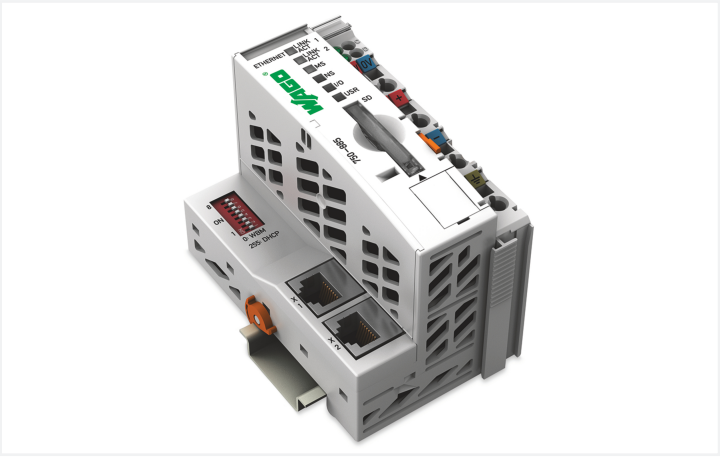
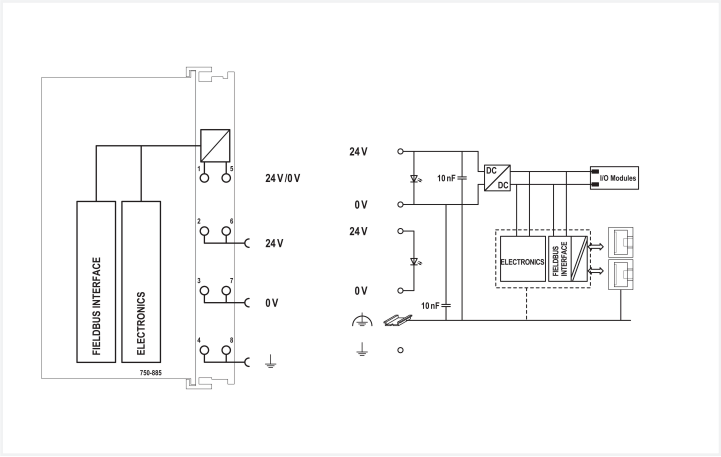
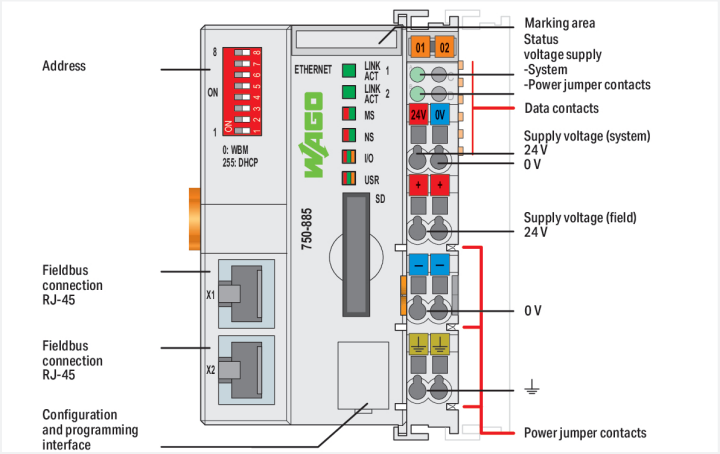
Data Sheet | Item Number: 750-885

Controller ETHERNET; 3rd Generation; SD Card Slot; Media Redundancy

https://www.wago.com/750-885







In conjunction with the WAGO I/O System, the ETHERNET Controller serves ETHERNET networks requiring fast and safe media redundancy. 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.

Media redundancy is achieved by operating the controller in two separate networks – which is accessible via two different IP addresses (including two MAC IDs). Cross communication between separate channels is not possible. The two separate ETHERNET interfaces allow redundant connection of two transmission paths (no hub or switch required). Both interfaces support autonegotiation and Auto-MDI(X). The DIP switch configures the last byte of both default IP addresses and may be used for IP address assignment (DHCP, BootP).
The media redundancy controller is designed for fieldbus communication via MODBUS/TCP in ETHERNET networks. It also supports a wide variety of standard ETHERNET protocols (HTTP, BootP, DHCP, DNS, 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 1 MB is available.
For memory expansion, the 750-885 Controller is equipped with a removable memory card slot.

Notes

Note	For new installations, take the alternative items into account.

Technical data

Communications	EtherNet/IP™ Modbus (TCP, UDP) ETHERNET
ETHERNET protocols	HTTP BootP DHCP DNS SNTP FTP SNMP
Redundancy function	via two logically separated ETHERNET interfaces
Visualization	Web-Visu
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
Transmission 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	1024 KB
Data memory	1024 KB
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
Powerfail RTC buffer	6 days (min.)
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, SELV/PELV (-25 … +30 %); via wiring interface (CAGE CLAMP® connection); External fuse required: 2 A slow-blow
Input current (typ.) at nominal load (24 V)	500 mA
Power supply efficiency (typ.) at nominal load (24 V)	90 %
Current consumption (system supply)	450 mA
Total current (system supply)	1700 mA
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
Current carrying capacity (power jumper contacts)	10 A
Number of outgoing power jumper contacts	3
Isolation	500 V system/field

Continued on next page

Connection Data

Connection technology: communication/fieldbus	EtherNet/IP™: 2 x RJ-45; Modbus (TCP, UDP): 2 x RJ-45
Connection technology: system supply	2 x CAGE CLAMP®
Connection technology: field supply	6 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	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

Mounting type	DIN-35 rail

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	3.46 MJ
Weight	161.9 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	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
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm

Continued on next page

Commercial data

Product Group	15 (I/O System)
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821572206
Customs tariff number	85371091990

Product Classification

UNSPSC	43201404
eCl@ss 10.0	27-24-26-07
eCl@ss 9.0	27-24-26-07
ETIM 9.0	EC000236
ETIM 10.0	EC000236
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

CAS-No.	12060-00-3 1303-86-2 1317-36-8 25550-51-0 693-98-1 7439-92-1 79-94-7 80-43-3
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 2-methylimidazole 4-Methyl-1,2-cyclohexanedicarboxylic anhydride Diboron trioxide Lead Lead monoxide Lead titanium oxide (PbTiO3) Peroxide, bis(1-methyl-1-phenylethyl)
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II 7c
SCIP notification number (Bulgaria)	5250ecce-6c5a-4aa3-a688-e5e13d517d4d
SCIP notification number (Czech Republic)	983894ae-1d08-4021-a017-97c5a4588867

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-PFC750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	-	25-0415412
BSH Bundesamt fuer Seeschiffahrt und Hydrographie	-	1104
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
LR Lloyds Register EMEA	-	LR22180952TA
PRS Polski Rejestr Statków	-	TE/1101/880590/23

Continued on next page

Approvals for marine applications

RINA RINA Germany GmbH	-	ELE343521XG001

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 TÜV Rheinland do Brasil Ltda.	IEC 60079-0	TÜV 12.1297 X
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX003X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-885	

Documentation

Manual

System Manual Series 750/753			
Product Manual ETHERNET-MR/SD-Fieldbus Controller	V 1.4.0	pdf 15115.79 KB	
Product Manual WAGO MODBUS Master Configurator	V 1.1.0	pdf 1761.59 KB	

System Description

Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	
750 Controller, General Product Information	pdf 507.50 KB	

Bid Text

750-885	19.02.2019	xml 7.61 KB	
750-885	19.05.2015	doc 31.50 KB	

Instruction Leaflet

CCC Ex (Additional information)	26.04.2023	pdf 159.76 KB	

Continued on next page

Application Notes

Application Note CoDeSys 2.3			
HART Tool Routing via ETHERNET with 750-820x/750-88x and CODESYS 2.3 (a116120)	1.0.0 22.03.2019	pdf 3798.36 KB	
Using the web visualization with Java™ runtime environment (JRE, JVM) 7 update 51 (7u51) (a500690)	1.2.4 26.02.2019	zip 4896.43 KB	
Application Note Power-Measurement_03 Library	19.01.2011 19.03.2012	zip 932.08 KB	
Application Note: DMX_02	26.04.2017 26.04.2017	zip 733.43 KB	
HVAC System Macros	10.03.2017 15.03.2019	zip 13252.92 KB	
Application Note: Mp-Bus_03 Library	2020-08-14 14.08.2020	zip 513.66 KB	
Connection of a Thermokon Thanos SR L MODBUS room control unit to the WAGO-I/O-SYSTEM	02.05.2013 13.05.2013	zip 305.89 KB	
Anbindung der HKW-Elektronik Wetterprog-nose-Station WS-K xx T ModBus	1.1 07.07.2017	zip 762.78 KB	
Application Note Sched-uler_03.lib	20.05.2011 20.05.2011	zip 1717.92 KB	
GRUNDFOS GENIbus in-terface, application note	20.03.2017 20.03.2017	zip 279.86 KB	
Connection of Thermokon Multi-func-tion room control units WRF 08	10.04.2019 10.04.2019	zip 855.84 KB	
Connection of DMX de-vices to the WAGO-I/O-SYSTEM via the ArtNet-DMX STAGE-PROFI 1.1	11.01.2013 11.01.2013	zip 1450.63 KB	
Connection of Thermokon Multi-func-tion room control units WRF 06	10.04.2019 08.04.2016	zip 826.10 KB	
Application Note for the 750-494 3-Phase Power Measurement Module	24.01.2014 11.11.2014	zip 1629.99 KB	
Application Note: EnO-cean_06 Library	30.11.2016 30.11.2016	zip 822.25 KB	
Application Note for the 750-495 3-Phase Power Measurement Module	24.01.2014 24.01.2014	zip 1806.18 KB	
Application Note Weath-er Station Elsner P03 Modbus	01.12.2011 28.10.2011	zip 269.09 KB	
HLK-Anlagenmakros für TRIC	2015-07-10 10.07.2015	zip 74963.43 KB	
Application Note Library ModuleAccess_01	05.01.2016 29.01.2016	zip 1001.22 KB	

Continued on next page

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 750-885	EPLAN Data Portal 750-885
	WSCAD Universe 750-885
	ZUKEN Portal 750-885

Engineering-Software

Configuration and Commissioning Software			
WAGO Ethernet Settings			
(759-316) WAGO Ethernet Settings / Serie 750	06.18.01.01 02.09.2021	zip 26678.54 KB	
WAGOupload	1.16.1.0 02.02.2022	zip 12111.45 KB	

Runtime Software

Firmware			
0750-0885, Controller ETHERNET	V 17 22.07.2022	zip 1507.11 KB	

Libraries

Library			
WagoLibConfigETH_01	1.0.0	pdf 381.48 KB	
ModuleAccess_01.lib	1.8.7 27.01.2020	zip 2114.60 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Cables and connectors

1.1.1.1 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

Continued on next page

1.1.1.1 Connector plug



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

1.1.2 Communication

1.1.2.1 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

1.1.3 DIN-rail

1.1.3.1 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.: 210-197
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.: 210-115
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.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

1.1.4 Marking

1.1.4.1 Group marker carrier



Item No.: 750-106
Group marker carrier

1.1.4.2 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

Continued on next page

1.1.4.2 Marker



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

1.1.4.3 Marker carrier



Item No.: 750-103
Group marker carrier

1.1.5 Memory card

1.1.5.1 Memory card

Item No.: 758-879/000-2116
Memory Card SD; pSLC-NAND; 16 GB; Temperature range: -40 to 85°C

1.1.6 Shield termination

1.1.6.1 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

 Continued on next page

1.1.8 System enclosure

1.1.8.1 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