

# Totalizers electronic

## Large impulse counters and position displays

### Display LED, 6-digits, programmable

#### N 214



N 214 - Totalizer

#### Technical data - electrical ratings

|                            |                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Voltage supply             | 115/230 VAC $\pm 10\%$ (50/60 Hz)<br>24/48 VAC $\pm 10\%$ (50/60 Hz)<br>12...30 VDC                                        |
| Power consumption          | 7 VA, 5 W                                                                                                                  |
| Sensor supply              | 12...26 VDC / max. 100 mA                                                                                                  |
| Display                    | LED, 7-segment display                                                                                                     |
| Number of digits           | 6-digits                                                                                                                   |
| Digit height               | 14 mm                                                                                                                      |
| Function                   | Totalizer<br>Difference counter A - B<br>Parallel counter A + B<br>Position display                                        |
| Scaling factor             | 0.0001...9999.99                                                                                                           |
| Count modes                | Adding or subtracting<br>A-B (difference counting)<br>A+B total (parallel counting)<br>Up/Down<br>A 90° B phase evaluation |
| Counting frequency         | 3 Hz, 25 Hz, 10 kHz<br>programmable                                                                                        |
| Measuring range            | -99 999...+999 999                                                                                                         |
| Data memory                | >10 years in EEPROM                                                                                                        |
| Reset                      | Button and electric                                                                                                        |
| Keylock                    | Yes, electric (keylock)                                                                                                    |
| Outputs electronic         | Optocoupler                                                                                                                |
| Outputs relay              | Potential-free change-over<br>contact                                                                                      |
| Output holding time        | 0.01...9.99 s                                                                                                              |
| Interfaces                 | RS232, RS422, RS485                                                                                                        |
| Standard<br>DIN EN 61010-1 | Protection class II<br>Overvoltage category II<br>Pollution degree 2                                                       |
| Emitted interference       | DIN EN 61000-6-3                                                                                                           |
| Interference immunity      | DIN EN 61000-6-2                                                                                                           |

#### Features

- Totalizer and position display
- Display 6-digits
- Set value, scaling factor, momentary signal duration and operating mode programmable
- Connection: Incremental encoder or digital sensors
- Interface RS232, RS422, RS485

#### Technical data - electrical ratings

|                         |                                                                              |
|-------------------------|------------------------------------------------------------------------------|
| Programmable parameters | Decimal point<br>Sensor logic, scaling factor<br>Count mode, measuring units |
| Approvals               | UL/cUL, CE conform                                                           |

#### Technical data - mechanical design

|                         |                                                  |
|-------------------------|--------------------------------------------------|
| Operating temperature   | 0...+50 °C                                       |
| Storing temperature     | -20...+70 °C                                     |
| Relative humidity       | 80 % non-condensing                              |
| E-connection            | Plug-in screw terminals                          |
| Core cross-section      | 1.5 mm <sup>2</sup>                              |
| Protection DIN EN 60529 | IP 65 face with seal                             |
| Operation / keypad      | Membrane with softkeys                           |
| Housing type            | Built-in housing                                 |
| Dimensions W x H x L    | 96 x 48 x 124 mm                                 |
| Installation depth      | 124 mm                                           |
| Mounting                | Clip frame                                       |
| Cutout dimensions       | 92 x 45 mm (+0.6)                                |
| Materials               | Housing: Makrolon 6485 (PC)<br>Keypad: Polyester |
| Weight approx.          | 350 g (AC), 250 g (DC)                           |

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#### Part number

N 214.          AX01

#### Voltage supply

- 1 24 / 48 VAC
- 2 115 / 230 VAC
- 3 24 VDC

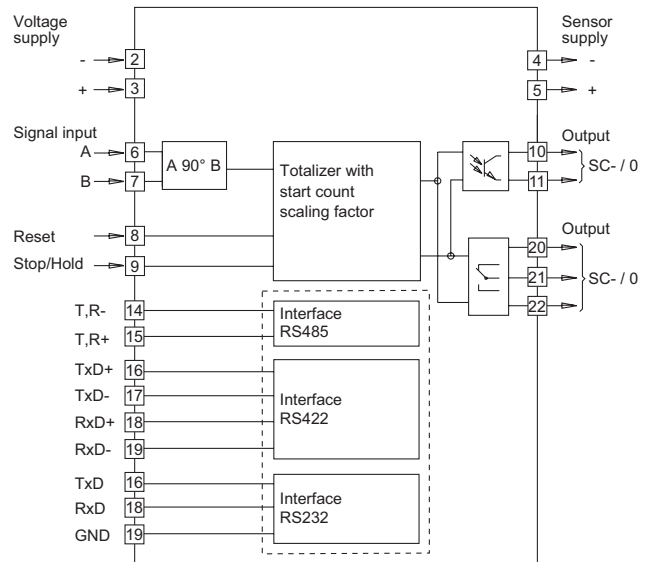
#### Outputs

- 0 Without relay
- 1 Relay and optocoupler outputs

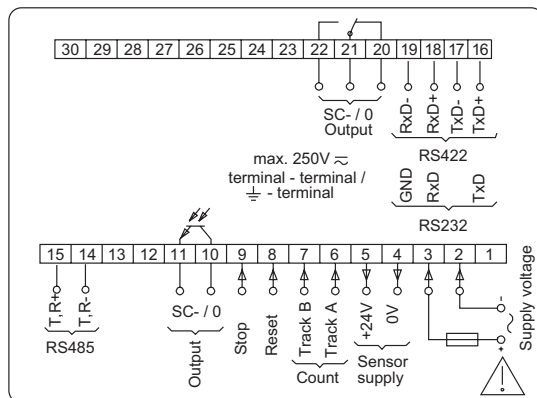
#### Interface

- 0 Without interface
- 1 RS485
- 2 RS422
- 3 RS232

#### Block circuit diagram



#### Connection diagram



#### Trigger level

| Comparator inputs       | Input circuit                       |
|-------------------------|-------------------------------------|
| Inputs                  | PNP- / NPN-logic                    |
| Input level             | Programmable                        |
| Input level Low         | 0...2 VDC                           |
| Input level High        | 3...40 VDC                          |
| Input resistance        | 3 kΩ                                |
| Relay output            | Output circuit                      |
| Switching voltage max.  | 250 VAC / 110 VDC                   |
| Switching current max.  | 1 A                                 |
| Switching capacity max. | 150 VA / 30 W                       |
| Relay responding time   | 5 ms                                |
| Electronic output       | Output circuit                      |
|                         | Optocoupler not short-circuit proof |
| Switching voltage max.  | 40 V                                |
| Switching current max.  | 15 mA                               |

#### Dimensions

