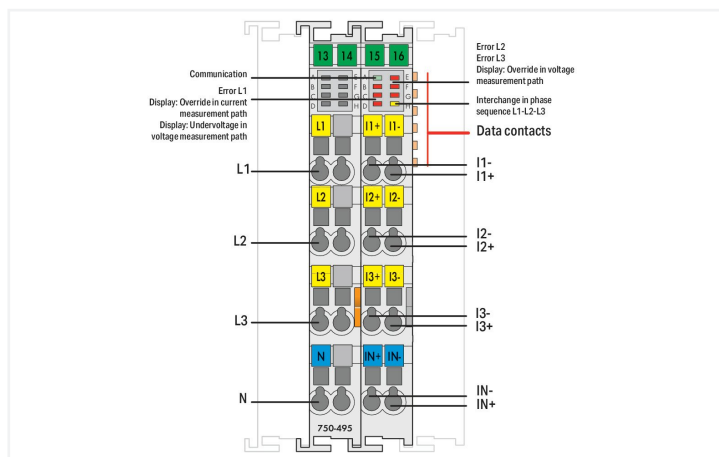
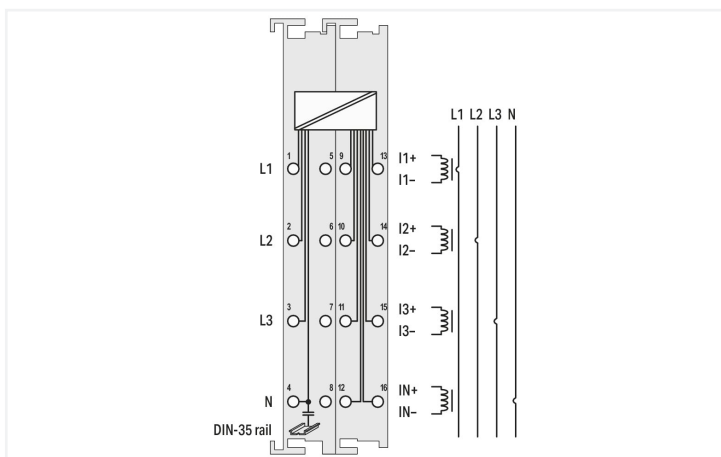
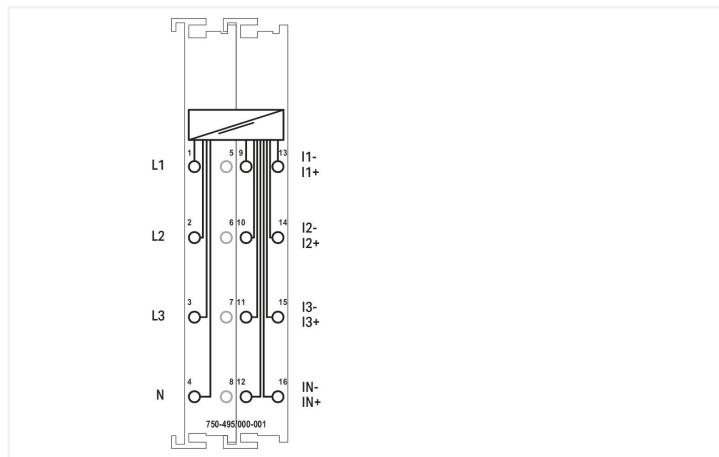


Color: ■ light gray



The 750-495 3-Phase Power Measurement Module measures electrical data in a three-phase supply network. The voltage is measured via network connection to L1, L2, L3 and N. The current of the three phases is fed to IL1, IL2, IL3 and IN (two clamping points each +,-) via current transformers or via Rogowski coils for the 750-495/000-002 module. The 750-495 Module transmits metrics (e.g., reactive/apparent/effective power, energy consumption, power factor, phase angle, frequency, over-/undervoltage) directly into the process image, without requiring high computing power from the controller. Both comprehensive metrics and harmonic analysis up to the 41st harmonic permit extensive network analysis via the fieldbus. Metrics allow the operator to optimize the supply to a drive or machine, protecting the system from damage and failure. Insulation failures can be detected and prevented via current measurement performed in the neutral conductor. The 4-quadrant display indicates the type of load (inductive, capacitive) and whether it is an energy consumer or producer.

Technical data	
Number of measurement inputs	7 (3 voltage measurement inputs, 4 differential current measurement inputs)
Signal type	Power measurement
Signal form	Sinusoidal signals (taking the cutoff frequency into account)
Resolution [bit]	24 bits
Data width	2 x 128-bit data; 2 x 64-bit control/status
Voltage path input resistance (typ.)	1429 kΩ
Current path input resistance (typ.)	5 mΩ
Reference for measurement error	AC current/voltage
Measurement error (reference temperature)	23 °C
Measurement error, deviation (max.) from the upper-range value	0.5 %
Measurement current (max.)	5 A
Measurement cycle time	Adjustable for arithmetic mean value, Min_Max_Values
Frequency range (mains frequency)	50/60 Hz
Frequency range (harmonics analysis)	0 ... 3300 Hz
Limit frequency	15.9 kHz

Technical data

Permissible common mains supply systems	Three-phase, four-wire system: max. 277/480 VAC; Three-phase, three-wire system: max. 600 VAC (UL)
Note on common mains supply systems	Under special conditions (see manual), U_{LL} up to 690 V are possible
Upper-range value for the measurement accuracy	400/690 V
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Measurement method	True RMS measurement
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	100 mA
Indicators	LED (A) green: Communication; LED (B-G) red: Error L1, Override in Current Measurement Path (display), Undervoltage in Voltage Measurement Path (display), Error L2, Error L3, Override in Voltage Measurement Path (display); LED (H) yellow: Interchange in Phase Sequence L1-L2-L3

Safety and protection

Measurement category per EN/UL 61010-2-030	CAT III	Test voltage	
		Test voltage	3.51 kVAC, 50/60 Hz, 1 min.
		Rated surge voltage	System/field side: 5.0 kV (EN 60870-2-1 / Class VW3) 6.4 kV (EN/UL 61010-1)

Insulation coordination per EN/UL 61010-2-201 with N connection

System voltage	≤300 V
Note on system voltage	The system voltage is derived from the line-to-neutral voltage for common MAINS supply systems.
Overvoltage category	III
Insulation type	Reinforced insulation

Insulation coordination per EN/UL 61010-2-201 without N connection

System voltage	≤600 V
Note on system voltage	The neutral 'N' connector shall not be connected to ensure safe isolation. The system voltage is derived from the line-to-neutral voltage for common MAINS supply systems.
Overvoltage category	III
Insulation type	Double insulation (Basic insulation and Supplementary Insulation by Impedance/current measurement transformer). Safe isolation for neighboring SELV/PELV modules must be maintained. User manual 750-495/000-00x, section "Isolation to Adjacent I/O Modules per EN/UL 61010 2-201" contains the types of insulation to neighboring modules. The 750-495/000-00x Power Measurement Module must not be attached directly to SELV/PELV modules without double or reinforced insulation. A 750-616 distance module must be attached at these conditions.

Connection data

Connection technology: inputs/outputs	12 x CAGE CLAMP®
Connection type 1	Inputs/outputs
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
Note (conductor cross-section)	Solid conductor: 20 ... 14 AWG (UL); Fine-stranded conductor: 20 ... 16 AWG (UL) These values refer exclusively to the mechanical connection capacity of the clamping points. When the applications/devices are operated in locations covered by UL, only solid conductor with 20 ... 14 AWG and fine-stranded conductor with 20 ... 16 AWG are permitted.

Physical data

Width	24 mm / 0.945 inches
Height	100 mm / 3.937 inches
Depth	67.8 mm / 2.669 inches
Depth from upper-edge of DIN-rail	60.6 mm / 2.386 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	2.001 MJ
Weight	90.8 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Protection type	IP20
Pollution degree	2 per EN 60664-1
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Mounting position	horizontal left, horizontal up, 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
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	27-24-26-05
eCl@ss 9.0	27-24-26-05
ETIM 8.0	EC001601
ETIM 7.0	EC001601
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1
REACH Candidate List Substance	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 (Bulgaria)	270e708c-cfd6-40e8-b6ad-6e72264345ad
SCIP notification number (Czech Republic)	34284c00-9b2c-4b17-8ebc-1742d0de303b

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC Brjansker Zertifizierungs- stelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087/19
EAC Brjansker Zertifizierungs- stelle	TP TC 004/2011	EAC RU C-DE.AM02. B.00088_19
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-AIM750

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 marine applications



Approval	Standard	Certificate Name
BSH Bundesamt fuer See- schifffahrt und Hydrogra- phie	-	1104
PRS Polski Rejestr Statków	-	TE/2236/880590/19
RINA RINA Germany GmbH	-	ELE343521XG001

Approvals for hazardous areas



Approval	Standard	Certificate Name
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	-	E198726

Downloads

Environmental Product Compliance




Compliance Search

Environmental Product
Compliance
750-495/000-001




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 3-Phase Power Measurement Module	V 1.3.0 06.04.2023	pdf 18495.39 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


750-495/000-001	20.10.2017	doc 30.50 KB	
750-495/000-001	19.02.2019	xml 6.31 KB	

CAD/CAE-Data

CAD data


2D/3D Models 750-495/000-001	
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CAE data

EPLAN Data Portal 750-495/000-001	
WSCAD Universe 750-495/000-001	
ZUKEN Portal 750-495/000-001	

Runtime Software

Firmware

0750-0495, 3-Phasen-Leistungsmessung	V 03 07.06.2022	zip 170.05 KB	
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Libraries

Library			
Function block description	2.1.0	zip	
PowerMeasurement_495_02.lib	23.01.2017	1579.43 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Current transformer

1.1.1.1 Current transformer terminal block



Item No.: 2007-8874

Compact terminal block; for current and voltage transformers; 6,00 mm²; multicoloured

Item No.: 2007-8877

Compact terminal block; for current transformer circuit; 6,00 mm²; multicoloured

1.1.1.2 Plug-in current transformer



Item No.: 855-305/300-501

Plug-in current transformer; Primary rated current 300 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-405/750-501

Plug-in current transformer; Primary rated current 750 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-305/100-201

Plug-in current transformer; Primary rated current: 100 A; Secondary rated current: 5 A; Rated power: 2.5 VA; Accuracy class: 1

Item No.: 855-505/1000-1001

Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1



Item No.: 855-305/150-501

Plug-in current transformer; Primary rated current: 150 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-605/1500-501

Plug-in current transformer; Primary rated current: 1500 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-305/200-501

Plug-in current transformer; Primary rated current: 200 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-805/2000-1001

Plug-in current transformer; Primary rated current: 2000 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1



Item No.: 855-305/250-501

Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-405/250-501

Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-1005/2500-1001

Plug-in current transformer; Primary rated current: 2500 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

Item No.: 855-305/400-1001

Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1



Item No.: 855-505/400-1001

Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

Item No.: 855-405/400-501

Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-305/050-103

Plug-in current transformer; Primary rated current: 50 A; Secondary rated current: 5 A; Rated power: 1.25 VA; Accuracy class: 3

Item No.: 855-305/060-101

Plug-in current transformer; Primary rated current: 60 A; Secondary rated current: 5 A; Rated power: 1.25 VA; Accuracy class: 1



Item No.: 855-305/600-1001

Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

Item No.: 855-505/600-1001

Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

Item No.: 855-305/075-201

Plug-in current transformer; Primary rated current: 75 A; Secondary rated current: 5 A; Rated power: 2.5 VA; Accuracy class: 1

Item No.: 855-505/800-1001

Plug-in current transformer; Primary rated current: 800 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

1.1.1.3 Split-core current transformer



Item No.: 855-5005/1000-000

Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m

Item No.: 855-5105/1000-000

Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m

Item No.: 855-4005/150-101

Split-core current transformer; Primary rated current: 150 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m

Item No.: 855-4105/250-101

Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m



Item No.: 855-5005/400-001

Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-4105/400-101

Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m

Item No.: 855-5005/600-000

Split-core current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 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; 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.: 750-107

Group marker carrier

1.1.3.2 Marker



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

1.1.3.2 Marker



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 Power tap

1.1.4.1 Power tap



Item No.: 855-8003
Power tap; with fuse; 10 mm² (8 AWG) - 16 mm² (6 AWG); Phase



Item No.: 855-8001
Power tap; with fuse; 2,5 mm² (12 AWG) - 6 mm² (10 AWG); Phase



Item No.: 855-8004
Power tap; without fuse; 10 mm² (8 AWG) - 16 mm² (6 AWG); N-conductor



Item No.: 855-8002
Power tap; without fuse; 2,5 mm² (12 AWG) - 6 mm² (10 AWG); N-conductor

1.1.5 Shield termination

1.1.5.1 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

1.1.6 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); 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