Multifunctional display: speed, time, counter

Digital display 4.0
The new multifunctional display is more than a simple display: It pre-processes digital signals in a decentralised manner and passes the information on to a higher-level controller if necessary. This intelligent feature makes it ideally suited for Industry 4.0 applications.

Versatile pulse evaluation
The multifunction display shows various measured values in industrial automation. It uses the principle of interval measurement to processes input pulses. The scaling factor allows (rotational) speed and processing time, etc., to be calculated, displayed and converted into an analogue signal. Moreover, the unit is suitable for counting and timer tasks.
# User-friendly handling

All settings can be made via a modern, resistive touch-screen interface. The display automatically changes from display mode to parameter setting mode. All parameters are displayed in clear text on the screen, enabling an easy and intuitive use. A password mechanism provides protection against manipulation.

## Monitoring of limit values

The user can define up to four limit values. Up to four transistor outputs switch if a set limit is not reached or exceeded.

The states of the outputs are displayed and the colour of the display can be shown in red, yellow or green depending on the process value.

## The basic functions:

### Speed:

Indication of rotational speed (RPM), operation as tachometer or for frequency measurement.

### Process time:

Operation as baking time or processing time display (reciprocal rotational speed).

### Timer:

Operation as stop watch.

### Counter:

Operation as position display, pulse, totalisator, differential, up or down counter.

### Velocity:

Speed indication from operating time measurement. Input A serves as start input and input B as stop input.

## Common technical data

<table>
<thead>
<tr>
<th>Operating voltage</th>
<th>Inputs</th>
<th>Inputs</th>
<th>Output</th>
<th>Outputs</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>[V]</td>
<td>pulse</td>
<td>programmable</td>
<td>analogue</td>
<td>transistor</td>
<td>no.</td>
</tr>
<tr>
<td>115 / 230 AC</td>
<td>2</td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>DX2021</td>
</tr>
<tr>
<td>24 DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115 / 230 AC</td>
<td>2</td>
<td>3</td>
<td>V or mA</td>
<td>4</td>
<td>DX2022</td>
</tr>
<tr>
<td>24 DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115 / 230 AC</td>
<td>2</td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>DX2023</td>
</tr>
<tr>
<td>24 DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 DC</td>
<td>2</td>
<td>3</td>
<td>V or mA</td>
<td>4</td>
<td>DX2031</td>
</tr>
<tr>
<td>24 DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 DC</td>
<td>2</td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>DX2032</td>
</tr>
<tr>
<td>24 DC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 DC</td>
<td>2</td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>DX2033</td>
</tr>
</tbody>
</table>

## Dimensions

- Operating voltage: 115/230 V AC, 24 V DC
- Current consumption (DC): approx. 100 mA (without load)
- Sensor supply (DC): 115/230 V AC, 24 V DC
- Output current: max. 250 mA
- Current consumption (AC): approx. 3 VA (without load)
- Sensor supply (AC): 24 V DC (± 15 %)
- Current consumption: approx. 24 V DC (± 15 %)
- Output current: 150 mA to 45 °C, 80 mA from 45 °C
- Incremental inputs: PNP, NPN, Namur encoders and sensors HTL (10...30 V)
  - max. 250 kHz
- Control inputs: HTL, PNP (10...30 V)
  - max. 10 kHz
- Analogue output (only DX2032, DX2022): 0...20 mA / 4...20 mA
  - ± 0.1 %
- Control outputs (DX2032, DX2033): 5...30 V (depending on the voltage on Com+), PNP
  - max. 200 mA (max. 150 mA at Com+ < 10 V)
- Display: LCD (backlight), red/yellow/green (selectable) touch screen (resistive)
- Ambient temperature: -20...45 °C
- Dimensions (W x H x D): 112 x 48 x 116 mm