kamstrup

Data sheet

Low Power Radio inputs (In-A, In-B), 434 MHz

MULTICAL® 403
MULTICAL® 603
MULTICAL® 803

- Wireless radio reading
- License-free radio band
- Easily built into the meter
- Internal or external antenna
- No configuration
- Prepared for radio network
- Extra pulse inputs
- Supplied from the MULTICAL® meter
- Supports leakage and burst alarms
- GDPR-compliant

Contents

Introduction

With a low-power radio module placed in the meter, remote reading is now possible. Low-power radio comes in two versions:

- HC-003-50 Low Power Radio
- HC-003-51 Low Power Radio GDPR

The software USB Meter Reader can, together with a radio dongle, be used for reading. The formerly popular hand terminal MULTITERM Pro can only read data from the HC-003-50 module.

The reading system decides which data is read from the meter.

The radio modules are designed for Walk-by/Drive-by but are prepared to be part of a Kamstrup radio mesh network where the read data is automatically transferred to the system software via the network routers and concentrators.

The radio module can be delivered with either internal or external antenna. To obtain the best possible radio coverage and range, an external antenna is recommended.

The module is equipped with pulse inputs for direct connection of other consumption meters, e.g. water or electricity.

The data security and privacy are secured by using individual encryption of the data read from the meter.

Installation

The module is easily mounted in a vacant module slot of the meter.

Normally, no configuration of the module is necessary.

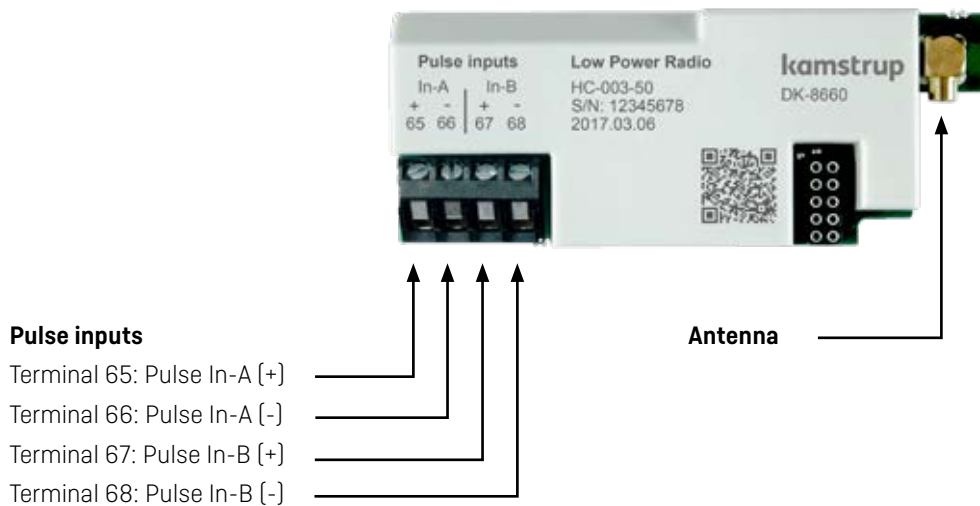The modules can be used in meters with both battery and mains supply.

Note that HC-003-51 - GDPR cannot be read via MULTITERM Pro.

MULTITERM Pro was typically used for walk-by/drive-by readings

Cable connections

Terminals

Max cable size 1.5 mm²
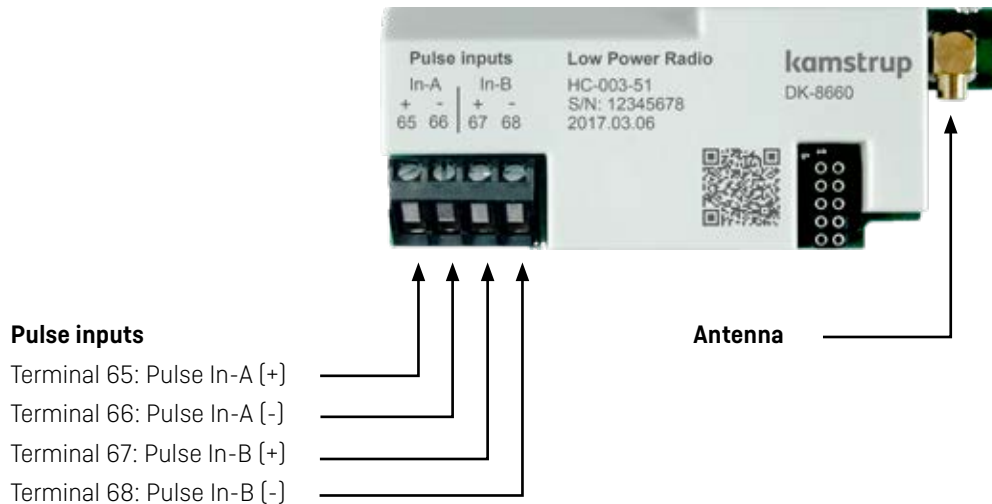
HC-003-50: Low Power Radio, inputs (In-A, In-B), 434 MHz

Pulse inputs

Terminal 65: Pulse In-A (+)

Terminal 66: Pulse In-A (-)

Terminal 67: Pulse In-B (+)

Terminal 68: Pulse In-B (-)

Antenna

Cable connections

Terminals

Max cable size 1.5 mm²

HC-003-51: Low Power Radio GDPR, inputs (In-A, In-B), 434 MHz

Antenna

Pulse inputs

Terminal 65: Pulse In-A (+)

Terminal 66: Pulse In-A (-)

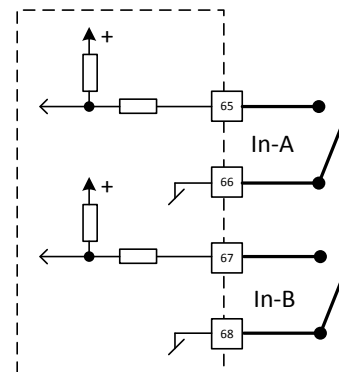Terminal 67: Pulse In-B (+)

Terminal 68: Pulse In-B (-)

Pulse inputs

The module is equipped with two pulse inputs, In-A and In-B, to collect and accumulate pulses, e.g. from water and electricity meters.

The pulse inputs are physically placed on the module. However, the accumulation and logging of values are performed by the MULTICAL® calculator.

When installing a module with pulse inputs in slot 2 of MULTICAL® 603 and MULTICAL® 803, the pulse inputs will be registered in the meter as In-A2 and In-B2.

Antenna

⚠️ This radio-based module must have either an internal or external antenna connected.

When mounting an external antenna, please ensure that the antenna cable is arranged in such a manner that damage of the cable is prevented when the meter is assembled.

Technical data

Physical data

For installation in   MULTICAL® 403, MULTICAL® 603 and MULTICAL® 803

Mechanical data

Dimensions (L x W x D)   90 x 35 x 14 mm

Weight   < 45 g

MULTICAL® supply

🔋 ⊃   Battery or AC supply

Data refresh rate   Data from the meter to the module is refreshed each time the meter completes an
                                             integration. The integration mode is defined by the meter's L-code.

Radio communication

Transmit frequency   434,420 MHz

Transmit power   2 mW

Range   Internal antenna <200 m

                                             External antenna <500 m

Pulse inputs

Input type   Contact input

Open voltage   3,6 V

Current   ≤ 5µA

Max cable length   10 m

Environment

Operational temperature   5°C – 55°C

Humidity   25 – 85% RH non-condensing

Markings/approvals   CE, MID, RED together with the type approval of MULTICAL® 403, MULTICAL® 603
                                             and MULTICAL® 803

Ordering

Order no.	Description
HC-003-50	Low Power Radio, inputs (In-A, In-B), 434 MHz
HC-003-51	Low Power Radio GDPR, inputs (In-A, In-B), 434 MHz
6699 099	Infrared optical read-out head w/USB A plug
6699 447	Internal antenna 434 MHz
6699 407	External triangle antenna with 2.5 m antenna cable
6699 408	External triangle antenna without antenna cable
6699 442	Cavity wall antenna with 2.5 m antenna cable
6699 460	Antenna cable – 50 m super low-loss RG58
www.kamstrup.com	METERTOOL HCW

Configuration

	XX	YY	ZZZ
Product type of module			
Low Power Radio, inputs (In-A, In-B), 434 MHz	50	00	100
Low Power Radio GDPR, inputs (In-A, In-B), 434 MHz	51		
System configuration			
EU, 319, NET0 (434,420 MHz		00	
EU, 319, NET1 (434,420 MHz)		01	
Datagram			
None			000

Displayed information

Module information can be read by selecting "TECH loop" on the MULTICAL® display.

Module in module slot 1: Select menu 2-101 in "TECH loop"

Module in module slot 2: Select menu 2-201 in "TECH loop"

Module in module slot 3: Select menu 2-301 in "TECH loop"

Module in module slot 4: Select menu 2-401 in "TECH loop"

Menu	Menu index	Information	Display example
2-x01	31	Module type and configuration	
2-x01-1	32	Module firmware and revision	
2-x01-2	33	Module serial number	