

# Totalizers electronic

## Small impulse counters

### Display LCD, 8-digits

#### ISI31



ISI31 - Up/down, difference counter

#### Features

- Up/down
- Difference counter

#### Technical data - electrical ratings

|                         |   |
|-------------------------|---|
| Voltage supply          | Lithium battery<br>(approx. 8 years at 20 °C)         |
| Display                 | LCD, 7-segment display                                |
| Display illumination    | 24 VDC $\pm$ 20 %, 50 mA                              |
| Number of digits        | 8-digits  |
| Display range           | -9999999...+99999999                                  |
| Digit height            | 8 mm  |
| Function                | Counting with direction signal,<br>Difference counter |
| Count modes             | INP A and INP B (up/down)<br>INP A - INP B            |
| Control                 | NPN, PNP, Pulses<br>10...260 VAC/VDC                  |
| Reset                   | Button and electric                                   |
| Keylock                 | Yes, electric (keylock)                               |
| Emitted interference    | DIN EN 61000-6-4                                      |
| Interference immunity   | DIN EN 61000-6-2                                      |
| Programmable parameters | Count mode  |
| Approval                | UL/cULus  |

#### Technical data - mechanical design

|                         |                                      |
|-------------------------|--------------------------------------|
| Ambient temperature     | -10...+60 °C                         |
| Storage temperature     | -20...+70 °C                         |
| Relative humidity       | 80 % non-condensing                  |
| Core cross-section      | 2.5 mm <sup>2</sup> fine wire AWG 12 |
| Protection DIN EN 60529 | IP 65 (face with seal)               |
| Housing type            | Built-in housing                     |
| Housing colour          | Deep grey, RAL 7021                  |
| Dimensions W x H x L    | 48 x 24 x 48 mm                      |
| Mounting depth          | 47.7 mm                              |
| Mounting type           | Clip frame or screw mount            |
| Cutout dimensions       | 45 x 22.2 mm (+0.3)                  |
| Weight approx.          | 50 g                                 |

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#### Type table

| Without backlit<br>With backlit | ISI31.010AA01<br>ISI31.010AB01   | ISI31.011AA01<br>ISI31.011AB01   | ISI31.013AA01<br>ISI31.013AB01                               |
|---------------------------------|--|--|--|
| Version                         | NPN  | PNP  | AC/DC  |
| Brief description               | Fast counting processes with direction signal (Up/Down) or difference counting   | Fast counting processes with direction signal (Up/Down) or difference counting   | Slow difference counting                                     |
| Signal input INP A, INP B       | NPN, 7 kHz   | PNP, 12 kHz  | AC/DC, 30 Hz   |
| Operating mode                  | Counting with direction signal<br>INP A - Counting input<br>INP B - Direction signal<br><br>Difference counting<br>INP A - Adding<br>INP B - Subtracting | Counting with direction signal<br>INP A - Counting input<br>INP B - Direction signal<br><br>Difference counting<br>INP A - Adding<br>INP B - Subtracting | Difference counting<br>INP A - Adding<br>INP B - Subtracting |

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### Part number

ISI31.01   **A**   **01**

Display

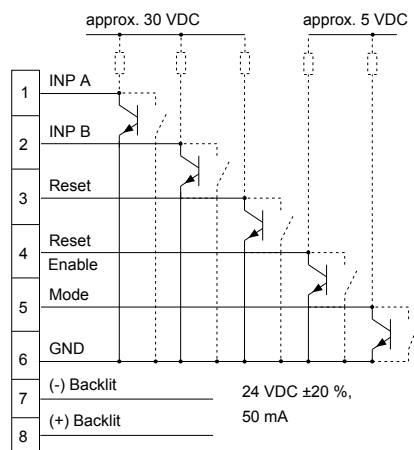
- A Without backlit
- B With backlit

Design

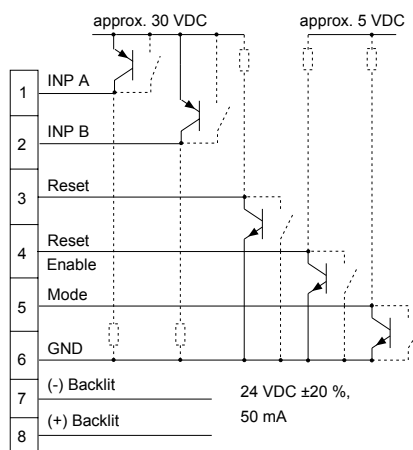
- 0 NPN 7 kHz (Up/Down, A-B)
- 1 PNP 12 kHz (Up/Down, A-B)
- 3 AC/DC 30 Hz (A-B)

### Connection diagram

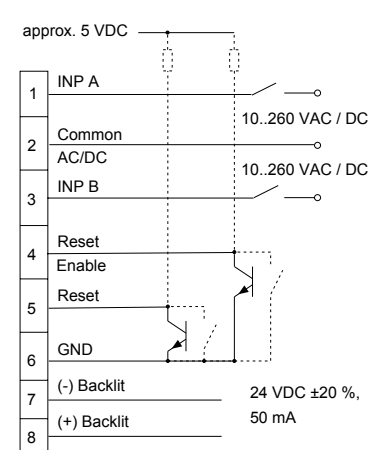
#### ISI31, DC, NPN



#### ISI31, DC, PNP



#### ISI31, AC/DC



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### Display LCD, 8-digits

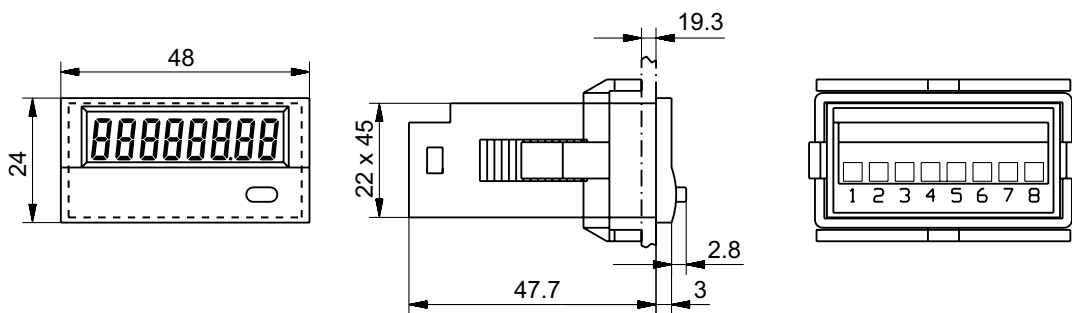
ISI31

#### Trigger level

| Inputs            | Input circuit               | Inputs                    | Input circuit                |
|-------------------|-----------------------------|---------------------------|------------------------------|
| <b>NPN inputs</b> | <b>Comparator (pin 1+2)</b> | <b>AC/DC inputs</b>       | <b>Optocoupler (pin 1+3)</b> |
| Input level Low   | 0...0.7 VDC                 | Input level Low           | 0...2 VDC/VAC                |
| Input level High  | 3...30 VDC                  | Input level High          | 10...260 VDC/VAC             |
| Input resistance  | 1 MΩ                        | Input resistance          | 160 kΩ                       |
| <b>PNP inputs</b> | <b>Comparator (pin 1+2)</b> | <b>NPN control inputs</b> | <b>Pin 4, 5</b>              |
| Input level Low   | 0...0.7 VDC                 | Input level Low           | 0...0.7 VDC                  |
| Input level High  | 4...30 VDC                  | Input level High          | 3...5 VDC                    |
| Input resistance  | 100 kΩ                      | Input resistance          | 2.2 MΩ                       |

#### Dimensions

ISI31



Front frame for screw/clip mount (included with delivery)

