

Telegraf App

ctrlX CORE Server Agent for Collecting Data
in the Data Layer 02VRS

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DOK-XCORE*-TSA***V02**-AP01-EN-P

DC-AE/EPI5 (MiNi/PiaSt)

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1 About this documentation

Editions of this documentation

Edition	Release date	Note
01	2024-01	First edition Telegraf App Version TSA-V-0202

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 offers the possibility to connect to databases or systems and to collect, process and aggregate information such as metrics, events and logs and write them to target systems, e.g. to 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 run simultaneously on the ctrlX device.

Functional scope of the Telegraf app

- **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.
- **Connecting to IoT sensors**
Collecting condition-based data from IoT sensors and devices, e.g. pressure levels, temperature levels.



The following apps are available in addition to 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 to analyze different data sources and applications using customized dashboards, heat maps, diagrams and histograms.

For more information about the so-called TIG stack, refer to the following web page (TIG = Telegraf / InfluxDB / Grafana):

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

Configuration templates

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

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

The configuration syntax and the Input plugin configuration can be tested prior to starting the Telegraf.

4.1 Installation

The app installation is described in the documentation of the ctrlX CORE Runtime, see: [↪ Web documentation](#)

Installing the app adds the following “Telegraf” elements to the web interface of the ctrlX device:

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

4.2 Licensing

The 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	Part 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, which regulate data access to the Data Layer of the ctrlX device, see [↗:Web documentation](#)



In case of insufficient authorizations, sporadically no data is displayed or buttons are inactive.

4.4 Telegraf plugins

The following web link takes you to the Telegraf plugin 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 in the web](#)

[↗ HOW-TO section](#)





[↗ ctrlX AUTOMATION FORUM](#)

[↗ ctrlX AUTOMATION Community](#)



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

5 Application

5.1 Creating a configuration






1.  In the ctrlX CORE web interface, navigate to the “Telegraf” window
 - ➔ In the factory state, the window shows that there is no configuration available yet.
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 should be created, see:
 - ➔ [Configuration template](#)
4.  Confirm the dialog
 - ➔ The configuration is created and is displayed in the window.

5.2 Starting a configuration




1.  In the ctrlX CORE web interface, navigate 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 Viewing the diagnostic log

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




1.  In the ctrlX CORE web interface, navigate 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 diagnostic log is displayed on the side.



5.4 Stopping a configuration

1.  In the ctrlX CORE web interface, navigate 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.  In the ctrlX CORE web interface, navigate 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

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

1.  In the ctrlX CORE web interface, navigate 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.
➔ The deletion is indicated by a message.

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 is provided 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”

To configure the Telegraf app, go to the window “Telegraf”.

Related topics:






[Information about Telegraf and about the Telegraf app](#)


Call:

ctrlX CORE side navigation “Telegraf”

If no Telegraf configuration was created on the control, the button + “Add telegraf configuration” is displayed in the window. After adding a configuration, the command bar and the table including the entry of the connection are displayed on the page.

Elements of the “Telegraf” window

GUI element	Description
Command bar	“[x] item(s)” Number of listed connections
	 Creating a new Telegraf configuration The “Create Telegraf configuration” dialog opens, see Chapter 6.2 Dialog – “Create new Telegraf configuration” on page 16
Table	“Status” Telegraf configuration status
	“Title” Telegraf configuration name
	“State” Telegraf configuration state
	“Actions” Includes buttons to edit or delete a Telegraf configuration. This is only possible in stopped state 
	“Start” Starting the Telegraf configuration after editing of the configuration has been completed and saved. Several Telegraf instances can be started with different configurations
	 “Stop” Stopping the Telegraf configuration  “Edit Telegraf configuration”. The Telegraf editor opens, see Chapter 6.3 Editor – “Edit Telegraf configuration” on page 16  “Diagnostic logbook”

GUI element	Description
	<p>Open the diagnostic logbook of the ctrlX device in a new tab.</p> <p>For more information about the diagnostic logbook of the ctrlX device, refer to the following web documentation, see link</p> <p> “Delete”</p> <p>Deleting the Telegraf configuration</p>




In case of a modified configuration, starting is only possible after saving the configuration.


Further information

- [Chapter 4 Introduction and overview on page 9](#)
- [Chapter 6.2 Dialog – “Create new Telegraf configuration” on page 16](#)
- [Chapter 6.3 Editor – “Edit Telegraf configuration” on page 16](#)

6.2 Dialog – “Create new Telegraf configuration”



Dialog to create a new Telegraf configuration. Close the dialog using the icon .

Call:

ctrlX CORE side navigation “Telegraf ” → 

Elements of the dialog “Create new Telegraf configuration”

GUI element	Description
“Title”	Telegraf configuration name
“Configuration template”	<p>Selecting the configuration template</p> <ul style="list-style-type: none"> • empty, e.g. no inputs and outputs • demo, e.g. trigs demo inputs and influxDB V2 output • ctrlx, e.g. ctrlX data layer sse input and influxDB V2 output • full, e.g. complete inputs and outputs



Click on  to create the Telegraf configuration. When clicking on , the Telegraf configuration is not created and the dialog is closed.

Further information

- [Chapter 4 Introduction and overview on page 9](#)
- [Chapter 6.1 Window – “Telegraf” on page 15](#)
- [Chapter 6.3 Editor – “Edit Telegraf configuration” on page 16](#)

6.3 Editor – “Edit Telegraf configuration”







Editing the Telegraf configuration

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

Call:

ctrlX CORE side navigation “Telegraf” → 

Elements of the “Edit Telegraf configuration” editor

GUI element	Description
Command bar	 “Save Telegraf configuration” Saving the Telegraf configuration in ctrlX configuration
	 “Start” Start measurement
	 “Stop” Stopping the measurement
Table	 “Open "Diagnostic log" window” The “diagnostic log” is displayed in the opening window. The “diagnostic log” can be deleted using  . Close the window using  .
	Telegraf configuration The Telegraf configuration is displayed in the table and can be edited

As for all Telegraf plugins, configure the ctrlX Data Layer SSE Input Plugin using a TOML file.

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

[↪ ctrlX Data Layer Input Plugin](#)

Further information

- [↪ Chapter 4 Introduction and overview on page 9](#)
- [↪ Chapter 6.1 Window – “Telegraf” on page 15](#)
- [↪ Chapter 6.2 Dialog – “Create new Telegraf configuration” on page 16](#)

7 Related documentation

7.1 Overview

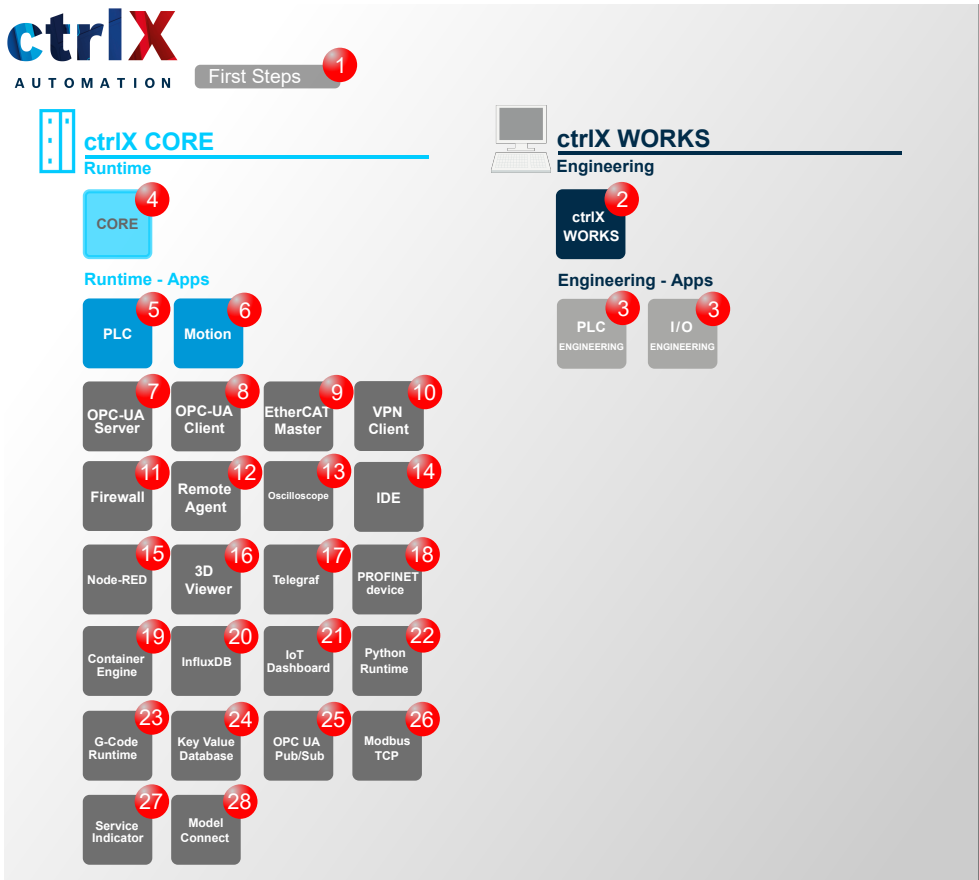


Fig. 1: Overview on further documentations

7.2 ctrlX AUTOMATION

No.	Documentation
1	<div><div>ctrlX WORKS First Steps 02VRS</div><div>Quick Start Guide</div><div>↗ Web documentation link</div><div>Ordering information:</div><div><ul style="list-style-type: none">• DOK-XWORKS-F*STEP**V02-QURS-EN-P• R911421574</div></div>

7.3 ctrlX WORKS

No.	Documentation
2	ctrlX WORKS Basic System 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XWORKS-WRK***V02**-APRS-EN-P • R911421576
3	ctrlX PLC Engineering - PLC Programming System 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XPLC**-ENG*****V02-APRS-EN-P • R911421578
3	ctrlX PLC Engineering - PLC Libraries 02VRS Reference ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XPLC**-LIBRARY*V02-RERS-EN-P • R911421580

7.4 ctrlX CORE

No.	Documentation
4	ctrlX CORE - Runtime 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-XCR***V02**-APRS-EN-P • R911421590
	ctrlX CORE - Nodes of the Data Layer 02VRS Reference ↗ Web documentation link Bestellinformationen: <ul style="list-style-type: none"> • DOK-XCORE*-BASE*DL*V02-RERS-EN-P • R911421592
	ctrlX CORE - Diagnostics 02VRS Reference ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-DIAG****V02-RERS-EN-P • R911421594

7.5 ctrlX CORE Apps

No.	Documentation
5	PLC App - PLC Runtime Environment for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-PLC****V02-APRS-EN-P • R911421584
6	Motion App - Motion Runtime Environment for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-MOT***V02**-APRS-EN-P • R911421610
7	OPC UA Server App - OPC UA Server for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-UAS***V02**-APRS-EN-P • R911421598
8	OPC UA Client App - OPC UA Client for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-UAC***V02**-APRS-EN-P • R911421600
9	EtherCAT Master App - EtherCAT Master for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-ECM***V02**-APRS-EN-P • R911421604
10	VPN Client App - Remote Support Software for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-VPN***V02**-APRS-EN-P • R911421596
11	Firewall App - Security Functions for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-FRW***V02**-APRS-EN-P • R911421606

No.	Documentation
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17	Telegraf App - Server Agent for Collecting Data in the Data Layer 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-TSA***V02**-APRS-EN-P • R911421623
18	PROFINET Device App - PROFINET Device for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-PROFINETV02-APRS-EN-P • R911421617

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19	Container Engine App - Use of Docker® Images on ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-DOE***V02**-APRS-EN-P • R911421619
20	InfluxDB App - Influx Database Connection for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-IDB***V02**-APRS-EN-P • R911421625
21	IoT Dashboard App - Data Visualization in Dynamic, Interactive Dashboards 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-GDB***V02**-APRS-EN-P • R911421633
22	Python Runtime App - Python Runtime Environment for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-PYR***V02**-APRS-EN-P • R911421629
23	G-Code Runtime App - G-Code Interpreter for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-GCO***V02**-APRS-EN-P • R911421631
24	Key Value Database App - Managing Data in the Data Layer 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-KVD*****V02-APRS-EN-P • R911421635
25	OPC UA Pub/Sub App - OPC UA Pub/Sub for ctrlX CORE 02VRS Application Manual ↗ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-UAP***V02**-APRS-EN-P • R911421602

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26	Modbus TCP App - Modbus TCP Communication for ctrlX CORE 02VRS Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-MOD*TCP*V02-APRS-EN-P • R911421621
27	Service Indicator App - Service Indicator for ctrlX CORE 02VRS Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-SIN*****V02-APRS-EN-P • R911421627
28	Model Connect App Target for Model-Based Development and Simulation for ctrlX OS 02VRS Application Manual ➔ Web documentation link Ordering information: <ul style="list-style-type: none"> • DOK-XCORE*-MOC*****V02-APRS-EN-P • R911421710

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**.

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

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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 of the system, services or APIs of third party providers.

Output plugin

Write metrics to different targets.

Plugin

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

The plug-ins 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

Transforming, decorating and/or filtering 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.

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

Telegraf

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

Telegraf is an Open Source project operated by the software producer Influxdata, 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 TOML syntax primarily consists of key = "value" pairs, [section names] and # comments.

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