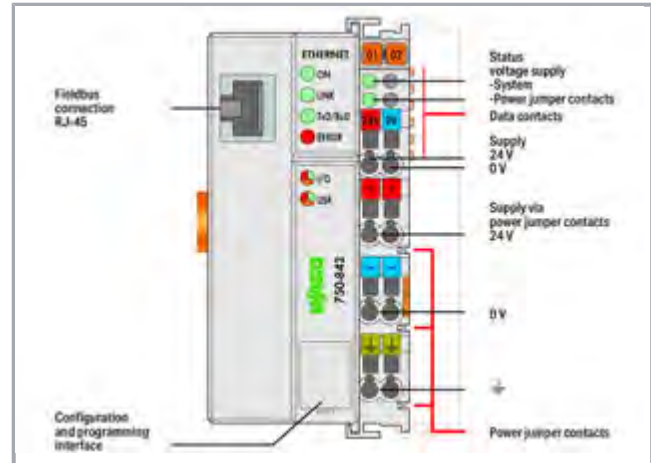
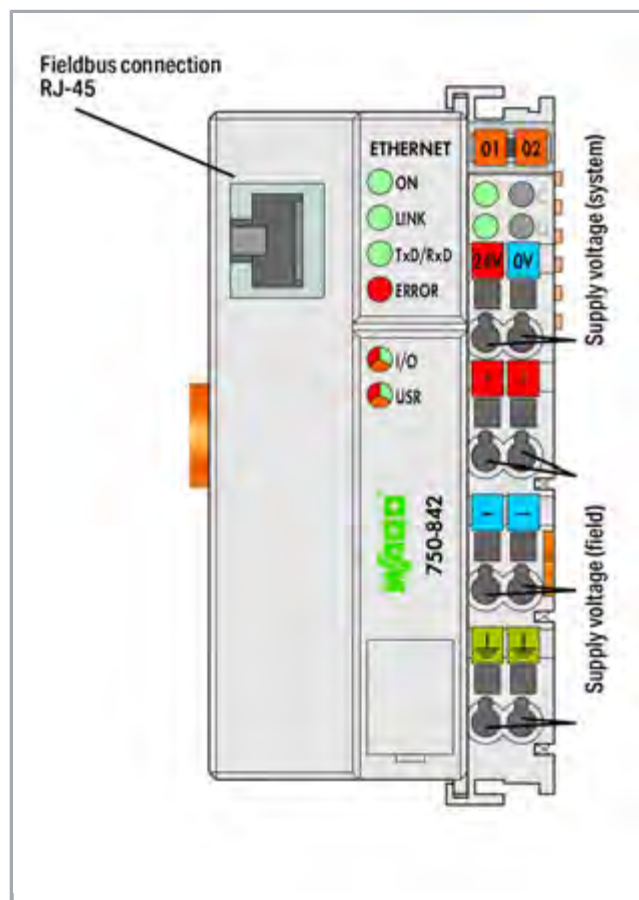
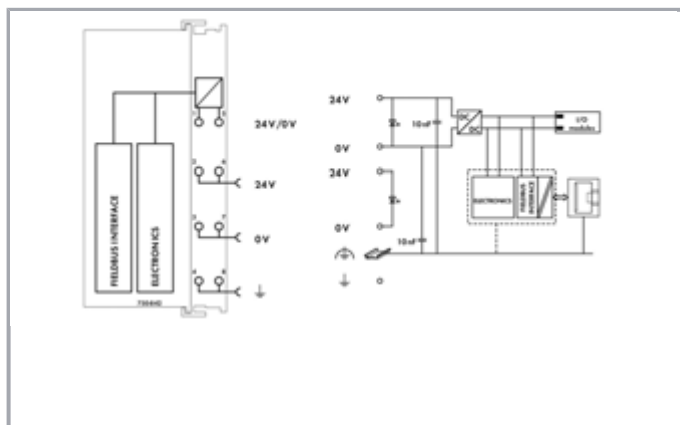




Subject to changes. Please also observe the further product documentation!



Item description

The ETHERNET Controller combines control functionality, I/O interface and ETHERNET in one device.

Application programming is IEC 61131-3 compliant.

Function blocks allow both clients and servers to be programmed via socket APIs for all transport protocols (e.g., TCP, UDP).

Features and applications:

- Decentralized control to optimize support for a PLC or PC
- Devide complex applications into individually testable units
- Programmable fault response in the event of fieldbus failure
- Signal pre-processing to reduce fieldbus transmissions
- Directly control peripheral equipment for faster system response times
- Stand-alone, compact controller

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



Data

Technical Data

Communication	Modbus (TCP, UDP) Ethernet
ETHERNET protocols	HTTP BootP
Visualization	without
CPU	16 bits
Programming languages per IEC 61131-3	Instruction List (IL) Ladder Diagram (LD) Function Block Diagram (FBD), Continuous Function Chart (CFC) Structured Text (ST) Sequential Function Chart (SFC)
Programming environment	WAGO-I/O-PRO V2.3 (based on CODESYS V2.3)
Configuration options	WAGO-I/O-CHECK
Cycle time	< 3 ms for 1000 bit instructions/ 256 digital I/O
Baud rate	-
Bus segment length (max.)	100 m
Transmission medium (communication/fieldbus)	Twisted Pair S-UTP; 100 Ω; Cat. 5
Program memory	128 kByte
Data memory	64 kByte
Non-volatile software memory	8 Kbytes
Memory for fieldbus input variables (max.)	512 Byte
Memory for fieldbus output variables (max.)	512 Byte
Number of modules per node (max.)	64
Input and output (fieldbus) process image (max.)	512 Byte/512 Byte
Indicators	LED (ON, LINK, TxD/RxD) green: Fieldbus initialization, network connection, data exchange; LED (ERROR) red: Fieldbus error; LED (I/O, USR) red/green/orange: Local data bus status, status programmable by user; LED (A, B) green: System power supply status, field supply
Supply voltage (system)	DC 24 V(-25 ... +30 %); via pluggable connector (CAGE CLAMP® connection)
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	87 %
Power consumption (5 V system supply)	200 mA
Total current (system supply)	1,800 mA
Supply voltage (actuator)	,

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



Supply voltage (field)	DC 24 V (-25 ... +30 %); via power jumper contacts
Current carrying capacity (power jumper contacts)	10 A
Number of outgoing power jumper contacts	3
Isolation	500 V system/field

Connection data

Connection technology: communication/fieldbus	Modbus TCP/UDP: 1 x RJ-45
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	6 x CAGE CLAMP®
Connection type (1)	System/field supply
Solid conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Connection technology: Device configuration	1 x Male connector; 4-pole

Geometrical Data

Width	50.5 mm / 1.988 inch
Height	100 mm / 3.937 inch
Depth	71.1 mm / 2.799 inch
Depth from upper edge of DIN-rail	63.9 mm / 2.516 inch

Mechanical data

Weight	179 g
Color	light gray
Housing material	Polycarbonate, polyamide 6.6
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	without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); 5000 m (max.)
Relative humidity (without condensation)	95 %
Mounting position	any

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



Mounting type	DIN-35 rail
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, marine applications
EMC emission of interference	per EN 61000-6-4, marine applications
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)
Packaging type	BOX
Country of origin	DE
GTIN	4045454527198
Customs tariff number	85371091990

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)	UL 121201	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-

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



Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1821926
	BV Bureau Veritas S.A.	-	13453/DO BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	KR Korean Register of Shipping	-	KR HMB05880- AC001
	LR Lloyds Register	-	02/20026 (E6)
	NK Nippon Kaiji Kyokai	-	TA17255M
	PRS Polski Rejestr Statków	-	TE/2236 /880590/19
	RINA RINA Germany GmbH	-	ELE066419XG

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

Compatible products

shield connection

	Item no.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm
	Item no.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm
	Item no.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm
	Item no.: 790-140 Shield clamping saddle; diameter of compatible conductor
	Item no.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm
	Item no.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm
	Item no.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm

system box

	Item no.: 850-804 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip
	Item no.: 850-804/000-001 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip
	Item no.: 850-805 IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip

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

**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

**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.: 850-826/002-000**

IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

**Item no.: 850-827**

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

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

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



Item no.: 210-113

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715



Item no.: 210-114

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715



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



Item no.: 210-118

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715



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.: 210-197

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



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.: 210-504

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715



Item no.: 210-505

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715



Item no.: 210-506

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715



Item no.: 210-508

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

software



Item no.: 759-333

WAGO-I/O-PRO



Item no.: 759-333/000-923

WAGO-I/O-PRO; USB-Set



Item no.: 759-911

WAGO-I/O-PRO; CD

wiring and connectors



Item no.: 750-975

ETHERNET RJ-45 connector, IP20; ETHERNET 10/100 Mbit/s; for field assembly; light gray



Item no.: 750-977/000-011

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22

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



Item no.: 750-977/000-012
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22



Item no.: 750-977/000-021
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24



Item no.: 750-977/000-022
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24



Item no.: 750-978/000-011
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief



Item no.: 750-978/000-012
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 22; Strain relief



Item no.: 750-978/000-021
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 24; Strain relief



Item no.: 750-978/000-022
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568B; AWG 24; Strain relief



Item no.: 750-979/000-011
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 22; Strain relief



Item no.: 750-979/000-012
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 22; Strain relief



Item no.: 750-979/000-021
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568A; AWG 24; Strain relief



Item no.: 750-979/000-022
Connector ETHERNET; RJ-45; Cat. 6A; angled; Code T568B; AWG 24; Strain relief

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



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

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

**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.: 2009-145/000-006**

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.: 2009-145/000-012**

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

**Item no.: 2009-145/000-023**

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

**Item no.: 2009-145/000-024**

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

**Item no.: 248-501**

Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card

**Item no.: 248-501/000-002**

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

**Item no.: 248-501/000-005**

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

**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.: 248-501/000-012**

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

**Item no.: 248-501/000-017**

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

**Item no.: 248-501/000-023**

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

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



Item no.: 248-501/000-024

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



Item no.: 750-100

Marker card; as a DIN A4 sheet; plain; white



Item no.: 750-103

Group marker carrier; transparent



Item no.: 750-106

Group marker carrier; transparent

General accessories



Item no.: 750-921

Bluetooth® Adapter; light gray



Item no.: 750-923

Configuration cable; USB connector; Length: 2.5 m; black



Item no.: 750-923/000-001

Configuration cable; USB connector; Length: 5 m

Downloads

Documentation

Manual

ETHERNET TCP/IP Programmable Fieldbus Controller

10 Mbit/s; digital and analog signals

Quick-Start Guide

Quick Start ETHERNET Fieldbus Controller 750-842

Bid Text

750-842

GAEB X81 - Datei

750-842

doc - Datei

Additional Information

Disposal; Electrical and electronic equipment, Packaging

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

System Description

750 Controller, General Product Information

Use in Hazardous Environments

Term definition, marking and installation regulations

Overview on WAGO-I/O-SYSTEM 750 approvals

Design Notes

Basic conditions and recommendations for higher operational safety

Application Notes

Application Note CoDeSys 2.3

HART-Module 750-482 on the ETHERNET-Controller (a116100)

This application note describes the connection of any HART sensor to the WAGO ETHERNET Controller 750-841 using the TH102 from ABB, for example. The connection is made via the HART Module 750-482 and "WagoLibHART_03.lib" CODESYS library. Section 3 describes the creation of a PLC program that reads and processes data from the HART sensor cyclically. Section 4 describes the execution of device-specific HART commands, e.g., Promag23 from Endress&Hauser. Section 5 describes the parameterization of the HART sensor from the FDT/DTM frame application "WAGOframe".

Modbus Configuring & Networking The 750-812, -814, -815, -816 & -842 Modbus TCP (a202101)

The purpose of this document is to provide a step-by-step procedure for Configuring & Networking the WAGO 750-812, -814, -815, -816 & -842 Modbus TCP 750-837 PFC. This document is to be used with the example node from the document Get Started Quick. The following equipment and software were used to Configuring and Network the Modbus network.

Application note, other

Anbindung an MCPS Datenerfassungs Software (a116400)

MCPS (Multi Channel Process System) ist eine PC-basierte Datenerfassungssoftware, die auf den Betriebssystemen Windows2000, XP, Vista oder höher läuft. Alle Meß- und Auswerteaufgaben werden allein durch Konfiguration der Software vorgenommen. MCPS ist KEINE grafische Programmieroberfläche und kann somit leicht von jedem Anwender bedient werden.

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

Libraries

Library

Condition monitoring with 750-645

The WagoLib_VIO.lib library provides a function block which allows to configure the module 750-645.

Modbusmaster for Ethernet

The ModbusEthernet_04.lib library provides the user with the two function modules, ETHERNET_MODBUSMASTER_UDP and ETHERNET_MODBUSMASTER_TCP. With these modules, a data exchange can be set up with several Modbus TCP / UDP slaves. The ETHERNET_MODBUSMASTER_UDP module should be used in preference, as this enables faster data transfer. The ETHERNET_TERMINAL_MODBUSSLAVE module is also included in the library. This module provides a Modbus server, which maps the Modbus services to a word array.

Control DC motor with 750-636

The "MC1_DC_Control.lib" library provides a function block which allows to configure the module 750-636 as well as to operate a DC motor.

Sending E-Mails based on "Ethernet.lib"

Sending E-Mails with an 750-842 based on the "Ethernet.lib".

Connecting HART-Modules 750-482 and 750-484

The library "WagoLibHART_03.lib" offers a set of function blocks to execute HART-commands (Revision 5) in a PLC program. The principal item of this library is program HART_INFO, it identifies connected HART modules like 750-482 and coordinates the Kbus access. In addition you find with HART_FDT program that act as counterpart to WAGO-ModbusTCP-HART-DTM, who enable configuration of HART devices with every FDT-Frameapplication like "WAGOframe".

Engineering-Software

Configuration and Commissioning Software

WAGO BootPServer / Serie 750 und 767

WAGO-IO-PRO Demo-Version (759-912) / Serie 750, 758 und 762

(759-316) WAGO Ethernet Settings / Serie 750

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



WAGO Extension Setting / Serie 750

Runtime Software

Firmware

Firmware: 750-842 Controller ETHERNET; 1st Generation; light gray

CAD/CAE-Data

CAD data

2D/3D Models 750-842

CAE data

EPLAN Data Portal 750-842

WSCAD Universe 750-842

ZUKEN Portal 750-842

Device Files

Device Description File

MIB-Datei für Ethernet-Controller / Serie 750

Device Driver

WAGO USB Service Kabel Treiber / Serie 750 und 857

Product family

Controller 750

[Learn more about the product family.](#)

[Show all products from the family](#)

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