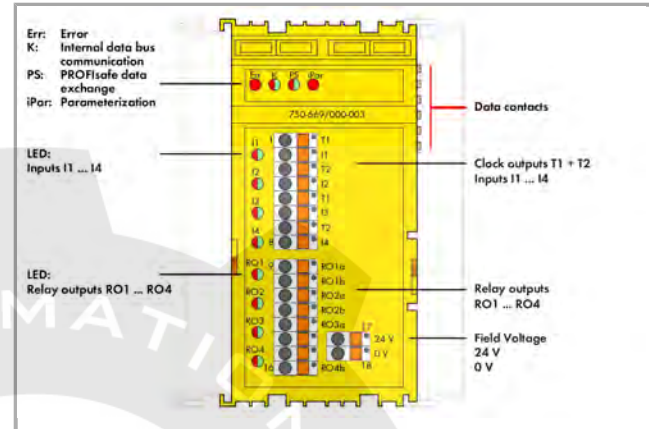
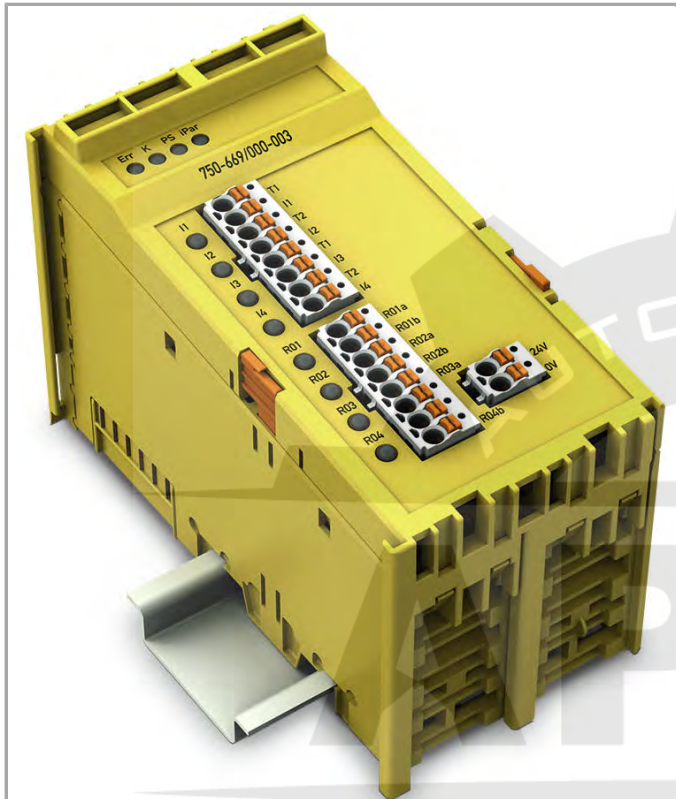


Data sheet | Item number: 750-669/000-003

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

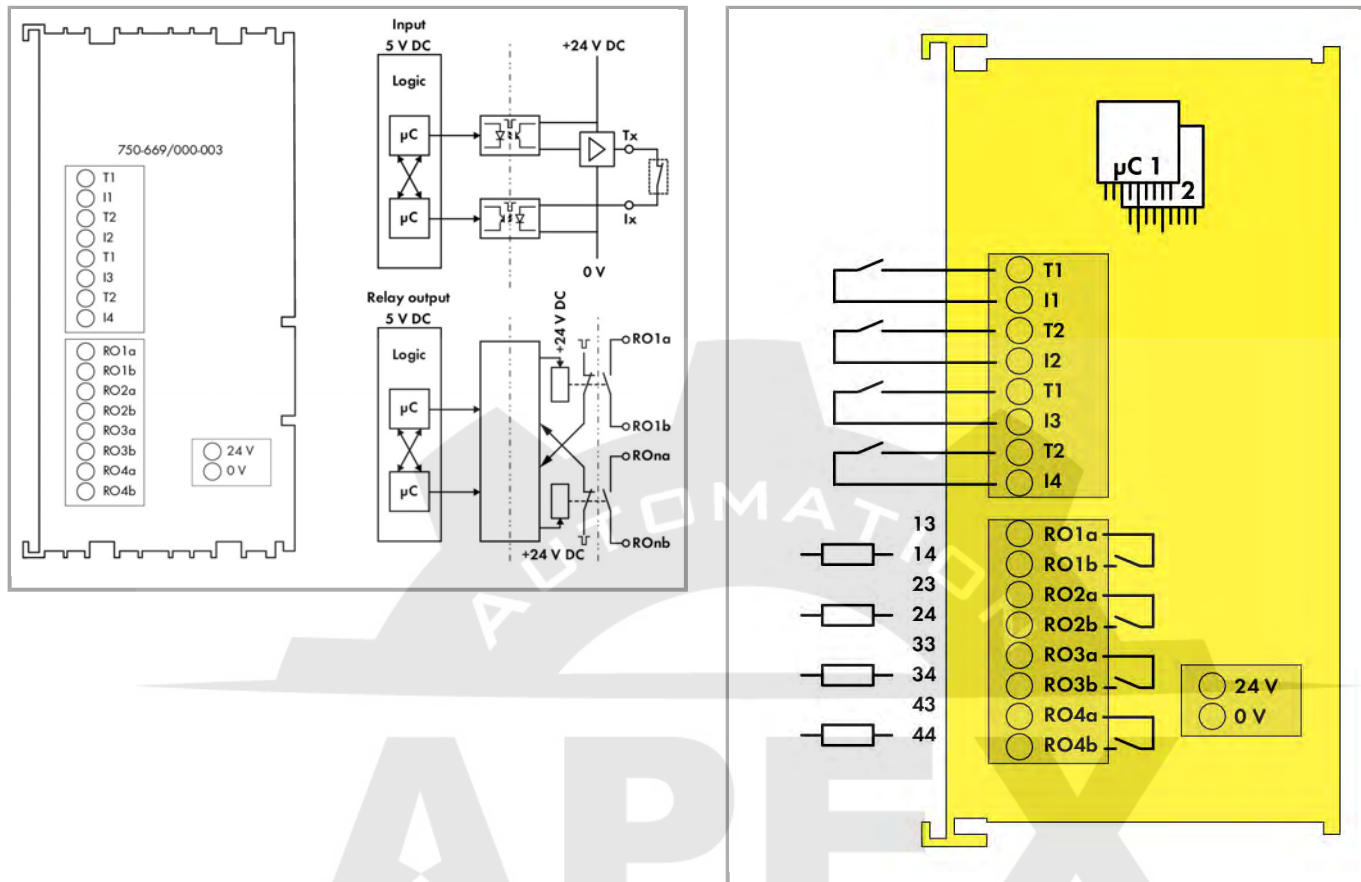


750-669/000-003



RoHS Compliant

[BOMcheck.net](https://www.bomcheck.net)



Item description

The relay module has 4 safe inputs and 4 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.

Depending on the requirements, four safe inputs can be used, e.g., as monitoring inputs for the contactor feedback contacts or freely for 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, test pulse length, 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.

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

To protect the module against impulse voltages (over-voltage protection acc. to 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.

Data

Technical Data

Number of digital inputs	4
Number of digital outputs	4
Total number of channels (module)	8
Achievable safety classes	SIL 3; Cat. 4, PL e
Type of signal	Voltage
Sensor connection	4 x (sicherer Eingang mit Testpuls)
Actuator connection	4 x (fail-safe output with test pulse)
Input characteristic	clock sensitive
Input characteristic	Type 1
Input current per channel for signal (1) typ.	2.2 mA
Output switching design	Relay Output
Output current per channel	6 A
Output current (module)	24 A
Signal frequency max.	50 Hz
Switching delay	50 ms
Switching current, information note	Schaltstrombereich kompatibel zu den WAGO-PROFIsafe-Busklemmen 75x-66x/000-003
Load switching voltage range	5 V ... 60 V DC (SELV/PELV); 5 V ... 48 V AC
Switching current (min.)	3 mA
System supply voltage	DC 5 V; via data contacts
Current consumption, system supply (5 V)	145 mA
System and sensor supply voltage	DC 24 V(-25 ... +30 %)
Field supply voltage	DC 24 V; über Verdrahtungsebene (Push-in CAGE CLAMP® - Anschluss)
Current consumption, field supply (module with no external load)	50 mA
Insulation voltage	Relaisausgänge: AC 48 V, DC 60 V
Indicators	LED grün/rot: Status/Fehler I1 ... I4, RO1 ... RO4; LED rot (Err): Sammelfehler; LED grün/rot (K, PS): Diagnose; LED rot (iPar): Parametrierung

Connection data

Connection technology: In-/Outputs	16 x Push-in CAGE CLAMP®
Connection technology: field supply	2 x Push-in CAGE CLAMP®
Connection type (1)	Inputs/Outputs
Solid conductor	0.5 ... 1.5 mm² / 20 ... 14 AWG
Fine-stranded conductor	0.5 ... 1.5 mm² / 20 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

Connection type (2)

Feldversorgung

Geometrical Data

Width	48 mm / 1.89 inch
Height	69.8 mm / 2.748 inch
Height from upper-edge of DIN-35 rail	62.6 mm / 2.465 inch
Depth	100 mm / 3.937 inch

Mechanical data

Type of mounting	DIN-35 rail
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Material Data

Housing material	Polycarbonate, polyamide 6.6
Fire load	0 MJ
Weight	220.3 g

Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying) or vertical
Relative air humidity (no condensation)	95 %
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	acc. to EN 61000-6-2, EN 61000-6-7, EN 61326-3
EMC emission of interference	acc. to EN 61000-6-4
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

Country of origin	DE
GTIN	4055143535588
Customs Tariff No.	85389099990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726 Sec.1

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	KC National Radio Research Agency	Article 58-2, Clause 3	MSIP- REM-W43- DI0750
	TUEV Rheinland TUEV Rheinland Industrie Service GmbH	-	No. 968 /EZ 247.14 /16

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	E175199 Sec10

Compatible products

Marking accessories

	Item no.: 2009-145 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145
	Item no.: 2009-145/000-002 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-002
	Item no.: 2009-145/000-005 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	2009-145 /000-005

	Item no.: 2009-145/000-006 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	7000-006	2009-145
	Item no.: 2009-145/000-007 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	7000-007	2009-145
	Item no.: 2009-145/000-012 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	7000-012	2009-145
	Item no.: 2009-145/000-023 Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	7000-023	2009-145
	Item no.: 2009-145/000-024 Mini-WSB Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type	7000-024	2009-145
	Item no.: 248-501 Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card		248-501
	Item no.: 248-501/000-002 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-002	248-501
	Item no.: 248-501/000-005 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-005	248-501
	Item no.: 248-501/000-006 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-006	248-501
	Item no.: 248-501/000-007 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-007	248-501
	Item no.: 248-501/000-012 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-012	248-501
	Item no.: 248-501/000-017 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-017	248-501
	Item no.: 248-501/000-023 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-023	248-501
	Item no.: 248-501/000-024 Mini-WSB marking card; as card; not stretchable; plain; snap-on type	7000-024	248-501
	Item no.: 750-103 Group marker carrier		750-103
	Item no.: 750-106		



Group marker carrier

750-106

shield connection

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

Carrier rail

	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	210-112
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715	210-113
	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715	210-114
	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	210-115
	Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-118
	Item no.: 210-196 Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715	210-196
	Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	210-197
	Item no.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715	210-198
	Item no.: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715	210-504
	Item no.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715	210-505
	Item no.: 210-506 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715	210-506

**Item no.: 210-508**

210-508

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715

tools**Item no.: 210-719**

210-719

Operating tool with partially insulated shaft; Type 1, blade (2.5 x 0.4) mm

system box**Item no.: 850-804**

850-804

IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip

**Item no.: 850-804/000-001**

850-804

IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip

**Item no.: 850-805**

850-805

IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip

**Item no.: 850-814/002-000**

850-814

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate

**Item no.: 850-815/002-000**

850-815

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate

**Item no.: 850-816/002-000**

850-816

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

**Item no.: 850-817/002-000**

850-817

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

**Item no.: 850-825**

850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20

**Item no.: 850-826**

850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

**Item no.: 850-826/002-000**

850-826

IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

**Item no.: 850-827**

850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

**Item no.: 850-827/002-000**

850-827

IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

**Item no.: 850-828**

850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip

**Item no.: 850-828/002-000**

850-828

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

850-834

**Item no.: 850-835**

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip

850-835

**Item no.: 850-836**

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

850-836

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Manual

4FDI / 4FRO 48 VAC / 60 VDC / 6 A PROFIsafe V2 iPar	V 1.1.2	pdf 5.0 MB	Download
Fail-Safe 4/4-Channel Digital Input and Relay Output Module PROFIsafe V2 iPar			

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System Description

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Term definition, marking and installation regulations			

Design Notes	V 2.0.0	pdf 1.5 MB	Download
Basic conditions and recommendations for higher operational safety			

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CAD data

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