



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
Transmission rate	0.078 Mbit/s
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 (system supply)	30 mA
Supply voltage (field)	24 VDC; via power jumper contacts (power supply via blade contact; transmission (field side supply voltage only) via spring contact)
Isolation	500 V system/field
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: I/O	8 x CAGE CLAMP®
Connectable conductor materials	Copper
Connection type	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	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	0.934 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 left, horizontal right, horizontal top, horizontal bottom, vertical top and vertical bottom
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 <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 (I/O System)
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821475705
Customs tariff number	85389099990

### Product Classification

UNSPSC	32151705
eCl@ss 10.0	27-24-26-08
eCl@ss 9.0	27-24-26-08
ETIM 9.0	EC001604
ETIM 10.0	EC001604
ECCN	NO US CLASSIFICATION

### Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide
RoHS Compliance Status	Compliant, With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	9e84adc4-d74b-46f4-9a6e-ef977e40ba4b
SCIP notification number (Belgium)	815fc152-56bc-426f-b353-530260488fb1
SCIP notification number (Bulgaria)	56a71b99-01fc-4b46-aa11-296168b8e04a
SCIP notification number (Czech Republic)	a1e2a4ac-e9f9-4e3d-9fe7-8ea7abedc6aa
SCIP notification number (Denmark)	99e44f75-257f-452d-bf58-73a7024519c9
SCIP notification number (Finland)	36914e76-9f98-46a0-9fa5-ec6f308959c5
SCIP notification number (France)	b52a6f58-e2ea-4d15-9083-2be837610563
SCIP notification number (Germany)	13ea95f9-8102-4136-989e-8376457f0079
SCIP notification number (Hungary)	dadccc40-0259-4026-805f-041ba07ebfad
SCIP notification number (Italy)	83c03e19-25ed-4538-a5a3-dc24b1bef630
SCIP notification number (Netherlands)	d3a66736-3769-4257-8399-cf27e0556762

**Environmental Product Compliance**

SCIP notification number (Poland)	d40b0273-5dde-428b-b1c7-d69247043d45
SCIP notification number (Romania)	5c0d993e-cabb-4252-b28e-e7b03db19be9
SCIP notification number (Sweden)	9e6f7b42-efc6-4fad-a66f-8ecf502a5c3d

**Approvals / Certificates**

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



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-MSM750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199

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

**Downloads**

**Environmental Product Compliance**

Compliance Search
Environmental Product Compliance 753-648 <a href="#">↓</a>

**Documentation**

Manual			
Product Manual WAGO LON Configurator	V 1.0.0	pdf 4852.35 KB	<a href="#">↓</a>
System Manual Series 750/753			<a href="#">↓</a>
Product Manual LON FTT Module	V 1.0.0	pdf 983.64 KB	<a href="#">↓</a>

System Description		
750/753 Series I/O-System – General Product Information	pdf 953.35 KB	<a href="#">↓</a>
Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	<a href="#">↓</a>

Bid Text			
753-648	15.11.2018	doc 26.50 KB	<a href="#">↓</a>
753-648	19.02.2019	xml 4.50 KB	<a href="#">↓</a>
ausschreiben.de 753-648			<a href="#">↓</a>

### Application Notes

Application Note CoDeSys 2.3			
Anwendungshinweis Ad- dress Table Entries der LON-Klemme 753-648	13.08.2013 23.09.2013	pdf 1155.19 KB	<a href="#">↓</a>

### CAD/CAE-Data

CAD data
2D/3D Models 753-648 <a href="#">↓</a>

CAE data
EPLAN Data Portal 753-648 <a href="#">↓</a>
WSCAD Universe 753-648 <a href="#">↓</a>
ZUKEN Portal 753-648 <a href="#">↓</a>

### Runtime Software

Firmware			
0753-0648, LON®-FTT Schnittstelle	V 04 07.06.2022	zip 171.06 KB	<a href="#">↓</a>

### Libraries

Library			
Libraries for Building Au- tomation CODESYS 2.3	2025-01-30 30.01.2025	zip 71441.83 KB	<a href="#">↓</a>

## 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.: 210-197**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



**Item No.: 210-114**

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.: 210-112**

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.: 210-113**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; 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



**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); Wx-HxD (160x100x160 mm); 9 x M12, 4 x M20



**Item No.: 850-826**  
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



**Item No.: 850-827**  
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



**Item No.: 850-828**  
IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



**Item No.: 850-826/002-000**  
IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



**Item No.: 850-827/002-000**  
IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



**Item No.: 850-828/002-000**  
IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



**Item No.: 850-834**  
IP65 enclosure; Polyester (RAL 7032); Wx-HxD (164x100x164 mm); 9 x M12, 4 x M20

1.1.6.1 System enclosure



**Item No.: 850-835**

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



**Item No.: 850-836**

IP65 enclosure; Polyester (RAL 7032); Wx-HxD (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); Wx-HxD (200x120x200 mm); without flange plate



**Item No.: 850-815/002-000**

IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (300x120x200 mm); without flange plate



**Item No.: 850-816/002-000**

IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (400x120x200 mm); without flange plate



**Item No.: 850-817/002-000**

IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (600x120x200 mm); without flange plate