



The 75x-668/000-004 Module features four differential fail-safe analog inputs (AI1 ... AI4) and four current-limited sensor supply outputs (L1 ... L4). The sensors can be supplied directly by the module or via external 24 V. The fail-safe analog inputs can be used either in single-channel (up to SIL2/PLd) or dual-channel mode (up to SIL3/PLe). Measurement cycle, filter times, encoder evaluation with discrepancy times and tolerance windows can be adjusted to meet the safety function requirements.

Overcurrent, overload and wire break are monitored at the fail-safe analog inputs. Both the monitoring and additional safety-relevant functions can be parameterized via *WAGO-I/O-CHECK*.

This configuration tool can be conveniently integrated into engineering systems supporting TCI (Tool Calling Interface) with CC2 or CC3.

When exchanging a module, parameters are automatically downloaded from the controller via PROFIsafe-compatible iPar server.

The PROFIsafe address can be set via DIP switch or *WAGO-I/O-CHECK*.

The module supports PROFI-safe protocols V2.4 (PROFIBUS, PROFINET) and V2.6 (PROFINET).

Individual input 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). This module (Item No. 753-668/000-004) was evaluated by UL to UL/CSA 61010-1, UL/CSA 61010-2-201, UL 121201, and 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](#)).

Notes

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

Protocols	PROFI-safe V2.6 (PROFINET) and V2.4 (PROFIBUS, PROFINET)
Configuration options	PROFI-safe address adjustable via DIP switch or engineering software
Indicators	LED (E) red, LED (F-H) red/green: Diagnostics; LED (I-M) red/green: Input/output status
Device-specific	Common mode rejection: typ. 87 dB; Sampling frequency: 100 Hz, 60 Hz, 50 Hz, 10 Hz; Configurable; Interference frequency suppression: 38 dB at 50 Hz/60 Hz; Safety accuracy: 1.25 % of upper-range value (single-channel); 1.58 % of upper-range value (two-channel)
Total number of channels (module)	4
Number of analog inputs	4
Signal type	Current
Signal type (current)	0 ... 20 mA; 4 ... 20 mA
Sensor supply	Outputs L1 ... L4
Sensor connection	4 x (2-wire, 3-wire, 4-wire)
Signal characteristics	Differential
Resolution [bit]	16 bits
Common-mode voltage (max.)	60 V
Load impedance	300 Ω
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.05 %
Output current per channel	1.5 A
Output current (module)	1.5 A
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	120 mA
Supply voltage (field)	24 VDC, SELV/PELV (-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)	40 mA
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A
Isolation	500 V system/field

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

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	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	1.608 MJ
Weight	86.7 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 %
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 61000-6-4, marine applications, EN 61000-6-3
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43

Commercial data

PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4066966345841
Customs tariff number	85389099990

Product Classification	
UNSPSC	32151705
ETIM 9.0	EC001596
ETIM 10.0	EC001596
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
CAS-No.	1303-86-2 1317-36-8 693-98-1 7439-92-1 79-94-7 80-05-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol 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)	9cf7962e-7bd2-46a7-a8bb-c39be0e01483
SCIP notification number (Belgium)	401c1395-fe63-4862-86de-fcededd8482a
SCIP notification number (Bulgaria)	ecd820ee-df78-45a6-909b-149423faecd9
SCIP notification number (Czech Republic)	d6a7321f-84a5-4956-a335-3a2bfe8c2c48
SCIP notification number (Denmark)	42bdcc58-8248-4f4c-8496-3e6462c47e67
SCIP notification number (Finland)	2f798dde-d3df-45f6-8b11-80961a8cb837
SCIP notification number (France)	af6c42ea-8cd4-4211-8f7e-6ccd543b3821
SCIP notification number (Germany)	c42f65d1-71f9-413e-8315-0fc8515f5441
SCIP notification number (Hungary)	3a1901e6-68c1-44e6-a7d3-a82edd57c65f
SCIP notification number (Italy)	e54d70b1-4d61-4236-a8bd-215afcee7616
SCIP notification number (Netherlands)	3cf93b02-4c28-4c38-a2d9-fa8b176eb0f4
SCIP notification number (Poland)	443b4f6f-f2ea-4b8d-a873-da8ed5b815c8
SCIP notification number (Romania)	988a0613-4eb1-40d0-b161-ae135596aa6e
SCIP notification number (Sweden)	40307f7f-21c3-4529-ad8f-217c99b8db7b

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS)	-	E175199	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-

Approvals for marine applications



Approval	Standard	Certificate Name
BSH Bundesamt fuer See- schifffahrt und Hydrogra- phie	-	1104
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	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 LOCA- TIONS)	UL 121201	E198726

Approvals for functional safety



Approval	Standard	Certificate Name
Profi-Safe Siemens AG/ComDeC	-	Z20240

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 753-668/000-004 ↓

Documentation

Manual			
Product Manual 4 FAI 0/4-20 mA; Diff. PROFI- safe	V 1.1.0 13.02.2023	pdf 5759.42 KB	↓
System Manual Series 750/753			↓

Bid Text		
753-668/000-004	doc 31.50 KB	↓
753-668/000-004	xml 8.12 KB	↓

Instruction Leaflet

CCC Ex (Additional in- formation)	26.04.2023	pdf 159.76 KB	↓
Gebrauchs- und Monta- geanleitung	V 1.0.0 11.11.2019	pdf 1087.13 KB	↓

Application Notes

Application note SIEMENS

Using iPar-Server option 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 753-668/000-004	↓
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CAE data

EPLAN Data Portal 753-668/000-004	↓
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Engineering-Software

Configuration and Commissioning Software

F-Address Confirmation Tool	1.2.2 06.06.2023	zip 3757.47 KB	↓
Safety Editor (SEDI) / 750-66x	3.5.1.0 25.01.2024	zip 19060.65 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.: 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

1.2.3 Pluggable connector

1.2.3.1 Coding



Item No.: 753-150
753 Series coding elements

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); 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.: 850-826/002-000

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



Item No.: 850-814/002-000

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