TOX®-Servocontroller

General data and operating conditions

The central intelligence: The freely parameterizable servo controller is a single-axis servo controller with integrated logic.

It controls and regulates the TOX®-ElectricDrive system with all required functions. Benefits are the immediate processing of process data and a direct response to their deviations. The process data can be viewed during and after production for a complete quality certificate, and documented accordingly.

The modules can be easily replaced by means of the plug-in system

| Operating conditions | | | |
|---|---|---|
| Circuit type | With grounded star-circuit | Unlimited use |
| | IT-net | Follow instructions for special measures! |
| Standards | | |
| Conformity | CE | Low voltage directive (2006/95/EC) |
| Approvals | UL 508C | Power Conversion Equipment (File-No. 32659) |
| Enclosure | | |
| Enclosure type | EN 60529 | IP20 |
| | NEMA 250 | Contact protection according to type 1 |
| Enclosure type | | |
| Operation* | IEC/EN 60721-3-3 EN 50178 | 3K3 (-10 °C to +55°C) Derating of rated output current +45 °C: +2.5%/°C |
| Relative air moisture | max. 85%, without condensation |

*Attention: In case of an installation at 1000 m above sea level the reduction of the nominal current will be 5%/1000 m.
For TOX®-ElectricDrive-systems up to 10 kN press force

Dimensions

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>b1</th>
<th>e</th>
<th>f</th>
<th>Weight kg</th>
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</thead>
<tbody>
<tr>
<td>90</td>
<td>481</td>
<td>350</td>
<td>288</td>
<td>348</td>
<td>5.3</td>
</tr>
</tbody>
</table>

* Mounting plate existing (comes with the switch cabinet)
- Built-in depth of switch cabinet: 400 mm
- Dimensions of ballast resistor W/H/D: T/H/B 30 / 60 / 355 mm
TOX®-Servocontroller

For TOX®-ElectricDrive-systems 25 - 100 kN press force

* Mounting plate existing (comes with the switch cabinet)
- Built-in depth of switch cabinet: 400 mm
- Dimensions of ballast resistor W/H/D: T/H/B 30 / 60 / 355 mm

### Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>a</th>
<th>b</th>
<th>b1</th>
<th>e</th>
<th>f</th>
<th>Weight kg</th>
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<tbody>
<tr>
<td>EQ-K</td>
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<td>288</td>
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<td>8.1</td>
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<tr>
<td>EX-K</td>
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<td>481</td>
<td>350</td>
<td>288</td>
<td>348</td>
<td>8.1</td>
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</tbody>
</table>
For TOX®-ElectricDrive-systems 200 - 700 kN press force

* Mounting plate existing (comes with the switch cabinet)
- Built-in depth of switch cabinet: 400 mm
- Dimensions of ballast resistor W/H/D: T/H/B 30 / 60 / 355 mm

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>a</th>
<th>b</th>
<th>b1</th>
<th>b2</th>
<th>e</th>
<th>c1</th>
<th>d</th>
<th>g</th>
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<td>170</td>
<td>585</td>
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<td>26.5</td>
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</tbody>
</table>
TOX®-Servocontroller

Wiring diagram

**Block diagram**
Use of the TOX®-ElectricDrive system.
Simplified diagram.

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**Servocontroller**

- X105
- MX1
- MS1
- X4, X5
- E/S

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**Emergency switch button light grille/protective door**

- approx. 150 – 500 ms delay
- Safety category 3

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**Emergency switch**

- undelayed

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**Ballast resistor**

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**Standard interface, ProfNet**

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**Emergency switch box with a delay of approx. 150 – 500 ms as per risk analysis and after running test**

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**PC**

- Ethernet, programming, process data

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**Servo drive**

- Motor
- Control, digital, PLC

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**Console**

- Force sensor
- Resolver
- Motor

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**green: Scope of delivery TOX®-ElectricDrive Set**

**red: supplied by customer**

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Subject to technical modifications.