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Selection guide

MULTICAL® communication modules

Enter the world of communication options available for Kamstrup's MULTICAL® meters

This table gives you an overview of the modules available for Kamstrup's MULTICAL® 403, MULTICAL® 603 and MULTICAL® 803 thermal energy meters.

To help you decide which communication module is relevant for your application, each module is listed with its most characteristic properties.

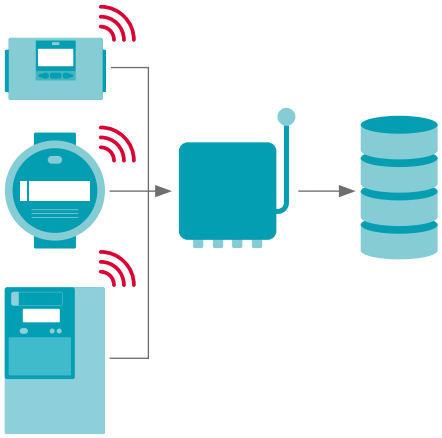
Type number		Supply			Protocol					Wired Communication					Cable range				Wireless Communication					Radio range			Security			Network type				Reading method				Reading system				Data amount			Reading Intervals				Typical application			
		Battery operation	AC supply operation	High Power supply	M-Bus	KMP	Industrial	Proprietary/Other	Controlled output	Wired	2-wire data comm	3-wire RS323 (Cmos)	RS485 based	Ethernet based	<10 m	<400 m	<2000 m	Unlimitted	Wireless	868 Mhz	44x Mhz	2G/4G	Mobile Infrastructure	Short-range <= 500 m	Long-range > 500 m	Unlimitted	GDPR-complient	P2P encryption	Open standard	Private infrastructure	Public infrastructure	Telecom network providers	Local LoRaWAN network providers	Local reading	Remote reading	Fixed Network	Walk-by/Drive-by	READy Hosted	READy Local	3.Part / Implemention guide	Industrial	Small	Medium	Large	Fast < 10 seconds	Medium	Fixed hourly readings	Daily or longer	Billing	Analytic	Control	Regulation
HC-003-20	Wired M-Bus, inputs (In-A, In-B)	•	•		•					•	•						•										•	•	•						•				•					•	•	•			•	•		
HC-003-21	Wired M-Bus, outputs (Out-C, Out-D)	•	•		•					•	•						•										•	•	•						•				•					•	•	•			•	•		
HC-003-22	Wired M-Bus, Thermal Disconnect		•		•				•	•	•						•										•	•	•						•				•					•	•	•			•	•	•	
HC-003-32	linkIQ/wM-Bus, inputs (In-A, In-B), EU	•	•		•			•											•	•				•	•		•	•		•					•	•	•	•	•				•	•			•	•			•	•		
HC-003-33	linkIQ/wM-Bus, outputs (Out-C, Out-D), EU	•	•		•			•											•	•				•	•		•	•		•					•	•	•	•	•				•	•			•	•			•	•		
	LoRaWan	•	•		•			•											•	•					•		•			•	•		•		•	•							•					•	•			•	•		
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	•	•					•											•		•			•			•	•		•					•	•	•	•	•				•	•			•	•			•	•		
HC-003-84	High Power Radio Router, inputs (In-A, In-B), 444 MHz			•				•											•		•				•					•					•	•	•	•	•				•	•			•	•			•	•		
HC-003-85	High Power Radio Router GDPR, inputs (In-A, In-B), 444 MHz			•				•											•		•				•		•	•		•					•	•	•	•	•				•	•			•	•			•	•		
HC-003-56	NB - IoT, inputs(In - A, In - B	•		•	•														•				•			•	•	•	•	•	•				•	•	•	•	•				•	•			•	•	•	•	•	•		
HC-003-80	2G/4G Network, inputs (In-A, In-B)			•	•														•			•				•	•	•	•	•	•				•	•	•	•	•				•	•			•	•	•	•	•	•		
HC-003-83	READy Ethernet, inputs (In-A, In-B)			•	•					•				•	•			•									•	•	•	•					•			•	•				•	•			•	•		•	•	•		
HC-003-10	Data Pulse, inputs (In-A, In-B)	•	•	•		•		•		•		•			•												•			•				•					•	•	•	•	•				•	•	•	•	•	•	•	•
HC-003-11	Data Pulse, outputs (Out-C, Out-D)	•	•	•		•		•		•		•			•												•			•				•					•	•	•	•	•				•	•	•	•	•	•	•	•
HC-003-40	Analog outputs 2 x 0/4...20 mA		•	•			•		•	•					•												•		•	•				•								•										•		
HC-003-41	Analog inputs 2 x 4...20 mA / 0...10 V		•	•			•			•					•												•		•	•				•								•				•	•	•	•			•	•
HC-003-43	PQT Controller		•	•					•	•					•												•		•	•				•								•										•	•
HC-003-60	LON TP/FT-10, inputs (In-A, In-B)			•			•			•	•					•											•		•	•			•	•						•				•				•	•	•	•	•	•	•	•
HC-003-66	BACnet MS/TP, inputs (In-A, In-B)		•				•			•			•			•											•		•	•			•	•						•				•				•	•	•	•	•	•	•	•
HC-003-67	Modbus RTU, inputs (In-A, In-B)		•				•			•			•			•											•		•	•			•	•						•				•				•	•	•	•	•	•	•	•
HC-003-81	BACnet IP, inputs (In-A, In-B)			•			•			•				•	•			•									•		•	•			•	•						•				•				•	•	•	•	•	•	•	•
HC-003-82	Modbus/KMP TCP/IP, inputs (In-A, In-B)			•			•			•				•	•			•									•		•	•			•	•						•				•				•	•	•	•	•	•	•	•

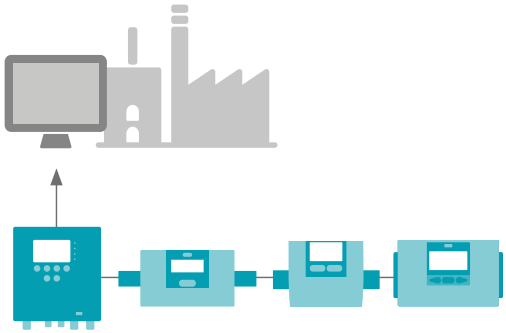
Communication solutions

Wireless communication

The wireless communication modules enable remote reading of your meters with a minimum of effort. Solutions cover Walk-by/Drive-by and fixed networks. The wireless M-Bus/linkIQ and NB-IoT modules are designed for battery-supplied meters, whereas the 2G/4G module must be mounted in AC-supplied meters. All wireless modules can be read by Kamstrup READy or third-party reading systems.

The low-power and high-power radio modules are for maintenance/repair purposes only.



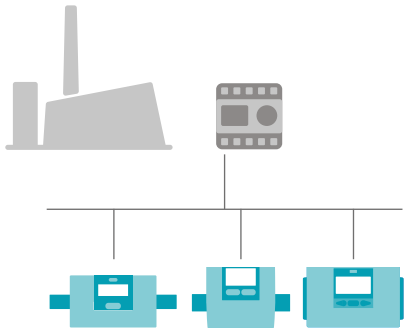


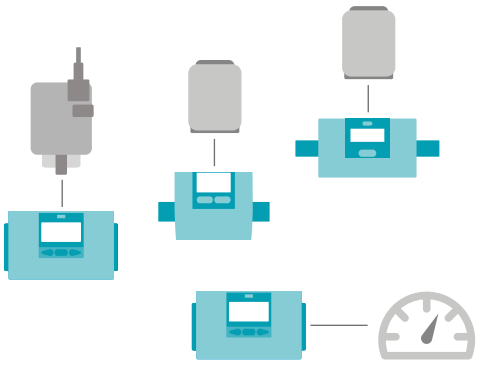
M-Bus communication

M-Bus wired communication is the classic way of reading meters in domestic buildings and rural areas for billing purposes. The M-Bus is well-known having a long range and a proven long-term stability. The solutions cover local readings or remote readings through an M-Bus Master into your reading system or Kamstrup READy or USB Meter Reader.

Industrial communication

This group of modules interface directly into communication protocols used by general control equipment used in building automation and industrial applications. From the basic data pulse modules to the BACnet and Modbus via RS485 or via Ethernet, the modules ensure that information from the meters can be read in an efficient way to build control and regulations systems based on values read from the energy meters.





Control modules

This group of modules have dedicated outputs to steer valves or analog signals. For heat/cooling applications, control of valves for energy management is provided by either M-Bus Thermal Disconnect or the PQT Controller. Analog signals provide a simple mean to pass information to local controls or displays.

58116636_A1_GB_02.2021

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