



The 750-642 Module receives radio telegrams from maintenance-free, self-powered and wireless switches/sensors based on EnOcean radio technology.

This module can be operated with any controller within the WAGO I/O System 750. Preprogrammed function blocks make integration easy.

The energy required for switch or sensor operation is produced by converting one type of energy (heat, solar or mechanical energy) into usable electrical energy. The radiated energy from the transmitter modules is approximately one million times smaller than mobile phones. Almost any number of sensors is possible. However, the maximum number is around 100 transmitters per module due to the increasing density of switches/sensors. Four billion code numbers provide for clear transmitter/receiver assignment. Repeated, time-shifted transmission of the radio telegrams, at very short transmission times, results in a high level of protection against external interference.

The maximum transmission range is 300 meters in open field. Depending on building materials and spatial geometry, the range may be reduced to typically 30 meters (see manual for more information). To assess the transmission path, the LED (RSSI) indicates a sufficient input level.

*Documentation available in German and English.

An SMA socket is used to connect an external antenna to the housing. The external magnetic-mount antenna (758-910) features a 2.5 m long coaxial cable and SMA plug (available as an accessory).

Notes

Note

The maximum range in the field decreases with use in buildings and changes depending on the building materials used and the spatial geometry. Therefore, range specifications within buildings can only represent a typical value that can normally be achieved. More detailed information is available in the manual.

Technical data

| | |
|---|--|
| Radio technology | EnOcean |
| Frequency band | 868.3 MHz |
| Transmission range | up to 300 m in open space (typ. in buildings, see manual) |
| Data width | 1 x 24-bit input/output (3-byte user data); 1 x 8-bit control/status |
| Supply voltage (system) | 5 VDC; via data contacts |
| Current consumption (5 V system supply) | 80 mA |
| Isolation | 500 V antenna connection/system |

Connection data

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|--------------------------------|----------------|
| Connection technology: antenna | 1 x SMA socket |
|--------------------------------|----------------|

Physical data

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|-----------------------------------|------------------------|
| Width | 24 mm / 0.945 inches |
| Height | 100 mm / 3.937 inches |
| Depth | 72 mm / 2.835 inches |
| Depth from upper-edge of DIN-rail | 64.8 mm / 2.551 inches |

Mechanical data

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

Material data

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|-------------------------|------------------------------|
| Housing material | Polycarbonate; polyamide 6.6 |
| Fire load | 2.555 MJ |
| Weight | 86.5 g |
| Conformity marking | CE |
| Conformity marking RTTE | www.wago.com |

Environmental requirements

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|--|---------------------------------------|
| Ambient temperature (operation) | 0 ... +55 °C |
| Ambient temperature (storage) | -40 ... +85 °C |
| Protection type | IP20 |
| Pollution degree | 2 per IEC 61131-2 |
| Operating altitude | 0 ... 2000 m / 0 ... 6562 ft |
| 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 |
| EMC emission of interference | per EN 61000-6-3 |
| 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 (I/O System) |
| eCl@ss 10.0 | 27-24-26-08 |
| eCl@ss 9.0 | 27-24-26-08 |
| ETIM 8.0 | EC001604 |
| ETIM 7.0 | EC001604 |
| PU (SPU) | 1 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4045454509583 |
| Customs tariff number | 85389099990 |

Environmental Product Compliance

| | |
|---|---|
| CAS-No. | 11120-22-2 12060-00-3 1303-86-2 1317-36-8 25550-51-0 7439-92-1 |
| REACH Candidate List Substance | 4-Methyl-1,2-cyclohexanedicarboxylic anhydride Diboron trioxide Lead Lead monoxide Lead silicate Lead titanium oxide (PbTiO ₃) |
| RoHS Compliance Status | Compliant,With Exemption |
| RoHS Exemption | 6(c) 7(a) 7(c)-I 7(c)-II |
| SCIP notification number (Bulgaria) | b8b2a4c8-1786-45af-bec7-3e0abaace09e |
| SCIP notification number (Czech Republic) | c27f9015-9eb1-4885-811b-0b04255be854 |

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---|------------------------|---------------------------------|
| EAC Brjansker Zertifizierungs- stelle | TP TC 020/2011 | EAC RU C-DE.AM02. B.00087/19 |
| KC National Radio Research Agency | Article 58-2, Clause 3 | MSIP-REM-W43-RFM750 |
| UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS) | UL 508 | E175199 Sec.1 |

Declarations of conformity and manufacturer's declarations

| Approval | Standard | Certificate Name |
|---|----------|------------------|
| EU-Declaration of Confor- mity WAGO GmbH & Co. KG | - | - |
| UK-Declaration of Confor- mity WAGO GmbH & Co. KG | - | - |

Approvals for hazardous areas



| Approval | Standard | Certificate Name |
|--|----------------|---|
| ATEX TUEV Nord Cert GmbH | EN 60079-0 | TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc) |
| CCCEX CQST/CNEC | CNCA-C23-01 | 2020312310000213 (Ex ec IIC T4 Gc) |
| EAC Brjansker Zertifizierungsstelle | TP TC 012/2011 | EAC RU C-DE.AM02. B.00163/19 (2Ex nA IIC T4 Gc X) |
| IECEX TUEV Nord Cert GmbH | IEC 60079-0 | IECEX TUN 14.0035 X (Ex ec IIC T4 Gc) |
| INMETRO TUV Rheinland do Brasil Ltda. | IEC 60079-0 | BR-Ex_TUV 12.1297 X |
| UKEx WAGO GmbH & Co. KG | EN 60079-0 | UKCA_WA GO22UKEX003X_ec |
| UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS) | UL 121201 | E198726 Sec.1 |

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-642



Documentation

Manual

| | | | |
|---------------------------------------|-----------------------|-------------------|--|
| System Manual WAGO I/O System 750/753 | V 3.3.3 29.08.2023 | pdf 8512.61 KB | |
| System Manual Series 750/753 | | | |
| Product Manual EnOcean Radio Receiver | V 1.1.0 | pdf 1047.05 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 | |
| Radio Technology – General Product Information | pdf 493.44 KB | |

Bid Text

| | | | |
|---------|------------|------------------|--|
| 750-642 | 16.10.2017 | doc 26.50 KB | |
| 750-642 | 16.10.2017 | docx 15.86 KB | |

Instruction Leaflet

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

Application Notes

Application Note CoDeSys 2.3

| | | | |
|--------------------------------------|--------------------------|------------------|-------------------|
| Application Note: EnOcean_06 Library | 30.11.2016 30.11.2016 | zip 822.25 KB | ↓ |
|--------------------------------------|--------------------------|------------------|-------------------|

CAD/CAE-Data

| CAD data | CAE data |
|--|---|
| 2D/3D Models 750-642 ↓ | EPLAN Data Portal 750-642 ↓ |
| | WSCAD Universe 750-642 ↓ |
| | ZUKEN Portal 750-642 ↓ |

Device Files

| Device Driver | | | |
|--|-----------------------|-------------------|-------------------|
| WAGO USB Service Kabel Treiber / Serie 750 und 857 | 6.5.3.0 10.09.2014 | zip 4721.96 KB | ↓ |

Libraries

| e!COCKPIT libraries | Library |
|--|---|
| e!COCKPIT Library Description WagoAppEnOcean | Libraries for Building Automation CODESYS 2.3 |
| 1.1.3.3 06.08.2021 | 2023-09-14 14.09.2023 |
| pdf 3942.65 KB | zip 44926.41 KB |
| ↓ | ↓ |

1 Compatible Products

1.1 Optional Accessories

1.1.1 Antenna

1.1.1.1 Antenna



[Item No.: 758-910](#)

Antenna; GSM; Magnetic Foot

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.: 210-508
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; 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; silver-colored



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



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.: 210-115
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



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.: 210-504
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; 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



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

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

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