



The 753-648 LON FTT Module complies with the ISO/IEC 14908 standard. The 1/2 inch (12 mm) wide module connects LON to 750 Series Controllers and I/O Modules (e.g., BACnet, KNX, EnOcean, DALI, MODBUS). It is a full-fledged and flexible LON device within LonWorks FT or LP networks. The module's network variable interface defines 249 network variables of any type and supports both LonMark objects and configuration properties. LON network interface is defined via LON Configurator. This comprehensive and easy-to-use software tool is a part of the WAGO-I/O-PRO Software. Interface representations are programmed via IEC-61131-3 and can be easily used for further applications. Fieldbus nodes are programmed via WAGO-I/O-PRO Software. WAGO provides a comprehensive IEC-61131-3 library of function blocks, simplifying the creation of complex control applications. A maximum of two modules may be connected to one controller. However, the number of modules depends on the memory required by the IEC application and the type of controller. The module is supplied via 24 V power jumper contacts.

Technical data	
Device-specific	Number of network variables: max. 254 (249 for application)
Transceiver	FTX2
Topology	per LON specification
Number of aliases (max.)	127
Baud rate	0.078 Mbit/s
Bus segment length (max.)	500 m (free topology); 2700 m (bus topology)
Transmission medium	Twisted pair – FTT
Transmission channel	1
Data width	24-byte data
Commissioning	via WAGO-I/O-CHECK or WAGO-I/O-PRO V2.3
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	30 mA
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission via spring contact)
Isolation	500 V system/field

Technical data

Indicators	LED (A, B, C, E, F) green: user configuration, TxD, mailbox, LonWorks status, RxD; LED (G) red: communication/initialization phase; LED (D, H) yellow: service, service
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2

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	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	12 mm / 0.472 inches
Height	100 mm / 3.937 inches
Depth	69 mm / 2.717 inches
Depth from upper-edge of DIN-rail	61.8 mm / 2.433 inches

Mechanical data

Mounting type	DIN-35 rail
Pluggable connector	pluggable

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	1.046 MJ
Weight	54.8 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Protection type	IP20
Pollution degree	2 per IEC 61131-2
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
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
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per EN 61000-6-3
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

Product Group	15 (I/O System)
eCl@ss 10.0	27-24-26-08
eCl@ss 9.0	27-24-26-08
ETIM 8.0	EC001604
ETIM 7.0	EC001604
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821475705
Customs tariff number	85389099990

Environmental Product Compliance

RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II

Approvals / Certificates

General approvals **Declarations of conformity and manufacturer's declarations**



Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087/19
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-MSM750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for hazardous areas



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 753-648	↓

Documentation

Manual			
Product Manual WAGO LON Configurator	V 1.0.0	pdf 4852.35 KB	↓
System Manual WAGO I/O System 750/753	V 3.3.3 29.08.2023	pdf 8512.61 KB	↓
System Manual Series 750/753 ↓			
Product Manual LON FTT Module	V 1.0.0	pdf 983.64 KB	↓

System Description		
750/753 Series I/O-System – General Product Information	pdf 953.35 KB	↓
Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	↓

Bid Text			
753-648	15.11.2018	doc 26.50 KB	↓
753-648	19.02.2019	xml 4.50 KB	↓
ausschreiben.de 753-648 ↓			

Application Notes

Application Note CoDeSys 2.3			
Anwendungshinweis	13.08.2013	pdf	↓
Address Table Entries der LON-Klemme 753-648	23.09.2013	1155.19 KB	

CAD/CAE-Data

CAD data
2D/3D Models 753-648 ↓

CAE data
EPLAN Data Portal 753-648 ↓
WSCAD Universe 753-648 ↓
ZUKEN Portal 753-648 ↓

Runtime Software

Firmware

0753-0648, LON®-FTT Schnittstelle	V 04 07.06.2022	zip 167.03 KB	
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Libraries

Library

Libraries for Building Automation CODESYS 2.3	2023-09-14 14.09.2023	zip 44926.41 KB	
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1 Compatible Products

1.1 Optional Accessories

1.1.1 DIN-rail

1.1.1.1 Mounting accessories



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



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



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



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



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



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



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



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



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



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-colored



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



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

1.1.2 Marking

1.1.2.1 Group marker carrier



Item No.: 750-107

Group marker carrier

1.1.2.2 Marker



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



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



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



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

1.1.2.2 Marker

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



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



Item No.: 2009-145

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



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



Item No.: 248-501/000-006

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



Item No.: 248-501/000-007

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



Item No.: 248-501/000-023

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



Item No.: 248-501/000-017

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



Item No.: 248-501/000-012

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



Item No.: 248-501/000-005

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



Item No.: 248-501/000-024

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



Item No.: 248-501

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



Item No.: 248-501/000-002

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



1.1.2.3 Marker carrier



Item No.: 750-103

Group marker carrier

1.1.3 Pluggable connector

1.1.3.1 Coding



Item No.: 753-150

753 Series coding elements

1.1.4 Shield termination

1.1.4.1 Shield clamping saddles



Item No.: 790-108

Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm



Item No.: 790-208

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



Item No.: 790-116

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



Item No.: 790-216

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm



Item No.: 790-124

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



Item No.: 790-220

Shield clamping saddle; 30 mm wide; 6 ... 20 mm



Item No.: 790-140

Shield clamping saddle; diameter of compatible conductor

1.1.5 Supply module

1.1.5.1 Supply module



Item No.: 750-612

Power Supply; 0 ... 230 V AC/DC



Item No.: 753-612

Power Supply; 0 ... 230 V AC/DC



Item No.: 750-602

Power Supply; 24 VDC



Item No.: 753-602

Power Supply; 24 VDC



Item No.: 750-601

Power Supply; 24 VDC; fuse holder



Item No.: 750-610

Power Supply; 24 VDC; fuse holder; Diagnostics

1.1.6 System enclosure

1.1.6.1 System enclosure



Item No.: 850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20



Item No.: 850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



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



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



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



Item No.: 850-834

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



Item No.: 850-835

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



Item No.: 850-836

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



Item No.: 850-814/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate



Item No.: 850-815/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate



Item No.: 850-816/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate



Item No.: 850-817/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate