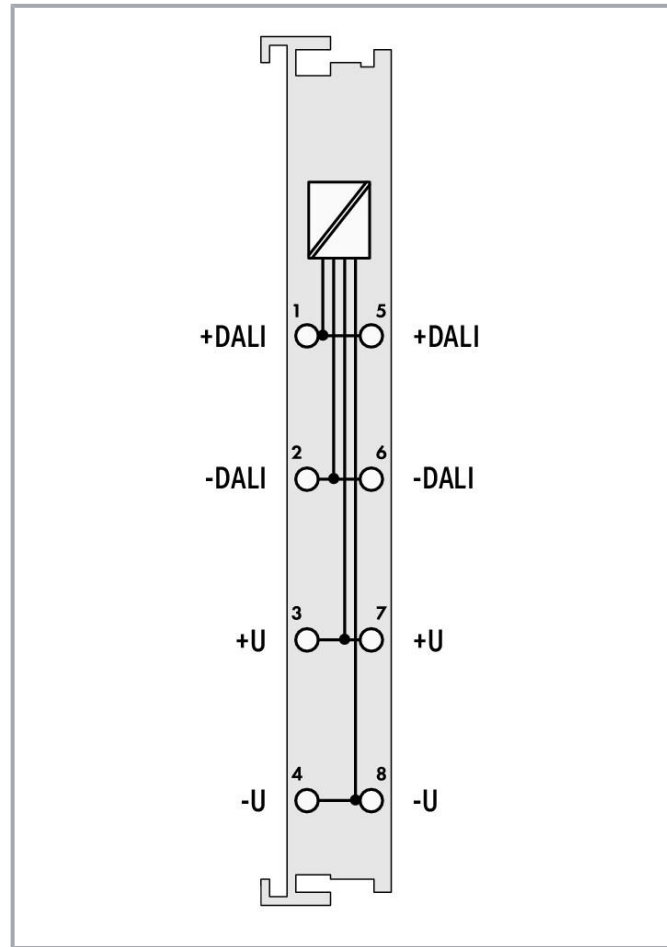
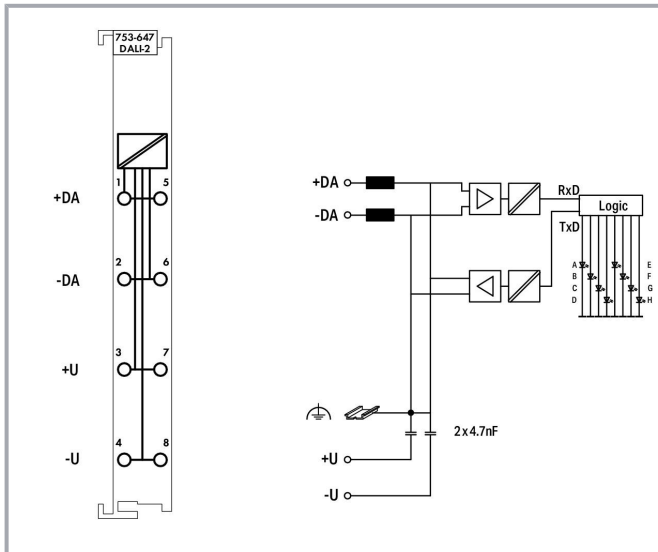


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Item description

The DALI Multi-Master (753-647) is certified according to the IEC 62386 DALI-2 standard. This manufacturer-independent protocol ensures the interoperability of DALI devices in lighting applications.

Just 12 mm wide, this module is used as a DALI interface in combination with WAGO's 750 Series Controllers and Modules (e.g., BACnet, KNX, EnOcean, LON®, Modbus®).

Each DALI Multi-Master supports 64 addresses for electronic control gears (ECGs) and 64 addresses for control devices (DALI multi sensors: Connection of max. 16 sensors recommended due to the cyclic transmission characteristics). Each DALI ECG can be assigned to 16 groups and 16 scenes. The DALI Multi-Master also offers 16 additional virtual groups on the DALI bus. Using the WAGO I/O System 750, DALI controllers can be seamlessly integrated into other building systems. Several DALI masters can connect to a single fieldbus node. The maximum number of modules that may be connected to a controller depends on the memory required by the application. The WAGO-I/O-PRO (CODESYS V2.3) or *e!COCKPIT* (based on CODESYS V3) programming software is used as the programming software for the fieldbus nodes. 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 readily controlled without any complicated PLC programming. The comprehensive and easy-to-use WAGO DALI Configurator is available for commissioning and maintenance – it can either run as a stand-alone application or be called from the WAGO-I/O-CHECK (CODESYS V2.3) or *e!COCKPIT* Software (based on CODESYS V3).

Two options are available to power to the DALI Multi-Master:

1. Via 753-620 DALI Multi-Master DC/DC Converter for powering a single module.
2. Via 787-1007 Power Supply for powering several 753-647 DALI Multi-Master Modules.

Subject to changes. Please also observe the further product documentation!

**Note:**

The 753 Series Plug is included with delivery.

Data**Technical data**

Device specification	DALI-2 Specification: DIN IEC 62386 only in conjunction with 753-620 or 787-1007 Power Supplies
Device-specific	Power consumption from DALI bus with alternative supply via DALI bus: 10 mA
Topology	Number of control gears/control devices (DALI): 64 control gears + 64 control devices (addressable)
Transmission channel	1
Data width	24-byte data
Guaranteed supply current	200 mA
Supply current (max.)	250 mA
Power supply	DALI: 18 V (external)
Commissioning	via WAGO-I/O-CHECK
Supply voltage (system)	5 VDC; via data contacts
Power consumption (5 V system supply)	85 mA
Isolation	2100 VDC DALI bus/local bus

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 inch

Physical data

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

Mechanical data

Mounting type	DIN-35 rail
Wiring interface	Pluggable

Subject to changes. Please also observe the further product documentation!



Material data

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.962 MJ
Weight	61.4 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	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2*, *only in connection with 753-620 DC/DC Converter or 787-1007 Power Supply
EMC emission of interference	per EN 61000-6-3*, *only in connection with 753-620 DC/DC Converter or 787-1007 Power Supply
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 (Remote I/O)
PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4050821475712
Customs tariff number	85389099990


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Approvals / Certificates


Country specific Approvals

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

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1821926
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	LR Lloyds Register	-	02/20026 (E6)
	PRS Polski Rejestr Statków	-	TE/2236 /880590/19
	RINA RINA Germany GmbH	-	ELE066419XG


Other Approvals

Logo	Approval	Additional Approval Text	Certificate name
	DALI2 Digital Illumination Interface Alliance (DiiA)	-	DALI_2_ID2036

UL-Approvals












Certificate

Subject to changes. Please also observe the further product documentation!






Logo	Approval	Additional Approval Text	name
	UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

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
	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

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	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.: 709-198 Marking strips; white	www.wago.com/709-198
	Item no.: 750-103 Group marker carrier	www.wago.com/750-103
	Item no.: 750-107 Group marker carrier	www.wago.com/750-107

Sensors

	Item no.: 2851-8201 WAGO DALI Multi-Sensor Kit	www.wago.com/2851-8201
	Item no.: 2851-8202 DALI sensor coupler	www.wago.com/2851-8202
	Item no.: 2851-8301 DALI MSensor 02 5DPI 41rc (Ceiling Installation)	www.wago.com/2851-8301
	Item no.: 2851-8302 DALI MSensor 02 5DPI 41W (Box installation)	www.wago.com/2851-8302
	Item no.: 2851-8303 DALI MSensor 02 5DPI 41rs (Surface Installation)	www.wago.com/2851-8303

Power supplies

	Item no.: 753-620 DALI Multi-Master DC/DC Converter	www.wago.com/753-620
	Item no.: 787-1007	

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Switched-mode power supply; for DALI module (753-647); 1-phase; 18 VDC output voltage; 1.1 A output current; 2,50 mm²

www.wago.com/787-1007
















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-colored	www.wago.com/210-504
	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







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

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	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
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

DALI Multi-Master Module	V 1.4.4 2021. 4. 29.	pdf 4.0 MB	Download
WAGO DALI Configurator For configuring WAGO 753-647 DALI Multi-Master Modules	V 3.3.2 2021. 8. 5.	pdf 3.9 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

753-647 X81 - Datei	2019. 5. 14.	xml 7.4 kB	Download
753-647 doc - Datei	2019. 5. 14.	doc 37 B	Download

Compatibility Information

Compatibility list DALI Sensors

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Compatibility List DALI Sensors	V 1.2.0 2020. 9. 24.	pdf 511.7 kB	Download
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This application note shows all DALI Sensors which are compatible with CODESYS V2.3 applications, e!Cockpit applications, the WAGO Lighting Management software, the WAGO flexROOM®software and the WAGO DALI Configurator.

System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf 1.0 MB	Download
750/753 Series I/O-System – General Product Information		pdf 1.7 MB	Download

Additional Information

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

Application Note CoDeSys 2.3

Application Note ThebenKNX_DALI Connecting the Theben thePrema P360 KNX Presence Detector to the WAGO I/O-System	25.08.2016 2016. 8. 25.	zip 745.2 kB	Download
Application note: DALI 753-647 Configuration Interface This application note describes the WAGO DALI Configurator, the integration of the DALI visualization for configuring various sensor types and the implementation in a program.	V1.0.2 2019. 4. 29.	zip 3.1 MB	Download
Application Note e!COCKPIT e!COCKPIT application note WagoAppDALI This application note describes the WAGO DALI Configurator, the integration of the DALI visualization for configuring ECG's and the implementation in an e!COCKPIT application.	2019-09-09 2019. 9. 9.	zip 2.6 MB	Download

Libraries

e!COCKPIT libraries

e!COCKPIT Library Description WagoAppDALI

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1.3.0.33 2021. 5. 25.	pdf 2.1 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 DALI Configurator Setup Small Version (753-647) The small setup includes only the DALI Configurator. This installation is recommended for updates or when the software packages contained in the full setup are already installed.	3.76.00.00 2021. 5. 31.	zip 6.3 MB	Download
WAGO DALI Configurator Setup Full Version (753-647) The full setup, in addition to the DALI Configurator, includes the installation for the .NET Framework 4.0 and Microsoft Visual C++ 2010 Redistributable Package (x86). This installation is recommended if the DALI Configurator is being installed for the first time.	3.76.00.00 2021. 5. 31.	zip 69.5 MB	Download

CAD/CAE-Data

CAE data

EPLAN Data Portal 753-647	URL	Download
ZUKEN Portal 753-647	URL	Download
WSCAD Universe 753-647	URL	Download

CAD data

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2D/3D Models 753-647

URL

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 753-647

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DALI Multi-Master

Installation Notes

Product family

750/753 Series I/O System

[Show all products from the family](#)

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