

Data sheet | Item number: 753-638

2 up/down counter; 16 bits; 500 Hz

www.wago.com/753-638



Color:



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

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Item description

This module has two counters that count 24 VDC binary pulses independently of one another. The data is then transmitted to the control via the fieldbus.

The counters can be set or reset with the control bytes. A counter lock-out is also possible.

The control bytes also determine the counting direction.

Data

Notes

Note

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



Pluggable connectors and coding fingers (753 Series) are not included.

Technical data

Number of counters	2
Counter depth	16 bits
Input filter	0.2 ms
Switching frequency (max.)	500 Hz
Signal characteristics	Differential
Voltage range for signal (0)	-3 ... +5 VDC (per EN 61131 Type 1)
Voltage range for signal (1)	15 ... 30 VDC (per EN 61131 Type 1)
Minimum pulse width (0, 1)	1 ms
Common-mode voltage (max.)	500 V
Data width	2 x 16-bit data; 2 x 8-bit control/status
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	10 mA
Supply voltage (field)	24 VDC (-15 ... +20 %); via power jumper contacts (power supply via blade contact; transmission via spring contact)
Current consumption, field supply (module with no external load)	8 mA
Isolation	500 V system/field
Indicators	LED (A-D) green: Function/Status DI 1, DI 2
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2

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	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	12 mm / 0.472 inches
Height	100 mm / 3.937 inches
Depth	69.8 mm / 2.748 inches

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



Depth from upper-edge of DIN-rail	62.6 mm / 2.465 inches
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Mechanical Data

Mounting type	DIN-35 rail
Pluggable connector	Pluggable

Material Data

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	1.162 MJ
Weight	43.9 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	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 61000-6-4
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

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



ETIM 7.0	EC001601
Recupel Type	
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918817646
Customs tariff number	85389099990

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 25550-51-0 7439-92-1
REACH Candidate List Substance	4-Methyl-1,2-cyclohexanedicarboxylic anhydride 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)	0f1261a4-8d00-479d-810a-f96bf1a0dcc3
SCIP notification number (Belgium)	07bceb2d-a961-4d58-a7bf-7eda07bc316b
SCIP notification number (Bulgaria)	199aefce-7590-4e41-87a8-de240ec32aab
SCIP notification number (Czech Republic)	283c7616-e67f-4800-923e-af12b2c6e112
SCIP notification number (Denmark)	69ca3b3e-18a1-40ed-9d65-f0bae3027baa
SCIP notification number (Finland)	154d8bb1-2317-4a41-bae2-6b877becd3e1
SCIP notification number (France)	c6e54310-0151-4a56-983d-e5480b503772
SCIP notification number (Germany)	8d78ab43-dc18-4b48-ad9a-bab2c420291e
SCIP notification number (Hungary)	4d34977a-606d-4dd4-b677-29c8fd53c8f1
SCIP notification number (Italy)	5f53c6df-c766-4a67-b08a-c07b5a0917ce
SCIP notification number (Netherlands)	8cb945e5-7982-4464-a37e-f4f36c587357
SCIP notification number (Poland)	98ac07ff-5b3d-441a-a318-08f4d8ac8ea9
SCIP notification number (Romania)	83c334d0-3f65-4c94-b04c-9a92cc4b8451
SCIP notification number (Sweden)	af24d53e-6408-41a7-8c1e-1d1ed85c4b70

Approvals / Certificates

General approvals

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

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Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	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-CTM750

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for hazardous areas

Logo	Approval	Additional Approval Text	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 Zertifizierungsstelle	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_WAGO22UKEX003X_ec
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

Required accessories

Pluggable connector

Male connector/plug		
Item no.: 753-110 Plug		www.wago.com/753-110

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



Optional accessories

Pluggable connector

Coding

Item no.: 753-150 753 Series coding elements	www.wago.com/753-150
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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
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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
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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
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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
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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
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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
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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
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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
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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
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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
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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	www.wago.com/210-115
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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
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Shield termination

Shield clamping saddles

Item no.: 790-116

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



Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm

www.wago.com/790-116**Item no.: 790-124**

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

www.wago.com/790-124**Item no.: 790-108**

Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm

www.wago.com/790-108**Item no.: 790-140**

Shield clamping saddle; diameter of compatible conductor

www.wago.com/790-140**Item no.: 790-216**

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

www.wago.com/790-216**Item no.: 790-220**

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

www.wago.com/790-220**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

www.wago.com/790-208**Marking accessories**

Marker carrier

Item no.: 750-103

Group marker carrier

www.wago.com/750-103

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

www.wago.com/2009-145/000-006**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

www.wago.com/2009-145/000-007**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

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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
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
Item no.: 750-100 Marker card; as a DIN A4 sheet; plain	www.wago.com/750-100
Group marker carrier	
Item no.: 750-106 Group marker carrier	www.wago.com/750-106
Supply module	
Supply module	
Item no.: 750-601 Power Supply; 24 VDC; fuse holder	www.wago.com/750-601
Item no.: 750-610 Power Supply; 24 VDC; fuse holder; Diagnostics	www.wago.com/750-610

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



Item no.: 750-602 Power Supply; 24 VDC	www.wago.com/750-602
Item no.: 750-612 Power Supply; 0 ... 230 V AC/DC	www.wago.com/750-612
Item no.: 753-612 Power Supply; 0 ... 230 V AC/DC	www.wago.com/753-612
Item no.: 753-602 Power Supply; 24 VDC	www.wago.com/753-602
System housing	
System enclosure	
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
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
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	

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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

Downloads

Documentation

Manual

System Manual WAGO I/O System 750/753
Decentralized Automation Technology V 3.3.3
2023 年8月29日 pdf 8.7 MB [Download](#)

Product Manual 2-channel up/down counter
24VDC / 16-Bit / 500Hz V 1.0.3
pdf 309.2 kB [Download](#)

System Manual Series 750/753
Online HTML URL [Download](#)

Bid Text

753-638
X81 - Datei 2019 年2月19日
xml 4.8 kB [Download](#)

753-638
doc - Datei 2017 年10月9日
doc 26.6 kB [Download](#)

Instruction Leaflet

CCC Ex (Additional information)
WAGO-I/O-SYSTEM *750-****/* 2023 年4月26日
pdf 163.6 kB [Download](#)

Additional Information

Disposal and Recycling V 1.1.0
Electrical and electronic equipment, Batteries, Packaging 2022 年8月18日
pdf 2.2 MB [Download](#)

System Description

Overview on WAGO-I/O-SYSTEM 750 approvals
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750/753 Series I/O-System – General Product Information

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CAD/CAE-Data

CAD data

2D/3D Models 753-638

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CAE data

EPLAN Data Portal 753-638

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WSCAD Universe 753-638

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Environmental Product Compliance

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2 up/down counter; 16 bits; 500 Hz

Installation Notes

Product family

WAGO I/O System 750/753

[Show all products from the family](#)

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