

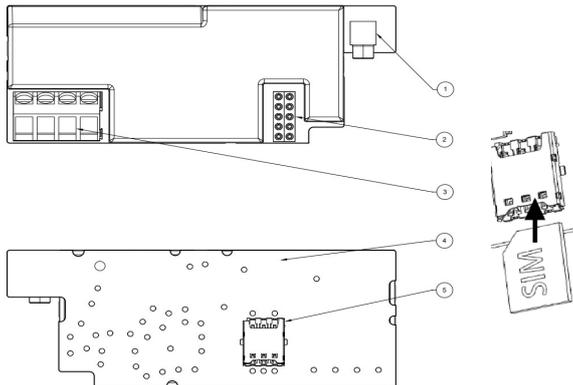
# CMi6140

## Integrated MCM for Kamstrup MULTICAL 403/603/803, NB-IoT

### INTRODUCTION

CMi6140 is an integrated meter connectivity module mounted inside a Kamstrup MULTICAL 403/603/803 that deliver meter data to a receiving system via a NB-IoT network. For a complete description of the product, or for information in other languages, please visit the Elvaco AB website, <https://www.elvaco.com>.

### MODULE SPECIFICATION



1. Antenna Connector (MCX female)
2. Meter Interface
3. Pulse Inputs
4. NFC Antenna
5. SIM (nano)

### MOUNTING

Before mounting the module in the meter, make sure that a SIM card is installed in the SIM card slot.

**NOTE! Please note that the SIM card must be inserted correctly. If it is inserted upside down it can easily damage the SIM slot.**

CMi6140 is mounted in the module slot of a Kamstrup Multical meter. Hold the device by the outer edges and gently press it into position

#### NOTE

- Electrostatic-sensitive devices. Please observe the necessary ESD protective measures when installing the device.



### ANTENNA

CMi6140 is available with external antenna. The antenna is connected using an MCX connector.

#### NOTE

- The antenna should be mounted at least 0.5 meter away from the meter to avoid interference.

### POWER SUPPLY

The meter where CMi6140 is installed in must use any of

Kamstrup 230V High Power  
Kamstrup 24V High Power  
Kamstrup IoT battery, D-cell  
Kamstrup IoT battery, C-cell

If battery operated, make sure the meter is in battery mode or adaptive mode. This ensures the battery lifetime of the complete product.

### ACTIVATION

Upon delivery, CMi6140 has a standard configuration. If you would like to change configuration, please download the Elvaco OTC Application (One-Touch commissioning) for Android available in Google Play or for iOS available in App Store.

The Elvaco OTC connects to the module via NFC.

By default, the product is set to passive mode, which means no messages will be transmitted from the device. There are two ways to activate the product:

- 1. By using the front buttons of the Kamstrup Multical meter.**
  - On Kamstrup Multical 403: press down both front buttons simultaneously until "CALL" is displayed on the meter display.
  - On Kamstrup Multical 603 and 803: press down both arrow buttons simultaneously until "CALL" is displayed on the meter display.
- 2. Via the Elvaco mobile application.**

Go to the Apply tab, set the Power mode to "Active", push "Apply" and place the phone on the right side of the meter, next to the module. Make sure to hold the phone still until the phone vibrates.

You can make sure that the module has joined the NB-IoT network correctly by checking the "connection" field in the Inspect tab of the OTC App. The mobile phone should vibrate three times. This indicates that settings have successfully been applied.

For more detailed information about activation and operation see Users Manual available on [www.elvaco.se](http://www.elvaco.se)

#### NOTE

- Make sure to locate the NFC antenna on your phone. When you scan or write new configurations to the module, you should place the phone's NFC antenna as close as possible to the NFC antenna of the module.

### SIMPLIFIED DECLARATION OF CONFORMITY

Hereby, Elvaco declares that the product is in compliance with the following directives:

#### EU:

- 2014/53/EU (RED)
- 2014/30/EU (EMC)
- 2014/35/EU (LVD)
- 2011/65/EU + 2015/863 (RoHS)

#### UK:

- 2017 No. 1206
- 2016 No. 1091
- 2016 No. 1101
- 2012 No. 3032

The complete Declaration of Conformity can be found at [www.elvaco.se/en](http://www.elvaco.se/en) > Search on product.

## TECHNICAL SPECIFICATIONS

### Mechanics

Dimensions (w x h x d)	90 x 35 x 12 mm
Mounting	In module slot of Kamstrup Multical® 403/603/803
External antenna connector	MCX (female)
SIM card	Slide, size Nano

### Electrical connections

Supply voltage	<b>HC99303 230 VAC high power supply</b> <b>HC99305 D-cell battery IoT</b> HC99306 C-cell battery IoT
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### Electrical characteristics

Nominal voltage	3.5 VDC
Power consumption (max)	300 mA
Power consumption (sleep mode)	8 µA

### Environmental specifications

Operating temperature	+5 °C to +55 °C
Operating humidity	0 - 93 % RH, no condensation
Operating altitude	2000 m
Pollution degree	Degree 1
Usage environment	Indoors
Storage temperature	-20 °C to +60 °C (Module)

### Mobile network

Band	20, 8, 3
3GPP	Release 14 (NB2)

### User interface

Configuration	<ul style="list-style-type: none"><li>• NFC via Elvaco OTC App</li><li>• Via LwM2M (Elvaco Evo DM-system, or third-party DM-system)</li><li>• Preconfig on delivery</li></ul>
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## SAFETY

The following safety precautions must be observed during all phases of the operation, usage, service or repair of any CMi Series product. Users of the product are advised to convey the information to users and operating personnel and to incorporate these guidelines into all manuals supplied with the product. Failure to comply with these precautions violates safety standards of design, manufacture and intended use of the product. Elvaco AB assumes no liability for customer's failure to comply with these precautions.

CMi6140 receives and transmits radio frequency energy while switched on. Remember that interference can occur if the product is used close to TV sets, radios, computers or inadequately shielded equipment. Follow any special regulations and always switch off the product wherever forbidden, or when you suspect that it may cause interference or danger.

The device or antenna of the product must not be mounted closer than 0.5 m from areas where people are staying permanently in order not to risk exposing people to RF fields.

To use the product's NFC TAG, follow the instructions issued by the manufacturer of the NFC reader for safe and efficient operation.

Ensure yourself that power supply and/or battery-unit connected to CMi6140 fulfil EN 62368-1 or equivalent safety standard.

For guaranteed lifetime of a battery-operated device, configuration and settings must be approved by Elvaco and not changed during the lifetime of the device.

## CONTACT INFORMATION

### Elvaco AB Technical support:

E-mail: [support@elvaco.com](mailto:support@elvaco.com)

Online: [www.elvaco.com](http://www.elvaco.com)

