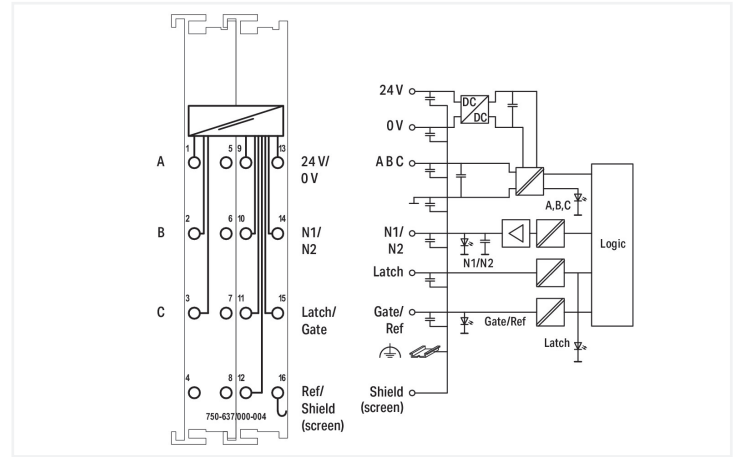
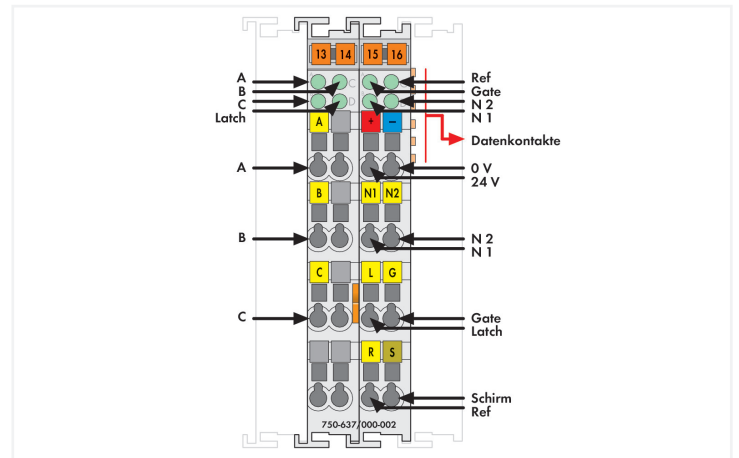
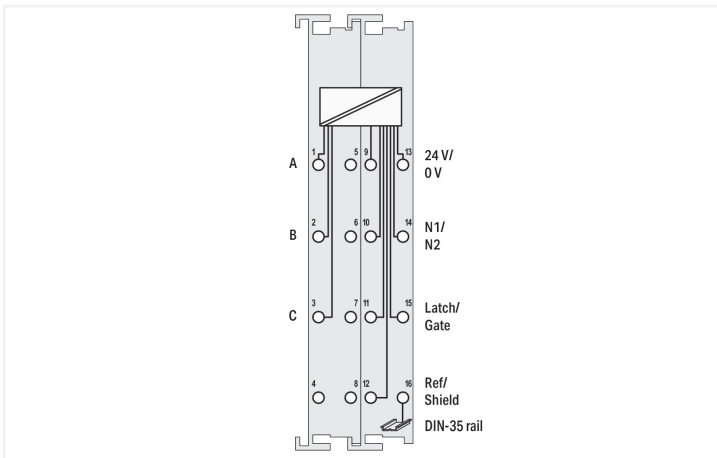


**Data Sheet | Item Number: 750-637/000-004**  
 Incremental encoder interface; 24 VDC; Single-ended; 32 bits; Cam output

<https://www.wago.com/750-637/000-004>



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	11 x CAGE CLAMP®
Connection type 1	Inputs/outputs
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 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	2.464 MJ
Weight	98 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 left, horizontal right, horizontal up, horizontal down, 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, 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 <sub>2</sub> S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO <sub>2</sub> 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 9.0	EC001601
ETIM 8.0	EC001601
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454393991
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	Lead monoxide 4-Methyl-1,2-cyclohexanedicarboxylic anhydride Diboron trioxide Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	9dc5f298-f7e1-4272-89d9-431032128f47
SCIP notification number (Belgium)	35b1a5ff-d19c-4fac-98ac-54a969454000
SCIP notification number (Bulgaria)	852fbcda-fe12-4339-9ae9-fca809ddb178
SCIP notification number (Czech Republic)	f267da06-f05a-47fa-99bc-c579b11f0089
SCIP notification number (Denmark)	9faf1ca7-9b8b-4d14-b0d2-ab8765994f1c
SCIP notification number (Finland)	26627c78-33b2-4fe3-a14c-93f609e2ce27
SCIP notification number (France)	0b351887-7950-4919-a855-beca8c7d4bd4
SCIP notification number (Germany)	20f8cf6c-61e5-426f-b371-59c97f8d8e14
SCIP notification number (Hungary)	235e6521-c077-479d-a0f1-e19860e64a54
SCIP notification number (Italy)	671280ad-c1db-4d5d-af45-2d576c0decb8
SCIP notification number (Netherlands)	5cdf312f-e2b7-43bb-a8bb-8a4b07a04048
SCIP notification number (Poland)	1051fbde-b8ef-488b-b01f-721e6b62c887
SCIP notification number (Romania)	4177207f-9fd7-4e0d-8757-3034d0085a0e
SCIP notification number (Sweden)	850b71bf-694b-4cc5-ad73-7e185195bcc5

### 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 Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199

#### 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

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 750-637/000-004	↓
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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

750-637/000-004	19.02.2019	xml 5.84 KB	↓
750-637/000-004	09.10.2017	doc 28.50 KB	↓

Instruction Leaflet

CCC Ex (Additional information)	26.04.2023	pdf 159.76 KB	↓
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**CAD/CAE-Data**

CAD data	CAE data
2D/3D Models 750-637/000-004	EPLAN Data Portal 750-637/000-004
	WSCAD Universe 750-637/000-004
	ZUKEN Portal 750-637/000-004

**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><b>Item No.: 210-196</b> Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored</p>	<p><b>Item No.: 210-198</b> Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored</p>	<p><b>Item No.: 210-508</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored</p>	<p><b>Item No.: 210-197</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored</p>
<p><b>Item No.: 210-506</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored</p>	<p><b>Item No.: 210-114</b> Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored</p>	<p><b>Item No.: 210-118</b> Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored</p>	<p><b>Item No.: 210-115</b> 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><b>Item No.: 210-112</b> 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><b>Item No.: 210-504</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored</p>	<p><b>Item No.: 210-113</b> Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored</p>	<p><b>Item No.: 210-505</b> 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><b>Item No.: 750-106</b> Group marker carrier</p>
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1.1.2.2 Marker

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

1.1.2.3 Marker carrier

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

1.1.3.1 Shield clamping saddles

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