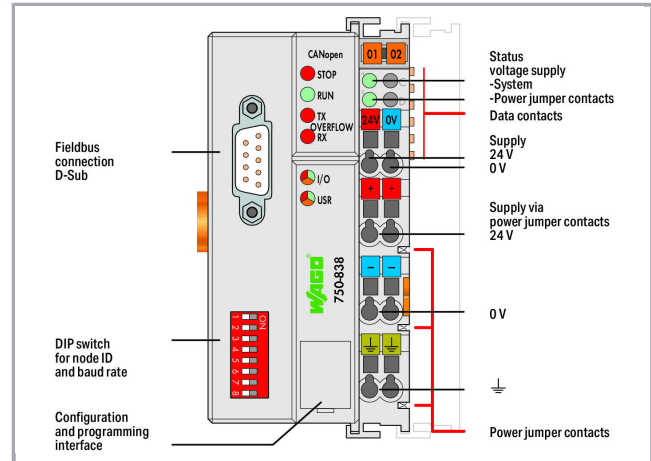


Data sheet | Item number: 750-838

Controller CANopen; 128/64 KB Program/RAM; D-Sub; light gray

www.wago.com/750-838



RoHS
Compliant

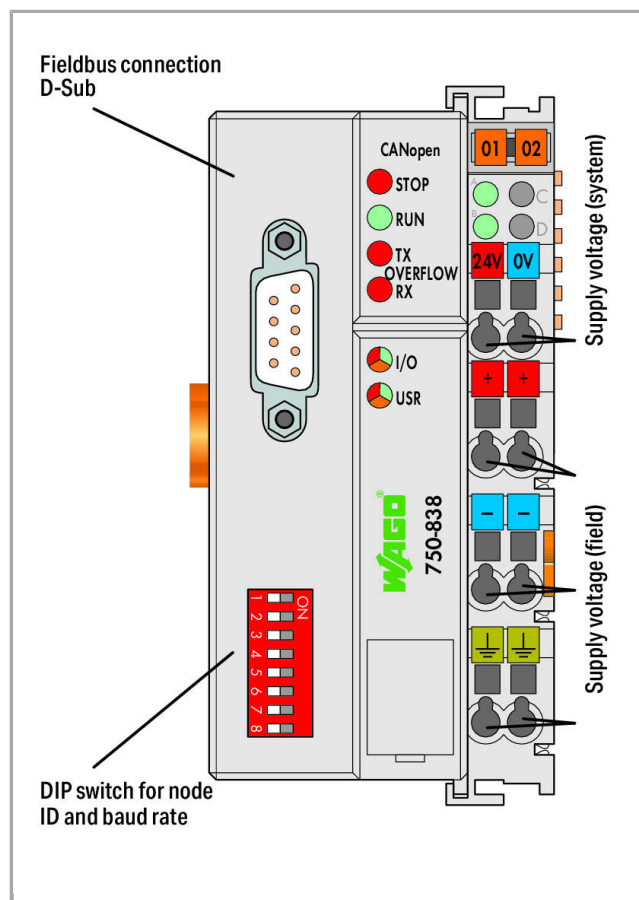
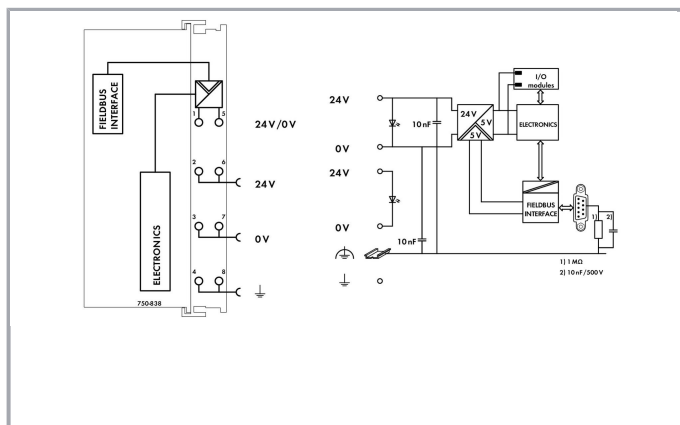
BOMcheck.net

Color:

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

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Item description

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

Application programming is IEC 61131-3 compliant.

The programmer can access all fieldbus and I/O data.

Features and applications:

- Decentralized control to optimize support for a PLC or PC
- Divide complex applications into individually testable units
- Programmable fault response in the event of fieldbus failure
- Signal pre-processing reduces 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!

**Note:****Note: Configuration files required (EDS)!**

The EDS files can be downloaded for free at www.wago.com.

Data**Technical Data**

Communication	CANopen
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	EDS device description file WAGO-I/O-CHECK
Cycle time	< 3 ms for 1000 bit instructions/ 256 digital I/O
Baud rate	10 kBd ... 1 MBd
Bus segment length (max.)	1000 m
Transmission medium (communication/fieldbus)	Shielded Cu cable 3 x 0.25 mm ²
Number of fieldbus nodes on master (max.)	110
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
Number of PDOs	32 Tx / 32 Rx
Number of SDOs	2 SDO servers / 16 SDO clients
Input and output (fieldbus) process image (max.)	512 Byte/512 Byte
Other CANopen features	NMT slave Minimum boot-up Variable PDO mapping Emergency message Life guarding/heartbeat Empty module configuration

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COB ID distribution	SDO, standard
Node ID distribution	DIP switch
Supported profiles	Communication profile: DS-301 V4.01; device profile: DS-401 V2.0; limit monitoring, flank-triggered PDOs, configurable response in the event of an error, DSP 405, NMT master programmable using function blocks
Indicators	LED (STOP) red: Device/node Stop; LED (RUN) green: Initialization; LED (TX, RX OVERFLOW) red: CAN send/receive buffer overflow; LED (I/O, USR) red/green/orange: Local 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)	350 mA
Total current (system supply)	1,650 mA
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	CANopen: 1 x D-sub 9 plug
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	71,1 mm / 2.799 inch
Height from upper-edge of DIN-rail	63,9 mm / 2.516 inch
Depth	100 mm / 3.937 inch

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Mechanical data

Weight	184.2 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
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
Fire load	2.877 MJ
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	4045454527136
Customs tariff number	85371091990

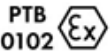
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Approvals / Certificates

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- PFC750

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1821926
	BV Bureau Veritas S.A.	-	30389/B0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA0000194
	LR	-	02/20026 (E6)

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Polski Rejestr Statków

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/880590/19



RINA
RINA Germany GmbH

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ELE066419XG

UL-Approvals

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

Counterpart

Compatible products

system box

**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

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**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**

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

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

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

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

**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.: 750-100**

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

www.wago.com/750-100**Item no.: 750-103**

Group marker carrier; transparent

www.wago.com/750-103**Item no.: 750-106**

Group marker carrier; transparent

www.wago.com/750-106**shield connection****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**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**wiring and connectors****Item no.: 750-963**

Fieldbus Connector CANopen; with D-sub female connector; 9-pole; light gray

www.wago.com/750-963**Carrier rail****Item no.: 210-112**

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Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm" 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

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

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"

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

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

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

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

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

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

www.wago.com/210-508

General accessories**Item no.: 750-921**

Bluetooth® Adapter; light gray

www.wago.com/750-921

**Item no.: 750-923**

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

www.wago.com/750-923

**Item no.: 750-923/000-001**

Configuration cable; USB connector; Length: 5 m

www.wago.com/750-923/000-001

software**Item no.: 759-333**

WAGO-I/O-PRO

www.wago.com/759-333

**Item no.: 759-333/000-923**

WAGO-I/O-PRO; USB-Set

www.wago.com/759-333/000-923

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Item no.: 759-911
WAGO-I/O-PRO; CD

www.wago.com/759-911

Downloads

Documentation

Manual

Programmable Fieldbus Controller CANopen, D-SUB 16-bit CPU	V 2.1.0	pdf 7.9 MB	Download
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Bid Text

750-838 GAEB X81 - Datei	Feb 19, 2019	xml 7.1 kB	Download
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750-838 doc - Datei	Jul 13, 2015	doc 30.7 kB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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System Description

Overview on WAGO-I/O-SYSTEM 750 approvals		pdf 780.2 kB	Download
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750 Controller, General Product Information		pdf 621.9 kB	Download
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Use in Hazardous Environments Term definition, marking and installation regulations	V 1.0.0	pdf 1.0 MB	Download
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Design Notes Basic conditions and recommendations for higher operational safety	V 2.0.0	pdf 1.5 MB	Download
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Engineering-Software

Configuration and Commissioning Software

WAGO Extension Setting / Serie 750	2.0.2 Mar 9, 2011	zip 5.4 MB	Download
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WAGO-IO-PRO Demo-Version (759-912) / Serie 750, 758 und 762

2.3.9.55
Jul 3, 2015zip
108.3 MB

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Runtime Software

Firmware

Firmware: 750-838 Controller CANopen; 128/64 KB Program/RAM; D-Sub; light gray

17
Feb 26, 2018zip
739.9 kB

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CAD/CAE-Data

CAD data

2D/3D Models 750-838

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CAE data

EPLAN Data Portal 750-838

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WSCAD Universe 750-838

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Device Files

Device Description File

750-914; EDS file for CANopen / 750, 752 and 767 Series

XR
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1.7 MB

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Device Driver

750-914; EDS file for CANopen / 750, 752 and 767 Series

XR
Dec 20, 2019zip
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WAGO USB Service Kabel Treiber / Serie 750 und 857

6.5.3.0
Sep 10, 2014zip
4.8 MB

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Installation Notes

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Product family

Controller 750

[Show all products from the family](#)

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