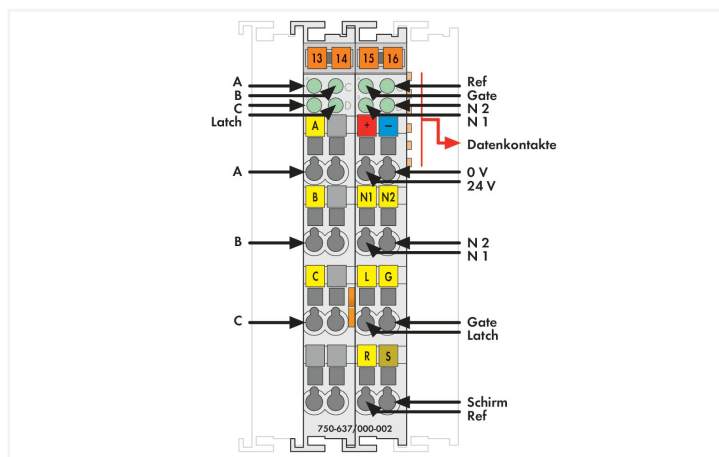
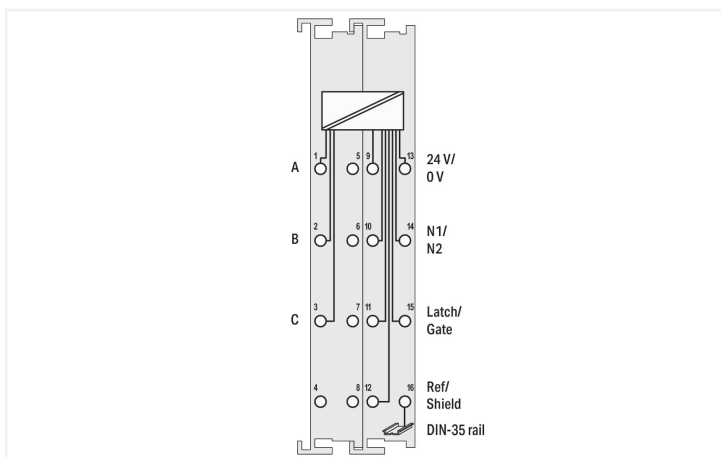
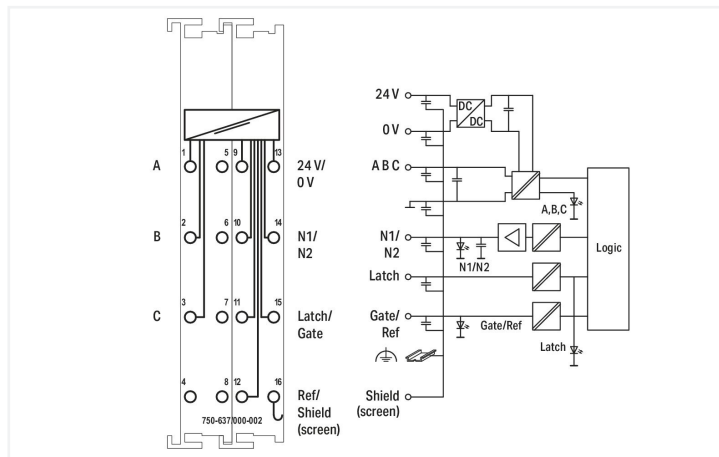


Data Sheet | Item Number: 750-637/000-002
 Incremental encoder interface; 24 VDC; Single-ended; 32 bits

<https://www.wago.com/750-637/000-002>



Color: ■ light gray



This module is an interface for any incremental encoder with standard connections.

A counter with a quadrature decoder as well as a latch for the zero impulse can be read or enabled by the controller. The module's control can set the counter. Depending on the operating mode, the counter value is added to the latch register on a positive edge at the "C" or "Latch" input.

The rate (increments/ms) is automatically acquired and can also be transmitted to the controller as an alternative to the latch value.

A counter lock-out is possible using the "Gate" input. Input "Ref" can be used to activate the initial point "C" function.

The cam outputs N1 and N2 indicate whether the counter value is within a defined range of values. The range can be adjusted.

The module must be powered using an external 24 VDC power supply, from which power to the transmitter (Ui, U0) can also be derived.

The shield directly connects to the DIN-rail.

Technical data

Counter depth	32 bits
Encoder connection	A; B; C (single-ended inputs)
Supply current (encoder) max.	300 mA
Zero impulse (latch)	32 bits
Quadrature decoder	4x evaluation
Input current (typ.)	Latch 5 mA, Gate 7 mA, Ref. 7 mA
Output current per channel	0.5 A
Output current	short-circuit-protected
Output voltage	24 VDC
Voltage range for signal (0)	-3 ... +5 VDC
Voltage range for signal (1)	15 ... 30 VDC
Data width	1 x 32-bit data 2 x 8-bit control/status
Limit frequency	250 kHz
Commands	Reading, setting, activating
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	110 mA

Technical data

Current consumption, field supply (module with no external load)	35 mA
Isolation	500 V system/field
Indicators	LED (A-D/A-D) green: A, C, B, Latch, Gate, N1, Ref, N2

Connection data

Connection technology: inputs/outputs	16 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

Physical data

Width	24 mm / 0.945 inches
Height	100 mm / 3.937 inches
Depth	69.8 mm / 2.748 inches
Depth from upper-edge of DIN-rail	62.6 mm / 2.465 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	2.174 MJ
Weight	99.8 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 IEC 61131-2
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Mounting position	horizontal (standing/lying); vertical
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 61000-6-4, marine applications
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
GTIN	4045454589905
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)	12436877-e676-4417-b5da-a031704dbaaf
SCIP notification number (Belgium)	9ba86a6b-8a5d-45ad-9270-1728cc2a4632
SCIP notification number (Bulgaria)	471642da-a89d-4c6e-8cce-5f37d447b7b1
SCIP notification number (Czech Republic)	2316f21a-a5b6-40bb-90eb-8e478be2d908
SCIP notification number (Denmark)	6b36c4ce-5118-4329-9333-b0e337e9c3ed
SCIP notification number (Finland)	f499a711-70ac-4d37-8002-708aab87b4bf
SCIP notification number (France)	da166ac7-775a-41ce-b9d2-e004ca71f13b
SCIP notification number (Germany)	80a2cc9f-d6af-4031-951d-c0f297e376cb
SCIP notification number (Hungary)	79756138-0b6c-4a5d-8656-c4e243ea9864
SCIP notification number (Italy)	b8e06c8e-acec-4099-a9b8-dca12ce311d8
SCIP notification number (Netherlands)	473b3bf8-adb8-47c9-88f1-3929fbf11097
SCIP notification number (Poland)	c60b08ef-7ff0-4601-8c40-ab834dc66401
SCIP notification number (Romania)	16d5f7dd-adac-465f-afbd-7a3d988e7968
SCIP notification number (Sweden)	561eaf5e-afd3-4c15-aa15-9e8bee8b1094

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-DAM750
UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
BSH Bundesamt fuer See- schifffahrt und Hydrogra- phie	-	1104

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 Sec.1

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 750-637/000-002 ↓

Documentation

Manual			
Product Manual Incremental encoder interface	V 1.6.1 07.07.2021	pdf 3275.85 KB	↓
System Manual Series 750/753			↓

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			
750-637/000-002	09.10.2017	doc 28.50 KB	↓
750-637/000-002	19.02.2019	xml 5.81 KB	↓

Instruction Leaflet		
CCC Ex (Additional information)	26.04.2023	pdf 159.76 KB ↓

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 750-637/000-002	EPLAN Data Portal 750-637/000-002
	WSCAD Universe 750-637/000-002
	ZUKEN Portal 750-637/000-002

Device Files

Device Driver			
WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 10.09.2014	zip 4721.96 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 DIN-rail

1.1.1.1 Mounting accessories











<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>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</p>	<p>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</p>

1.1.2 Marking


1.1.2.1 Group marker carrier

<p>Item No.: 750-106 Group marker carrier</p>
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1.1.2.2 Marker






 <p>Item No.: 750-100 Marker card; as a DIN A4 sheet; plain</p>	<p>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</p>	<p>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</p>	<p>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</p>
<p>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</p>	<p>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</p>	<p>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</p>	<p>Item No.: 2009-145 Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>
<p>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</p>	 <p>Item No.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue</p>	 <p>Item No.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray</p>	 <p>Item No.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green</p>
 <p>Item No.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green</p>	 <p>Item No.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange</p>	 <p>Item No.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red</p>	 <p>Item No.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet</p>
 <p>Item No.: 248-501 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white</p>	 <p>Item No.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow</p>		

1.1.2.3 Marker carrier

 <p>Item No.: 750-103 Group marker carrier</p>
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1.1.3 Shield termination

1.1.3.1 Shield clamping saddles

 <p>Item No.: 790-108 Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm</p>	 <p>Item No.: 790-208 Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm</p>	 <p>Item No.: 790-116 Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm</p>	 <p>Item No.: 790-216 Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm</p>
 <p>Item No.: 790-124 Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm</p>	 <p>Item No.: 790-220 Shield clamping saddle; 30 mm wide; 6 ... 20 mm</p>	 <p>Item No.: 790-140 Shield clamping saddle; diameter of compatible conductor</p>	

1.1.4 System enclosure

1.1.4.1 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); Wx-
 HxD (164x100x164 mm); 9 x M12, 4 x M20



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);
 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 flan-
 ge plate



Item No.: 850-815/002-000
 IP65 enclosure; Sheet steel (RAL 7035);
 WxHxD (300x120x200 mm); without flan-
 ge plate



Item No.: 850-816/002-000
 IP65 enclosure; Sheet steel (RAL 7035);
 WxHxD (400x120x200 mm); without flan-
 ge plate



Item No.: 850-817/002-000
 IP65 enclosure; Sheet steel (RAL 7035);
 WxHxD (600x120x200 mm); without flan-
 ge plate