

# Преобразователи сигналов EIB 5000

## Технические характеристики

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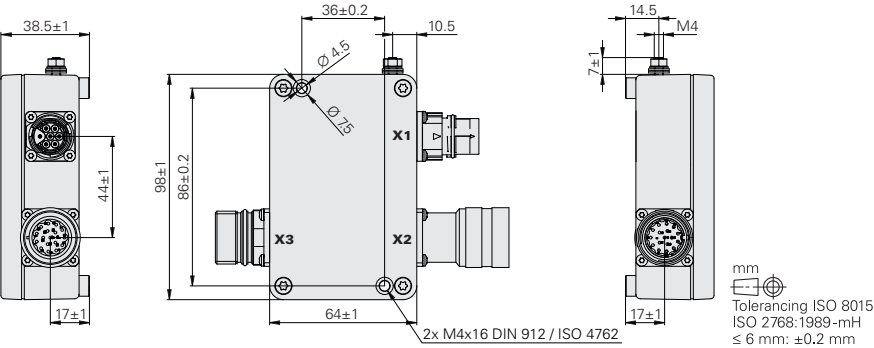
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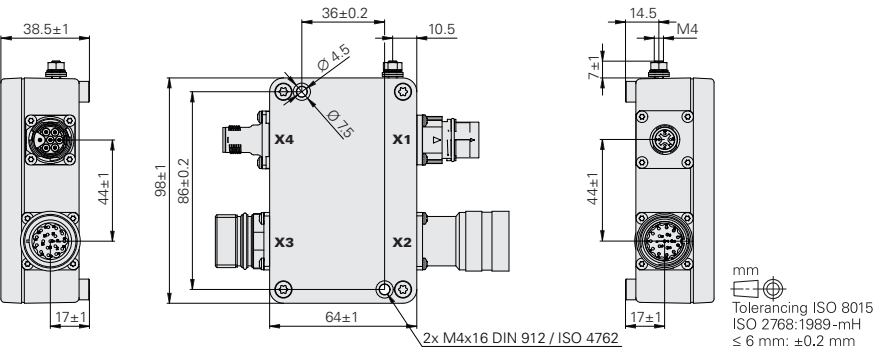
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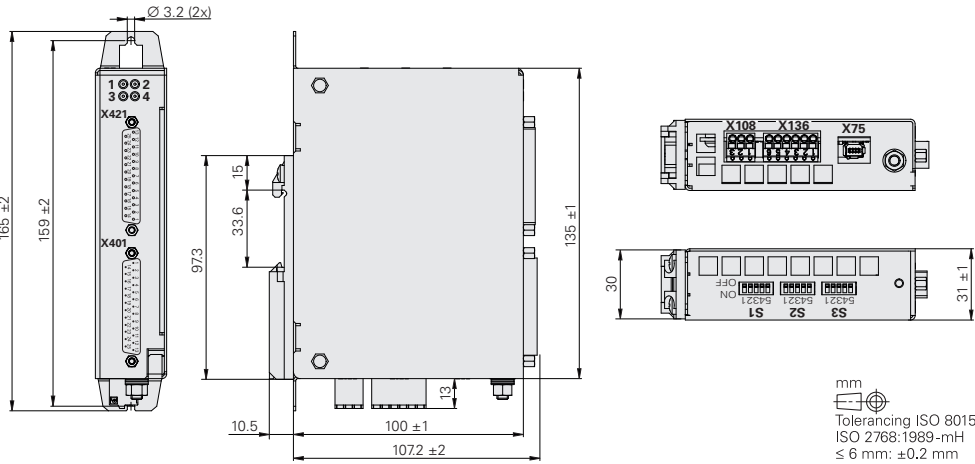
EIB 5281



EIB 5282



EIB 5181



| Specifications                              | EIB 5281/EIB 5282 <sup>1)</sup>                                                                    | EIB 5181                                                                           |
|---------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Functional safety                           | See <i>Functional safety</i> on page 5                                                             |                                                                                    |
| Encoder input                               |                                                                                                    |                                                                                    |
| Interface                                   | Depends on the encoder <sup>2)</sup>                                                               | 1 V <sub>PP</sub> /EnDat 2.1/EnDat 2.2                                             |
| Ordering designation                        | Depends on the encoder <sup>2)</sup>                                                               | EnDat01/EnDat02/EnDat22                                                            |
| Electrical connection                       | 17-pin M23 flange socket (female) with coupling ring                                               | 25-pin D-sub connector (male)                                                      |
| Power supply of encoder                     | The supply voltage from the downstream electronics is relayed to the connected encoder via the EIB |                                                                                    |
| Cable length <sup>3)</sup>                  | < 6 m                                                                                              | < 100 m                                                                            |
| Temperature sensor input                    |                                                                                                    |                                                                                    |
| Quantity                                    | 3                                                                                                  |                                                                                    |
| Connectable sensors <sup>4)</sup>           | KTY 84-130, PT 1000, PTC, PTC triplet <sup>5)</sup>                                                |                                                                                    |
| Evaluation accuracy tolerance               | Typically: ±1 K; maximum: ±2 K                                                                     |                                                                                    |
| Time constant for temperature measurement   | Please indicate when ordering                                                                      | Set using DIP switches                                                             |
| Electrical connection                       | 7-pin M17 flange socket (female)                                                                   | 6-pin header (male)                                                                |
| Cable length <sup>6)</sup>                  | < 6 m                                                                                              | < 45 m (for the KTY 84-130 and a conductor cross section of 0.25 mm <sup>2</sup> ) |
| Control output                              |                                                                                                    |                                                                                    |
| Interface                                   | Depends on the encoder <sup>2)</sup>                                                               | 1 V <sub>PP</sub> /EnDat 2.1/EnDat 2.2                                             |
| Ordering designation                        | Depends on the encoder <sup>2)</sup>                                                               | EnDat01/EnDat02/EnDat22                                                            |
| Electrical connection                       | 17-pin M23 flange socket (male)                                                                    | 25-pin D-sub connector (female)                                                    |
| Cable length <sup>3)</sup>                  | < 50 m                                                                                             | < 3 m                                                                              |
| Supply voltage <sup>7)</sup>                | 5 V ±10 %                                                                                          | 5 V ±10 %                                                                          |
| Power consumption <sup>8)</sup>             | Typically: 200 mW; max. 300 mW                                                                     | Typically: 250 mW; max. 350 mW                                                     |
| Temperature output                          | Emulation of PT 1000 behavior <sup>9)</sup>                                                        | Emulation of PT 1000 or KTY84-130 behavior <sup>9)</sup>                           |
| Emulation accuracy tolerance <sup>10)</sup> | Typically: ±3 K; maximum: ±4 K                                                                     | Typically: ±3 K; maximum: ±4 K                                                     |
| Operating temperature                       | 0 °C to 70 °C <sup>11)</sup>                                                                       | 0 °C to 40 °C <sup>11)</sup>                                                       |
| Storage temperature                         | -30 °C to 70 °C <sup>11)</sup>                                                                     |                                                                                    |
| Vibration 55 Hz to 2000 Hz                  | 100 m/s <sup>2</sup> (EN 60068-2-6)                                                                | 10 m/s <sup>2</sup> (EN 60068-2-6)                                                 |
| Shock 11 ms                                 | 300 m/s <sup>2</sup> (EN 60068-2-27)                                                               | 30 m/s <sup>2</sup> (EN 60068-2-27)                                                |
| Protection EN 60529                         | IP65/67 (when engaged)                                                                             | IP20                                                                               |
| Elevation                                   | < 2000 m above sea level                                                                           |                                                                                    |
| Mass                                        | ≈ 0.5 kg                                                                                           |                                                                                    |

1) The EIB 5282 features additional switching outputs (see *Switching outputs* on page 3)

2) Optimized for EnDat 2.1, determined by the encoder and relayed by the EIB (see also *Using with other controls* on page 3)

3) Applies only to HEIDENHAIN cables; be sure to consider the voltage drop

4) For more information, see *Temperature evaluation and Monitoring functions*

5) Please select when ordering; the EIB 5181 is configured using DIP switches

6) Depends on the expected accuracy, sensor type and conductor cross section; observe any additional information from the motor manufacturer

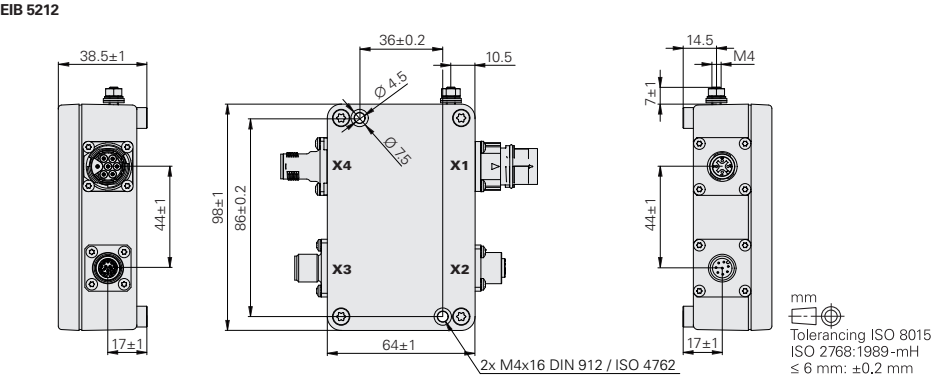
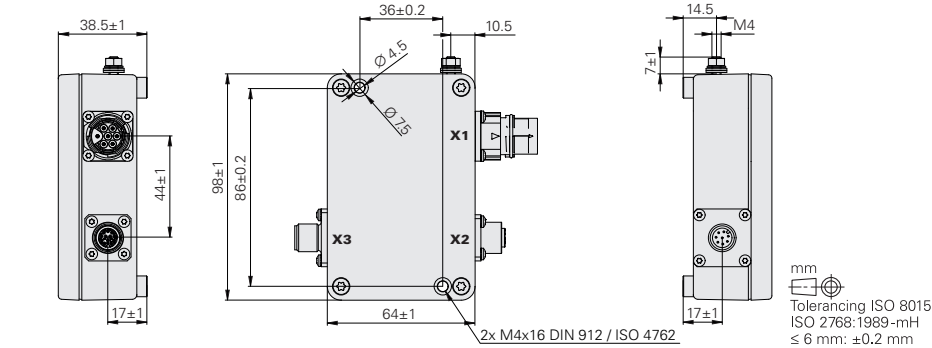
7) Take the supply voltage range of the encoder into account

8) Without power or current consumption of the encoder; version with switching output: additional power consumption of 50 mW

9) See *Emulation of PT 1000 behavior*

10) Applies to a cable length < 1 m

11) No condensation; max. humidity of 75 % under continuous operation



**Further information:**

For detailed descriptions of cables, please refer to the *Cables and Connectors* brochure.

| Specifications                            | EIB 5211/5212 <sup>1)</sup>                                                 | EIB 5291 F                                       | EIB 5291 S                                                                                                                                                                          |  |
|-------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Functional safety                         | See <i>Functional safety</i> on page 5                                      |                                                  |                                                                                                                                                                                     |                                                                                    |
| Encoder input                             |                                                                             |                                                  |                                                                                                                                                                                     |                                                                                    |
| Interface                                 | Depends on the encoder <sup>2)</sup>                                        |                                                  |                                                                                                                                                                                     |                                                                                    |
| Ordering designation                      | Depends on the encoder <sup>2) 3)</sup>                                     | EnDat22 <sup>3)</sup>                            | EnDat22 <sup>3)</sup>                                                                                                                                                               |                                                                                    |
| Electrical connection                     | 12-pin M12 flange socket (female)                                           |                                                  |                                                                                                                                                                                     |                                                                                    |
| Power supply of encoder                   | See <i>Power supply</i> on page 5                                           |                                                  | DC 8.0 V ±0.4 V (max. 1800 mW)                                                                                                                                                      |                                                                                    |
| Cable length <sup>4)</sup>                | < 6 m                                                                       |                                                  |                                                                                                                                                                                     |                                                                                    |
| Temperature sensor input                  |                                                                             |                                                  |                                                                                                                                                                                     |                                                                                    |
| Quantity                                  | 3                                                                           |                                                  |                                                                                                                                                                                     |                                                                                    |
| Connectable sensors <sup>5)</sup>         | KTY 84-130, PT 1000, PTC, PTC triplet <sup>6)</sup>                         |                                                  |                                                                                                                                                                                     |                                                                                    |
| Evaluation accuracy tolerance             | Typically: ±1 K; maximum: ±2 K                                              |                                                  |                                                                                                                                                                                     |                                                                                    |
| Time constant for temperature measurement | Please indicate when ordering                                               |                                                  |                                                                                                                                                                                     |                                                                                    |
| Electrical connection                     | 7-pin M17 flange socket (female)                                            |                                                  |                                                                                                                                                                                     |                                                                                    |
| Cable length <sup>7)</sup>                | < 6 m                                                                       |                                                  |                                                                                                                                                                                     |                                                                                    |
| Control output                            |                                                                             |                                                  |                                                                                                                                                                                     |                                                                                    |
| Interface                                 | Depends on the encoder <sup>2)</sup>                                        | Fanuc                                            | DRIVE-CLiQ                                                                                                                                                                          |                                                                                    |
| Ordering designation                      | Depends on the encoder <sup>2)</sup>                                        | Fanuc05                                          | DQ01                                                                                                                                                                                |                                                                                    |
| Electrical connection                     | 8-pin M12 flange socket (male)                                              |                                                  |                                                                                                                                                                                     |                                                                                    |
| Cable length <sup>4)</sup>                | < 100 m                                                                     | < 30 m                                           | < 95 m                                                                                                                                                                              |                                                                                    |
| Supply voltage <sup>8)</sup>              | 3.6 V to 14 V                                                               |                                                  | DC 24 V (16.0 V to 28.8 V); up to DC 36.0 V possible without compromising functional safety                                                                                         |                                                                                    |
| Power consumption                         | Typically: 160 mW;<br>max. 210 mW <sup>9)</sup>                             | Typically: 750 mW;<br>max. 1000 mW <sup>9)</sup> | Maximum At 16.0 V: ≤ 3300 mW<br>At 28.8 V: ≤ 3400 mW<br>Typically At 24.0 V: ≤ 1100 mW + 1.15 · P <sub>Mtyp</sub><br>(P <sub>Mtyp</sub> = Typical power consumption of the encoder) |                                                                                    |
| Operating temperature                     | 0 °C to 70 °C <sup>10)</sup>                                                |                                                  | 0 °C to 60 °C <sup>10)</sup>                                                                                                                                                        |                                                                                    |
| Storage temperature                       | −30 °C to 70 °C <sup>10)</sup>                                              |                                                  |                                                                                                                                                                                     |                                                                                    |
| Vibration 55 Hz to 2000 Hz<br>Shock 11 ms | 100 m/s <sup>2</sup> (EN 60068-2-6)<br>300 m/s <sup>2</sup> (EN 60068-2-27) |                                                  |                                                                                                                                                                                     |                                                                                    |
| Protection EN 60529                       | IP65/67 (when engaged)                                                      |                                                  |                                                                                                                                                                                     |                                                                                    |
| Elevation                                 | < 2000 m above sea level                                                    |                                                  | < 1000 m above sea level                                                                                                                                                            |                                                                                    |
| Mass                                      | ≈ 0.5 kg                                                                    |                                                  |                                                                                                                                                                                     |                                                                                    |

<sup>1)</sup> The EIB 5212 features additional switching outputs (see *Switching outputs* on page 3)  
<sup>2)</sup> Optimized for EnDat 2.2, determined by the encoder and relayed by the EIB (see also *Using with other controls* on page 3)  
<sup>3)</sup> The encoder must be designed for connection of the EIB 521x or the EIB 5291 S  
<sup>4)</sup> Applies only to HEIDENHAIN cables; be sure to consider the voltage drop

<sup>5)</sup> For further information, please refer to *Temperature evaluation and Monitoring functions*  
<sup>6)</sup> Please select when ordering  
<sup>7)</sup> Observe the information from the motor manufacturer  
<sup>8)</sup> Take the supply voltage range of the encoder into account  
<sup>9)</sup> Without power or current consumption of the encoder (version with switching output: additional power consumption of 50 mW)  
<sup>10)</sup> No condensation; max. 75% humidity in continuous operation

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