

# Telegraf App

ctrlX OS Server Agent for Collecting Data  
in Data Layer 03VRS

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# 1 About this documentation

## Editions of this documentation

| Edition | Release date | Note   |
|---------|--------------|--|
| 01      | 2024-12      | First edition<br>Telegraf App Version TSA-V-0302 |

# 2 Important directions on use

## 2.1 Intended use

### 2.1.1 Introduction

Rexroth products are developed and manufactured to the state-of-the-art.

The products are tested prior to delivery to ensure operational safety and reliability.

#### ▲ WARNING

#### Personal injury and damage to property due to incorrect use of products!

The products may only be used as intended.

Failure to use the products as intended may cause situations resulting in property damage and personal injury.

#### NOTICE

#### Damages resulting from unintended use

Rexroth As the manufacturer does not assume any warranty, liability or compensatory claims for damages resulting from unintended use of the products. The user alone shall bear the risks of an unintended use of the products.

Before using Rexroth products, make sure that all the prerequisites for an intended use of the products are met:

- Personnel that in any way, shape or form uses Rexroth products must first read and understand the relevant safety instructions and be familiar with their intended use
- Leave hardware products in their original state, i.e., do not make any structural modifications. It is not permitted to decompile software products or alter source codes
- Do not install damaged or defective products or commission them
- It has to be ensured that the products have been installed as described in the relevant documentation

### 2.1.2 Areas of use and application

Products of the ctrlX series are suitable for Motion/Logic applications.

**NOTICE**

Products of the ctrlX series may only be used with the accessories, mounting parts, and other components specified in this documentation. Components that are not expressly mentioned must neither be attached nor connected. The same applies to cables and lines.

Only to be operated with the hardware component configurations and combinations expressly specified and with the software and firmware specified in the corresponding documentations and functional descriptions.

Products of the ctrlX series are suitable for single-axis as well as for multi-axis drive and control tasks. Device types with different equipment and interfaces are available for using the system in specific applications.

Typical areas of application:

- Building automation
- IoT and Security Gateway or Device
- Handling & Robotic

Controls of the ctrlX CORE series may only be operated under the mounting and installation conditions, in the position of normal use and under the ambient conditions (temperature, degree of protection, humidity, EMC, etc.) specified in the related documentations.

## 2.2 Unintended use

"Unintended use" refers to using the ctrlX products outside of the above-mentioned areas of application or under operating conditions and technical data other than described and specified in the documentation.

ctrlX products must not be used if they are exposed to following conditions:

- Operating conditions that do not meet the specified ambient conditions. Operation under water, under extreme temperature fluctuations or under extreme maximum temperatures is prohibited
- Applications that have not been expressly authorized by Rexroth

## 3 Safety instructions

The Safety instructions contained in the available application documentation feature specific signal words (DANGER, WARNING, CAUTION or NOTICE) and, where required, a safety alert symbol (in accordance with ANSI Z535.6-2006).

The signal word is meant to draw the reader's attention to the safety instruction and identifies the hazard severity.

The safety alert symbol (a triangle with an exclamation point), which precedes the signal words DANGER, WARNING and CAUTION, is used to alert the reader to personal injury hazards.

The Safety instructions in this documentation are designed as follows:

**▲ DANGER**

In case of non-compliance with this safety instruction, death or serious injury **will** occur.

**▲ WARNING**

In case of non-compliance with this safety instruction, death or serious injury **could** occur.

**▲ CAUTION**

In case of non-compliance with this safety instruction, minor or moderate injury could occur.

**NOTICE**

In case of non-compliance with this safety instruction, property damage could occur.

## 4 Introduction and overview



Telegraf™ is a registered trademark owned by InfluxData inc. and is not associated with or endorsed by the ctrlX Telegraf app.

The Telegraf app provides the option to connect to databases or systems and collect, process, aggregate and write information such as metrics, events and logs to target systems, such as the InfluxDB app.

To configure the respective data connections, the Telegraf app provides specific interfaces and a Telegraf console in the web interface of the ctrlX device.

The configuration settings are automatically saved in the app data of the ctrlX device.

Several Telegraf instances can be run simultaneously on the ctrlX device.

Functional scope of Telegraf

- **Database connection**  
Establishing connections to data sources such as MongoDB, MySQL or Redis to collect or send metrics
- **System connection**  
Collecting information from cloud platforms and containers
- **Connection to IoT sensors**  
Collect condition-based data from IoT sensors and devices, e.g. pressure levels, temperature levels



The following apps can be used in conjunction with the Telegraf app:

- [↪ InfluxDB](#)  
The InfluxDB app is a time series database optimized for high-availability data retrieval and fast storage of time series data in areas such as operations monitoring, IoT data and real-time analytics
- [↪ IoT Dashboard](#)  
The IoT Dashboard app is used to visualize and analyse a wide range of data sources and applications using customized dashboards, heatmaps, diagrams and histograms

Further information on the so-called TIG stack can be found on the following website (**TIG** = Telegraf / InfluxDB / Grafana):

[↪ https://www.influxdata.com/blog/tig-stack-iiot-ot/](https://www.influxdata.com/blog/tig-stack-iiot-ot/)

### Configuration templates

The configuration file can be created using a template, see:

- [↪ Creating a configuration](#)
- [↪ Configuration template](#)

The syntax of the configuration and the configuration for the input plug-in can be tested before starting the Telegraf

### 4.1 Installation

The installation of apps is described in the documentation for ctrlX OS - Operating System for ctrlX CORE Control Devices 03VRS, see: [↪ Web documentation](#)

The app installation adds “Telegraf”-specific interfaces to the web interface of the ctrlX device, see:

- [↪ Window](#) – “Telegraf”
- [↪ Dialog](#) – “Create new Telegraf configuration”
- [↪ Editor](#) – “Edit Telegraf configuration”

## 4.2 Licensing

Operation of the Telegraf app is subject to licensing and requires the following license for each Telegraf instance installed on the ctrlX device:

| Type code                      | Material number |
|--------------------------------|-----------------|
| SWL-XC*-TSA-TELEGRAF*****-NNNN | R911416258      |

## 4.3 Required user rights

Telegraf user authentication is linked to the user administration of the ctrlX device.

Authentication (login) in the web interface of the ctrlX device is required to access the Telegraf app.

After logging in to the web interface, Telegraf-specific authorizations have to be defined that regulate data access to the Data Layer of the ctrlX device, see: [→ Web documentation](#)



Insufficient authorizations may mean that no data can be displayed or that buttons have no function.

## 4.4 Telegraf plugins

Use the following web link to access the Telegraf plugins page: [→ https://github.com/influxdata/telegraf/blob/v1.27.0/README.md](https://github.com/influxdata/telegraf/blob/v1.27.0/README.md)

## 4.5 Useful web links

[→ ctrlX Store on the web](#)

[→ How-to range](#)

[→ ctrlX AUTOMATION FORUM](#)

[→ ctrlX AUTOMATION Community](#)

[→ YouTube Tutorial \(Telegraf App & InfluxDB App\)](#)


# 5 Application

## 5.1 Creating a configuration

1. [→](#) Navigate in the ctrlX OS web interface to the “Telegraf” window.
  - ➔ The default factory configuration indicates in a window that there is no configuration available.
2. [→](#) Click on [+] to add a new configuration.
  - ➔ The “Create new Telegraf configuration” dialog is called.
3. [→](#) Enter a configuration name and select from the drop-down menu whether a configuration template or an empty configuration is to be created, see: [→ Configuration template](#)
4. [→](#) Confirm the dialog.
  - ➔ The configuration is created and displayed in the window.




## 5.2 Starting a configuration

1. [→](#) Navigate in the ctrlX OS web interface to the “Telegraf” window.
  - ➔ The window displays all existing configurations.



2.  Click on [▶] in the relevant configuration column to start the configuration.
  - ➔ The start is indicated by a message.

### 5.3 View diagnostic log

Telegraf diagnostic messages are displayed in the "Diagnostic Log" window after the Telegraf instance has been started.




1.  Navigate in the ctrlX OS web interface to the "Telegraf" window.
  - ➔ The window displays all existing configurations.
2.  Click on [✎] in the relevant configuration column to start the editor.
  - ➔ The editor is displayed on the side.
3.  Click on [📄] in the editor to open the diagnostic log.
  - ➔ The diagnostics log is displayed on the side.

### 5.4 Stopping a configuration

1.  Navigate in the ctrlX OS web interface to the "Telegraf" window.
  - ➔ The window displays all existing configurations.
2.  Click on [⏹] in the relevant configuration column to stop the configuration.
  - ➔ The stop is indicated by a message.




### 5.5 Editing a configuration

Editing a configuration is only possible in stopped state, see: [➔ Stopping a configuration](#)

1.  Navigate in the ctrlX OS web interface to the "Telegraf" window.
  - ➔ The window displays all existing configurations.
2.  Click on [✎] in the relevant configuration column to edit the configuration.
  - ➔ The editor is displayed on the side.
3.  Make the changes and save the changes with [💾].
  - ➔ A message indicates that the data has been saved.

### 5.6 Deleting a configuration

A configuration can only be deleted in stopped state, see: [➔ Stopping a configuration](#)

1.  Navigate in the ctrlX OS web interface to the "Telegraf" window.
  - ➔ The window displays all existing configurations.
2.  Click on [🗑] in the relevant configuration column to delete the configuration.
3.  Confirm the security prompt to delete the configuration.
  - ➔ A message indicates if the configuration has been deleted successfully.

### 5.7 Configuration template

Ex works, the Telegraf app provides a configuration template that can be used as a basis or example when creating a configuration for the first time.

The configuration template can be selected in the "Create new Telegraf configuration" dialog, see:

## ➔ Dialog – “Create new Telegraf configuration”

**Configuration template: ctrlX Data Layer sse input and InfluxDB V2 output**

Further information on the configuration template can be found under the following web link: ➔ [ReadMe "ctrlX Data Layer Input Plugin"](#)

```
## Install InfluxDB at first
## Set up the InfluxDB with organization and initial bucket
## Log in the InfluxDB UI and get the token
## Configure the output plugin influxdb_v2 with these datas
[[outputs.influxdb_v2]]
  urls = ["https://127.0.0.1/influxdb"]
  token = ""
  organization = ""
  bucket = ""
  insecure_skip_verify = true

## Configure the input plugin with the username and password to ctrlX Core
[[inputs.ctrlx_datalayer]]
  ## Hostname or IP address of the ctrlX CORE Data Layer server
  ## example: server = "localhost" # Telegraf is running directly on the device
  ## server = "192.168.1.1" # Connect to ctrlX CORE remote via IP
  ## server = "host.example.com" # Connect to ctrlX CORE remote via hostname
  ## server = "10.0.2.2:8443" # Connect to ctrlX CORE Virtual from development environment
  server = "localhost"

  ## Authentication credentials
  username = ""
  password = ""

  ## Use TLS but skip chain & host verification
  insecure_skip_verify = true

  ## Timeout for HTTP requests. (default: "10s")
  # timeout = "10s"

  ## Create a ctrlX Data Layer subscription.
  ## It is possible to define multiple subscriptions per host. Each subscription can have its own
  ## sampling properties and a list of nodes to subscribe to.
  ## All subscriptions share the same credentials.
  [[inputs.ctrlx_datalayer.subscription]]
    ## The name of the measurement. (default: "ctrlx")
    measurement = "metrics"

    ## Configure the ctrlX Data Layer nodes which should be subscribed.
    ## address - node address in ctrlX Data Layer (mandatory)
    ## name - field name to use in the output (optional, default: base name of address)
    ## tags - extra node tags to be added to the output metric (optional)
    ## Note:
    ## Use either the inline notation or the bracketed notation, not both.
    ## The tags property is only supported in bracketed notation due to toml parser restrictions
    ## Examples:
    ## Inline notation
    nodes=[
      {name="cpu_usage_percent", address="framework/metrics/system/cpu-utilisation-percent"},
    ]
    ## Bracketed notation
    # [[inputs.ctrlx_datalayer.subscription.nodes]]
    # name = "available"
    # address="framework/metrics/system/memavailable-mb"
    # ## Define extra tags related to node to be added to the output metric (optional)
    # [inputs.ctrlx_datalayer.subscription.nodes.tags]
    # node_tag1="node_tag1"
    # node_tag2="node_tag2"
    # [[inputs.ctrlx_datalayer.subscription.nodes]]
    # name = "used"
    # address="framework/metrics/system/memused-mb"

    ## The switch "output_json_string" enables output of the measurement as json.
    ## That way it can be used in in a subsequent processor plugin, e.g. "Starlark Processor Plugin".
    # output_json_string = false

    ## Define extra tags related to subscription to be added to the output metric (optional)
    # [inputs.ctrlx_datalayer.subscription.tags]
    # subscription_tag1 = "subscription_tag1"
    # subscription_tag2 = "subscription_tag2"

  ## The interval in which messages shall be sent by the ctrlX Data Layer to this plugin. (default: 1s)
```

```
## Higher values reduce load on network by queuing samples on server side and sending as a single TCP
packet.
# publish_interval = "1s"

## The interval a "keepalive" message is sent if no change of data occurs. (default: 60s)
## Only used internally to detect broken network connections.
# keep_alive_interval = "60s"

## The interval an "error" message is sent if an error was received from a node. (default: 10s)
## Higher values reduce load on output target and network in case of errors by limiting frequency of
error messages.
# error_interval = "10s"

## The interval that defines the fastest rate at which the node values should be sampled and values
captured. (default: 1s)
## The sampling frequency should be adjusted to the dynamics of the signal to be sampled.
## Higher sampling frequency increases load on ctrlX Data Layer.
## The sampling frequency can be higher, than the publish interval. Captured samples are put in a queue
and sent in publish interval.
## Note: The minimum sampling interval can be overruled by a global setting in the ctrlX Data Layer
configuration ('datalayer/subscriptions/settings').
# sampling_interval = "1s"

## The requested size of the node value queue. (default: 10)
## Relevant if more values are captured than can be sent.
# queue_size = 10

## The behaviour of the queue if it is full. (default: "DiscardOldest")
## Possible values:
## - "DiscardOldest"
##   The oldest value gets deleted from the queue when it is full.
## - "DiscardNewest"
##   The newest value gets deleted from the queue when it is full.
# queue_behaviour = "DiscardOldest"

## The filter when a new value will be sampled. (default: 0.0)
## Calculation rule: If (abs(lastCapturedValue - newValue) > dead_band_value) capture(newValue).
# dead_band_value = 0.0

## The conditions on which a sample should be captured and thus will be sent as a message. (default:
"StatusValue")
## Possible values:
## - "Status"
##   Capture the value only, when the state of the node changes from or to error state. Value changes are
ignored.
## - "StatusValue"
##   Capture when the value changes or the node changes from or to error state.
##   See also 'dead_band_value' for what is considered as a value change.
## - "StatusValueTimestamp":
##   Capture even if the value is the same, but the timestamp of the value is newer.
##   Note: This might lead to high load on the network because every sample will be sent as a message
##   even if the value of the node did not change.
# value_change = "StatusValue"
```

## 6 User interface

### 6.1 Window – “Telegraf”

In the window “Telegraf”, the Telegraf app can be configured.

#### Related topics:





[➔ Information about Telegraf and the Telegraf App](#)

#### Call:

ctrlX OS side navigation “*Telegraf*”

If no Telegraf configuration has yet been created on the control, + “Add Telegraf configuration” is displayed in the window. After adding a configuration, the command bar and the table with the connection entry are displayed on the page.

## Elements of the “Telegraf” window

| Interface element | Description   |
|-------------------|---|
| Command bar       | <p>“[x] item(s)”</p> <p>Number of listed connections</p> <p></p> <p>Create new Telegraf configuration</p> <p>The “Create new Telegraf configuration” dialog opens, see <a href="#">Chapter 6.2 Dialog – “Create new Telegraf configuration” on page 11</a></p>   |
| Table             | <p>“Name”</p> <p>Name of the Telegraf configuration</p> <p>“State”</p> <p>State of the Telegraf configuration</p> <p>“Actions”</p> <p>Contains buttons for editing or deleting a Telegraf configuration, this is only possible in stopped state</p> <p>▷</p> <p>“Start”</p> <p>Start Telegraf configuration after the configuration has been edited and saved. You can start several Telegraf instances with different configurations</p> <p><input type="checkbox"/></p> <p>“Stop”</p> <p>Stop Telegraf configuration</p> <p></p> <p>“Edit Telegraf configuration”. The Telegraf editor opens to edit the configuration, see <a href="#">Chapter 6.3 Editor – “Edit Telegraf configuration” on page 12</a></p> <p></p> <p>“Diagnostic logbook”</p> <p>Open the diagnostic logbook of the ctrlX device in a new tab.</p> <p>Further information on the diagnostic logbook of the ctrlX device can be found in the following web documentation, see <a href="#">link</a></p> <p></p> <p>“Delete”</p> <p>Delete Telegraf configuration</p> |




If the configuration has been changed, starting is only enabled again after the configuration has been saved.


## Additional information

- [Chapter 4 Introduction and overview on page 6](#)
- [Chapter 6.2 Dialog – “Create new Telegraf configuration” on page 11](#)
- [Chapter 6.3 Editor – “Edit Telegraf configuration” on page 12](#)

## 6.2 Dialog – “Create new Telegraf configuration”



Dialog for creating a new Telegraf configuration. The dialog can be closed via the icon  button.

**Call:**

ctrlX OS side navigation “Telegraf” → 

**Dialog elements “Create new Telegraf configuration”**

| Interface element        | Description   |
|--------------------------|---|
| “Title”                  | Name of the Telegraf configuration  |
| “Configuration template” | Select configuration template <ul style="list-style-type: none"> <li>• empty, e.g. no configuration demo</li> <li>• demo, e.g. ctrlX Data Layer sse input and InfluxDB V2 output</li> </ul> |



Click on  to create the Telegraf configuration. If you click on , the Telegraf configuration is not created and the dialog is closed.

**Additional information**

- [↪ Chapter 4 Introduction and overview on page 6](#)
- [↪ Chapter 6.1 Window – “Telegraf” on page 10](#)
- [↪ Chapter 6.3 Editor – “Edit Telegraf configuration” on page 12](#)

## 6.3 Editor – “Edit Telegraf configuration”







**Editing the Telegraf configuration**

The properties of the Telegraf configuration can be edited after adding a new configuration via the  button in the “Telegraf” window. The window can be closed using the icon .

**Call:**

ctrlX OS side navigation “Telegraf” → 

**Elements of the editor “Edit Telegraf configuration”**

| Interface element | Description  |
|-------------------|--|
| Command bar       | <br>“Save Telegraf configuration”<br>Save Telegraf configuration in ctrlX configuration   |
|                   | <br>“Start”<br>Start measurement  |
|                   | <br>“Stop”<br>Stop measurement  |
|                   | <br>“Open “Diagnostic log” window”<br>The “Diagnostic log” is displayed in the window that opens. The “Diagnostic log” can be deleted using  .<br>The window can be closed again using  . |
| Table             | Telegraf configuration<br>The Telegraf configuration is displayed in the table and can be edited   |

The ctrlX Data Layer SSE Input plugin is configured using a TOML file, as with all other Telegraf plugins.

For a complete description of the TOML configuration, please refer to the README of the ctrlX Data Layer Input plugin:

➔ [ctrlX Data Layer Input Plugin](#)

**Additional information**

- ➔ [Chapter 4 Introduction and overview on page 6](#)
- ➔ [Chapter 6.1 Window – “Telegraf” on page 10](#)
- ➔ [Chapter 6.2 Dialog – “Create new Telegraf configuration” on page 11](#)

## 7 Further documentation

### 7.1 Overview

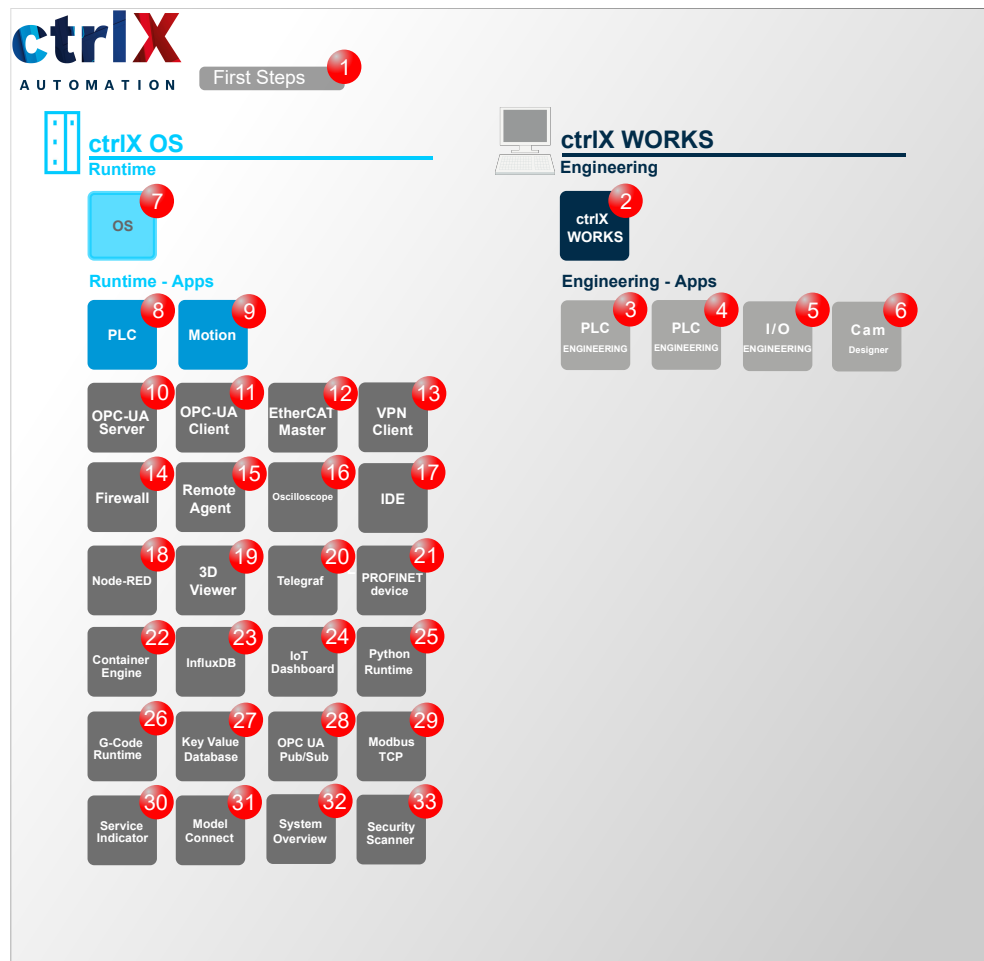


Fig. 1: Overview of further documentation

### 7.2 ctrlX AUTOMATION

| No. | Documentation   |
|-----|---|
| 1   | <p><b>ctrlX WORKS - First Steps</b></p> <p>Quick Start Guide</p> <p>➔ <a href="#">Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XWORKS-F*STEP*****-QU01-EN-P</li> <li>• R911403760</li> </ul> |

## 7.3 ctrlX WORKS

| No. | Documentation   |
|-----|---|
| 2   | <p><b>ctrlX WORKS - Basic System 03VRS</b></p> <p>Application manual</p> <p><a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XWORKS-WRK***V03**-APRS-EN-P</li> <li>● R911423376</li> </ul>                                   |
| 3   | <p><b>ctrlX PLC Engineering - PLC Programming System 03VRS</b></p> <p>Application manual</p> <p><a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XPLC**-PLE***V03**-APRS-EN-P</li> <li>● R911423378</li> </ul>               |
| 4   | <p><b>ctrlX PLC Engineering - PLC Libraries 03VRS</b></p> <p>Reference</p> <p><a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XPLC**-LIB***V03**-RERS-EN-P</li> <li>● R911423456</li> </ul>                                 |
| 5   | <p><b>ctrlX I/O Engineering - Field Bus Configuration for ctrlX OS 03VRS</b></p> <p>Application manual</p> <p><a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XIO***-IOE***V03**-APRS-EN-P</li> <li>● R911423380</li> </ul> |
| 6   | <p><b>ctrlX Cam Designer - Configuring ctrlX MOTION Cams 03VRS</b></p> <p>Application manual</p> <p><a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XWORKS-CAM***V03**-APRS-EN-P</li> <li>● R911427217</li> </ul>           |

## 7.4 ctrlX OS

| No. | Documentation  |
|-----|--|
| 7   | <p><b>ctrlX OS - Operating System for ctrlX CORE Control Devices 03VRS</b><br/>Application manual<br/> <a href="#">↗ Link to the web documentation</a><br/>                     Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XCORE*-XCR***V03**-APRS-EN-P</li> <li>• R911423382</li> </ul> |
|     | <p><b>ctrlX OS - Data Layer Node 03VRS</b><br/>Reference<br/> <a href="#">↗ Link to the web documentation</a><br/>                     Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XCORE*-DL****V03**-RERS-EN-P</li> <li>• R911423384</li> </ul>  |
|     | <p><b>ctrlX OS - Diagnostics 03VRS</b><br/>Reference<br/> <a href="#">↗ Link to the web documentation</a><br/>                     Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XCORE*-DIAG**V03**-RERS-EN-P</li> <li>• R911423386</li> </ul>  |

## 7.5 ctrlX OS Apps

| No. | Documentation  |
|-----|--|
| 8   | <p><b>PLC App - PLC Runtime Environment for ctrlX OS 03VRS</b><br/>Application manual<br/> <a href="#">↗ Link to the web documentation</a><br/>                     Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XCORE*-PLC***V03**-APRS-EN-P</li> <li>• R911423401</li> </ul>         |
| 9   | <p><b>Motion App - Motion Runtime Environment for ctrlX CORE 03VRS</b><br/>Application manual<br/> <a href="#">↗ Link to the web documentation</a><br/>                     Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XCORE*-MOT***V03**-APRS-EN-P</li> <li>• R911423405</li> </ul> |
| 10  | <p><b>OPC UA Server App - OPC UA Server for ctrlX OS 03VRS</b><br/>Application manual<br/> <a href="#">↗ Link to the web documentation</a><br/>                     Ordering information:</p> <ul style="list-style-type: none"> <li>• DOK-XCORE*-UAS***V03**-APRS-EN-P</li> <li>• R911423392</li> </ul>         |

| No. | Documentation   |
|-----|---|
| 11  | <p><b>OPC UA Client App - OPC UA Client for ctrlX OS 03VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-UAC***V03**-APRS-EN-P</li> <li>● R911423390</li> </ul>                         |
| 12  | <p><b>EtherCAT Master App - EtherCAT Master for ctrlX OS 03VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-ECM***V03**-APRS-EN-P</li> <li>● R911423394</li> </ul>                     |
| 13  | <p><b>VPN Client App - Remote Maintenance Software for ctrlX OS 03VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-VPN***V03**-APRS-EN-P</li> <li>● R911423388</li> </ul>              |
| 14  | <p><b>Firewall App - Security Functions for ctrlX OS 03VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-FRW***V03**-APRS-EN-P</li> <li>● R911423397</li> </ul>                         |
| 15  | <p><b>Remote Agent App - ctrlX Device Portal-Connection for ctrlX OS Devices 03VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-RMA***V03**-APRS-EN-P</li> <li>● R911423399</li> </ul> |
| 16  | <p><b>Oscilloscope App - Oscilloscope Function for ctrlX OS devices 03VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-OSC***V03**-APRS-EN-P</li> <li>● R911423407</li> </ul>          |
| 17  | <p><b>IDE App - Integrated Development Environment 02VRS</b></p> <p>Application manual</p> <p><a href="#">↔ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-IEN***V02**-APRS-EN-P</li> <li>● R911421612</li> </ul>                           |

| No. | Documentation  |
|-----|--|
| 18  | <p><b>Node-RED App - Graphical Programming for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-RED***V03**-APRS-EN-P</li> <li>● R911423403</li> </ul>                         |
| 19  | <p><b>3D Viewer App - Browser-based 3D Kinematics Simulation for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-3DV***V03**-APRS-EN-P</li> <li>● R911423411</li> </ul>       |
| 20  | <p><b>Telegraf App - Server Agent for Collecting Data in the Data Layer 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-TSA***V03**-APRS-EN-P</li> <li>● R911425238</li> </ul>         |
| 21  | <p><b>PROFINET Device App - PROFINET Device for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-PND***V03**-APRS-EN-P</li> <li>● R911425232</li> </ul>                        |
| 22  | <p><b>Container Engine App - Using Docker® Images on ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-DOE***V03**-APRS-EN-P</li> <li>● R911425234</li> </ul>                   |
| 23  | <p><b>InfluxDB App - Influx Database Connection for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-IDB***V03**-APRS-EN-P</li> <li>● R911425240</li> </ul>                    |
| 24  | <p><b>IoT Dashboard App - Data Visualization in Dynamic, Interactive Dashboards 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-GDB***V03**-APRS-EN-P</li> <li>● R911425248</li> </ul> |

| No. | Documentation   |
|-----|---|
| 25  | <p><b>Python Runtime App - Python Runtime Environment for ctrlX CORE 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-PYR***V03**-APRS-EN-P</li> <li>● R911425244</li> </ul>                     |
| 26  | <p><b>G-Code Runtime App - G-Code Interpreter for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-GCO***V03**-APRS-EN-P</li> <li>● R911425246</li> </ul>                               |
| 27  | <p><b>Key Value Database App - Managing Data in the Data Layer 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-KVD***V03**-APRS-EN-P</li> <li>● R911425250</li> </ul>                           |
| 28  | <p><b>OPC UA Pub/Sub App - OPC UA Pub/Sub for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-UAP***V03**-APRS-EN-P</li> <li>● R911423409</li> </ul>                                   |
| 29  | <p><b>Modbus TCP App - Modbus TCP Communication for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-MBT***V03**-APRS-EN-P</li> <li>● R911425236</li> </ul>                             |
| 30  | <p><b>Service Indicator App -Service Indicator for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-SIN***V03**-APRS-EN-P</li> <li>● R911425242</li> </ul>                              |
| 31  | <p><b>Model Connect App - Target for Model-Based Development and Simulation for ctrlX OS 03VRS</b></p> <p>Application manual<br/> <a href="#">↪ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-MOC***V03**-APRS-EN-P</li> <li>● R911425252</li> </ul> |

| No. | Documentation   |
|-----|---|
| 32  | <p><b>System Overview App - System Topology and System Information 03VRS</b></p> <p>Application manual</p> <p><a href="#">↗ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-SOV***V03**-APRS-EN-P</li> <li>● R911425254</li> </ul> |
| 33  | <p><b>Security Scanner App -Inventory of Components 03VRS</b></p> <p>Application manual</p> <p><a href="#">↗ Link to the web documentation</a></p> <p>Ordering information:</p> <ul style="list-style-type: none"> <li>● DOK-XCORE*-SSC***V03**-APRS-EN-P</li> <li>● R911427698</li> </ul>                |

## 8 Service and support

Our worldwide service network provides an optimized and efficient support. Our experts provide you with advice and assistance. You can contact us **24/7**.

### Service Germany

Our technology-oriented Competence Center in Lohr, Germany, is responsible for all your service-related queries for electric drive and controls.

Contact the **Service Hotline** and **Service Helpdesk** under:

Phone: **+49 9352 40 5060**

Fax: **+49 9352 18 4941**

Email: [↗ service.svc@boschrexroth.de](mailto:service.svc@boschrexroth.de)

Internet: [↗ http://www.boschrexroth.com](http://www.boschrexroth.com)

Additional information on service, repair (e.g. delivery addresses) and training can be found on our internet sites.

### Service worldwide

Outside Germany, please contact your local service office first. For hotline numbers, refer to the sales office addresses on the internet.

### Preparing information

To be able to help you more quickly and efficiently, please have the following information ready:

- Detailed description of malfunction and circumstances
- Type plate specifications of the affected products, in particular type codes and serial numbers
- Your contact data (phone and fax number as well as your e-mail address)

## 9 Glossary

### **Aggregator plugin**

Creating aggregated metrics (e.g. mean value, min, max, etc.).

### **Input plugin**

Collecting metrics from the system, services or third party APIs.

### **Output plugin**

Write metrics to different targets.

### **Plugin**

A plugin is a software program that can be accessed by other software applications in order to extend their functionality.

The plugins are accessed via manufacturer-defined interfaces of the software applications.

There are four types of plugins in Telegraf:

- Input plugins
- Processor plugins
- Aggregator plugins
- Output plugins

### **Processor plugin**

Transform, decorate and/or filter metrics.

### **Server Sent Event (SSE)**

SSE is a server push technology that enables a client to receive automatic updates from a server via an HTTP connection.

Furthermore, SSE describes how servers can initiate a data transfer to clients as soon as an initial client connection has been established.

### **Telegraf**

Telegraf is a console application with a plugin-driven server agent for collecting and sending metrics and events from databases, systems and IoT sensors.

Telegraf is an open source project operated by software manufacturer Influxdata.inc, see:

➔ <https://www.influxdata.com/time-series-platform/telegraf/>

The sources are available on the open source platform github, see:

➔ <https://github.com/influxdata/telegraf>

### **TOML file format**

TOML is a file format for configuration files.

The Telegraf configuration is described in the TOML file format.

The syntax of TOML consists primarily of key = "value" pairs, [section names] and # comments.



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