

The 750-666/000-004 Module is equipped with two power outputs (O1 ... O2) and four clock sensitive inputs (I1 ... I4). The sensors can be powered either directly via 24 VDC or via the two pulse-timed 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. Power output O1 can be operated in high-side switching mode, while power output O2 can be used in high-side or low-side switching mode. Both power outputs are single-channel and can be combined to a two-channel output. The module monitors short circuits, cross circuits and 24 V power supply from separate sources. Monitoring and other safety-relevant parameters – such as operating modes, disabling of test pulses, discrepancy times, 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 located on the side of the module, or via *WAGO-I/O-CHECK*.

The module supports PROFIsafe protocols V2.4 (PROFIBUS, PROFINET) and V2.6 (PROFINET).

Field and system levels are electrically isolated.

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

To protect the 24 VDC power supply against surge and burst (to IEC 61000-6-7 and for marine applications), a WAGO filter module or a suitable external interference suppression filter must be used. Additional information can be found in the product manual (available in German and English).

The 750-666/000-004 Module was evaluated by UL in accordance with UL/CSA 61010-1, UL/CSA 61010-2-201 and UL 121201, CSA-C22.2 No. 213.

The functional safety evaluation was performed by TÜV Rheinland in compliance with the specified standards.

Additional information and examples can be found in the WAGO Download Center (link: [Learning Material | WAGO Download Center](#)).

General technical data

Protocols	PROFIsafe V2.6 (PROFINET) and V2.4 (PROFIBUS, PROFINET)
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	fixed

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 per IEC 61131
Input current per channel for signal (1) typ.	3 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	per channel: O1 ... O2: 2 A ("Pilot Duty" / DC13); 10 A other applications; Derating output current per channel: 10 A at 40 °C; 6 A at 55 °C (see manual for details)
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
Switching frequency (max.) (3)	0.1 Hz; Capacitive load

Technical data

Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	120 mA
Supply voltage (field)	24 VDC, SELV/PELV (-25 ... +30 %); For digital inputs; Power outputs: SELV/PELV 24 VDC (-25 ... +20 %) for inductive loads ("Pilot Duty" / DC13); SELV/PELV 24 VDC (-25 ... +30 %) for other applications; Current consumption from power outputs: 3 mA + load current
Current consumption, field supply (module with no external load)	30 mA
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 (two-channel); SIL 2; Category 2; PL _d (one-channel)
Safety standards	IEC 61508-1 ... -7; EN ISO 13849-1; EN 62061
Interface types according to ZVEI (inputs)	Drain; A, C0, C1, C2, C3
Interface types per ZVEI CB24I (outputs)	Source; C0, C1, C2, C3, D0, D1, D2, D3
Test pulse duration (max.)	500 ms
Test pulse duration (min.)	0 ms

Connection Data

Connection technology: I/O	16 x CAGE CLAMP®
Connectable conductor materials	Copper
Connection type	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	67.8 mm / 2.669 inches
Depth from upper-edge of DIN-rail	60.6 mm / 2.386 inches

Mechanical data

Mounting type	DIN-35 rail
Pluggable connector	fixed

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	1.909 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, EN 61000-6-7 (FS)
EMC emission of interference	per EN 61000-6-3, -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

PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4066966333879
Customs tariff number	85371098990

Product Classification

UNSPSC	32151705
ETIM 9.0	EC001599
ETIM 10.0	EC001599
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 693-98-1 7439-92-1 80-05-7
REACH Candidate List Substance	2-methylimidazole 4,4'-isopropylidenediphenol 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)	6af2d758-2b3a-4960-80db-cc4e1ae6895f
SCIP notification number (Belgium)	f418157e-c87b-4add-9e83-35463f448cc9
SCIP notification number (Bulgaria)	cfa2f719-d15a-4b04-9c73-43931d859adc
SCIP notification number (Czech Republic)	9e22e59d-be64-4543-a533-3058819c080e
SCIP notification number (Denmark)	abfd9462-3ace-42a3-afe6-fb396e9bda9f
SCIP notification number (Finland)	d052143f-8ab9-47b8-85ef-efbba2adb678
SCIP notification number (France)	9efaddc2-00da-4938-9731-b97b3d6eb291
SCIP notification number (Germany)	ef388db8-34de-4da8-8b70-b8f69ee9de49
SCIP notification number (Hungary)	69404dcc-3abc-40cb-bdac-c8f0032d3dae
SCIP notification number (Italy)	62380cf3-6459-47b7-ba00-f8ed3db41f94
SCIP notification number (Netherlands)	edf4f24a-f457-4b8f-8e53-c313704049b6
SCIP notification number (Poland)	17bee4c3-1207-4c17-9064-a7b8213dcf80
SCIP notification number (Romania)	c3a3cda5-68d3-4664-9921-440e4fa4cf02

Environmental Product Compliance

SCIP notification number (Sweden)

e05594c9-e607-4d27-9f49-2bb5d1ea42cc

Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	-	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
DNV DNV GL SE	DNV-CG-0339, Aug. 2021	TAA0000194
PRS Polski Rejestr Statków	-	TE/1101/880590/23

Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX TUEV Nord Cert GmbH	-	TUEV14ATEX148929X (II 3 G Ex ec IIC T4 Gc)
CCCEX CQST/CNEX	-	2020312310000213 (Ex ec IIC T4 Gc)
IECEx TUEV Nord Cert GmbH	-	IECEx TUN 14.0035 X (Ex ec IIC T4 Gc)
INMETRO TÜV Rheinland do Brasil Ltda.	-	TÜV 12.1297 X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Approvals for functional safety



Approval	Standard	Certificate Name
Profi-Safe Siemens AG/ComDeC	-	Z20321

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product
Compliance
750-666/000-004




Documentation

Manual

Product Manual 4FDI/2FDO 24V/10A PROFI-safe	V 1.1.0 13.02.2023	pdf 5584.46 KB	
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System Description


750/753 Series I/O- System – General Pro- duct Information	pdf 953.35 KB	
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Overview on WAGO-I/ O-SYSTEM 750 appro- vals	pdf 770.48 KB	
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Functional Safety – Ge- neral Product Informati- on	pdf 217.82 KB	
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Bid Text

0750-0666/0000-0004	docx 35.71 KB	
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0750-0666/0000-0004	xml 11.27 KB	
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Instruction Leaflet

Operating and assemb- ly instructions	V 1.3.0 12.04.2023	pdf 792.49 KB	
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Application Notes

Application note SIEMENS

Using iPar-Server opti- on with WAGO PROFI- safe modules (a114802)	V 14.1 07.02.2023	zip 130043.55 KB	
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CAD/CAE-Data


CAD data

2D/3D Models 750-666/000-004	
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Engineering-Software

Configuration and Commissioning Software

F-Address Confirmati- on Tool	1.2.2 06.06.2023	zip 3757.47 KB	
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Safety Editor (SEDI) / 750-66x	3.5.1.0 25.01.2024	zip 19060.65 KB	
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Runtime Software

Firmware

0750-0666/0000-0004, V 02	zip	1026.94 KB	
Sicherer Digitaleingang	20.01.2023		

1 Compatible Products

1.1 Optional Accessories

1.1.1 DIN-rail

1.1.1.1 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.: 210-115
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



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

1.1.2 Marking

1.1.2.1 Group marker carrier



Item No.: 750-107
Group marker carrier

1.1.2.2 Marker



Item No.: 2009-145/000-006
Mini-WSB In-line; 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 In-line; 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 In-line; 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 In-line; 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 In-line; 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 In-line; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 2009-145
Mini-WSB In-line; 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 In-line; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



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

1.1.2.2 Marker



Item No.: 248-501/000-002

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

1.1.2.3 Marker carrier



Item No.: 750-103

Group marker carrier

1.1.3 Shield termination

1.1.3.1 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

1.1.4 Supply module

1.1.4.1 Supply module



Item No.: 750-612

Power Supply; 0 ... 230 V AC/DC



Item No.: 750-602

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

1.1.5 System enclosure

1.1.5.1 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

1.1.5.1 System enclosure



Item No.: [850-816/002-000](#)

IP65 enclosure; Sheet steel (RAL 7035);
WxD (400x120x200 mm); without flange plate

Item No.: [850-817/002-000](#)

IP65 enclosure; Sheet steel (RAL 7035);
WxD (600x120x200 mm); without flange plate