default execution is shown in bold