



## DZ210

### Monitor for direction of rotation and standstill

#### Product features:

- Simple and compact unit to monitor forward / reverse motion and standstill of machines
- Universal pulse inputs for use with all common incremental encoders and sensors (HTL, RS422 or TTL)
- Two potential-free changeover relay outputs as well as two fast-responding power transistor outputs
- Wide input frequency range (up to 500 kHz) and a fast response time (<1 msec. with  $f > 1$  kHz)
- Compact housing for simple snap fitting on top hat rails (EN 60715)
- Easy to set up by two front DIL switches
- 17 to 30 VDC power supply

| Technical Specifications:          |  |  |
|------------------------------------|--|--|
| <b>Power supply:</b>               | Input voltage:<br>Protection circuit:<br>Ripple:<br>Consumption:<br>Connections:   | 17 ... 30 VDC<br>reverse polarity protection<br>≤ 10 % bei 24 VDC<br>approx. 30 mA (unloaded)<br>screw terminal, 1.5 mm <sup>2</sup> / AWG 16  |
| <b>Encoder supply:</b>             | Output voltage:<br>Output current:<br>Connections:   | approx. 5.4 V<br>max. 200 mA<br>screw terminal, 1.5 mm <sup>2</sup> / AWG 16   |
| <b>Incremental input:</b>          | Characteristic:<br>Level:<br><br>Channels:<br>Frequency:<br><br>Internal resistance:<br><br>Connections:                           | PNP, NPN<br>RS422: Differential voltage > 1 V<br>TTL: LOW 0 ... 0.5 V, HIGH 2.5 ... 5 V<br>HTL: LOW 0 ... 4 V, HIGH 9 ... 30 V<br>A, /A, B, /B or A, B<br>RS422 and TTL: max. 500 kHz (symmetrical)<br>HTL and TTL: max. 350 kHz (asymmetrical)<br>RS422 and TTL: Ri ≈ 10 kOhm<br>HTL: Ri ≈ 4.7 kOhm<br>screw terminal, 1.5 mm <sup>2</sup> / AWG 16 |
| <b>Relay outputs:</b>              | Number of relays:<br>Switching capacity:<br>Switching delay:<br>Connections:   | 2 potential free changeovers<br>30 VDC / 2 A or 115 VAC / 0.6 A or 230 VAC / 0.3 A<br>approx. 5 ms<br>screw terminal, 1.5 mm <sup>2</sup> / AWG 16   |
| <b>Transistor outputs:</b>         | Number of outputs:<br>Type:<br>Switching voltage:<br>Switching current:<br>Switching delay:<br>Protection circuit:<br>Connections: | 2<br>High-Side-Driver<br>7 ... 30 V<br>max. 350 mA<br>approx. 200 μs<br>durable short circuit proof (not both outputs at the same time)<br>screw terminal, 1.5 mm <sup>2</sup> / AWG 16  |
| <b>Housing:</b>                    | Material:<br>Mounting:<br>Dimensions (w x h x d):<br>Protection class:<br>Weight:  | plastic<br>35 mm top hat rail (according to EN 60715)<br>22.5 x 102 x 102 mm / 0.8858 x 4.0157 x 4.0157 inch<br>IP20<br>approx. 100 g  |
| <b>Ambient temperature:</b>        | Operation:<br>Storage:   | 0 °C ... +45 °C / +32 ... +113 °F (not condensing)<br>-25 °C ... +70 °C / -13 ... +158 °F (not condensing)   |
| <b>Failure rate:</b>               | MTBF in years:   | 91.5 a (long-term usage at 60 °C / 140 °F)   |
| <b>Conformity &amp; standards:</b> | EMC 2014/30/EU:<br>LV 2014/35/EU:<br>(Only for option AC and RL)<br>RoHS ( II ) 2011/65/EU<br>RoHS ( III ) 2015/863:               | EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61326-1<br>EN 61010-1<br><br><br><br>EN IEC 63000   |