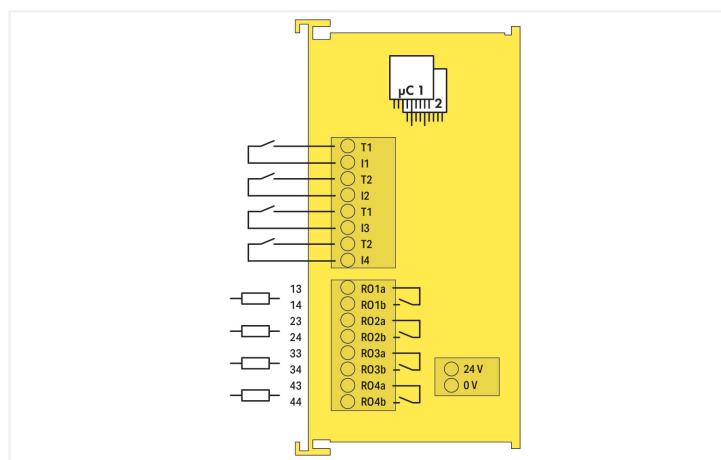
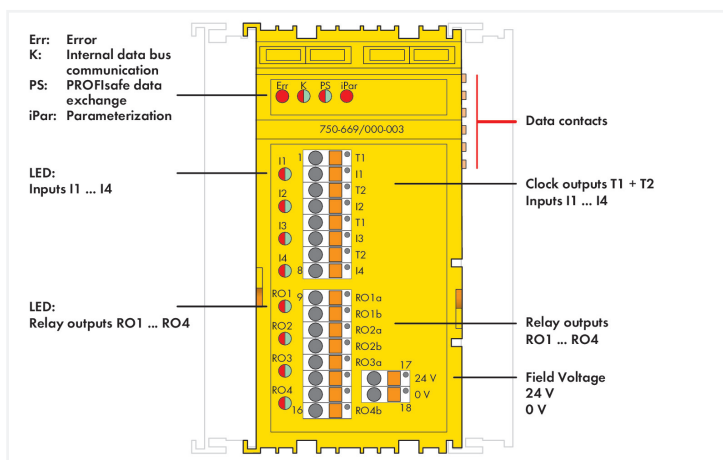
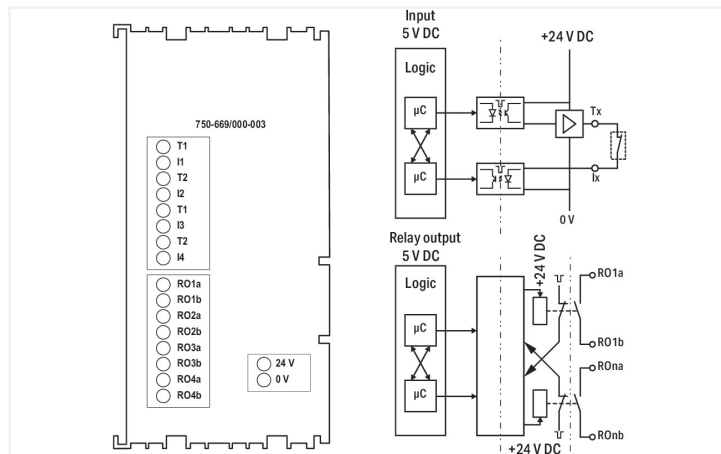
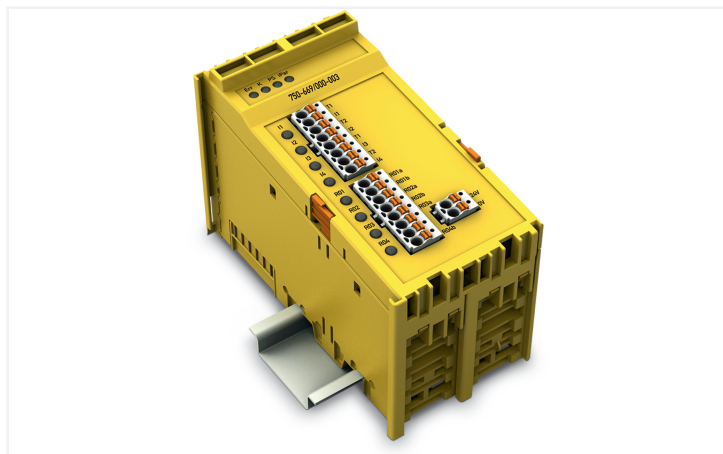


Data Sheet | Item Number: 750-669/000-003

Fail-safe 4/4 channel digital input/relay output; 48 VAC/ 60 VDC; 6 A; PROFIsafe V2.0 iPar

<https://www.wago.com/750-669/000-003>



This relay module has four safe inputs and four safe relay outputs and is particularly suitable for applications that require, e.g., individually electrically isolated outputs, that must switch high loads or that are controlled via different types of voltage (e.g., DC or AC).

The electrically isolated outputs can be freely combined with each other, so that Cat. 2 or Cat. 4 architectures up to SIL3 or PLe are possible. For this, the outputs can be configured as P (positive), N (negative), or PP and NN or PN switching. Depending on the requirements, four safe inputs can be used, e.g., as monitoring inputs for the contactor feedback contacts or freely for emergency stop switches or door contacts.

On the input side, 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. Reference the product manual for further information.

General technical data

Protocols	PROFIsafe V2
Configuration options	PROFIsafe address adjustable via DIP switch or engineering software
Indicators	LED green/red: Status/Error I1 ... I4, RO1 ... RO4; LED red (Err): Group error; LED green/red (K, PS): Diagnostics; LED red (iPar): Parameterization
Total number of channels (module)	8
Isolation voltage	Relay outputs: 48 VAC, 60 VDC

Digital Inputs

Number of digital inputs	4
Signal type	Digital
Signal type (voltage)	48 VAC; 60 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)	48 VAC; 60 VDC
Output current per channel	6 A

Digital outputs

Number of digital outputs	4
Signal type	Digital
Signal type (voltage)	48 VAC; 60 VDC
Output current (module)	24 A
Actuator connection	4 x (fail-safe output with test pulse)
Output circuit design	Relay outputs
Switching delay	50 ms
Switching current (note)	Switching current range compatible with the WAGO 75x-66x/000-003 PROFIsafe I/O Module
Switching Voltage Range	5 ... 60 VDC (SELV/PELV); 5 ... 48 VAC

Technical data

Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	145 mA
Supply voltage (system and sensor)	24 VDC(-25 ... +30 %)
Supply voltage (field)	24 VDC; via pluggable connector (Push-in CAGE CLAMP®connection)
Current consumption, field supply (module with no external load)	50 mA
Isolation	500 V system/field

Functional Safety

Achievable safety classes	SIL 3; Category 4, PL e
Safety standards	IEC 61508-1 ... -7; EN ISO 13849-1; EN 62061

Connection Data

Connection technology: I/O	18 x Push-in CAGE CLAMP®
Connectable conductor materials	Copper
Connection type	Inputs/outputs
Solid conductor	0.5 ... 1.5 mm ² / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 1.5 mm ² / 20 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches
Connection technology: field supply	2 x Push-in CAGE CLAMP®
Connection type	Field supply

Physical data

Width	48 mm / 1.89 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
---------------	-------------

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	2.342 MJ
Weight	220.3 g

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	Per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2; EN 61131-2; EN 61326-3-1; EN 61000-6-7
EMC emission of interference	per EN 61000-6-4, EN 61131-2
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	4055143535588
Customs tariff number	85389099990

Product Classification

UNSPSC	32151705
eCl@ss 10.0	27-24-26-04
eCl@ss 9.0	27-24-26-04
ETIM 9.0	EC001599
ETIM 10.0	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 (Austria)	72e2b3c2-e12c-46c0-ae48-ce34bd1fa99c
SCIP notification number (Belgium)	ae9362ac-c439-4425-a3ff-b3eeaa1d05ef
SCIP notification number (Bulgaria)	69b42b83-1f2e-4bad-bbee-199b956fcab9
SCIP notification number (Czech Republic)	c585bd6f-85d0-493e-9d98-dd1f09757ce9
SCIP notification number (Denmark)	21dfd6fb-a34c-4d97-a4c7-1db8a2ec5e04
SCIP notification number (Finland)	dfa7c6f7-c341-4e3c-9c84-770e70458aeb
SCIP notification number (France)	dec5c374-c58d-4333-93e7-da27a7c0a6a8
SCIP notification number (Germany)	06e5b542-025e-4bf6-a8c7-8db11c7f84c5
SCIP notification number (Hungary)	56158475-1c7a-4b08-8e00-c58914045bfa
SCIP notification number (Italy)	c8239abb-4933-4038-9ce6-eb34c108c32a
SCIP notification number (Netherlands)	9710cf4a-f775-412e-8944-376eaf7119ab
SCIP notification number (Poland)	4da1c540-79f4-403c-afa2-e679af18e674
SCIP notification number (Romania)	38554419-3deb-4439-8be3-995805b934e7
SCIP notification number (Sweden)	1aaecde0-083e-491f-a44c-5b753a932557

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-DI0750
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	-	-

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

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 750-669/000-003	↓
---	-------------------

Documentation

Manual			
Product Manual 4FDI / 4FRO 48 VAC / 60 VDC / 6 A PROFlsafe V2 iPar	V 1.4.0 13.03.2025	pdf 4834.37 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	↓
Functional Safety – General Product Information	pdf 217.82 KB	↓

Bid Text			
750-669/000-003	19.02.2019	xml 6.94 KB	↓
750-669/000-003	09.10.2017	doc 31.50 KB	↓

Instruction Leaflet			
CCC Ex (Additional information)	26.04.2023	pdf 159.76 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	
2D/3D Models 750-669/000-003	↓

CAE data	
EPLAN Data Portal 750-669/000-003	↓

WSCAD Universe 750-669/000-003	↓
-----------------------------------	-------------------

ZUKEN Portal 750-669/000-003	↓
---------------------------------	-------------------

Engineering-Software

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

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.: 750-106
Group marker carrier

1.1.2.2 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



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

1.1.2.3 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 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

1.1.5 Tool

1.1.5.1 Operating tool



Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft