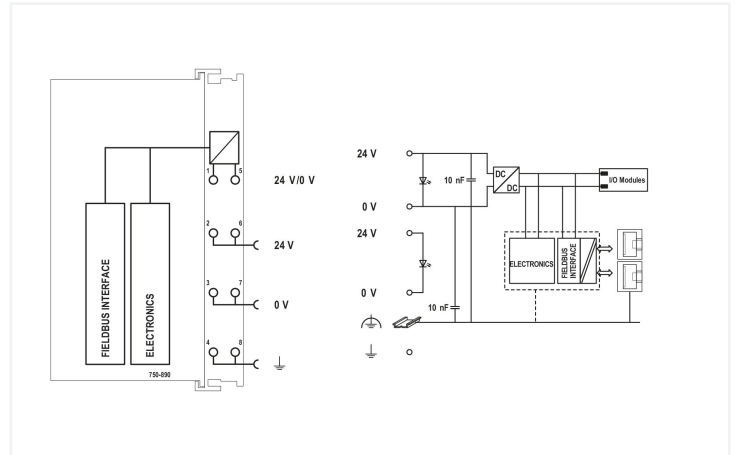


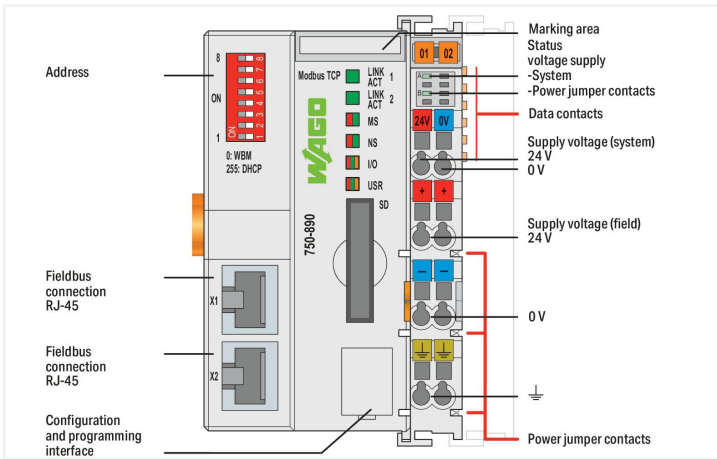
Data Sheet | Item Number: 750-890/025-001

Controller Modbus TCP; 4th generation; 2 x ETHERNET, SD Card Slot; Ext. Temperature

<https://www.wago.com/750-890/025-001>



Similar to illustration



The Modbus TCP Controller can be used as a programmable controller within ETHERNET networks along with the WAGO I/O System. The controller supports all digital and analog input/output modules, as well specialty modules found within the 750/753 Series, and is suitable for data rates of 10/100 Mbit/s.

Two ETHERNET interfaces and an integrated switch allow the fieldbus to be wired in a line topology, eliminating additional network devices, such as switches or hubs. Both interfaces support autonegotiation and Auto-MDI(X). The DIP switch configures the last byte of the IP address and may be used for IP address assignment. This controller supports Modbus TCP for use in industrial environments. It also supports a wide variety of standard ETHERNET protocols for easy integration into IT environments (e.g., HTTP(S), BootP, DHCP, DNS, SNTP, SNMP, (S)FTP). An integrated Webserver provides user configuration options, while displaying the controller's status information. The IEC 61131-3 programmable controller is multitasking-capable and features a capacitor-backed RTC. A data memory of 8 MB is available. The controller is equipped with a removable memory card slot. A memory card can be used to transfer device parameters or files (e.g., boot files) from one controller to another. The card can be accessed via FTP and used as an additional drive.

Technical data	
Communication	Modbus (TCP, UDP) Telecontrol protocols
ETHERNET protocols	HTTP(S) BootP DHCP DNS SNTP FTP(S) SNMP
Telecontrol protocols	IEC 60870-5-101/-103/-104 IEC 61400-25 IEC 61850-7 DNP3
Visualization	Web-Visu

Technical data	
CPU	32 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 Web-Based Management CODESYS Library
Baud rate (communication/fieldbus 1)	10/100 Mbit/s
Baud rate	10/100 Mbit/s
Transmission medium (communication/fieldbus)	Twisted pair S-UTP; 100 Ω; Cat. 5; 100 m maximum cable length
Transmission performance	Class D per EN 50173
Program memory	8 MB
Data memory	8 MB
Non-volatile software memory	32 KB
Type of memory card	SD and SDHC up to 32 GB (all guaranteed properties only valid with WAGO's memory card)
Memory card slot	Push-push mechanism; cover lid (sealable)
Number of modules per node (max.)	250
Number of modules without a bus extension (max.)	64
Input and output process image (fieldbus) max.	1020 words/1020 words
Indicators	LED (LINK/ACT) green: Network connection via ports 1 ... 2; LED (MS, NS) red/green: Status of node, network; 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)	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)	90 %
Current consumption (5 V system supply)	440 mA
Total current (system supply)	1700 mA
Supply voltage (field)	24 VDC (-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): 2 x RJ-45; Telecontrol protocol IEC 60870-5-101/-103: 1 x Serial interface via I/O module; Telecontrol protocol IEC 60870-5-104: 1 x RJ-45; Telecontrol protocol IEC 61850: 1 x RJ-45; Telecontrol protocol DNP3: 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 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 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	61.5 mm / 2.421 inches
Height	100 mm / 3.937 inches
Depth	71.9 mm / 2.831 inches
Depth from upper-edge of DIN-rail	64.7 mm / 2.547 inches

Mechanical data

Weight	159.8 g
Housing material	Polycarbonate; polyamide 6.6
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	-20 ... +60 °C
Ambient temperature (storage)	-40 ... +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.)
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K6/IEC EN 60721-3-3 and E-DIN 40046-721-3, accounting for a temperature range of -20 to +60 °C (except for wind-driven precipitation, water and ice formation)
Mounting position	any
Mounting type	DIN-35 rail
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
Fire load	2.482 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

ETIM 8.0	EC000236
ETIM 7.0	EC000236
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4055143918695
Customs tariff number	85371091990

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	8085e0ec-aec9-4db8-a921-904ea63454e2
SCIP notification number (Belgium)	d49c94bd-4092-465a-a1a2-d459ef64f023

Environmental Product Compliance

SCIP notification number (Bulgaria)	413e7a81-a718-439f-a47c-8fc4056914b1
SCIP notification number (Czech Republic)	8f24ab3a-93eb-4b9e-8f1c-f4016298d687
SCIP notification number (Denmark)	b854f140-2cde-4344-b64f-599d9045b692
SCIP notification number (Finland)	69a20333-6453-4dce-85a4-3eb1c205a114
SCIP notification number (France)	2f26804d-a9a2-4456-99cc-be2b6beb49cf
SCIP notification number (Germany)	418cb3fb-0afa-4f4c-b3b8-2365de98090b
SCIP notification number (Hungary)	b644a63c-b652-44ed-b244-40d9166a0ad9
SCIP notification number (Italy)	0cc8e62f-845c-45fe-8a4d-2e4abd0dfc72
SCIP notification number (Netherlands)	a3377419-d36f-47f5-bf19-f94824444ab6
SCIP notification number (Poland)	7a90b2c9-c4bc-4738-92b2-95d76cef100
SCIP notification number (Romania)	076b39c3-8753-471c-af39-d2c54c59e2c7
SCIP notification number (Sweden)	139b0642-f479-481f-a971-1d34f2166336

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087/19
EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AZ58. B.2173-21 e (2Ex e IIC T4 Gc X)
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-PFC750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	-	E175199

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
BSH Bundesamt fuer Seeschifffahrt und Hydrographie	-	1104
DNV DNV Germany GmbH	DNV-CG-0339, Aug.2021	TAA00001J4

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/CNEX	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
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
750-890/025-001



Documentation

Manual


Product Manual Con- troller Modbus TCP; G4; 2ETH; SD	V 1.3.1 25.05.2022	pdf 7409.85 KB	
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System Manual WAGO I/O System 750/753	V 3.3.3 29.08.2023	pdf 8512.61 KB	
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System Manual Series
750/753





System Description

Overview on WAGO-I/ O-SYSTEM 750 appro- vals	pdf 770.48 KB	
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750 Controller, General Product Information	pdf 507.50 KB	
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Bid Text

750-890/025-001	docx 16.96 KB	
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750-890/025-001	xml 9.81 KB	
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Instruction Leaflet

CCC Ex (Additional in- formation)	26.04.2023	pdf 159.76 KB	
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CAD/CAE-Data

CAD data

2D/3D Models 750-890/025-001	
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CAE data


EPLAN Data Portal 750-890/025-001	
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ZUKEN Portal 750-890/025-001	
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Engineering-Software

Configuration and Commissioning Software

WAGO-IO-PRO Demo- Version (759-912) / Se- rie 750, 758 und 762	V 2.3.9.68 17.02.2022	zip 122524.17 KB	
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(759-316) WAGO Ether- net Settings / Serie 750	06.18.01.01 02.09.2021	zip 26678.54 KB	
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WAGOupload	1.16.1.0 02.02.2022	zip 12111.45 KB	
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Runtime Software

Firmware

0750-089x, Controller	V 11 24.08.2023	zip 4696.31 KB	
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1 Compatible Products

1.1 Required Accessories

1.1.1 Memory card

1.1.1.1 Memory card



Item No.: 758-879/000-2108

Memory Card SD; pSLC-NAND; 8 GB;
Temperature range: -40 to 90°C



Item No.: 758-879/000-001

Memory Card SD; SLC-NAND; 2 GByte;
Temperature from -40 to 90 °C

1.2 Optional Accessories

1.2.1 Cables and connectors

1.2.1.1 Connector plug



Item No.: 750-979/000-011

Connector ETHERNET; RJ-45; Cat. 6A;
angled; Code T568A; 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.: 750-979/000-012

Connector ETHERNET; RJ-45; Cat. 6A;
angled; Code T568B; AWG 22; Strain relief



Item No.: 750-979/000-022

Connector ETHERNET; RJ-45; Cat. 6A;
angled; Code T568B; AWG 24; Strain relief



Item No.: 750-977/000-011

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



Item No.: 750-978/000-011

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



Item No.: 750-977/000-021

Connector ETHERNET; RJ-45; Cat. 6A;
straight; Code T568A; AWG 24



Item No.: 750-978/000-021

Connector ETHERNET; RJ-45; Cat. 6A;
straight; Code T568A; AWG 24; Strain relief



Item No.: 750-977/000-012

Connector ETHERNET; RJ-45; Cat. 6A;
straight; Code T568B; AWG 22



Item No.: 750-978/000-012

Connector ETHERNET; RJ-45; Cat. 6A;
straight; Code T568B; AWG 22; Strain relief



Item No.: 750-977/000-022

Connector ETHERNET; RJ-45; Cat. 6A;
straight; Code T568B; AWG 24



Item No.: 750-978/000-022

Connector ETHERNET; RJ-45; Cat. 6A;
straight; Code T568B; AWG 24; Strain relief



Item No.: 750-975

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

1.2.2 Communication

1.2.2.1 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

1.2.3 DIN-rail

1.2.3.1 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

1.2.4 Marking

1.2.4.1 Group marker carrier



Item No.: 750-106

Group marker carrier

1.2.4.2 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

1.2.4.2 Marker



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

1.2.4.3 Marker carrier



Item No.: 750-103

Group marker carrier

1.2.5 Shield termination

1.2.5.1 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

1.2.6 Software

1.2.6.1 Basic version



Item No.: 759-333

WAGO-I/O-PRO



Item No.: 759-333/000-923

WAGO-I/O-PRO; USB-Set

1.2.7 System enclosure

1.2.7.1 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

1.2.7.1 System enclosure



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