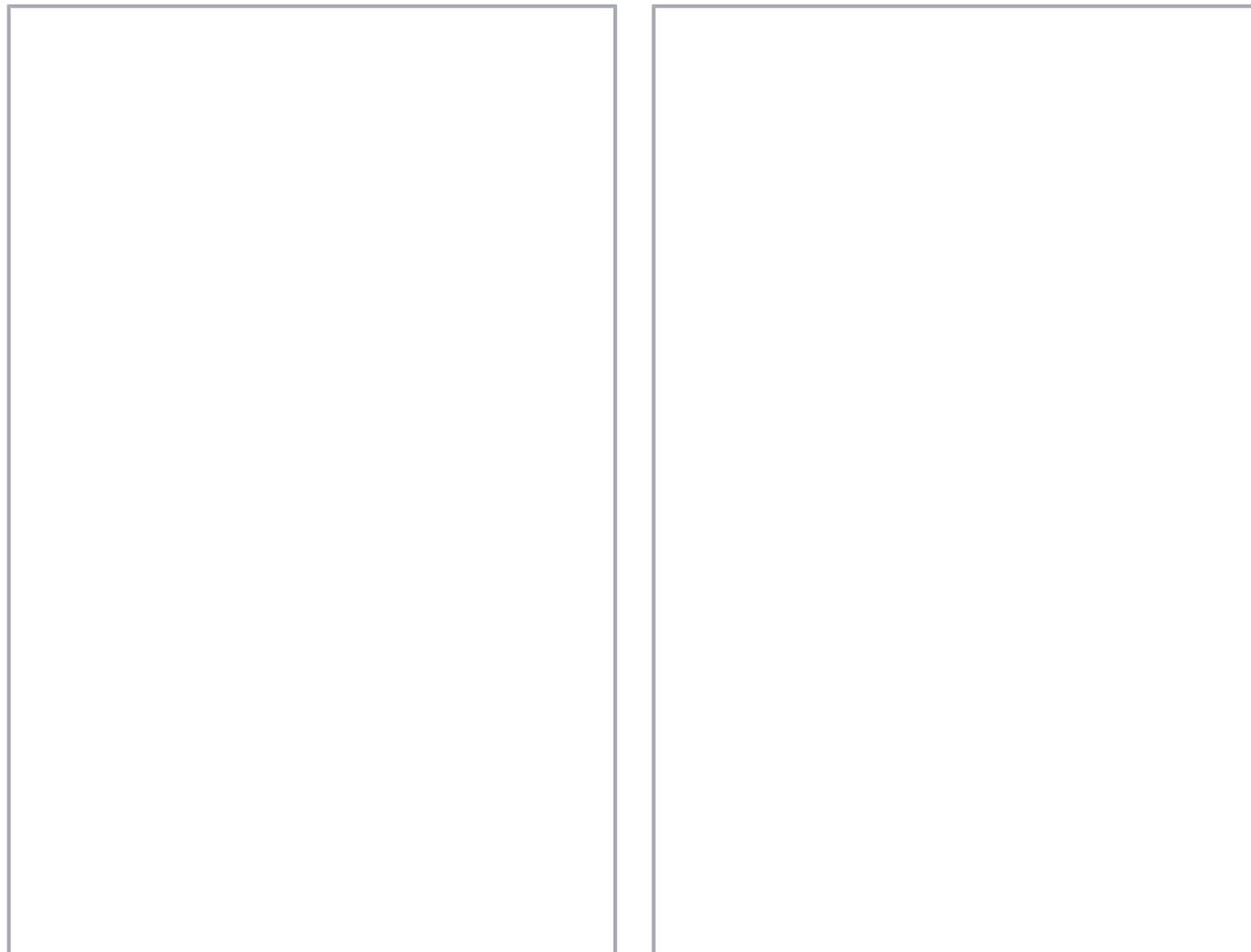


Data sheet | Item number: 750-677/040-000

4 pulse width outputs; 24 VDC; 0.2 A; 20 kHz; Adjustable; Extreme

www.wago.com/750-677_040-000



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

WAGO Corporation

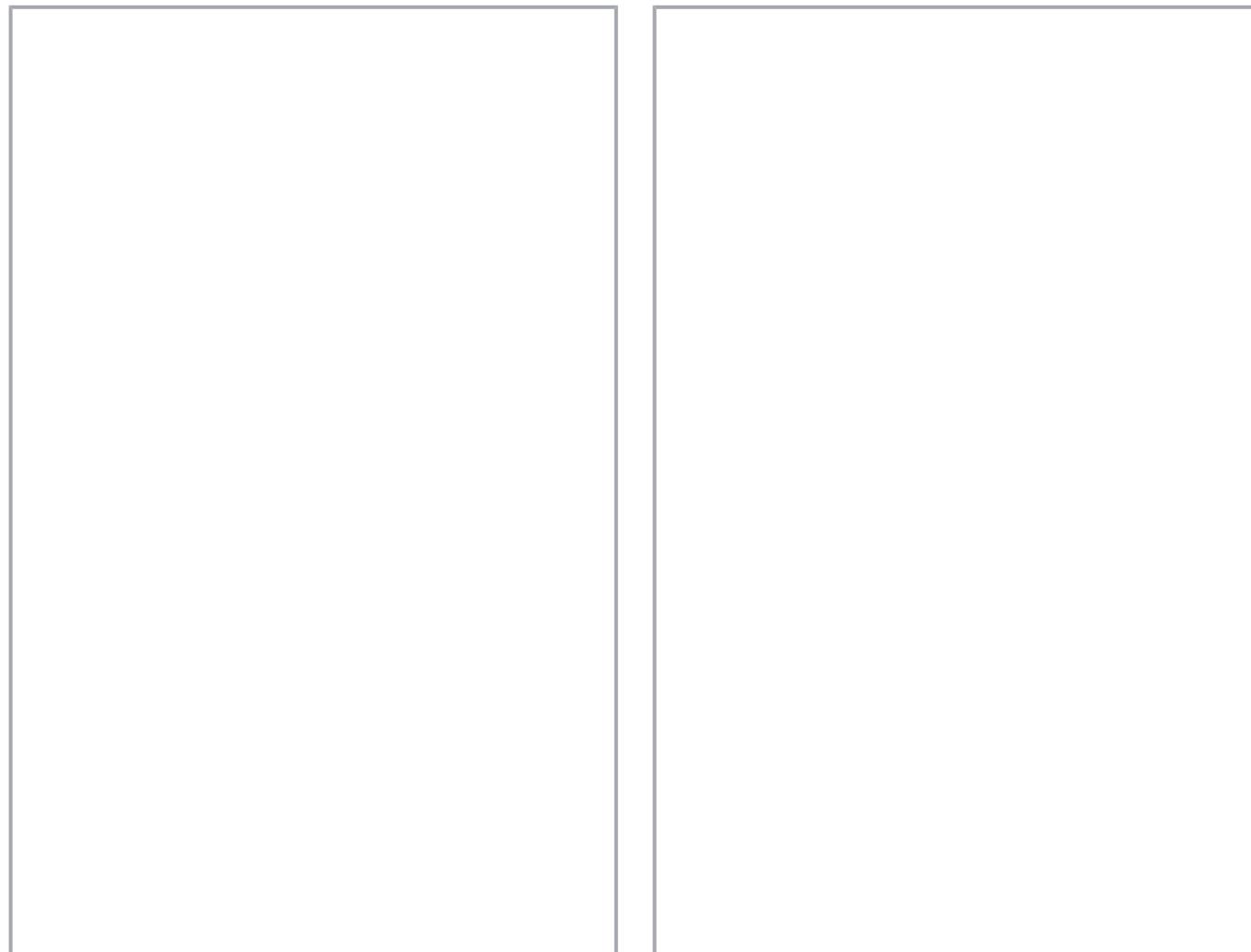
Germantown, WI 53022

Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222

Email: info.us@wago.com | Web: www.wago.us

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



Item description

This module outputs separately adjustable PWM signals at four channels. The channels can be individually configured as LSS (low-side switching) or HSS (high-side switching) and are short-circuit protected. The PWM signals are each 16 bits wide.

The module supports five operating modes. In both "PWM DC" and "PWM Frq" operating modes, all four channels may be used independently. The bridge mode can also be activated if the same operating mode is set on each channel pair (1 and 2 or 3 and 4). Both channels work synchronously and can be connected in parallel. In the other three complex operating modes, two channels functionally correlate with each other. The first channel outputs the PWM signal and the second channel a static signal ("0" or "1").

Refer to the manual ("Operating Modes" section) for all setting options and the bit signification in the process image. The "PWM DC" operating mode is set by default.

The device is ideal for operation in extreme environments thanks to:

- Extended temperature range
- Greater immunity to impulse voltages and electromagnetic interference

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

- Higher vibration and shock resistance

Data

Technical data

Number of digital outputs	4
Output current per channel	0.2 A
Output current	short-circuit-protected; 0.4 A, short-circuit-protected in bridge mode
Switching frequency (max.)	20 kHz
Diagnostics	per modul: undervoltage; per channel pair of a bridge: short circuit after Uout+ or Uout-
Pulse frequency	0 ... 20,000 Hz; integer
Duty cycle	0 ... 100 %; 11-bit resolution
Operating mode	1: PWM DC (variable duty cycle); 2: PWM Frq (variable frequency); 3: PWM Frq - Cnt; 4: Pulse Frq - Cnt; 5: PWM Pulse - Dir
Data width	4 x 16-bit data; 4 x 8-bit control/status
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	85 mA
Supply voltage (field)	24 VDC (-25 ... +30 %); via power jumper contacts (power supply via blade contact; transmission via spring contact); Derating must be observed!
Current consumption, field supply (module with no external load)	20 mA
Rated surge voltage	1 kV
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A
Derating	Derating (supply voltage): Surrounding air temperatures under laboratory conditions: (-25 ... +30 %); for -40 ... +55 °C: 24 V (-25 ... +20 %); for +55 ... +70 °C: 24 V (-25 ... +10 %); Lower limit in all temperature ranges: -27.5 % (including 15 % residual ripple)

Connection data

Connection technology: inputs / outputs	8 x CAGE CLAMP®
Connection type 1	Inputs/outputs
Solid conductor	0.25 ... 2.5 mm² / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm² / 24 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

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

Physical data

Width	12 mm / 0.472 inch
Height	100 mm / 3.937 inch
Depth	67.8 mm / 2.669 inch
Depth from upper-edge of DIN-rail	60.6 mm / 2.386 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

Color	dark gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.147 MJ
Weight	40.3 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Protection type	IP20
Pollution degree (5)	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 (standing/lying); vertical
Relative humidity (without condensation)	95 %
Relative humidity (with condensation)	Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E-DIN 40046-721-3 (except for wind-driven precipitation, water and ice formation)
Vibration resistance	Per IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155; EN 61373
Shock resistance	Per IEC 60068-2-27 (15g/11 ms/half-sine/1,000 shocks; 25g/6 ms/1,000 shocks), EN 50155, EN 61373
EMC immunity to interference	Per EN 61000-6-1, -2; EN 61131-2; marine applications; EN 50121-3-2; EN 50121-4, -5; EN 60255-26; EN 60870-2-1; EN 61850-3; IEC 61000-6-5; IEEE 1613; VDEW: 1994
EMC emission of interference	Per EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5

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

Exposure to pollutants

Per IEC 60068-2-42 and IEC 60068-2-43

Commercial data

PU (SPU)	1 Pieces
Country of origin VKOrg Germany	DE
GTIN	4066966237221
Customs tariff number VKOrg Germany	85371098990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	DNV DNV Germany GmbH	DNV-CG-0339,Aug.2021	TAA00000Y7

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Optional accessories

System housing

Enclosures

Item no.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate	www.wago.com/850-814/002-000
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Item no.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate	www.wago.com/850-815/002-000
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Subject to changes. Please also observe the further product documentation!

Item no.: 850-816/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate www.wago.com/850-816/002-000



Item no.: 850-817/002-000
IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate www.wago.com/850-817/002-000



Item no.: 850-825
IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20 www.wago.com/850-825



Item no.: 850-826
IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip www.wago.com/850-826



Item no.: 850-827
IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip www.wago.com/850-827



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 www.wago.com/850-827/002-000



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 www.wago.com/850-826/002-000



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 www.wago.com/850-828/002-000



Item no.: 850-828
IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip www.wago.com/850-828

Item no.: 850-834
IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20 www.wago.com/850-834



Item no.: 850-835
IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip www.wago.com/850-835



Item no.: 850-836
IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip www.wago.com/850-836



Shield termination

Shield clamping saddles

Item no.: 790-216
Shield clamping saddle; 21.8 mm wide; 6-16 mm diameter conductors www.wago.com/790-216



Item no.: 790-220
Shield clamping saddle; 30 mm wide; 6-20 mm diameter www.wago.com/790-220

Item no.: 790-208

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

Shield clamping saddle; 12.4 mm wide; 3-8 mm diameter conductors

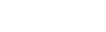
www.wago.com/790-208

Shield

	Item no.: 790-116 Shield clamping saddle; 19 mm wide; 7-16 mm diameter conductors	www.wago.com/790-116
	Item no.: 790-124 Shield clamping saddle; 27 mm wide; 6-24 mm diameter conductors	www.wago.com/790-124
	Item no.: 790-108 Shield clamping saddle; 11 mm wide; 0-8 mm diameter conductors	www.wago.com/790-108
	Item no.: 790-140 Shield clamping saddle; 43 mm wide; 22-40 mm diameter conductors	www.wago.com/790-140

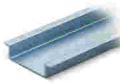
Carrier rail

Mounting accessories

	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	www.wago.com/210-197
	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	www.wago.com/210-198
	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	www.wago.com/210-504
	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	www.wago.com/210-505
	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	www.wago.com/210-506
	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	www.wago.com/210-508
	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	www.wago.com/210-113
	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	www.wago.com/210-118
	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	www.wago.com/210-112
	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	www.wago.com/210-114
	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";	www.wago.com/210-115

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

silver-colored



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 www.wago.com/210-196

Marking accessories

Accessories

Item no.: 750-103

Group marker carrier

www.wago.com/750-103

Item no.: 750-107

Group marker carrier

www.wago.com/750-107

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 /000-006

www.wago.com/2009-145

Item no.: 2009-145

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white www.wago.com/2009-145

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

www.wago.com/2009-145
/000-002

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 /000-007

www.wago.com/2009-145

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

www.wago.com/2009-145
/000-005

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

www.wago.com/2009-145
/000-012

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

www.wago.com/2009-145
/000-023

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

www.wago.com/2009-145
/000-024



Item no.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/248-501
/000-006

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

	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray	www.wago.com/248-501/000-007
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow	www.wago.com/248-501/000-002
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange	www.wago.com/248-501/000-012
	Item no.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/248-501
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green	www.wago.com/248-501/000-017
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red	www.wago.com/248-501/000-005
	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet	www.wago.com/248-501/000-024
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green	www.wago.com/248-501/000-023

Downloads

Documentation

Manual

System Manual XTR Basic conditions and recommendations for higher operational safety	V 1.3.1 2021 Dec 2	pdf 6.4 MB	Download
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System Manual Series 750/753 Online HTML	URL	Download
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System Description

System Manual XTR Basic conditions and recommendations for higher operational safety	V 1.3.1 2021 Dec 2	pdf 6.4 MB	Download
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750 XTR Series I/O-System – General Product Information	pdf 743.5 kB	Download
Additional Information		
Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB

Installation Notes

Product family

Couplers & I/O modules: XTR

I/O-System 750 XTR: Dort automatisieren, wo jedes andere System an seine Grenzen stößt – und das zuverlässig und wirtschaftlich! XTR – dieses Kürzel im Systemnamen steht für extremen Schutz vor klimatischen Einflüssen, Schwingungen, Erschütterungen und Überspannungen.

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