



Color: ■ light gray

The MODBUS Controller is an expansion for the WAGO I/O System.
This controller combines a WAGO MODBUS Fieldbus Coupler with PLC functionality. 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
- 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

Technical data	
Communications	Modbus RTU
Visualization	none
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)
Cycle time	< 3 ms for 1000 bit instructions/ 256 digital I/O
Transmission rate	1.2 ... 115.2 kBd
Bus segment length (max.)	1200 m
Transmission medium (communication/fieldbus)	Shielded Cu cable 2 (4) x 0.25 mm²
Number of fieldbus nodes on master (max.)	99
Number of I/O points	6000
Program memory	32 KB
Data memory	32 KB
Non-volatile software memory	8 KB
Memory for fieldbus input variables (max.)	512 bytes
Memory for fieldbus output variables (max.)	512 bytes
Number of modules per node (max.)	64
Input and output process image (fieldbus) max.	1024 bytes/1024 bytes
Supply voltage (system)	24 VDC (-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 %
Current consumption (5 V system supply)	350 mA
Total current (system supply)	1650 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts
Current carrying capacity (power jumper contacts)	10 A



Technical data	
Number of outgoing power jumper contacts	3
Isolation	500 V system/supply

Connection data	
Connection technology: communication/fieldbus	Modbus RTU: 1 x D-sub 9 socket
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	6 x CAGE CLAMP®
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	71.1 mm / 2.799 inches
Depth	100 mm / 3.937 inches

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	4.532 MJ
Weight	189.5 g
Conformity marking	CE

Environmental requirements	
Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-25 ... +85 °C
Protection type	IP20
Pollution degree	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.)
Mounting position	Horizontal left, horizontal right, horizontal top, horizontal bottom, vertical top and vertical bottom
Relative humidity (without condensation)	95 %
Vibration resistance	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 (I/O System)	
PU (SPU)	1 pcs	
Packaging type	Box	
Country of origin	DE	
GTIN	4045454654627	
Customs tariff number	85371091990	
End of Sale	2018-05-31	
End of Production	2018-06-05	
End of Delivery	2018-06-15	
End of Service and Repair	2020-05-30	

Product Classification		
UNSPSC	32151705	
eCl@ss 10.0	27-24-26-07	
eCl@ss 9.0	27-24-26-07	
ECCN	NO US CLASSIFICATION	

Environmental Product Compliance		
CAS-No.	12060-00-3 1303-86-2 1317-36-8 25550-51-0 7439-92-1 79-94-7	
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 4-Methyl-1,2-cyclohexanedicarboxylic anhydride Diboron trioxide Lead Lead monoxide Lead titanium oxide (PbTiO3)	
RoHS Compliance Status	Compliant,With Exemption	
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II	
SCIP notification number (Austria)	3da1de5a-e530-49ed-b816-fe2cdcb15902	
SCIP notification number (Belgium)	55ac7aa0-9bf5-43f6-aabd-157f4412cf09	
SCIP notification number (Bulgaria)	ea96afd5-fbe5-4aca-8617-bf3d5c2d38fe	
SCIP notification number (Czech Republic)	49a931fe-03f8-4110-a2af-89ac5fb2fb46	
SCIP notification number (Denmark)	7884e311-3b18-4f36-bec8-43188b32b0ed	
SCIP notification number (Finland)	23e2eb46-2a98-414e-b629-0219637e0826	
SCIP notification number (France)	5a0c25b6-9345-4259-966a-a1d2531aaa9c	
SCIP notification number (Germany)	010e9256-da4b-4331-a085-34772732faff	
SCIP notification number (Hungary)	6a44bf20-bf96-4b7f-a81d-c83dcec1ec04	
SCIP notification number (Italy)	33768aba-926f-4e54-a3b8-6dad26f904ea	
SCIP notification number (Netherlands)	39ce1ce0-f4cb-4b98-9cee-41d12126bd20	
SCIP notification number (Poland)	e0c06a9a-c992-4ed7-94a0-8ea5b5f1a387	
SCIP notification number (Romania)	4ec42871-9e89-4586-ad65-ed6a94dfd86f	
SCIP notification number (Sweden)	de09c6d1-e457-4178-9cc3-7eed41d96bc2	



Approvals / Certificates

Approvals for marine applications



Approval	Standard	Certificate Name
BV Bureau Veritas S.A.	-	13453/E0 BV
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
KR Korean Register of Ship- ping	-	KR HMB05880-AC001

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance 750-815



Documentation

Manual

Product Manual MOD-
BUS Programmable
Fieldbus Controller

V 2.3.1

pdf
6546.53 KB



Application Notes

Application Note CoDeSys 2.3

1.0.0
28.11.2002

zip
255.21 KB



CAD/CAE-Data

CAD data

2D/3D Models 750-815



CAE data

EPLAN Data Portal
750-815



WSCAD Universe
750-815



ZUKEN Portal 750-815



Runtime Software

Firmware

0750-0815, Controller MODBUS; RS-485	V 03 19.10.2021	zip 441.62 KB	
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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

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; simi-
lar 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; si-
milar 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 Software

1.1.5.1 Basic version



Item No.: 759-333
WAGO-I/O-PRO

1.1.6 System enclosure

1.1.6.1 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); Wx-
HxD (164x100x164 mm); 9 x M12, 4 x M20



Item No.: 850-835
IP65 enclosure; Polyester (RAL 7032); Wx-
HxD (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 flan-
ge plate



Item No.: 850-815/002-000
IP65 enclosure; Sheet steel (RAL 7035);
WxHxD (300x120x200 mm); without flan-
ge plate



Item No.: 850-816/002-000
IP65 enclosure; Sheet steel (RAL 7035);
WxHxD (400x120x200 mm); without flan-
ge plate



Item No.: 850-817/002-000
IP65 enclosure; Sheet steel (RAL 7035);
WxHxD (600x120x200 mm); without flan-
ge plate