TOX® ProcessMonitorControl Core

100.53

2026 / 02

TOX® ProcessMonitorControl Core

Field of application

The integrated real-time control system enables precise process monitoring of TOX®'s own drives and systems, as well as third-party systems, in order to collect and forward quality data for your production processes. TheTOX®- operating system used is based on a hardened Real-Time Linux® to meet IT security requirements. The monitoring processes are executed by the integrated multi-core application. The existing fieldbus interfaces enable connection to higher-level control systems. The device is compact in design and intended for installation in switch cabinet environments.

Properties

- Fanless device
- Optimized heat dissipation
- Reliable and robust

- Undervoltage protection by means of supercapacitors
- Fieldbus interfaces: Profinet, EtherCAT, Ethernet/IP

Technical data

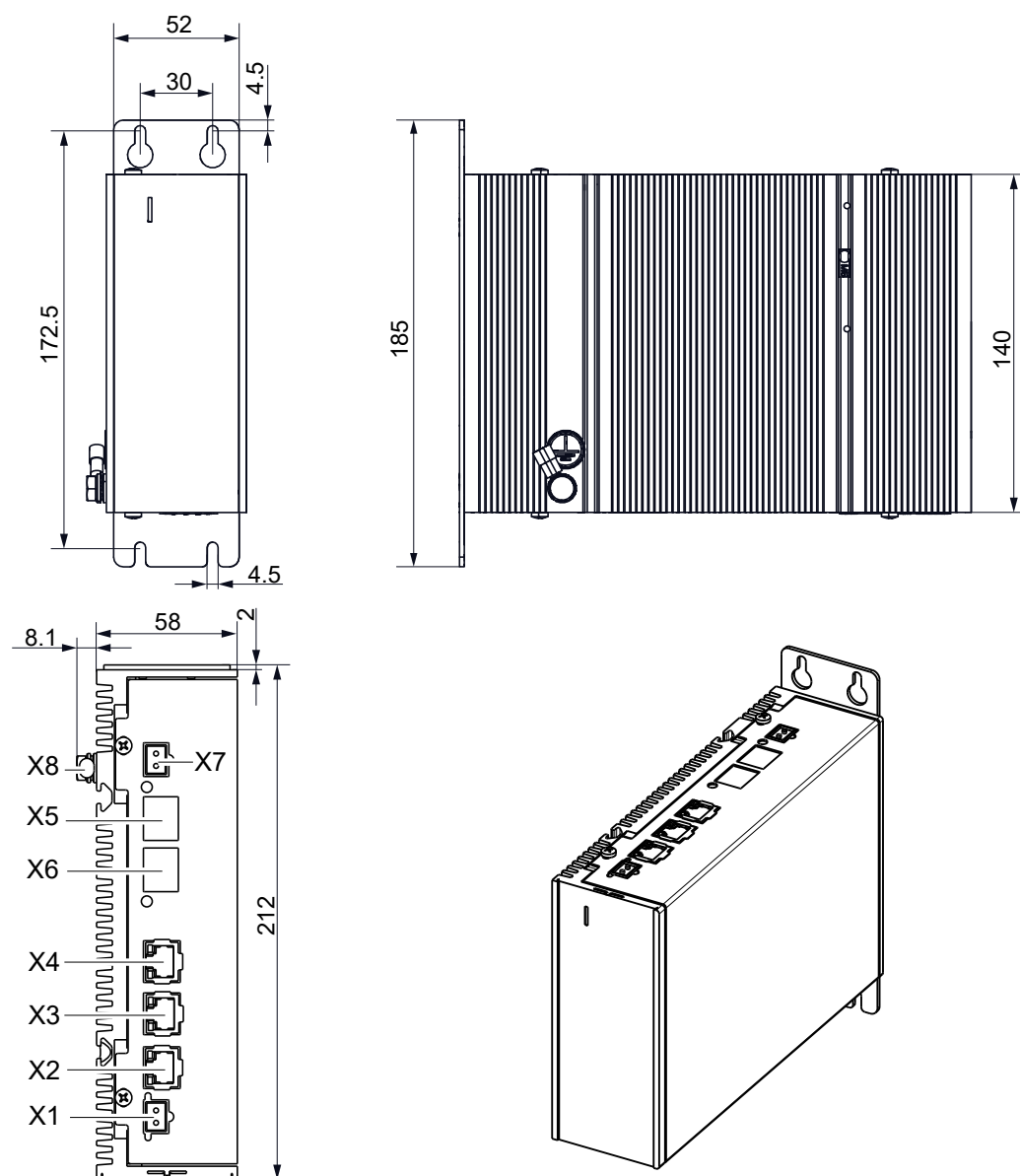|		
Voltage	Min.	19.2 V DC
	Type	24 V DC
	Max.	28.8 V DC
Power consumption (during operation)		7 W
Operating temperature range		+0 °C - +60 °C
Protection class (switch cabinet installation)		IP20
Weight		1.5 kg
Fixture / mounting		Retaining plate for mounting in the switch cabinet
Processor		Cortex A72 (up to 1.5 Ghz), 4 cores
Working storage		LPDDR4 / 4 GB
Start-up time		< 20 s
Typical buffer time (at rated power)		10 s
Removable disk	Type	MicroSD
	Capacity	32 GB, contains customer-specific, project-specific configuration
eMMC		16 GB, contains operating system
Real Time Clock battery		CR2032
Cooling		Without fan
Transport / storage temperature		-20 °C - +70 °C
Operating system		TOX® OperatingSystem: hardened Linux® system
Fieldbus options		Profinet, Ethernet/IP, EtherCAT

TOX® ProcessMonitorControl Core

Connection allocation

Designation	Model	Function	Pin allocation
X1 Power	Phoenix MSTBA Raster 5.08.	Power IN, buffered internally (UPS)	▪ Pin 1 = 24 V ▪ Pin 2 = GND
X2 EtherCAT Master	RJ45	Max. 100 Mbit	▪ Pin 1 = TD+ ▪ Pin 2 = RD+ ▪ Pin 3 = TD- ▪ Pin 4 = - ▪ Pin 5 = - ▪ Pin 6 = RD- ▪ Pin 7 = - ▪ Pin 8 = -
X3 Ethernet TOX®	RJ45	Max. 1 Gbit, communication with TOX® software/HMI, buffered (UPS)	See pin allocation X2
X4 Ethernet (customer)	RJ45	Max. 100 Mbit, for free use, DHCP preset	See pin allocation X2
X5 Fieldbus In	RJ45	Optional Profinet, Ethernet/IP, EtherCAT Realtime Ethernet Port A	See pin allocation X2
X6 Fieldbus Out	RJ45	Optional Profinet, Ethernet/IP, EtherCAT Realtime Ethernet Port B	See pin allocation X2
X7 Power	Phoenix MSTBA Raster 5.08.	External fieldbus power to maintain switch functionality X5 + X6	▪ Pin 1 = 24 V ▪ Pin 2 = GND
X8 PE	M6		

TOX® ProcessMonitorControl Core

Dimensions

52

30

4.5

172.5

185

140

4.5

8.1

58

2

212

X8
X7
X5
X6
X4
X3
X2
X1

Mounting instructions and installation distances can be found in our operating instructions.

TOX® ProcessMonitorControl Core

System overview