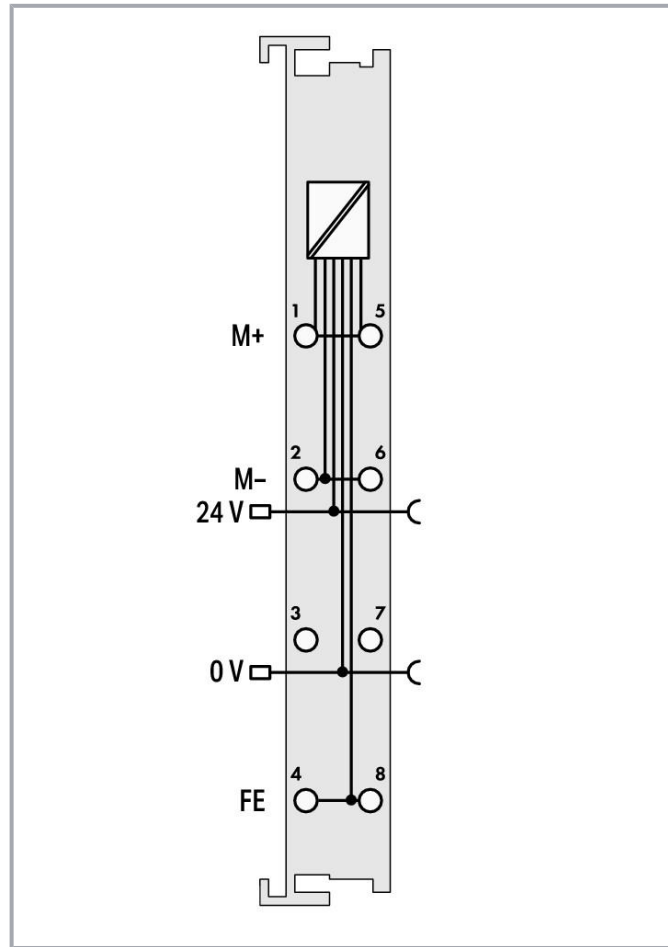
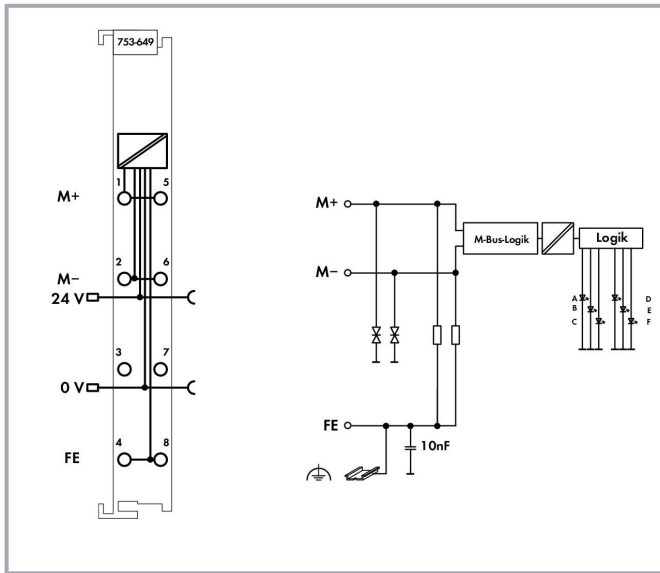


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Item description

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 local bus communication, are indicated via single- and multi-color LEDs.

The M-Bus connection modules are short-circuit-protected.

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**Note:**

The 753 Series Plug is included with delivery.

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 (1.5 mA each); Overcurrent shutdown: Active current monitoring; Threshold value: approx. 120 mA; Minimum shutdown time: 500 ms
Topology	Star, tree and line topology
Output voltage	23.4 ... 25.2 VDC; for supplying the M-Bus slaves
Baud rate	300 Baud ... 9.6 kBd (2400 baud (default))
Transmission channels	1, bidirectional
Data width	24 bytes (mailbox 2.0 with 22-byte length)
Commissioning	WAGO-I/O-PRO V2.3, e!COCKPIT
Supply voltage (system)	5 VDC; via data contacts
Power consumption (5 V system supply)	40 mA
Supply voltage (field)	24 VDC (-2.5 ... +5 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Power 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
Current carrying capacity (power jumper contacts)	10 A

Connection data

Connection technology: inputs/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

Physical data

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

Mechanical data

Mounting type	DIN-35 rail
Wiring interface	Pluggable

Material data

Color	-
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.962 MJ
Weight	71.9 g
Conformity marking	CE

Environmental requirements

Surrounding air temperature (operation)	0 ... 55 °C
Surrounding air temperature (storage)	-40 ... 85 °C
Protection type	IP20
Pollution degree (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration resistance	per 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

PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4055143622127

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Customs tariff number

85389099990

Approvals / Certificates


Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
☐	KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-MSM750

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199 Sec10

Optional accessories

Marking accessories

✓	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-145
✓	Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	www.wago.com/2009-145/000-002
✓	Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red	www.wago.com/2009-145/000-005
✓	Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue	www.wago.com/2009-145/000-006

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✓	Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	www.wago.com/2009-145/000-007
✓	Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange	www.wago.com/2009-145/000-012
✓	Item no.: 2009-145/000-023 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green	www.wago.com/2009-145/000-023
✓	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet	www.wago.com/2009-145/000-024
✓	Item no.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow	www.wago.com/248-501/000-002
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red	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; blue	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; gray	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; orange	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; light green	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; green	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; violet	www.wago.com/248-501/000-024
✓	Item no.: 750-100 Marker card; as a DIN A4 sheet; plain	www.wago.com/750-100

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	Item no.: 750-106 Group marker carrier	www.wago.com/750-106
Shield termination		
	Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm	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
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; silver-colored	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; silver-colored	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; silver-colored	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; silver-colored	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; silver-colored	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; silver-colored	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; silver-colored	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; copper-colored	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; silver-	www.wago.com/210-504

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colored

	Item no.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored	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; silver-colored	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; silver-colored	www.wago.com/210-508

System housing

	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	

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	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	V 1.1.2 2020. 1. 21.	pdf 3.3 MB	Download
System Manual WAGO I/O System 750 / 753 Decentralized Automation Technology	V 3.0.2 2021. 4. 27.	pdf 6.6 MB	Download
System Manual Series 750/753 Online HTML		URL	Download

Bid Text

753-649 X81 - Datei	2019. 2. 19.	xml 6.6 kB	Download
753-649 doc - Datei	2017. 11. 9.	doc 31.2 kB	Download

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	1.0 2017. 9. 8.	mp4 130.1 MB	Download
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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)

System Description

Overview on WAGO-I/O-SYSTEM 750 approvals	pdf	Download
	780.2 kB	

750/753 Series I/O-System – General Product Information	pdf	Download
	1.7 MB	

Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf	Download
		265.8 kB	

Application Notes

Application note SIEMENS

a2018001 TIA M-Bus	V1.1.0	zip	Download
This Application Note describes the linking of an M-Bus module to a Siemens S7 1500 PLC via a PROFINET coupler and the operation of the corresponding M-Bus function blocks.	2021. 1. 5.	19.7 MB	

a2018002 S7 M-Bus	V1.0.0	zip	Download
Dieser Anwendungshinweis beschreibt wie das WAGO M-Bus Modul 753-649 im SIMATIC Manager V5.5 eingebunden wird.	2018. 11. 19.	3.1 MB	

Application Note e!COCKPIT

eCOCKPIT application note WagoAppM_Bus	2021-02-18	pdf	Download
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.	2021. 2. 18.	1.5 MB	

Application Note CoDeSys 2.3

Application Note Library MBus_649_01	1.0	zip	Download
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.	2017. 7. 6.	2.2 MB	

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Libraries

e!COCKPIT libraries

e!COCKPIT Library Description WagoAppM_Bus	1.2.1.0 2021. 5. 25.	pdf 1.1 MB	Download
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Library

Libraries for Building Automation CODESYS 2.3 This zip file contains WAGO I / O PRO libraries for building automation. Blocks are available for the following applications: - DALI - DALI sensors - DALI Color Control - DALI Emergency Lighting - Enocean - SMI - HVAC / HVAC functions - General building functions such as blinds, dimmers, impulse switches - Scheduler - KNX function blocks - BACnet - WINSTA blind box - DMX - Elsner weather station - M-Bus, MBus - MP-Bus, MPBus - Romutec handset - Thermokon Thanos room thermostat - Thermokon WRF04 room thermostat - Thermokon WRF06 room thermostat - Thermokon WRF07 room thermostat - Thermokon WRF08 room thermostat - 3-phase Power measuring module 750-493 - LON - Grundfos pumps with GENIbus interface - EAP Modbus® room control units - Conversion of color formats - "robutecheasy" modules - Schüco TipTronic group control units - Weather station Thies	2021-08-13 2021. 8. 13.	zip 76.0 MB	Download
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Engineering-Software

Configuration and Commissioning Software

WAGO-M-Bus-Connector-Setup M-Bus Connector stellt einen virtuellen COM-Port bereit, über den MBSheet an WAGO-I/O-Check angebunden wird.	1.17.0.1105 2017. 5. 4.	zip 4.1 MB	Download
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CAD/CAE-Data

CAD data

2D/3D Models 753-649	URL	Download
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CAE data

EPLAN Data Portal 753-649	URL	Download
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ZUKEN Portal 753-649	URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 753-649

URL

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M-Bus Master

Installation Notes

Product family

750/753 Series I/O System

[Show all products from the family](#)

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