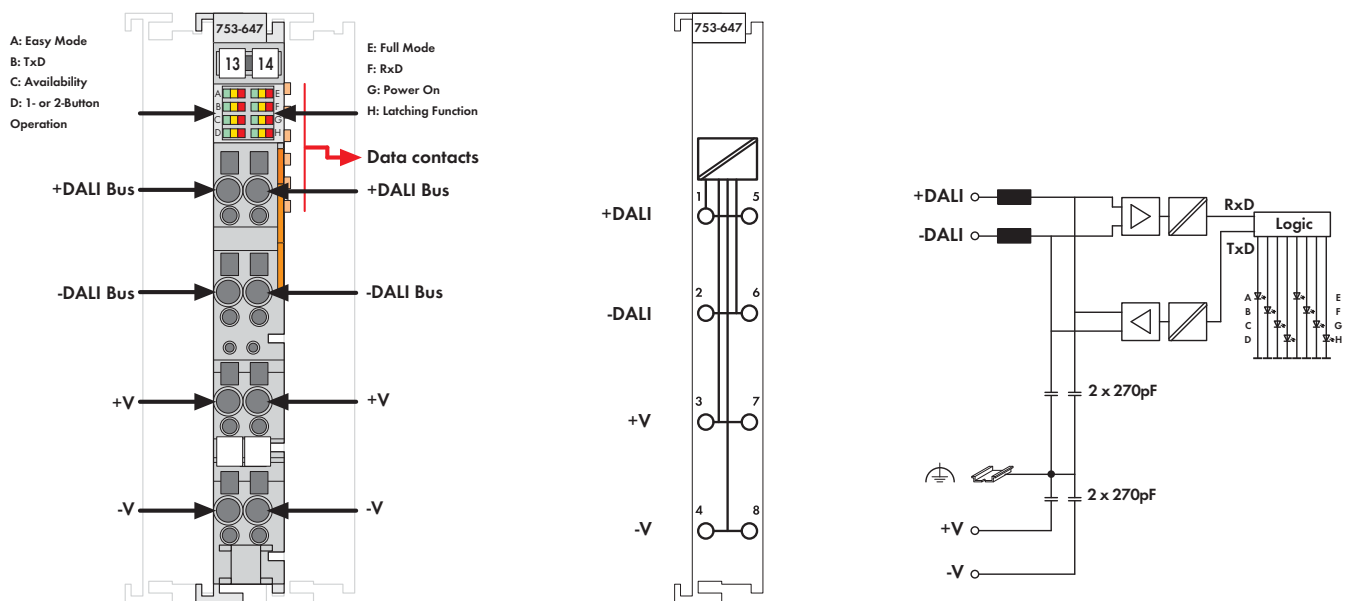


DALI Multi-Master Module



The 753-647 DALI Multi-Master Module complies with DALI standard according to IEC 62386. This manufacturer-independent protocol ensures interoperability of DALI devices in lighting applications.


The 1/2 inch (12 mm) wide module is a DALI interface used in combination with WAGO 750 Series Controllers and Modules (e.g., BACnet, KNX, EnOcean, LON, MODBUS). Each DALI Multi-Master Module supports 64 addresses for electronic control gears (ECGs) and 64 addresses for DALI sensors. Each DALI ECG can be assigned to 16 groups and 16 scenes. The 753-647 Module also offers 16 additional virtual groups on the DALI bus.

Using the WAGO-I/O-SYSTEM, DALI control devices are seamlessly integrated with all supported BA and fieldbus protocols. Several DALI masters can be connected to a single fieldbus node. The maximum number of modules that can be connected to a controller depends on the memory required by the application. 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 lighting applications.

Alternatively an "Easy Mode" allows lighting functions to be easily controlled without any complicated PLC programming. The 753-647 Module is future-proof and upgradable to the latest DALI release. A comprehensive and easy-to-use commissioning and maintenance tool is available as stand-alone application or as integrated WAGO-I/O-CHECK software component.

The two following power supply options are available for the 753-647 Series:

1. The 753-620 DALI Multi-Master DC/DC Converter is used to supply one single module.
2. The 787-1007 Power Supply is used to supply several modules.

Description	Item No.	Pack. Unit
DALI Multi-Master Module	753-647	
Accessories	Item No.	Pack. Unit
DALI Configurator	see page 29 or download: www.wago.com	
WAGO-I/O-CHECK, RS-232 kit	759-302	1
 Miniature WSB Quick marking system plain with marking	248-501	5
	see Full Line Catalog AUTOMATION 2012/2013	
753 Series Connectors	753-110	25
Coding fingers	753-150	100
753 Series pluggable connectors and coding fingers are included.		
Approvals		
Conformity marking	CE	
UL 508	pending	
EN 60079-0, -15	pending	
EN 61241-0, -1		

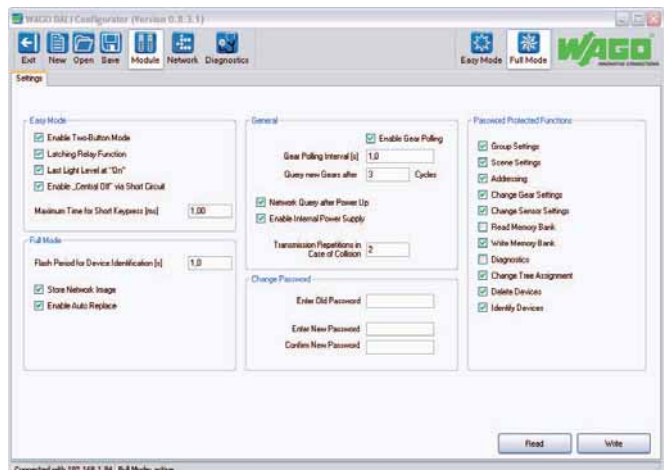
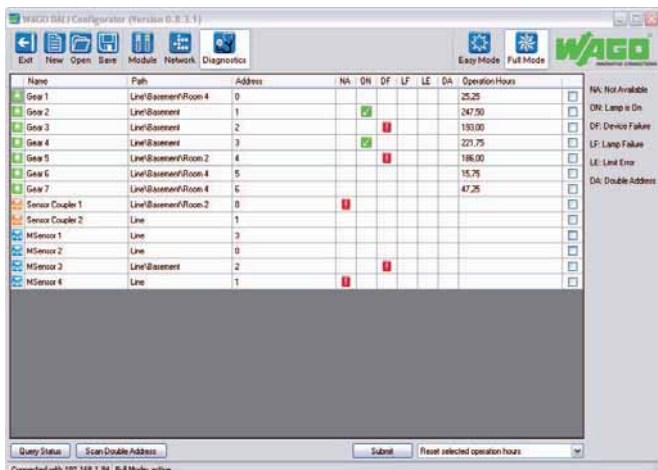
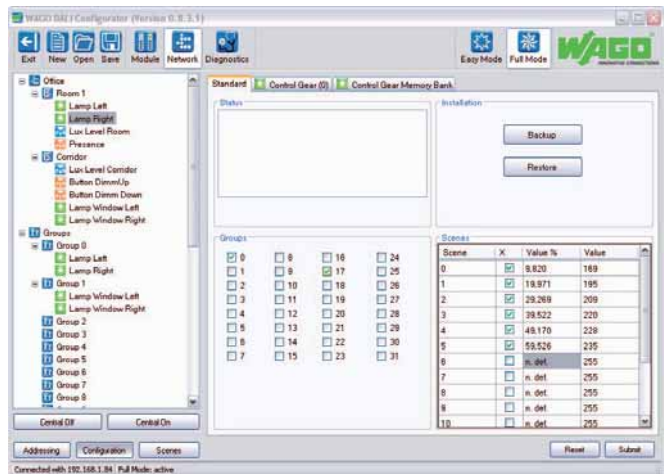
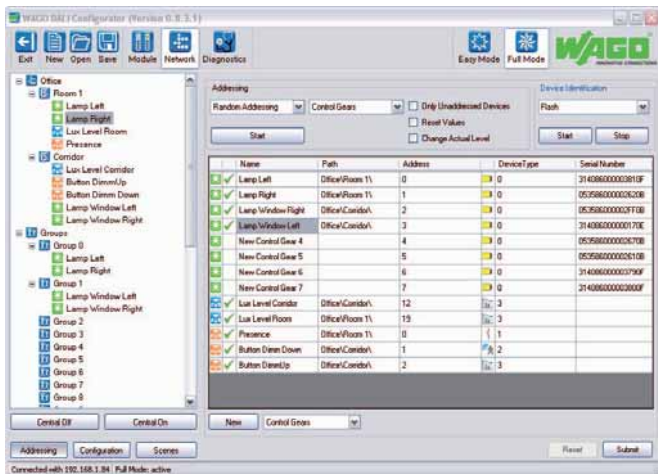
Technical Data	
DALI specification	DIN IEC 62386 only in conjunction with 753-620 or 787-1007 Power Supplies
Number of slaves (DALI)	addressable: 64 control devices + 64 control gears
Module power supply at +V and -V	18 V via 753-620 / 787-1007 Power Supplies
Transmission channel	1
Technical information acc. to DALI specification	
Maximum supply current	250 mA
Guaranteed supply current	200 mA
Current consumption (internal)	30 mA
Power supply	via system voltage (DC/DC)
Isolation	1500 V DC DALI bus/Internal data bus
Internal bit width	24-byte data
Commissioning	via WAGO-I/O-CHECK
Configuration	with WAGO DALI Configurator
Programming	via WAGO-I/O-PRO
Wire connection	CAGE CLAMP®
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14
Stripped lengths	9 ... 10 mm / 0.37 in
Width	12 mm
Weight	55 g
EMC: CE - immunity to interference	acc. to EN 61000-6-2 (2005) *
EMC: CE - emission of interference	acc. to EN 61000-6-3 (2007) *
* Only in conjunction with 753-620 / 787-1007 DC/DC Converter	
EMC: marine applications	
- immunity to interference	acc. to Germanischer Lloyd (2003)
EMC: marine applications	
- emission of interference	acc. to Germanischer Lloyd (2003)

DAI Configurator

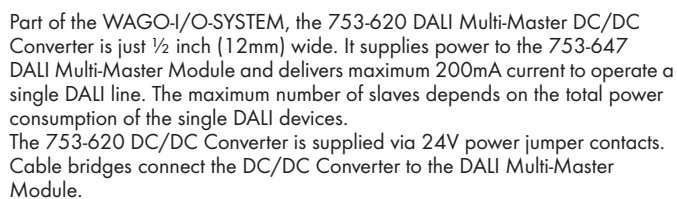
The DALI Configurator allows easy commissioning of a DALI network via 753-647 DALI Multi-Master Module. The configurator is available as stand-alone Windows application or for use with WAGO-I/O-CHECK software. It provides the following functions: easy commissioning, configuration, service, support and maintenance of a DALI network. Comprehensive backup & restore features, as well as offline configuration option for the entire DALI network (including ECGs and sensors) are available.

Features:

- Stand-alone software or for use with WAGO-I/O-CHECK
- Commissioning functions:
 - Addressing
 - Formation of scenes and groups
 - Control gear configuration
 - Offline configuration option
- Service, support and maintenance functions:
 - Backup & restore
 - Status messages from defective ECGs/lamps
 - Identification of double addresses
 - Operating hours display
- Windows-conform user interface:
 - Multiple selection for time-optimized configuration
 - Displays network in a clear tree structure
 - Supports different commissioning workflows

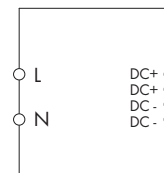


DALI Configurator is available as part of WAGO-I/O-CHECK (Version 3.4.1.9 and higher) or as a stand-alone application (www.wago.com).

[illegible]

Power Supply

for 753-647 DALI Multi-Master Module



The 787-1007 Primary Switch Mode Power Supply is specially designed to supply the 753-647 DALI Multi-Master Module. The 787-1007 features a 54mm-wide DIN-rail mount enclosure with input voltage range of 85 to 264VAC (120 – 373VAC). The power supply provides an output voltage of 18VDC and a maximum output current of 1100mA – enough to supply up to five parallel modules. The maximum current per DALI line is limited to 200mA in each DALI Multi-Master Module.

- Supplies up to five 753-647 DALI Multi-Master Modules*
- Prepared for class II equipment
- Natural convection cooling when horizontally mounted
- Stage profile, ideal for distribution boards or distribution boxes

Technical Data

Input:

Nominal input voltage $V_{i \text{ nom}}$	100 ... 240 VAC
Input voltage range	85 ... 264 VAC; 120 ... 373 VDC
Frequency	44 ... 66 Hz; 0 Hz
Input current I_i	0.6 A at 110 VAC / 0.4 A at 230 VAC
Inrush current	< 30 A, NTC
Mains failure hold-up time	> 10 ms at 110 VAC / > 80 ms at 230 VAC

Output:

Nominal output voltage $V_{o \text{ nom}}$	18 VDC
Output current I_o	1.1 A at 18 VDC max. 0.8 A (18 VDC) in any mounting position
Factory preset	18 VDC
Adjustment accuracy	2 %
Residual ripple	< 150 mV (peak-peak)
Current limitation	1.1 x I_o typ.
Overload behavior	Constant current
Operational indication	LED green (V_a)

Efficiency / power losses:

Efficiency	80 % typ.
Power loss P_v	3 W (no load) / 6 W (rated load)

Fuse protection:

Internal fuse	2 AT
External fuse	Wire breaking 10 A, 16 A, Characteristic B, C An external DC fuse is required for the DC input voltage

* **Note:** The 787-1007 Power Supply must be operated in a DALI network with interconnected 753-647 DALI Multi-Master Module. Otherwise the connected DALI devices will be destroyed.

Description

Primary Switch Mode Power Supply,
18 VDC / 1.1A

Item No.

787-1007

Pack. Unit

1

Technical Data

Environmental requirements:

Ambient operating temperature	-25 °C ... +55 °C
Storage temperature	-25 °C ... +80 °C
Rel. humidity	30 % ... 85 % (no condensation)
Degree of pollution	2 (acc. to EN 50178)
Climatic category	3K3 (acc. to EN 60721)

Safety and protection:

Enclosure	Plastic, light gray, Flammability class V0 acc. to UL94
Test voltage pri. - sec.	4.2 kV DC
Protection class	Prepared for class II equipment
Degree of protection	IP20 (acc. to EN 60529)
No-load proof	yes
Feedback voltage	max. 20 VDC
Short circuit protection	yes
MTBF	500000 h

Connection and type of mounting:

Wire connection	Input/Output: WAGO Series 740
Cross sections	Input/Output: 0.08 mm ² ... 2.5 mm ² / AWG 28 ... 12
Stripped lengths	Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in
Type of mounting	DIN-rail mount (EN 60715)

Dimensions and weight:

Dimensions (mm) W x H x L	54 x 89 x 59
	Length: 55 mm, from upper-edge of DIN 35 rail
Weight	170 g

Standards and approvals:

Standards/Specifications	EN 60950 (SELV), EN 61204-3, GL (Environmental Category A, EMC 2), UL 60950**, UL 508** (** pending)
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