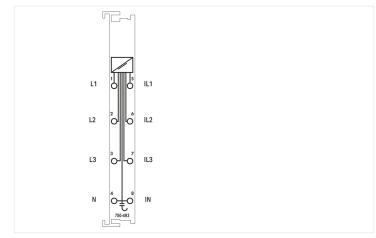
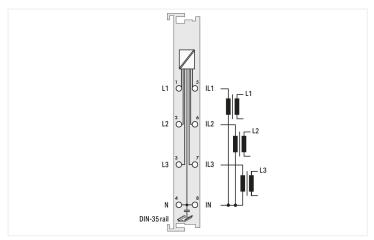
https://www.wago.com/750-493

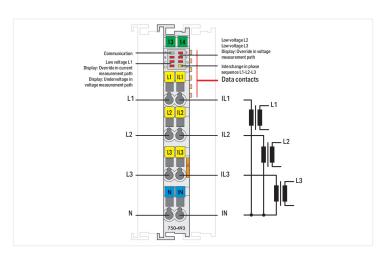






Color: Ight gray





The 750-493 3-Phase Power Measurement Module measures the 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 via current transformers.

The 750-493 Module transmits the root mean square values into the process image without requiring high computing power from the controller. For each phase, the effective power (P) and the energy consumption (W) are calculated by the module using the root mean square values for all measured voltages (V) and currents (I). For example, both the apparent power (S) and phase shift angle (φ) can be easily derived from these values. Therefore, the 750-493 Module provides comprehensive network analysis via fieldbus. Metrics, such as effective and apparent power consumption or

load condition, enable the operator to optimize supply to a drive or machine. This can protect the installation from damage and failure.

Technical data Number of measurement inputs 6 (3 voltage measurement inputs, 3 current measurement inputs) Signal type Power measurement Signal form Any periodic signals (considering the threshold frequencies) Resolution [bit] 2 x 48-bit data; 2 x 24-bit control/status (optional) Voltage path input resistance (typ.) $1071 \, k\Omega$ Current path input resistance (typ.) $22\,\text{m}\Omega$ AC current/voltage Reference for measurement error Measurement error (reference temperature) 25 °C Measurement error, deviation (max.) from the upper-range value 0.5 % Measurement current (max.) 1 A 500 VAC, 3 phases Measurement voltage (max.) Adjustable measuring cycle time for Min_Max_Values Measurement cycle time Frequency range with activated DC filter 10 ... 2000 Hz 0...2000 Hz Frequency range with deactivated DC filter Frequency range (mains frequency) 45 ... 65 Hz

Data Sheet | Item Number: 750-493 https://www.wago.com/750-493



Technical data	
Limit frequency	7.2 kHz
Rated voltage	U _{LN} = 277 V AC/DC; U _{LL} = 480 VAC
Calculated values	Active power, active energy, grid frequency, $\cos\phi$
Measurement components	Evaluating
Measurement method	True RMS measurement
Configuration options	WAGO-I/O-CHECK CODESYS Library e!COCKPIT
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	100 mA
Isolation	4 kV system/field
Rated surge voltage	4 kV
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

Connection data	
Connection technology: inputs/outputs	8 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	89 mm / 0.31 0.35 inches

Physical data	
Width	12 mm / 0.472 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

Material data		
Color	light gray	
Housing material	Polycarbonate; polyamide 6.6	
Fire load	0.955 MJ	
Weight	48.5 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 IEC 61131-2
Operating altitude	0 2000 m / 0 6562 ft
Mounting position	horizontal (standing/lying); vertical
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
EMC emission of interference	per EN 61000-6-3
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43

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Environmental requirements Permissible $\rm H_2S$ contaminant concentration at a relative humidity $\,75\,\%$ 10 ppm Permissible SO_2 contaminant concentration at a relative humidity $\,75~\%$ 25 ppm

Commercial data	
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
GTIN	4055143374385
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)	8c1bfc75-5764-41ae-b7ff-ad86a3c13ee8
SCIP notification number (Czech Republic)	9e8a2393-4d4b-4955-9a16-236aa738014f

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-AIM750
UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS)	UL 508	E175199 Sec.1

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)
EAC Brjansker Zertifizierungs- stelle	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 TÜV Rheinland do Brasil Ltda.	IEC 60079-0	BR-Ex_TÜV 12.1297 X
UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX003X_ec
UL Underwriters Laboratories Inc. (HAZARDOUS LOCA- TIONS)	UL 121201	E198726 Sec.1

https://www.wago.com/750-493



Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-493



Documentation

Manual			
Product Manual 3-Pha- se Power Measurement Module	V 1.2.0	pdf 3319.74 KB	$\underline{\downarrow}$
System Manual WAGO I/O System 750/753	V 3.3.3 29.08.2023	pdf 8512.61 KB	$\underline{\downarrow}$
System Manual Series 750/753			$\overline{\downarrow}$

System Description		
750/753 Series I/O- System – General Pro- duct Information	pdf 953.35 KB	\perp
Overview on WAGO-I/ O-SYSTEM 750 approvals	pdf 770.48 KB	\perp

Bid Text			
750-493	19.02.2019	xml 5.81 KB	$\underline{\downarrow}$
750-493	26.06.2019	docx 17.99 KB	$\underline{\downarrow}$

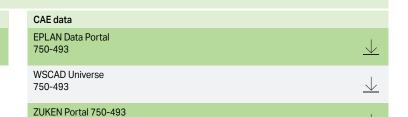
Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 159.76 KB	$\underline{\downarrow}$

Application Notes

Application Note CoDeSys 2.3

CAD/CAE-Data

CAD data
2D/3D Models 750-493



https://www.wago.com/750-493



Runtime Software

Firmware

0750-0493, 3-Phasen-V 05 07.06.2022 154.45 KB Leistungsmessung

Device Files

Device Driver

WAGO USB Service Ka-6.5.3.0 4721.96 KB bel Treiber / Serie 750 10.09.2014 und 857

Libraries

Library

Libraries for Building 2023-09-14 44926.41 KB **Automation CODESYS** 14.09.2023 2.3

1 Compatible Products

1.1 Optional Accessories

1.1.1 Current transformer

1.1.1.1 Current transformer terminal block



Item No.: 2007-8873

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

Item No.: 2007-8875

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

1.1.1.2 Plug-in current transformer



Item No.: 855-1700/032-000

Plug-in current transformer; Primary rated current 32 A; Secondary rated current 320 mA

Item No.: 855-301/100-201

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

Item No.: 855-501/1000-1001

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

Item No.: 855-801/1000-1001

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

Item No.: 855-301/150-501

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

Item No.: 855-601/1500-501

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

Item No.: 855-301/200-501

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

Item No.: 855-801/2000-1001

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



Item No.: 855-301/250-501

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

Item No.: 855-401/250-501 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1

Item No.: 855-1001/2500-1001 Plug-in current transformer; Primary ra-

ted current: 2500 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1

Item No.: 855-2701/035-001

Plug-in current transformer; Primary rated current: 35 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1

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1.1.1.2 Plug-in current transformer



Item No.: 855-301/400-1001

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



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

Item No.: 855-401/400-501

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

Item No.: 855-301/050-103

Plug-in current transformer; Primary rated current: 50 A; Secondary rated current: 1 A; Rated power: 1.25 VA; Accuracy class: 2



Item No.: 855-301/060-101

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

Item No.: 855-301/600-1001

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

Item No.: 855-401/600-501

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

Item No.: 855-501/600-1001

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



Item No.: 855-2701/064-001

Plug-in current transformer; Primary rated current: 64 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1

Item No.: 855-301/075-201

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

Item No.: 855-501/800-1001

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

1.1.1.3 Split-core current transformer



Item No.: 855-4001/100-001

Split-core current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-3001/100-003

Split-core current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 3; Cable length: 3 m

Item No.: 855-5001/1000-000

Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m

Item No.: 855-5101/1000-000

Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m



Item No.: 855-4001/150-001

Split-core current transformer; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-4001/200-001

Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; Cable length: 3 m

Item No.: 855-3001/200-001

Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-4101/200-001

Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m



Item No.: 855-3001/250-001

Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-4101/250-001

Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m

Item No.: 855-5001/250-001

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

Item No.: 855-4101/400-001

Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1: Cable length: 3 m



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

Item No.: 855-3001/060-003

Split-core current transformer; Primary rated current: 60 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 3; Cable length: 3 m

Item No.: 855-5001/600-000

Split-core current transformer; Primary rated current: 600 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable 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; 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

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1.1.2.1 Mounting accessories



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



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 FN 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



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

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 Potential distribution

1.1.4.1 Current and voltage tap



Item No.: 855-951/250-000

Current and voltage tap up to 95 mm²; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused

1.1.5 Power tap

1.1.5.1 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

1.1.6 Shield termination

1.1.6.1 Shield clamping saddles



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

Item No.: 790-216

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm



Item No.: 790-124

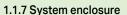
Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm

Item No.: 790-220

Shield clamping saddle; 30 mm wide; 6 ... 20 mm

Item No.: 790-140

Shield clamping saddle; diameter of compatible conductor



1.1.7.1 System enclosure



Item No.: 850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

Item No.: 850-827/002-000

M16, 17 x M12 cable grip

Item No.: 850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



IP65 enclosure; Aluminium (RAL 7035);

WxHxD (320x100x160 mm); 4 x M20, 8 x

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

Item No.: 850-834

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

WxHxD (324x100x164 mm); 4 x M20, 8 x

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



IP65 enclosure; Polyester (RAL 7032); Wx-

Item No.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flan-

Item No.: 850-815/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate



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); M16, 17 x M12 cable grip

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ge plate

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1.1.7.1 System enclosure





<u>Item No.: 850-816/002-000</u>

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

Subject to changes. Please also observe the further product documentation!