

# RUT950 DLMS

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The information in this page is updated in accordance with firmware version [RUT9\\_R\\_00.07.06.11](#).

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## Summary

The **DLMS / COSEM** standard suite (IEC 62056 / EN 13757- 1) is the most widely accepted international utility meter data exchange standard. DLMS is the application layer protocol that transforms the data into messages and COSEM describes the general object model and can be used for all kinds of presentations.

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This manual page provides an overview of the DLMS functionality in RUT950 devices.

**Note:** DLMS is additional software that can be installed from the **System** → [Package Manager](#) page.

## Main

The **Main** page is used to configure DLMS physical devices and Cosem Groups.

## DLMS Physical devices

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Interoperable devices in DLMS categorize as server (physical device) and client. Data collection device act as a client that supports system dependent features, parameters, functions and classes requesting data from the server (physical device). In this structure, communication protocol stack is

independent of application layer so both devices may communicate different media. To add a new physical device, enter an new configuration name and click the 'Add' button.



After clicking 'Add' you will be redirected to the newly added physical device's configuration page.

## DLMS Physical device configuration

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The **DLMS Physical device configuration** section is used to configure the parameters of server (physical device).



Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables specific physical device configuration.
Connection	empty ; default: <b>none</b>	DLMS connection.
Name	string; default: <b>previously added device name</b>	Physical device name.
Server address	integer [0..255]; default: <b>1</b>	DLMS device server address.
Logic server address	integer [0..255]; default: <b>0</b>	DLMS device logical server address.
Client address	integer [0..255]; default: <b>16</b>	DLMS device client address.
Access security	none   <b>Low</b>   <b>High</b>   <b>High MD5</b>   <b>High SHA1</b>   <b>High GMAC</b> ; default: <b>none</b>	DLMS device authentication type.
<b>Password</b>	string; default: <b>none</b>	DLMS device password if authentication is used.
Interface type	HDLC   WRAPPER; default: <b>HDLC</b>	DLMS device interface type.
Transport security	none   <b>Authentication</b>   <b>Encryption</b>   <b>Authentication encryption</b> ; default: <b>none</b>	DLMS device message encryption.
<b>Invocation counter OBIS code</b>	string; default: <b>none</b>	DLMS device invocation counter OBIS code.
<b>Authentication key</b>	string (Length of the value must be 32); default: <b>none</b>	DLMS device authentication key.
<b>Block cipher key</b>	string (Length of the value must be 32); default: <b>none</b>	DLMS device block cipher key.
<b>Dedicated key</b>	string (Length of the value must be 32); default: <b>none</b>	DLMS device dedicated key.
Logical name referencing	on   off; default: <b>on</b>	DLMS devices use Logical Names to reference and access specific data objects or attributes during communication. For example, when requesting data from a device, you might reference a specific Logical Name to retrieve the information.
Test	-(interactive button)	Test device configuration.

## DLMS Cosem groups

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To add a new cosem group, enter an new configuration name and click the 'Add' button.



After clicking 'Add' you will be redirected to the newly added cosem group's configuration page.

### DLMS Cosem group configuration

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The **DLMS Cosem group configuration** section is used to configure the parameters of cosem groups.



Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables Cosem group.
Name	string; default: <b>previously added cosem group name</b>	OBIS code group name.
Interval	integer [1..4294967295]; default: <b>1</b>	Interval for OBIS code reading (in seconds).
Test	-(interactive button)	Test cosem group.

### DLMS Cosem value

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**Cosem value** is a specific value retrieved from a defined server (physical device). To add a new cosem value, enter an new configuration name and click the 'Add' button.



After clicking 'Add' you will be redirected to the newly added cosem value's configuration page.



Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables Cosem state.
Name	string; default: <b>previously added cosem value name</b>	COSEM option name.
Physical device	selection; default: <b>none</b>	Physical device to read from.
OBIS code	string; default: <b>none</b>	OBIS code value, actions are not executed, only properties are read.

COSEM class id	DATA (ID: 1)   REGISTER (ID: 3)   REGISTER (ID: 3)   DEMAND REGISTER (ID: 5)   REGISTER ACTIVATION (ID: 6)   <b>PROFILE GENERIC (ID: 7)</b>   CLOCK (ID: 8)   SCRIPT TABLE (ID: 9); default: <b>DATA (ID: 1)</b>	Object type for OBIS code.
	<b>Entries</b>	interger [1..32767]; default: <b>none</b> How many data objects to read.

## Connections

The **Connections** page is used to configure DLMS connections. You can use either TCP or serial (depending on the router) connection to establish a connection between the physical device and the router.

### DLMS Connections

To add a new connection, enter an new connection name and click the 'Add' button.



After clicking 'Add' you will be redirected to the newly added connection's configuration page.

### DLMS Connection configuration

The **DLMS Connection configuration** section is used to configure the parameters of connections.



Field	Value	Description
Enable	off   on; default: <b>off</b>	Enables Cosem state.
Name	string; default: <b>previously added connection name</b>	Name of DLMS connection configuration.
Connection type	TCP ; default: <b>TCP</b>	DLMS connection type.
IP address	ip; default: <b>none</b>	DLMS device IP address for TCP connection.
Port	integer [1..65535]; default: <b>none</b>	DLMS device IP port for TCP connection.