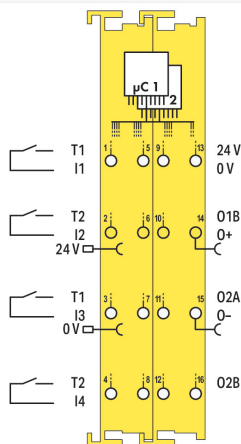
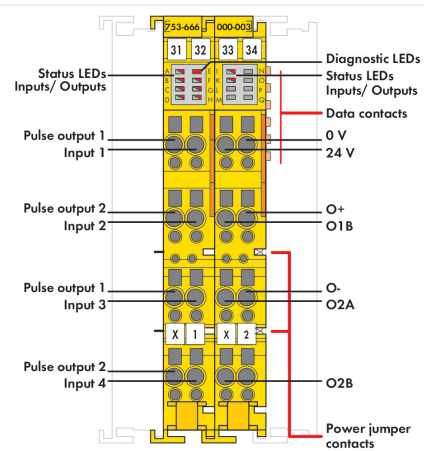
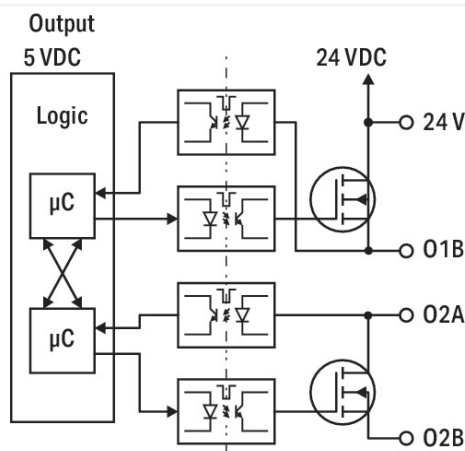
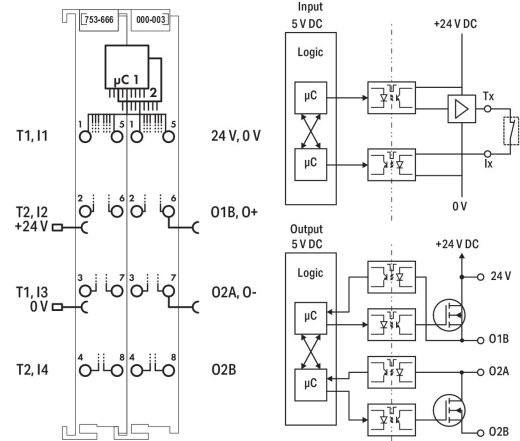
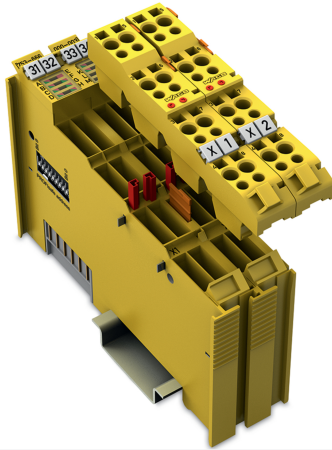


Data Sheet | Item Number: 753-666/000-003

Fail-safe 4/2 channel digital input/output; 24 VDC; 10 A; PROFIsafe V2.0 iPar

<https://www.wago.com/753-666/000-003>



The 753-666/000-003 Module is equipped with two power outputs (O1 ... O2) and four clock sensitive inputs (I1 ... I4). The sensors can be supplied directly with 24 V, or fed by two differently clocked outputs (T1 ... T2).

The inputs connect potential-free, emergency-off switches with contacts, safety interlock switches, mode selectors, as well as both safety sensors and semiconductor outputs (e.g., light barriers, PLC outputs). The power outputs switch both DC13 resistive and inductive loads with up to a 2A-rated current without requiring any additional external circuit.

The power outputs operate in both bipolar (high-side/low-side switching) and unipolar (common potential on one side of the load) modes.

The module monitors short circuits, cross circuits and 24 V power supply from separate sources. Both the monitoring and additional safety-relevant parameters (e.g., operating modes, switching off test pulses, discrepancy or filter times) can be configured via WAGO-I/O-CHECK.

The configuration tool can be conveniently integrated into engineering systems supporting both CC2 and CC3 tool calling interfaces (TCI).

When exchanging modules, parameters are automatically downloaded into the control unit via PROFIsafe-compatible iPar server – depending on settings. The PROFIsafe address can be set using the DIP switch on the side of the module, or via WAGO-I/O-CHECK.

The module supports both PROFIsafe V1 (PROFIBUS) and V2 (PROFIBUS, PROFINET) protocols.

Individual input modules can be arranged in any combination when configuring the fieldbus node.

To protect the module against impulse voltages (over-voltage protection per IEC 61000-4-5), the 750-626 Filter Module or an external surge filter must be used for the 24 V supply voltage.

Additional information can be found in the product manual (available in German and English).

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

General technical data	
Protocols	PROFIsafe V2
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Indicators	LED (A-D) green/red: Status/Error I1 ... I4; LED (I-K) green/red: Status/error O1 ... O2; LED (E) red: Group error; LED (F-H) green/red: Diagnostics
Total number of channels (module)	6
Pluggable connector	pluggable

Digital Inputs	
Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	24 VDC
Sensor connection	4 x (Fail-safe input with test pulse)
Input characteristic	clock sensitive
Input characteristic	Type 1
Input current per channel for signal (1) typ.	2.2 mA
Signal frequency (max.)	50 Hz

Digital Clock Outputs	
Signal type	Digital
Signal type (voltage)	24 VDC
Output current per channel	10 A

Digital outputs	
Number of digital outputs	2
Signal type	Digital
Signal type (voltage)	24 VDC
Output current	short-circuit-protected
Output current (module)	20 A
Actuator connection	2 x (fail-safe output with test pulse)
Output circuit design	Power outputs
Switching frequency (max.)	50 Hz; Resistive load
Switching frequency (max.) (2)	0.1 Hz; Inductive load

Technical data

Supply voltage (system)	5 VDC; via data contacts
Current consumption (system supply)	190 mA
Supply voltage (field)	24 VDC (-15 ... +30 %); via power jumper contacts (power supply via blade contact; transmission (field side supply voltage only) via spring contact)
Current consumption, field supply (module with no external load)	30 mA
Isolation	500 V system/field
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A

Functional Safety

Achievable safety classes	SIL 3; Category 4, PL e
Safety standards	IEC 61508-1 ... -7; EN ISO 13849-1; EN 62061
Test pulse duration (max.)	500 ms
Test pulse duration (min.)	0 ms

Connection Data

Connection technology: I/O	16 x CAGE CLAMP®
Connection type	Inputs/outputs
Solid conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm² / 28 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data

Width	24 mm / 0.945 inches
Height	100 mm / 3.937 inches
Depth	69 mm / 2.717 inches
Depth from upper-edge of DIN-rail	61.8 mm / 2.433 inches

Mechanical data

Mounting type	DIN-35 rail
Pluggable connector	pluggable

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	1.632 MJ
Weight	96.1 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 left, horizontal right, horizontal top, 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



Environmental requirements	
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)
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4050821255482
Customs tariff number	85371098990
End of Sale	2023-06-30
End of Production	2023-12-31
End of Delivery	2024-03-01
End of Service and Repair	2026-03-01

Product Classification	
UNSPSC	32151705
eCl@ss 10.0	27-24-26-04
eCl@ss 9.0	27-24-26-04
ETIM 9.0	EC001599
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8 79-94-7 80-05-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 4,4'-isopropylidenediphenol Diboron trioxide Lead Lead monoxide Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Bulgaria)	aa14c5d3-2a4b-426c-a618-fea5cd8ad066
SCIP notification number (Czech Republic)	0d67a168-5234-4558-9710-7f50cb4db8cd

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
					
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-DOM750	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
			UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Approvals for hazardous areas

   			      		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
BSH Bundesamt fuer Seeschiff-fahrt und Hydrographie	-	1104	ATEX TUEV Nord Cert GmbH	EN 60079-0	TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc)
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194	CCCEX CQST/CNEX	CNCA-C23-01	2020312310000213 (Ex ec IIC T4 Gc)
PRS Polski Rejestr Statków	-	TE/1101/880590/23	IECEx TUEV Nord Cert GmbH	IEC 60079-0	IECEx TUN 14.0035 X (Ex ec IIC T4 Gc)
RINA RINA Germany GmbH	-	ELE343521XG001	INMETRO TÜV Rheinland do Brasil Lt-da.	IEC 60079-0	TÜV 12.1297 X
			UKEx WAGO GmbH & Co. KG	EN 60079-0	UKCA_WA GO22UKEX003X_ec

Approvals for functional safety

					
Approval	Standard	Certificate Name			
Prod. Safety, Funct. Safety TUEV Rheinland Industrie Service GmbH	-	No. 968_FSP 2387_01_25			

Downloads

Environmental Product Compliance	
Compliance Search	
Environmental Product Compliance 753-666/000-003	

Documentation					
Manual			System Description		
Product Manual 4FDI / 2FDO 10A / 24VDC PROFIsafe V2 iPar	V 1.6.0 13.03.2025	pdf 2799.30 KB	750/753 Series I/O-System – General Product Information	pdf 953.35 KB	
System Manual Series 750/753			Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	
			Functional Safety – General Product Information	pdf 217.82 KB	

Bid Text			Instruction Leaflet		
753-666/000-003	19.02.2019	xml 7.52 KB	CCC Ex (Additional information)	26.04.2023	pdf 159.76 KB
753-666/000-003	09.10.2017	doc 31.50 KB	Gebrauchs- und Montageanleitung		pdf 269.86 KB

Application Notes					
Application note SIEMENS					
Using iPar-Server option with WAGO PROFIsafe modules (a114802)	V 14.1 07.02.2023	zip 130043.55 KB			

CAD/CAE-Data					
CAD data			CAE data		
2D/3D Models 753-666/000-003			EPLAN Data Portal 753-666/000-003		
			WSCAD Universe 753-666/000-003		
			ZUKEN Portal 753-666/000-003		

Engineering-Software					
Configuration and Commissioning Software					
Safety Editor (SEDI) / 750-66x	3.5.1.0 25.01.2024	zip 19060.65 KB			

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 Required Accessories

1.1.1 Pluggable connector

1.1.1.1 Male connector/plug



[Item No.: 753-120](#)
Plug; Safety

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 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.: 210-197](#)
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; 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



[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.: 210-113](#)
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

1.2.2 Marking

1.2.2.1 Group marker carrier



[Item No.: 750-107](#)
Group marker carrier

1.2.2.2 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

1.2.2.2 Marker

 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 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			

1.2.2.3 Marker carrier

 Item No.: 750-103 Group marker carrier
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1.2.3 Pluggable connector

1.2.3.1 Coding

 Item No.: 753-150 753 Series coding elements
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1.2.4 Shield termination

1.2.4.1 Shield clamping saddles

 Item No.: 790-108 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 mm	 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	

1.2.5 Supply module

1.2.5.1 Supply module

 Item No.: 750-612 Power Supply; 0 ... 230 V AC/DC	 Item No.: 753-612 Power Supply; 0 ... 230 V AC/DC	 Item No.: 750-602 Power Supply; 24 VDC	 Item No.: 753-602 Power Supply; 24 VDC
 Item No.: 750-601 Power Supply; 24 VDC; fuse holder	 Item No.: 750-610 Power Supply; 24 VDC; fuse holder; Diagnostics		

1.2.6 System enclosure

1.2.6.1 System enclosure

 Item No.: 850-825 IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (160x100x160 mm); 9 x M12, 4 x M20	 Item No.: 850-826 IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	 Item No.: 850-827 IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	 Item No.: 850-828 IP65 enclosure; Aluminium (RAL 7032); Wx-HxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip
 Item No.: 850-826/002-000 IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	 Item No.: 850-827/002-000 IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	 Item No.: 850-828/002-000 IP65 enclosure; Aluminium (RAL 7035); Wx-HxD (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); Wx-HxD (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); Wx-HxD (200x120x200 mm); without flange plate	 Item No.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (300x120x200 mm); without flange plate
 Item No.: 850-816/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (400x120x200 mm); without flange plate	 Item No.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); Wx-HxD (600x120x200 mm); without flange plate		

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

Current addresses can be found at: www.wago.com