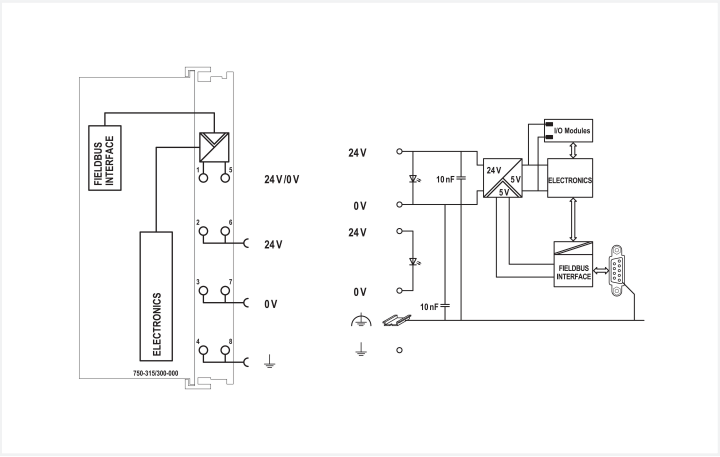
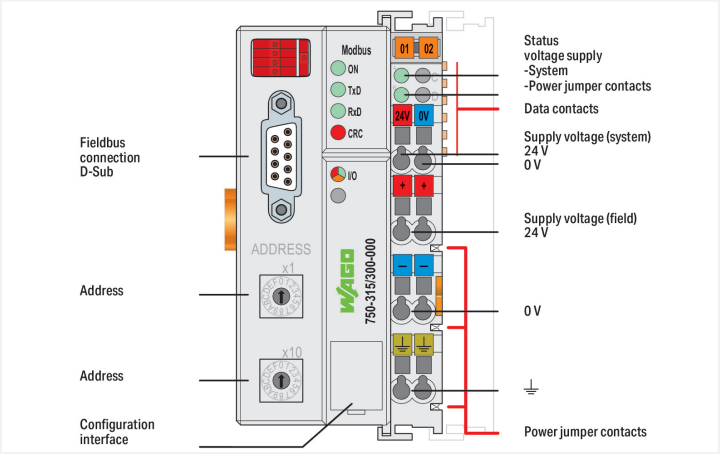
# Data Sheet | Item Number: 750-315/300-000

Fieldbus Coupler MODBUS; RS-485; 115,2 kBd

https://www.wago.com/750-315/300-000






This fieldbus coupler connects the WAGO I/O System as a slave to the MODBUS fieldbus.

The fieldbus coupler detects all connected I/O modules and creates a local process image. Analog and specialty module data is sent via words and/or bytes, digital data is sent bit by bit.

The data of the analog modules is stored in the process image that is created automatically according to the order in which the modules are connected to the coupler. The bits of the digital modules are sent byte by byte and added to the analog data. If the amount of digital I/O information exceeds eight bits, the coupler automatically starts with a new byte.

## Technical data

| | |
|---|---|
| Communications | Modbus RTU |
| Number of fieldbus nodes on master (max.) | 247 |
| Number of I/O points | 6000 |
| Transmission rate | 150 Bd ... 115.2 kBd |
| Bus segment length (max.) | 1200 m |
| Transmission medium (communication/fieldbus) | Shielded Cu cable 2 (4) x 0.25 mm² |
| Number of modules per node (max.) | 64 |
| Number of modules without a bus extension (max.) | 64 |
| Input and output process image (fieldbus) max. | 512 bytes/512 bytes |
| Supply voltage (system) | 24 VDC, SELV/PELV (-25 ... +30 %); via wiring interface (CAGE CLAMP® connection); External fuse required: 2 A slow-blow |
| Current consumption (system supply) | 350 mA |
| Total current (system supply) | 1650 mA |

## Technical data

| | |
|---|---|
| Supply voltage (field) | 24 VDC, SELV/PELV (-25 … +30 %); via power jumper contacts (supply via CAGE CLAMP® connection; distribution via spring contact); External fuse required: 10 A slow-blow |
| Input current (typ.) at nominal load (24 V) | 500 mA |
| Power supply efficiency (typ.) at nominal load (24 V) | 87 % |
| Number of outgoing power jumper contacts | 3 |
| Current carrying capacity (power jumper contacts) | 10 A |

## Safety and protection

| | |
|---|---|
| Protection type | IP20 |
| Pollution degree | 2 per IEC 61131-2 |
| Isolation | 500 V system/field |

## Connection Data

| | |
|---|---|
| Connection technology: communication/fieldbus | Modbus RTU: 1 x D-sub 9 socket |
| Connection technology: field supply | 6 x CAGE CLAMP® |
| Connection technology: system supply | 2 x CAGE CLAMP® |
| Connectable conductor materials | Copper |
| Connection type | 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 inches |
| Connection technology: device configuration | 1 x Male connector; 4-pole |

## Physical data

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

## Mechanical data

| | |
|---|---|
| Mounting type | DIN-35 rail |

## Material data

| | |
|---|---|
| Housing material | Polycarbonate; polyamide 6.6 |
| Fire load | 2.433 MJ |
| Weight | 183.2 g |
| Conformity marking | CE |

## Environmental requirements

| | |
|---|---|
| Ambient temperature (operation) | 0 … +55 °C |
| Ambient temperature (storage) | -25 … +85 °C |
| 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 | 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 61000-6-3, marine applications |
| Exposure to pollutants | per IEC 60068-2-42 and IEC 60068-2-43 |
| Permissible $H_2S$ contaminant concentration at a relative humidity 75 % | 10 ppm |


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## Environmental requirements

| | |
|---|---|
| Permissible $SO_2$ contaminant concentration at a relative humidity 75 % | 25 ppm |

## Data Act

| | |
|---|---|
| Pre-contractual Information | <a href="https://www.wago.com/global/d/Data-Act-750-Series-Coupler">Data-Act-750-Series-Coupler</a> |

## Commercial data

| | |
|---|---|
| Product Group | 15 (I/O System) |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4055143070935 |
| Customs tariff number | 85176200000 |

## Product Classification

| | |
|---|---|
| UNSPSC | 32151705 |
| eCl@ss 10.0 | 27-24-26-07 |
| eCl@ss 9.0 | 27-24-26-07 |
| ETIM 9.0 | EC001603 |
| ETIM 10.0 | EC001603 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

| | |
|---|---|
| CAS-No. | 12060-00-3<br>1303-86-2<br>1317-36-8<br>25550-51-0<br>7439-92-1<br>79-94-7 |
| REACH Candidate List Substance | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol<br>4-Methyl-1,2-cyclohexanedicarboxylic anhydride<br>Diboron trioxide<br>Lead<br>Lead monoxide<br>Lead titanium oxide (PbTiO3) |
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 6(c)<br>7(a)<br>7(c)-I<br>7(c)-II<br>7c |
| SCIP notification number (Austria) | aa58200c-d5cc-48f2-bf7c-c337992044e3 |
| SCIP notification number (Belgium) | 1990f16a-bb15-46eb-8191-864497870e53 |
| SCIP notification number (Bulgaria) | a5f12962-0703-46fc-a04c-16cf5c2c6753 |
| SCIP notification number (Czech Republic) | d086b429-eff9-41a2-b1a8-1f43dcc1488e |
| SCIP notification number (Denmark) | 7d73afce-9d38-4c1f-9402-1ea263c498a1 |
| SCIP notification number (Finland) | 773d2e03-a923-49d3-bf56-807cfd3d0a5b |
| SCIP notification number (France) | 4662d107-caaf-4e7f-8c28-ded6dd3fc6ff |
| SCIP notification number (Germany) | 0d70229b-3ba4-48d8-879e-d2b9301c82b1 |
| SCIP notification number (Hungary) | 0968f1c8-615a-472a-b1e0-b288fb25333d |
| SCIP notification number (Italy) | 3db637af-4493-4a93-b11c-d4f1c824b2f9 |
| SCIP notification number (Netherlands) | b33f23d2-4498-47e4-9404-d74c4dc02d76 |
| SCIP notification number (Poland) | f15ed0fb-ef7b-4438-913a-2985873956c1 |
| SCIP notification number (Romania) | 4fce291e-da45-47f2-9b71-84312048b22a |
| SCIP notification number (Sweden) | 9f6fb058-6fd5-4922-ad8c-043cef1e4174 |


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## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| EAC<br>GZO Almaty Standart | TP TC 020/2011 | EAC CoC 03083 |
| KC<br>National Radio Research Agency | Article 58-2, Clause 3 | MSIP-REM-W43-FBC750 |
| UL<br>Underwriters Laboratories Inc. (ORDINARY LOCATIONS) | UL 508 | E175199 |

### Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|---|---|
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG | - | - |

### Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| ABS<br>American Bureau of Shipping | - | 25-0415412 |
| BSH<br>Bundesamt fuer Seeschiffahrt und Hydrographie | - | 1104 |
| BV<br>Bureau Veritas S.A. | - | 13453/E0 BV |
| DNV<br>DNV GL SE | DNV-CG-0339,Aug.2021 | TAA0000194 |
| KR<br>Korean Register of Shipping | - | KR HMB05880-AC001 |
| LR<br>Lloyds Register EMEA | - | LR22180952TA |
| PRS<br>Polski Rejestr Statków | - | TE/1101/880590/23 |
| RINA<br>RINA Germany GmbH | - | ELE343521XG001 |

### Approvals for hazardous areas

| Approval | Standard | Certificate Name |
|---|---|---|
| ATEX<br>TUEV Nord Cert GmbH | EN 60079-0 | TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc) |
| CCCEx<br>CQST/CNEx | CNCA-C23-01 | 2020312310000213 (Ex ec IIC T4 Gc) |
| IECEx<br>TUEV Nord Cert GmbH | IEC 60079-0 | IECEx TUN 14.0035 X (Ex ec IIC T4 Gc) |
| INMETRO<br>TÜV Rheinland do Brasil Ltda. | IEC 60079-0 | TÜV 12.1297 X |
| UKEx<br>WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WAGO22UKEX003X_ec |
| UL<br>Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance
750-315/300-000

 Continued on next page

## Documentation

### Manual

| | | | |
|---|---|---|---|
| System Manual Series 750/753 | | | |
| Product Manual MODBUS Fieldbus Coupler RTU | V 1.0.1 10.04.2022 | pdf 4856.44 KB | |

### System Description

| | | | |
|---|---|---|---|
| 750/753 Series I/O-System – General Product Information | | pdf 953.35 KB | |
| Overview on WAGO-I/O-SYSTEM 750 approvals | | pdf 770.48 KB | |

### Bid Text

| | | | |
|---|---|---|---|
| 750-315/300-000 | 19.02.2019 | xml 5.63 KB | |
| 750-315/300-000 | 21.07.2017 | doc 28.00 KB | |
| ausschreiben.de 750-315/300-000 | | | |

### Instruction Leaflet

| | | | |
|---|---|---|---|
| CCC Ex (Additional information) | 26.04.2023 | pdf 159.76 KB | |

## CAD/CAE-Data

### CAD data

2D/3D Models 750-315/300-000

### CAE data

EPLAN Data Portal 750-315/300-000

WSCAD Universe 750-315/300-000

ZUKEN Portal 750-315/300-000

## Runtime Software

### Firmware

| | | | |
|---|---|---|---|
| 0750-0315/0300-0000, Feldbuskoppler MODBUS; RS-485 | V 02 17.02.2022 | zip 572.99 KB | |

## 1 Compatible Products

### 1.1 Optional Accessories

#### 1.1.1 Communication

##### 1.1.1.1 Communication cable



Item No.: 750-923
Configuration cable; USB connector; Length: 2.5 m



Item No.: 750-923/000-001
Configuration cable; USB connector; Length: 5 m

 Continued on next page

## 1.1.2 DIN-rail

### 1.1.2.1 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

## 1.1.3 Marking

### 1.1.3.1 Group marker carrier



Item No.: 750-106
Group marker carrier

### 1.1.3.2 Marker



Item No.: 750-100
Marker card; as a DIN A4 sheet; plain



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


Continued on next page

### 1.1.3.3 Marker carrier



Item No.: 750-103
Group marker carrier

## 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 System enclosure

### 1.1.5.1 System enclosure



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.: 850-827
IP65 enclosure; Aluminium (RAL 7032); 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.: 850-826/002-000
IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



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



Item No.: 850-828/002-000
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



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