TECHDOCS

WAGO I/O System 750/753

Filter module for field-side power supply (surge); 24 VDC; higher isolation

750-624/020-000

Product manual
Valid as of HW version 01 | FW version --
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WAGO GmbH & Co. KG
Hansastraße 27
D - 32423 Minden
Phone: +49 571/887 – 0
E-Mail: **info@wago.com**
Internet: **www.wago.com**

Technical Support
Phone: +49 571/887 – 44555
E-Mail: **support@wago.com**
Internet: **www.wago.com/support**

Every conceivable measure has been taken to ensure the accuracy and completeness of this documentation. However, as errors can never be fully excluded, we always appreciate any information or suggestions for improving the documentation.

E-Mail: **documentation@wago.com**

We wish to point out that the software and hardware terms as well as the trademarks of companies used and/or mentioned in the present documentation are generally protected by trademark or patent.

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1 Provisions

1.1 Scope of Applicability

This document applies to the following product:

750-624/020-000 (24V DC Field Supply Filter /HI) Filter module for field-side power supply (surge); 24 VDC; higher isolation.

From hardware version	01
From firmware version	--
Product detail page	**www.wago.com/750-624/020-000**

Note

Note applicable documents!

The complete operating instructions for the product consists of several, applicable documents. The product must only be installed and operated in accordance with the complete operating instructions. Knowledge of all applicable documents is required for proper use. You can find all documents and information on the product detail page.

Applicable document

System Manual I/O System 750/753

- Provisions
- Safety
- Planning
- Transport and Storage
- Assembly and Disassembly
- Conductor Termination
- Decommissioning

2 Overview

The filter module is used for providing the supply voltage to a fieldbus node.

Use of filter modules also allows the WAGO I/O System 750/753 to be used in shipbuilding or offshore/onshore areas (e.g., platforms and loading facilities). This is demonstrated by compliance with the requirements of leading classification agencies, such as the Germanischer Lloyd and Lloyd's Register. The filter module ensures proper (certified) system operation.

The filter module protects against high-energy disturbances on the DC supply lines due to switching overvoltages caused by inductive loads. It contains transient protection for the field supply.

This version of the filter module is optimized for use in systems with insulation monitoring.

The filter module has blade contacts for receiving the potential for the field supply. The field supply can also be fed in from an external source via the CAGE CLAMP® connections. The filter module provides the 24 V field supply voltage for the field level to downstream I/O modules via its spring contacts.

The filter module contains overvoltage protection for the field supply voltage via the power jumper contacts.

A green status LED indicates the status of the operating voltage at the power jumper contacts.

This variant is NOT intended for marine-certified operation in conjunction with an Ex i supply module (item no.: 750-625/000-001) or for use with PROFIsafe modules!

3 Properties

3.1 View

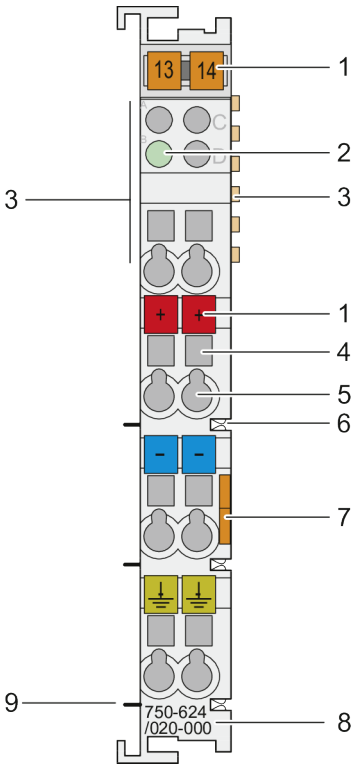

Figure 1: View

1	Slot for Mini-WSB (optional)	System Manual I/O System 750/753
2	Indicator	Indicators [▸ 7]
3	Data contacts	System Manual I/O System 750/753
4	Access to open the associated CAGE CLAMP® connection	System Manual I/O System 750/753
5	CAGE CLAMP® connection	Wiring Interface [▸ 7] and System Manual I/O System 750/753
6	Power jumper contacts (spring)	Power Jumper Contacts [▸ 8] and System Manual I/O System 750/753
7	Release tab	System Manual I/O System 750/753
8	Item number	Scope of Applicability [▸ 4]
9	Power jumper contacts (blade)	Power Jumper Contacts [▸ 8] and System Manual I/O System 750/753

3.2 Indicators

A green status LED indicates the status of the operating voltage at the power jumper contacts.

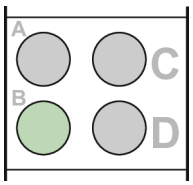

Figure 2: Indicator

Designation	LED	Status	Function
Status of the operating voltage – Power jumper contacts	B	Off	No 24 V operating voltage at the power jumper contacts
		Green	24 V operating voltage applied to the power jumper contacts

3.3 Wiring Interface

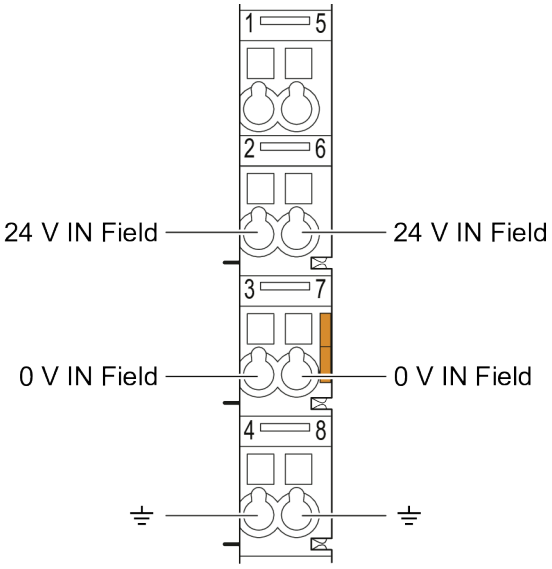

Figure 3: CAGE CLAMP® Connections

Designation	Connection	Function
24 V IN, field	2	Feed-in, field supply, 24 VDC
	6	
0 V IN, field	3	Feed-in, field supply, 0 VDC
	7	
Ground	4	Feed-in, field supply, ground
	8	

3.4 Power Jumper Contacts

The potential for the field supply is fed in via the blade contacts and passed on via the spring contacts.

For additional information on the Power Jumper Contacts, please see
System Manual I/O System 750/753.

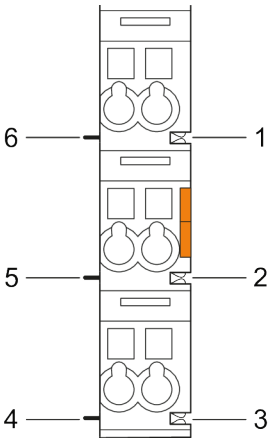

Figure 4: Power Jumper Contacts

No.	Type
1	Groove with spring contact
2	
3	
4	Blade contact
5	
6	

Arrangement in the Bus Node

For electrical compatibility requirements see Section Schematic Circuit Diagram [▸ 9].

For mechanical arrangement of the I/O module, the previous component must have 3 open grooves for accommodating the blade contacts.

3.5 Schematic Circuit Diagram

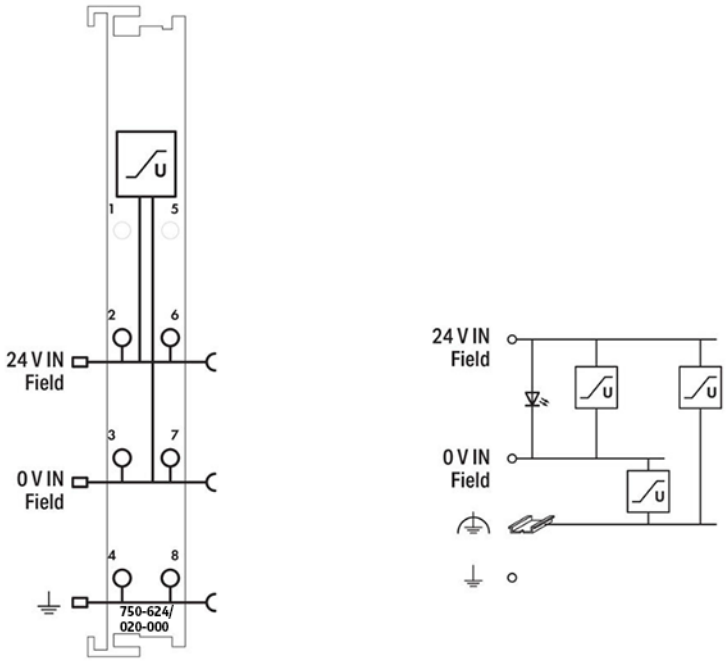

Figure 5: Schematic Circuit Diagram

For information on the system power supply, please see 🕮 **System Manual I/O System 750/753**.

4 Planning

This section provides helpful information for planing the use of the product in a node.

4.1 Compatibility

The filter module can be operated on all head stations of the WAGO I/O System 750/753.

4.2 Requirements for Wiring and Accessories

The field supply filter is used together with an upstream 24 V supply module (e.g., Item No.: 750-601, 750-602 or 750-610) and offers additional protection against high-energy disturbances on the DC supply lines.

This version of the filter module is optimized for use in systems with insulation monitoring.

This variant is NOT intended for marine-certified operation in conjunction with an Ex i supply module (item no.: 750-625/000-001) or for use with PROFIsafe modules!

For power supply concepts and the node structure, e.g., for certified operation of the filter module in shipbuilding or onshore/offshore applications, see the 🕮 System Manual I/O System 750/753.

5 Appendix

5.1 Technical Data, Approvals, Guidelines and Standards

Note

Subject to changes!

Please also observe the further product documentation! You can generate the current datasheet at any time at: www.wago.com /<item number>.

See also

Data sheet 750-624/020-000 [▸ 12]

Data Sheet | Item Number: 750-624/020-000

Filter module for field-side power supply (surge); 24 VDC; Higher isolation

https://www.wago.com/750-624/020-000

Technical data

Signal type	Voltage
Signal type (voltage)	24 VDC
Supply voltage (system)	5 VDC; via data contacts
Supply voltage (field)	24 VDC (-25 … +30 %); via power jumper contacts (power supply via blade contact; transmission (field side supply voltage only) via spring contact)
Current carrying capacity (power jumper contacts)	10 A
Number of incoming power jumper contacts	3
Number of outgoing power jumper contacts	3
Use	Marine-certified operation in conjunction with 750 Series I/O Modules
Indicators	LED (C) green: operating voltage status: power jumper contacts

Connection Data

Connectable conductor materials	Copper
Connection type	Field supply
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip length	8 … 9 mm / 0.31 … 0.35 inches
Connection technology: field supply	6 x CAGE CLAMP®

Physical data

Width	12 mm / 0.472 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
Pluggable connector	fixed

Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	0.758 MJ
Weight	46 g
Conformity marking	CE

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Environmental requirements

Ambient temperature (operation)	0 … +55 °C
Ambient temperature (storage)	-40 … +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, horizontal bottom, 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
EMC emission of interference	per EN 61000-6-3, marine applications
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Permissible H_2S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO_2 contaminant concentration at a relative humidity 75 %	25 ppm

Product Classification

UNSPSC	39121610
eCl@ss 10.0	27-24-26-10
eCl@ss 9.0	27-24-26-10
ETIM 9.0	EC001600
ETIM 10.0	EC001600
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

CAS-No.	1317-36-8 25550-51-0 7439-92-1
REACH Candidate List Substance	4-Methyl-1,2-cyclohexanedicarboxylic anhydride Lead Lead monoxide
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	7(a) 7(c)-I
SCIP notification number (Austria)	1a1aaca9-237b-467a-a49e-9833486b288d
SCIP notification number (Belgium)	2e5dc62a-0cfe-4f87-a3d0-7c6aea2fe114
SCIP notification number (Bulgaria)	1fc920df-9a3d-4ab2-892e-d3d932d929cb
SCIP notification number (Czech Republic)	832c0878-efbc-4bfc-9176-6c1f8c525c06
SCIP notification number (Denmark)	1385d7df-e9ee-4cd3-8688-e467aeea5683
SCIP notification number (Finland)	dbf56ad4-9bec-4850-8a80-e3b76400d1ec
SCIP notification number (France)	0d6c59cc-a2f1-462c-af52-d357d10d3754
SCIP notification number (Germany)	e940aff4-d841-406d-ad02-f959addcdac9
SCIP notification number (Hungary)	d0a313d5-da21-4444-92d8-9da5894aeb54
SCIP notification number (Italy)	ad0b1cc0-76e2-495c-92ee-c56b0ff9f5bd
SCIP notification number (Netherlands)	68c7c3b9-d293-4aa2-b94c-41ebef26e748
SCIP notification number (Poland)	65fe37b6-c6df-43b8-ab6b-fbbcd42d71e6
SCIP notification number (Romania)	3c463e62-15e8-4dda-b123-cca572e695b3
SCIP notification number (Sweden)	65b8efc8-c227-41bd-95b1-15a510b5793c

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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-IDE750
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 508	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
ABS American Bureau of Shipping	-	22-2219060
BSH Bundesamt fuer Seeschifffahrt und Hydrographie	-	1104
BV Bureau Veritas S.A.	-	30389/C0 BV
DNV DNV GL SE	DNV-CG-0339,Aug.2021	TAA0000194
KR Korean Register of Shipping	-	KR HMB05880-AC001
LR Lloyds Register EMEA	-	LR22180952TA
PRS Polski Rejestr Statków	-	TE/1101/880590/23
RINA RINA Germany GmbH	-	ELE343521XG001

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

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WAGO GmbH & Co. KG
Postfach 2880 · D - 32385 Minden
Hansastraße 27 · D - 32423 Minden
info@wago.com
www.wago.com

Headquaters	+49 571/887 – 0
Sales	+49 (0) 571/887 – 44 222
Order Service	+49 (0) 571/887 – 44 333