INTELLIGENT LARGE DIGIT INDICATOR

(Large 38 mm high digits)

Display viewing distance up to 40m

- Transmitter supply 24VDC
- Input 0-20, 4-20mA, 0-5, 1-5, 0-10, 2-10VDC
- Pt-100, Pt500, Pt1000, K,S, J, T, N, R, B, E
- 4-digit LED 38mm height
- Programmable measuring range
- Programmable hysteresis
- Password protected
- Root, square or 20 point linearization
- Volume characteristics of cylindrical tanks.
- Programmable display brightness
- 2 or 4 programmable alarm relays
- Output 0-20 or 4-20mA (option)
- Signal peak detection
- Programmable digital filter
- Calibration and self-calibration
- RS485 MODBUS RTU

DESCRIPTION

The BASI programmable process indicator BDI147 is designed for wide range of control applications. It is equipped with a large 4-digit LED display with 38 mm digit height and 2 or 4 programmable relay alarm outputs. BDI147 has a input accepting signals from Pt100, Pt500, Pt1000, theromocouple as well as linear current or voltage signals from external transmitters. This process indicator has a built-in circuit for selftesting and self-calibration and automatic software compensation of line resistance. The display-to-input correspondance (in case of linear input) and possibility to programming linear, root, square and user defined 20 point. The decimal point position, temperature measuring unit as well as the offset value are also programmable through the convenient keyboard. Thanks to its large display, universal input, and serial interface RS485 MODBUS RTU as well as the excellent priceto-performance ratio, BDI147 is exceptionally widely applicable device.

TECHNICAL SPECIFICATIONS

| Construction | : Panel design to standard DIN 144 x 72mm |
|--------------|---|
| Wiring | : Screw terminals at rear panel |
| Housing | : Noryl-GFN2SE1 |
| Isolation | : Input to supply |
| Indication | : Red LED 4-digit height, 38mm |
| | |

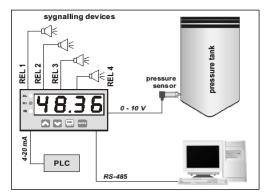
INPUT

Pt-100-500-1000 : -100 - 600°C 3 or 4-wire Thermocouple : K,S, J, T, N, R, B, E Voltage : 0-5, 1-5, 0-10 or 2-10VDC Current : 0-20, 4-20mA Indication : -999 till +9999

OUTPUT

| Current | : 0/4-20mA load 700 ohm |
|---------------|------------------------------|
| Relay | : 2 or 4 relay or OC |
| Contacts | : 250VAC, 1A |
| Relay | : 10 ⁷ operations |
| Transistor | : Open collector 30V/30mA |
| Communication | : RS485 MODBUS RTU isolated |
| Sensor supply | : 24VDC/100mA |
| | |





INSTALLATION

Supply

Ambient temp Storage temp Mounting **Protection class** Dimension Weight

: 85 to 260VAC/DC, 16 to 35VAC or 19 to 50VDC : -0 to +50°C, RH 0 to 85%

- : -10 to+70°C : Panel with bracket

: IP40 IP65 front (option), IP20 rear : B144 x H72 x D102mm

CE

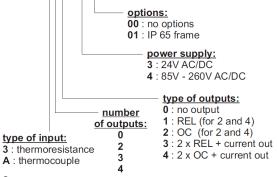
: 400g

PERFORMANCE

| Accuracy error | : < ±0.05% FS |
|-------------------|--------------------------------------|
| Display | : Red LED 4-digit height, 20 |
| Power consumption | : 4.5VA |
| Isolation | : Input to output to supply (3-way) |
| | 2300VDC/AC peak |
| EMC | : EN 50081-1, EN 50082-2, EN 61010-1 |
| | EN 61010-1/A2:1999 |

ORDER INFORMATION

BDI147-1XXX-1-X-XX1





| BASI Instrument / | AB | Tel: +46 40-880 09 | Fax: +4640-92 98 77 |
|-------------------------------|-----------|--------------------|---------------------------------|
| P.O. Box 53 | SE-275 06 | VOLLSJÖSWEDEN | E-mail: info@basi.se |
| Universal intelligent digital | indicator | BDI147 | No. DS 29:5-E Issue: 3 11/01/12 |



We are pleased to announce that we have recently added to BASI meters range a new feature, **the volume characteristics of cylindrical tanks.**

The following combinations of tank shapes for volume calculation are now possible:

| cylindrical tank in vertical position | \bigcirc | | \bigcirc | | | | |
|--|------------|--------|------------|------------------|---|--------|------------------|
| cylindrical tank in horizontal position | | | | | | | |
| parameter s setting (for vertical and horizontal position of tank) | | t h3=0 | t h2=0 | t h1=0 t h3=0 | - | t h1=0 | t h1=0 t h2=0 |

The new feature is available with the following products: BDI49, BDI 73, BDI 77, BDI94, BDI 147, BDI 457, BDI118.

CONNECTION

| 85-260V AC/DC | - | | | | +24V | |
|--|---|--|--|---|---|--|
| 4,5W | | | | | /100mA + Uo - | |
| LN | | | | | ↑ ↑ | |
| 1 2 | 34 | 56 | 78 | 9 10 | 11 12 13 14 | 4 15 16 17 18 19 |
| | | | n.c. n.e | ·_ + | DAT | n.c. 1 1 n.c. |
| 1 | | | | ACTIVE | DATA - | 4+ + 1 GND 0/4-20mA |
| 1 | R1 | R2 | cu | (option) | | |
| 1 | (option) | (option) | | | RS-485 | - + GND 0/1-5V, 0/2-10V |
| 1 | | | | | | 0/1-30, 0/2-100 |
| | | versi | on wit | h 4-20 | mA output | CE |
| | | | | | | 16 17 18 |
| | | | | +24V +5 | 9/ 109/ | $ \cdot \cdot $ |
| Power supply | | | | | nax = 100mA | L |
| (depending on v | | | | | + uo - | Pt100/500/1000 |
| | | | | | + + | |
| 1 2 | 3 4 | 5 6 | 7 8 | 9 10 | 11 12 13 14 | 4 15 16 17 18 19 |
| | | | | | | n.c. |
| | | | | | DATA- GND DAT | $ \rightarrow $ $ \rightarrow $ |
| | ~ | | _ | _ | | |
| | R1 optional) (o | R2 | R3 (optional) | R4 | RS - 485 | Pt100/500/1000 |
| | optional) (o | puonaly | (optional) | (optional) | | |
| Power supply | | | | | 5%, -10% nax = 100mA | |
| | | | | | | |
| (depending on v | | | | | + 110 - | Pt100/500/100 |
| | ersion) | <u> </u> | 7 0 | | + 100 - | |
| (depending on v | ersion) | 56 | 78 | 9 10 | +,º₀ , 11 12 13 1 | 4 15 16 17 18 19 |
| | ersion) | 56 | n.c. n.c. | 9 10 | + uo - | 4 15 16 17 18 19 |
| | 3 4 | | n.c. n.c. | 9 10 | + uo - 11 12 13 1 DATA- IVE GND DAT | 4 15 16 17 18 19 |
| 12 | 3 4 R1 | R2 | n.c. n.c. | 9 10 - + | + uo - + 11 12 13 1 DATA- IVE GND DAT | 4 15 16 17 18 19 |
| 12 | 3 4 | R2 | n.c. n.c. | 9 10 - + | + uo - 11 12 13 1 DATA- IVE GND DAT | 4 15 16 17 18 19 |
| 12 | 3 4 R1 | R2 | n.c. n.c. | 9 10 - + | + uo - 11 12 13 1 DATA- IVE GND DAT | 4 15 16 17 18 19 |
| 12 | 3 4 R1 | R2 | n.c. n.c. | 9 10 - + optional ACT current out | + Uo - 11 12 13 1. DATA- IVE GND DAT RS - 485 | 4 15 16 17 18 19 /A+ Pt100/500/1000 |
| 12 | R1 optional) (o | R2 | n.c. n.c. | 9 10 - + optional ACT current out; +24V + | + uo - 11 12 13 11 DATA- IVE GND DAT RS - 485 5%, -10% | 4 15 16 17 18 19 /A+ Pt100/500/1000 |
| 1 2 | rersion) 3 4 R1 optional) (o | R2 | n.c. n.c. | 9 10 - + optional ACT current out; +24V + | + uo - 11 12 13 1. DATA- IVE GND DAT UU RS - 485 5%, -10% max = 100mA | 4 15 16 17 18 19 /A+ Pt100/500/1000 |
| 12 | rersion) 3 4 R1 optional) (o | R2 | n.c. n.c. | 9 10 - + optional ACT current out; +24V + | + uo - 11 12 13 11 DATA- IVE GND DAT RS - 485 5%, -10% | 4 15 16 17 18 19 ra+ Pt100/500/1000 16 17 18 |
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| BASI | BASI Instrument AB P.O. Box 53 | SE-275 06 | Tel: +46 40-880 09 VOLLSJÖSWEDEN | Fax: +4640-92 98 77 E-mail: info@basi.se |
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| Universal ir | ntelligent digital in | dicator | BDI147 | No. DS 29:5-E Issue: 3 11/01/12 |