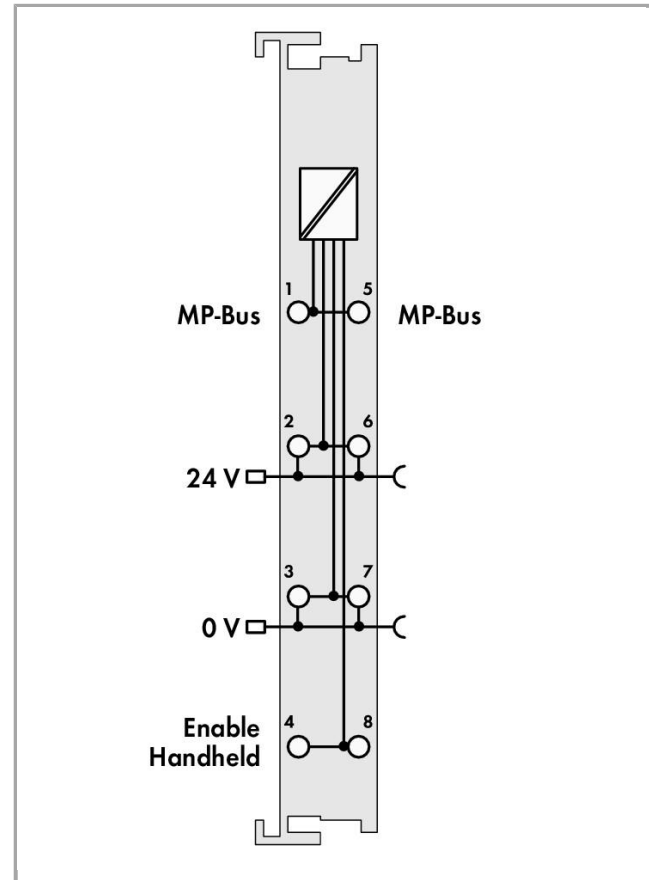
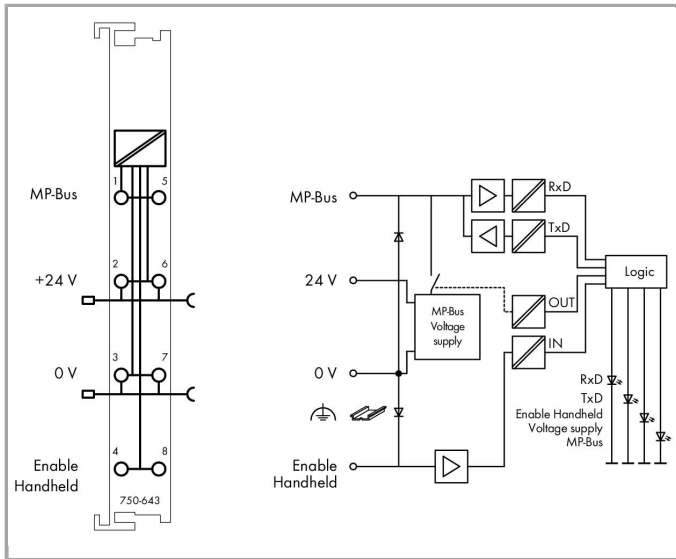


RoHS  Compliant

[BOMcheck.net](https://www.bomcheck.net)



## Item description

The 750-643 I/O module acts as a master for the MP bus (Multi Point Bus from Belimo/Switzerland) and allows the bus to be integrated into a higher level bus network such as Ethernet or LONWORKS<sup>®</sup>. The MP-bus controls HVAC actuators for dampers, regulator valves or VAV air volume controls. An additional product series for MP bus connection is the window ventilation system (FLS) from Belimo (MP bus connection for Belimo actuators, see Belimo documentation).

Devices that are equipped with an MP Bus connection, e.g. the Belimo MFT actuator series, can communicate with a higher level control via bus cable. The actuators have connections for active and passive sensors (temperature, humidity, ON/OFF switch, etc.), and are accessible via MP-Bus. An MP bus master, i.e., the WAGO I/O module, can manage up to 8 slaves (actuators) + 8 sensors (1 sensor can be connected to each slave) via a common bus line, which considerably reduces the wiring effort involved (for the actuators and sensors)(cable lengths for MP bus lines, see Belimo documentation\*). \*Documentation available in German and English.

A Belimo parameterization unit (hand-held control unit, or Belimo PC tool) can be connected to the module to configure the Belimo actuators. The enable handheld contact can be used for this. The module deactivates its MP bus communication when the external parameterization unit is connected to this contact (or simply to the +24V power supply).

## Data

### Technical Data

Gerätespezifikation	MP Bus specifications: PP/MP specifications V1.21 from Belimo (Valid since 1.10.2002)
Topology	No. of slaves: max. 8

Current consumption typ.	25 mA (MP-Bus)
Bit width	1 byte C/S, 7 byte data
Power supply	MP-Bus: DC 24 V, über Leistungskontakte
System supply voltage	DC 5 V; via data contacts
Current consumption, system supply (5 V)	15 mA
System and sensor supply voltage	)
Field supply voltage	DC 24 V; über Leistungskontakte (Einspeisung über Messerkontakt; Weiterleitung über Federkontakt)
Isolation	500 V eff MP-bus/system
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 <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

### 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
------------------	-------------

### Material Data

Color	light gray
Housing material	Polycarbonate, polyamide 6.6
Fire load	1.129 MJ
Weight	50.474 g
Conformity marking	1

### Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2

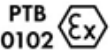


Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying) or vertical
Relative air humidity (no condensation)	95 %
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	acc. to EN 61000-6-2
EMC emission of interference	acc. to EN 61000-6-3
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H <sub>2</sub> S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO <sub>2</sub> contaminant concentration at a relative humidity 75 %	25 ppm

### Commercial data


Product Group	15 (Remote I/O)
Country of origin	DE
GTIN	4045454394011
Customs Tariff No.	85389099990

### Approvals / Certificates


#### Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV 07 ATEX 554086 X en.
	TUEV Nord TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 09.0001 X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	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 UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1
















## Compatible products

## Marking accessories

	<b>Item no.: 2009-145</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type		2009-145
	<b>Item no.: 2009-145/000-002</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-002	2009-145
	<b>Item no.: 2009-145/000-005</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-005	2009-145
	<b>Item no.: 2009-145/000-006</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-006	2009-145
	<b>Item no.: 2009-145/000-007</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-007	2009-145
	<b>Item no.: 2009-145/000-012</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-012	2009-145
	<b>Item no.: 2009-145/000-023</b> Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-023	2009-145
	<b>Item no.: 2009-145/000-024</b> Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	/000-024	2009-145
	<b>Item no.: 248-501</b> Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card		248-501
	<b>Item no.: 248-501/000-002</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	/000-002	248-501

	<b>Item no.: 248-501/000-005</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-005
	<b>Item no.: 248-501/000-006</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-006
	<b>Item no.: 248-501/000-007</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-007
	<b>Item no.: 248-501/000-012</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-012
	<b>Item no.: 248-501/000-017</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-017
	<b>Item no.: 248-501/000-023</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-023
	<b>Item no.: 248-501/000-024</b> Mini-WSB marking card; as card; not stretchable; plain; snap-on type	248-501 /000-024
	<b>Item no.: 750-100</b> Marker card; as a DIN A4 sheet; plain	750-100
	<b>Item no.: 750-103</b> Group marker carrier	750-103
	<b>Item no.: 750-106</b> Group marker carrier	750-106
<b>Supply module</b>		
	<b>Item no.: 750-601</b> Power Supply; 24 VDC	750-601
	<b>Item no.: 750-602</b> Power Supply; 24 VDC	750-602
	<b>Item no.: 750-610</b> Power Supply; 24 VDC; fuse holder; Diagnostics	750-610
	<b>Item no.: 750-612</b> Power Supply; 0 ... 230 V AC/DC	750-612
<b>shield connection</b>		
	<b>Item no.: 790-108</b> Shield clamping saddle; 11 mm wide; diameter of compatible conductor	790-108
	<b>Item no.: 790-116</b> Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm	790-116
	<b>Item no.: 790-124</b> Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm	790-124

	<b>Item no.: 790-140</b> Shield clamping saddle; diameter of compatible conductor	790-140
	<b>Item no.: 790-208</b> Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm	790-208
	<b>Item no.: 790-216</b> Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm	790-216
	<b>Item no.: 790-220</b> Shield clamping saddle; 30 mm wide; 6 ... 20 mm	790-220
<b>Carrier rail</b>		
	<b>Item no.: 210-112</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm	210-112
	<b>Item no.: 210-113</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715	210-113
	<b>Item no.: 210-114</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	210-114
	<b>Item no.: 210-115</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm	210-115
	<b>Item no.: 210-118</b> Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-118
	<b>Item no.: 210-196</b> Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715	210-196
	<b>Item no.: 210-197</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	210-197
	<b>Item no.: 210-198</b> Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-198
	<b>Item no.: 210-504</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715	210-504
	<b>Item no.: 210-505</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715	210-505
	<b>Item no.: 210-506</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715	210-506
	<b>Item no.: 210-508</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715	210-508
<b>system box</b>		
	<b>Item no.: 850-804</b> IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip	850-804
	<b>Item no.: 850-804/000-001</b> IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip	850-804 /000-001

	<b>Item no.: 850-805</b> IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip		850-805
	<b>Item no.: 850-814/002-000</b> IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate	/002-000	850-814
	<b>Item no.: 850-815/002-000</b> IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate	/002-000	850-815
	<b>Item no.: 850-816/002-000</b> IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate	/002-000	850-816
	<b>Item no.: 850-817/002-000</b> IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate	/002-000	850-817
	<b>Item no.: 850-825</b> IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20		850-825
	<b>Item no.: 850-826</b> IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip		850-826
	<b>Item no.: 850-826/002-000</b> IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	/002-000	850-826
	<b>Item no.: 850-827</b> IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip		850-827
	<b>Item no.: 850-827/002-000</b> IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	/002-000	850-827
	<b>Item no.: 850-828</b> IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip		850-828
	<b>Item no.: 850-828/002-000</b> IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	/002-000	850-828
	<b>Item no.: 850-834</b> IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20		850-834
	<b>Item no.: 850-835</b> IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip		850-835
	<b>Item no.: 850-836</b> IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip		850-836



## Downloads

### Documentation

#### Manual

MP Bus Master Module	V 1.3.0	pdf 366.8 kB	Download
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#### Bid Text

750-643 IO-Klemmen	Apr 4, 2012	doc 28.2 kB	Download
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#### Additional Information

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

Design Notes Basic conditions and recommendations for higher operational safety	V 2.0.0	pdf 1.5 MB	Download
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750/753 Series I/O-System – General Product Information		pdf 1.7 MB	Download
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Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
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Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf 1.0 MB	Download
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## Application Notes

### Application Note CoDeSys 2.3

Application Note: MpBus_03 Library This Application Note explains how a WAGO fieldbus controller sets up communication to the MP-bus actuators via the MP-bus master module (750-643).	Apr 13, 2018	zip 1.4 MB	Download
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### Application Note e!COCKPIT

eCOCKPIT application note WagoAppMP_Bus This Application Note explains how a WAGO fieldbus controller sets up communication to the MP-bus actuators via the MP-bus master module (750-643).	V 1.0.0 Jan 23, 2018	zip 983.4 kB	Download
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## Libraries

### Library

Bibliotheken für die Gebäudeautomation CODESYS 2.3	Apr 25, 2019	zip 74.2 MB	Download
<p>In dieser Zip-Datei sind WAGO I/O PRO Bibliotheken für die Automation von Gebäuden enthalten. Es sind Bausteine für folgende Applikationen verfügbar: - DALI - DALI Sensoren - DALI Colour Control (Farbsteuerung) - DALI Emergency Lighting - Enocean - SMI - HLK / HVAC Funktionen - Allgemeine Gebäudfunktionen wie Jalousie, Dimmer, Stromstoßschalter - Zeitschaltfunktionen (Scheduler) - KNX Funktionsbausteine - BACnet - WINSTA Jalousiebox - DMX - Wetterstation Elsner - M-Bus, MBus - MP-Bus, MPBus - Romutec Handbedienung - Thermokon Thanos Raumbediengerät - Thermokon WRF06 Raumbediengerät - Thermokon WRF08 Raumbediengerät - 3-Phasen-Leistungsmessklemme 750-493 - LON - Grundfos Pumpen mit GENIbus Interface</p>			

### e!COCKPIT libraries

e!COCKPIT library description WagoAppMP_Bus		pdf 601.9 kB	Download
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## CAD/CAE - Smart Data

### CAD data

3D Download 750-643		URL	Download
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## Device Files

### Device Driver

WAGO USB Service Cable Driver / 750 and 857 Series 759-923	6.5.3.0 Sep 10, 2014	zip 4.8 MB	Download
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Product family

**750/753 Series I/O-System**

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Subject to changes.

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