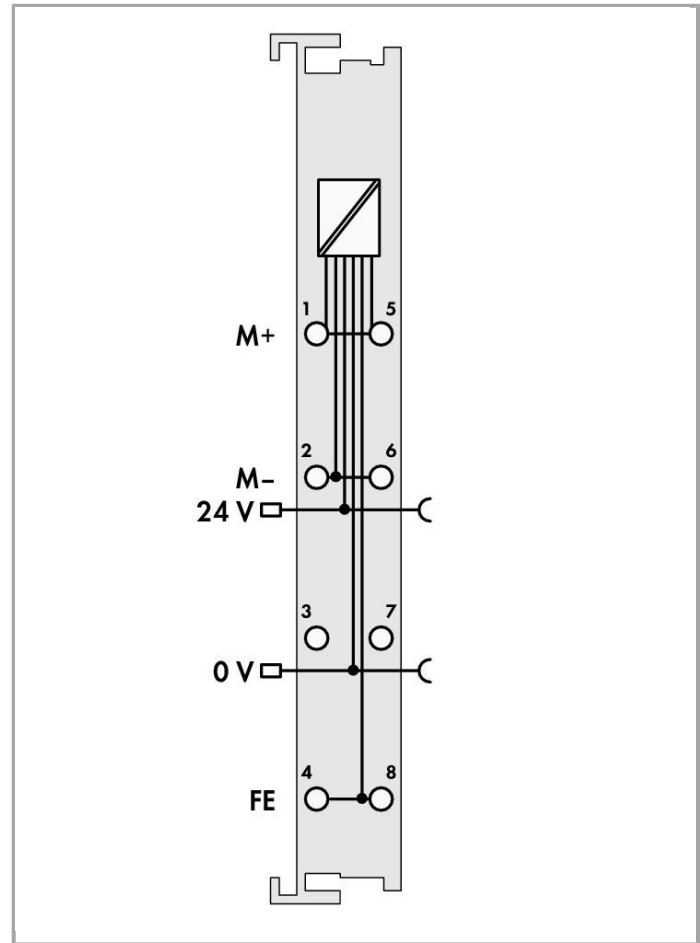
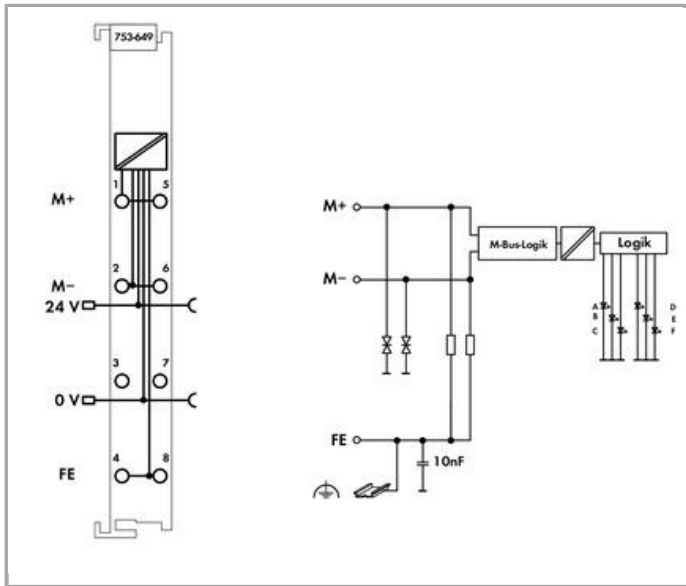


RoHS Compliant

BOMcheck.net



Item description

The 753-649 M-Bus Module acts as an M-Bus master, allowing M-Bus slaves to be directly connected to the WAGO-I/O-SYSTEM 750.

The Meter-Bus (M-Bus) is a fieldbus system that transmits energy consumption data measured by M-Bus slaves (e.g., heat, water, electricity and gas meters), as well as all sensor and actuator types.

The M-Bus master communicates with the M-Bus slaves and forms the interface between the M-Bus and the processing software. On demand, the M-Bus master reads energy consumption data via the M-Bus 2-wire line, transmitting this data to the higher-level control system for further processing or visualization. Alternatively, PLC queries can be implemented via the PLC using IEC 61131-3 function blocks or via a PC application.

The M-Bus slaves are powered via the M-bus master. The use of a separate level converter is not required.

The M-Bus technology is defined in the technical standard EN 13757, which defines the communication systems for meters and their remote reading.

Both signal transmission and operating status, as well as trouble-free internal data bus communication, are indicated via single- and multi-color LEDs. The M-Bus connection modules are short-circuit-protected.

Data

Technical Data

Device-specific

Line length (overall network): up to 1000 m at 9600 baud; up to 2000 m at 2400 baud; up to 6000 m at 300 baud; Master/Slave distance:



up to 500 m at 9600 baud; up to 1000 m at 2400 or 300 baud; M-Bus loads (max.); 40 pcs (1.5 mA each); Overcurrent shutdown: active current monitoring; Threshold: approx. 120 mA; Minimum shutdown time: 500 ms

Topology	Star, tree and line topology
Output voltage	23.4 ... 25.2 VDC; used to supply M-Bus slaves
Baud rate	300Baud ... 9.6kBd (2400 baud (default setting))
Transmission channels	1, bidirectional
Bit width	24 bytes (mailbox 2.0 with 22-byte length)
Commissioning	WAGO-I/O-PRO V2.3, e!COCKPIT
System supply voltage	DC 5 V; via data contacts
Current consumption, system supply (5 V)	40 mA
Field supply voltage	DC 24 V (-2.5 ... 5 %); über Leistungskontakte (Einspeisung über Messerkontakt; Weiterleitung über Federkontakt)
Current consumption, field supply (module with no external load)	130 mA
Isolation	500 V system/field
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2

Connection data

Connection technology: In-/Outputs	8 x CAGE CLAMP®
Connection type (1)	Inputs/Outputs
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 Inch
Connection requirement (permissible cable type)	2-line, shielded or unshielded

Geometrical Data

Width	12 mm / 0.472 inch
Height	69.8 mm / 2.748 inch
Height from upper-edge of DIN-35 rail	62.6 mm / 2.465 inch
Depth	100 mm / 3.937 inch

Mechanical data

Type of mounting	DIN-35 rail
Pluggable connector	yes

Material Data

Housing material	Polycarbonate, polyamide 6.6
Weight	71.9 g
Conformity marking	CE

Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Degree of protection	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying) or vertical
Relative air humidity (no condensation)	95 %
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity < 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity < 75 %	25 ppm

Commercial data

Country of origin	DE
GTIN	4055143622127
Customs Tariff No.	85389099990




Approvals / Certificates










Country specific Approvals

Logo	Approval	Certificate name
	KC National Radio Research Agency	MSIP-REM-W43-MSM750









Compatible products

Carrier rail

	Item no.: 210-112 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm	www.wago.com/210-112
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715	www.wago.com/210-113
	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	www.wago.com/210-114

	Item no.: 210-115 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm	www.wago.com/210-115
	Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	www.wago.com/210-118
	Item no.: 210-196 Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715	www.wago.com/210-196
	Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	www.wago.com/210-197
	Item no.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	www.wago.com/210-198
	Item no.: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715	www.wago.com/210-504
	Item no.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715	www.wago.com/210-505
	Item no.: 210-506 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715	www.wago.com/210-506
	Item no.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715	www.wago.com/210-508

Marking accessories

	Item no.: 2009-145 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145
	Item no.: 2009-145/000-002 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-002
	Item no.: 2009-145/000-005 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-005
	Item no.: 2009-145/000-006 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-006
	Item no.: 2009-145/000-007 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-007
	Item no.: 2009-145/000-012 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-012
	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-023
	Item no.: 2009-145/000-024 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	www.wago.com/2009-145/000-024

**Item no.: 248-501**

Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card

www.wago.com/248-501**Item no.: 248-501/000-002**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-002**Item no.: 248-501/000-005**

Mini-WSB marking card; as card; plain; snap-on type

www.wago.com/248-501/000-005**Item no.: 248-501/000-006**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-006**Item no.: 248-501/000-007**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-007**Item no.: 248-501/000-012**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-012**Item no.: 248-501/000-017**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-017**Item no.: 248-501/000-023**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-023**Item no.: 248-501/000-024**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type

www.wago.com/248-501/000-024**Item no.: 750-100**

Marker card; as a DIN A4 sheet; plain

www.wago.com/750-100**Item no.: 750-106**

Group marker carrier

www.wago.com/750-106**shield connection****Item no.: 790-108**

Shield clamping saddle; 11 mm wide; diameter of compatible conductor

www.wago.com/790-108**Item no.: 790-116**

Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm

www.wago.com/790-116**Item no.: 790-124**

Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm

















www.wago.com/790-124**Item no.: 790-140**

Shield clamping saddle; diameter of compatible conductor

www.wago.com/790-140**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

www.wago.com/790-208

	Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	www.wago.com/790-216
	Item no.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm	www.wago.com/790-220
system box		
	Item no.: 850-804 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip	www.wago.com/850-804
	Item no.: 850-804/000-001 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip	www.wago.com/850-804/000-001
	Item no.: 850-805 IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip	www.wago.com/850-805
	Item no.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate	www.wago.com/850-814/002-000
	Item no.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate	www.wago.com/850-815/002-000
	Item no.: 850-816/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate	www.wago.com/850-816/002-000
	Item no.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate	www.wago.com/850-817/002-000
	Item no.: 850-825 IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20	www.wago.com/850-825
	Item no.: 850-826 IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826
	Item no.: 850-826/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826/002-000
	Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827
	Item no.: 850-827/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827/002-000
	Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828
	Item no.: 850-828/002-000 IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828/002-000



Item no.: 850-834

IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20

www.wago.com/850-834



Item no.: 850-835

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

www.wago.com/850-835



Item no.: 850-836

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

www.wago.com/850-836

Downloads

Documentation

Manual

M-Bus Master Module	Mar 12, 2018	2.1 MB	Download
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Bid Text

753-649	Nov 9, 2017	DOC 31.2 kB	Download
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Tutorial

Retrieve data from a meter using the M-Bus module 753-649 In this video we are demonstrating how to read an electricity M-Bus meter by using the M-Bus module 753-649 in e!COCKPIT. Contents: 0:22 Set up the hardware configuration; 0:43 Insert WagoAppM_Bus library; 1:01 Add the master function block; 1:40 Add the meter function block; 2:14 Create a timer; 3:03 Convert units; 3:59 Start the program; e!COCKPIT version used: 1.3.1.4; Controller used: 750-8202 (FW10)	Jan 23, 2018	130.1 MB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	Oct 15, 2018	265.8 kB	Download
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System Description

Overview on WAGO-I/O-SYSTEM 750 approvals	Jun 6, 2017	314.9 kB	Download
750/753 Series I/O-System – General Product Information	May 29, 2018	2.0 MB	Download

Application Notes

Application Note e!COCKPIT

eCOCKPIT application note WagoAppM_Bus	Jan 31, 2018		Download
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This application note describes how connecting energy meters via the M-Bus Master Module to the WAGO-I/O-SYSTEM 750 can be established. In addition, the application note also describes the function and export of the included sample project that can be used to read M-Bus meters.

2.3 MB

Application Note CoDeSys 2.3

Application Note Library MBus_649_01

Dec 6, 2017

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This application note describes how connecting energy meters via the M-Bus Master Module to the WAGO-I/O-SYSTEM 750 can be established. In addition, the application note also describes the function and export of the included sample project that can be used to read M-Bus meters.

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Application note SIEMENS

a2018002 S7 M-Bus

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Libraries

Library

Libraries for Building Automation CODESYS 2.3

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This Zip-File contains WAGO I/O PRO libraries for Building Automation The following applications are supported: - DALI - DALI Sensors - DALI Colour Control - DALI Emergency Lighting - Enocan - SMI - HVAC Functions - Blind control, Dimmer, Latching Relay ... - Scheduler - KNX Functionblocks - BACnet - WINSTA Blind Control - DMX - Weather Station Elsner - M-Bus, MBus - MP-Bus, MPBus - Romutec - Thermokon WRF06 - Thermokon WRF08 - 3-Phase Power Measurement 750-493 - LON - Grundfos GENiBus Interface

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e!COCKPIT libraries

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Engineering-Software

Configuration and Commissioning Software

WAGO M-Bus Connector Setup

1.17.0.1105

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The M-Bus Connector provides a virtual COM port that is connected to WAGO-I/O-Check via MBSheet.

Jul 19, 2017

4.1 MB

smartDATA



CAD data

3D Download 753-649

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Product family

750/753 Series I/O-System

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Subject to changes.

WAGO Kontakttechnik GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.