



This module (Item No. 750-1665/000-004) has 8 power outputs (O1+ ... O8+).

The power outputs switch resistive, capacitive, and inductive loads in accordance with DC-13 at a rated current of up to 0.5 A without requiring external circuitry.

The power outputs can be operated in unipolar mode (with a common potential on one side of the load).

Short circuit and 24 V power supply are monitored.

The PROFIsafe address is set using the side-mounted coding switch, WAGO-I/O-CHECK, or the engineering tool of the safety controller.

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

Field and system levels are electrically isolated.

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

If required (e.g., if the 24 V supply line exceeds 3 m in length), a WAGO filter module or a suitable external filter must be used to protect the 24 V supply against surge and burst in accordance with EN 61000-6-7, EN 61326-3-1, and marine requirements.

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

The module (Item No. 75x-1665/000-004) 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.

General technical data

Protocols	Secure communication via PROFIsafe V2.4 and V2.6 (PROFINET® and PROFIBUS)
Configuration options	Device address configurable via DIP switch, WAGO Safety Editor 75x or engineering software of the safety controller
Indicators	LED (1–8), green/red: Status/fault O1+ ... O8+; LED (9), red: Module fault; LED (10), red/green: Local bus communication; LED (11), red/green: Protocol status; LED (12), red/green: Parameterization
Device specification	GSD specification: V2.4
Number of F I/O modules per node (fieldbus coupler/controller)	See information in the manual about the respective fieldbus coupler/controller
Device-specific	Channel-granular passivation: available

Digital outputs

Number of digital outputs	8
Total number of channels (module)	8
Signal type	Digital
Signal type (voltage)	24 VDC
Output characteristic	Dual-channel high-side with test pulses
Output characteristics	0.5 ADC per IEC 61131-2
Output current (per channel)	0.5 ADC
Output current (module)	4 A
Output current	8 x 0.5 ADC to 40 °C; 8 x 0.375 ADC to 55 °C; Note: Observe the permissible mounting positions and the use of distance modules (see "Derating" in the product manual).
Output residual current at signal "0"	< 0.5 mA
Output protection	Protected and short-circuit-proof per IEC 61131-2
Response threshold (output protection) min.	0.6 ADC
Response threshold (output protection) max.	1.2 ADC
Parallel connection of outputs	Not possible
Controlling an IEC 61131-2-compatible input	Possible; see product manual
Response times (max.) (outputs)	See product manual
Switching frequency (max.)	30 Hz; Resistive load
Switching frequency (max.) (2)	0.1 Hz; Inductive load
Switching frequency (max.) (3)	0.1 Hz; Capacitive load
Capacitive load for each channel	10 µF
Connection requirement (permissible cable length) (2)	200 m
Connection requirement (permissible cable type) (2)	Shielded or unshielded
Read-back time	50 ms (max.)
Test pulse duration (digital outputs)	1 ... 50 ms; the test pulse duration is adaptively adjusted to the actuator.
Response threshold (output monitoring)min.	8 VDC (O1+ ... O8+)
Response threshold (output monitoring) max.	10 VDC (O1+ ... O8+)

Technical data

Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	60 mA
Supply voltage (field)	24 VDC, SELV/PELV (-25 ... +20 %); For inductive loads ("Pilot Duty" / DC13); SELV/PELV 24 VDC (-25 ... +30 %) Resistive loads and general use
Current consumption, field supply (module with no external load)	25 mA
Isolation	500 VDC system voltage/field level (power jumper contacts)
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Current carrying capacity (power jumper contacts)	10 A
Reverse voltage protection	Yes (power jumper contacts)

Functional Safety

Achievable safety classes	Digital outputs: Cat. 4/PL e per EN ISO 13849-1; SIL 3 per IEC 61508 / EN 62061
Safety standards	IEC 61508-1 ... -7; EN ISO 13849-1; EN 62061
Interface types per ZVEI CB24I (outputs)	Source; CO

Connection Data

Connection technology: I/O	16 x Push-in CAGE CLAMP® (outputs)
Connectable conductor materials	Copper
Connection type	Output
Solid conductor	0.08 ... 1.5 mm ² / 28 ... 16 AWG
Fine-stranded conductor	0.25 ... 1.5 mm ² / 22 ... 16 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data

Width	12 mm / 0.472 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	fixed

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	0.818 MJ
Weight	50.3 g

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Ambient temperature (storage)	-40 ... +85 °C
Protection type	IP20
Protection class	III
Overvoltage category	II per IEC 61131-2
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 (ambient temperature up to 40°C); horizontal right, horizontal left, horizontal top (ambient temperature up to 55°C)
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); EN 61326-3-1:2017
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
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
Approvals	Marine applications: DNV E175199 Ordinary Locations UL E198726 Hazardous Locations: Class I, Div2 ABCD T4

Conformity marking	CE; UKCA
EU directive	EU Machinery Directive: 2006/42/EC

Commercial data	
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4066966782547
Customs tariff number	85371098990

Product Classification	
ETIM 9.0	EC001599
ETIM 10.0	EC001599
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II

Approvals / Certificates

General approvals		
Approval	Standard	Certificate Name
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
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
750-1665/000-004



Documentation

Manual

Product manual Fail-safe 8 channel digital output;
3304278795 | 2 | en-US | 2025-09-16 12:27
pdf
1939.97 KB



CAD/CAE-Data

CAD data

2D/3D Models
750-1665/000-004



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 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 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



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