

WAGO-I/O-SYSTEM 750
24V DC Field Side Power Supply Filter
750-624
Filter Module for Field Side Power Supply

Version 1.1.0

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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.

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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 manual are generally protected by trademark or patent.

Table of Contents

1	Notes about this Documentation.....	5
1.1	Validity of this Documentation.....	5
1.2	Copyright.....	5
1.3	Symbols.....	7
1.4	Number Notation.....	9
1.5	Font Conventions	9
2	Important Notes	10
2.1	Legal Bases	10
2.1.1	Subject to Changes	10
2.1.2	Personnel Qualifications.....	10
2.1.3	Use of the 750 Series in Compliance with Underlying Provisions	10
2.1.4	Technical Condition of Specified Devices.....	11
2.2	Safety Advice (Precautions).....	12
3	Device Description	14
3.1	View	15
3.2	Connectors.....	16
3.2.1	Data Contacts/Internal Bus.....	16
3.2.2	Power Contacts/Field Supply	17
3.2.3	CAGE CLAMP® Connections	18
3.3	Display Elements	19
3.4	Operating Elements.....	19
3.5	Schematic Diagram	20
3.6	Technical Data	21
3.6.1	Device data	21
3.6.2	Supply.....	21
3.7	Approvals	22
3.8	Standards and Guidelines.....	23
4	Assembly	24
4.1	Assembly Sequence	24
4.2	Inserting and Removing Devices	25
4.2.1	Inserting I/O Module	25
4.2.2	Removing the I/O Module.....	26
5	Connect Devices	27
5.1	Connecting a conductor to the CAGE CLAMP®	27
5.2	Power Supply Concept.....	28
6	Use in Hazardous Environments	29
6.1	Identification	30
6.1.1	For Europe according to CENELEC and IEC.....	30
6.1.2	For America according to NEC 500.....	33
6.2	Installation Regulations.....	34
6.2.1	Special Conditions for Safe Operation of the ATEX and IEC Ex (acc. DEMKO 08 ATEX 142851X and IECEx PTB 07.0064).....	35
6.2.2	Special conditions for safe use (ATEX Certificate TÜV 07 ATEX 554086 X).....	36

6.2.3 Special conditions for safe use (IEC-Ex Certificate TUN 09.0001 X) 37
6.2.4 ANSI/ISA 12.12.01 38
List of Figures 39
List of Tables..... 40

1 Notes about this Documentation

Note



Keep this documentation!

The operating instructions are part of the product and shall be kept for the entire lifetime of the device. They shall be transferred to each subsequent owner or user of the device. Care must also be taken to ensure that any supplement to these instructions are included, if applicable.

1.1 Validity of this Documentation

This documentation is only applicable to the I/O module 750-624 (24V DC Field Side Power Supply Filter) of the WAGO-I/O-SYSTEM 750 series and the variants listed in the table below.

Table 1: Variants

Item Number/Variant	Designation
750-624	24V DC Field Side Power Supply Filter 24V DC Field Side Power Supply Filter
750-624/020-000	24V DC Field Side Power Supply Filter/I

Note



Documentation Validity for Variants

Unless otherwise specified, basic version 750-624 data also applies to listed variants.

The I/O module 750-624 shall only be installed and operated according to the instructions in this manual and in the manual for the used fieldbus coupler/controller.

NOTICE

Consider power layout of the WAGO-I/O-SYSTEM 750!

In addition to these operating instructions, you will also need the manual for the used fieldbus coupler/controller, which can be downloaded at www.wago.com. There, you can obtain important information including information on electrical isolation, system power and supply specifications.

1.2 Copyright

This Manual, including all figures and illustrations, is copyright-protected. Any further use of this Manual by third parties that violate pertinent copyright provisions is prohibited. Reproduction, translation, electronic and phototechnical filing/archiving (e.g., photocopying) as well as any amendments require the

written consent of WAGO Kontakttechnik GmbH & Co. KG, Minden, Germany.
Non-observance will involve the right to assert damage claims.

1.3 Symbols

 **DANGER**

Personal Injury!

Indicates a high-risk, imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **DANGER**

Personal Injury Caused by Electric Current!

Indicates a high-risk, imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING**

Personal Injury!

Indicates a moderate-risk, potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**

Personal Injury!

Indicates a low-risk, potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

Damage to Property!

Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.

NOTICE

Damage to Property Caused by Electrostatic Discharge (ESD)!

Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.

Note

Important Note!

Indicates a potential malfunction which, if not avoided, however, will not result in damage to property.



Information

Additional Information:

Refers to additional information which is not an integral part of this documentation (e.g., the Internet).

1.4 Number Notation

Table 2: Number Notation

Number code	Example	Note
Decimal	100	Normal notation
Hexadecimal	0x64	C notation
Binary	'100' '0110.0100'	In quotation marks, nibble separated with dots (.)

1.5 Font Conventions

Table 3: Font Conventions

Font type	Indicates
<i>italic</i>	Names of paths and data files are marked in italic-type. e.g.: <i>C:\Programme\WAGO-I/O-CHECK</i>
Menu	Menu items are marked in bold letters. e.g.: Save
>	A greater-than sign between two names means the selection of a menu item from a menu. e.g.: File > New
Input	Designation of input or optional fields are marked in bold letters, e.g.: Start of measurement range
“Value”	Input or selective values are marked in inverted commas. e.g.: Enter the value “4 mA” under Start of measurement range .
[Button]	Pushbuttons in dialog boxes are marked with bold letters in square brackets. e.g.: [Input]
[Key]	Keys are marked with bold letters in square brackets. e.g.: [F5]

2 Important Notes

This section includes an overall summary of the most important safety requirements and notes that are mentioned in each individual section. To protect your health and prevent damage to devices as well, it is imperative to read and carefully follow the safety guidelines.

2.1 Legal Bases

2.1.1 Subject to Changes

WAGO Kontakttechnik GmbH & Co. KG reserves the right to provide for any alterations or modifications that serve to increase the efficiency of technical progress. WAGO Kontakttechnik GmbH & Co. KG owns all rights arising from the granting of patents or from the legal protection of utility patents. Third-party products are always mentioned without any reference to patent rights. Thus, the existence of such rights cannot be excluded.

2.1.2 Personnel Qualifications

All sequences implemented on Series 750 devices may only be carried out by electrical specialists with sufficient knowledge in automation. The specialists must be familiar with the current norms and guidelines for the devices and automated environments.

All changes to the coupler or controller should always be carried out by qualified personnel with sufficient skills in PLC programming.

2.1.3 Use of the 750 Series in Compliance with Underlying Provisions

Couplers, controllers and I/O modules found in the modular WAGO-I/O-SYSTEM 750 receive digital and analog signals from sensors and transmit them to the actuators or higher-level control systems. Using programmable controllers, the signals can also be (pre-)processed.

The components have been developed for use in an environment that meets the IP20 protection class criteria. Protection against finger injury and solid impurities up to 12.5 mm diameter is assured; protection against water damage is not ensured. Unless otherwise specified, operation of the components in wet and dusty environments is prohibited.

Operating 750 Series components in home applications without further measures is only permitted if they meet the emission limits (emissions of interference) according to EN 61000-6-3. You will find the relevant information in the section on "WAGO-I/O-SYSTEM 750" → "System Description" → "Technical Data" in the manual for the used fieldbus coupler/controller.

Appropriate housing (per 94/9/EG) is required when operating the WAGO-I/O-SYSTEM 750 in hazardous environments. Please note that a prototype test certificate must be obtained that confirms the correct installation of the system in a housing or switch cabinet.

2.1.4 Technical Condition of Specified Devices

The components to be supplied Ex Works, are equipped with hardware and software configurations, which meet the individual application requirements. WAGO Kontakttechnik GmbH & Co. KG will be exempted from any liability in case of changes in hardware or software as well as to non-compliant usage of components.

Please send your request for modified and new hardware or software configurations directly to WAGO Kontakttechnik GmbH & Co. KG.

2.2 Safety Advice (Precautions)

For installing and operating purposes of the relevant device to your system the following safety precautions shall be observed:



DANGER

Do not work on components while energized!

All power sources to the device shall be switched off prior to performing any installation, repair or maintenance work.

DANGER

Installation only in appropriate housings, cabinets or in electrical operation rooms!

The WAGO-I/O-SYSTEM 750 and its components are an open system. As such, install the system and its components exclusively in appropriate housings, cabinets or in electrical operation rooms. Allow access to such equipment and fixtures to authorized, qualified staff only by means of specific keys or tools.

NOTICE

Replace defective or damaged devices!

Replace defective or damaged device/module (e.g., in the event of deformed contacts), since the long-term functionality of device/module involved can no longer be ensured.

NOTICE

Protect the components against materials having seeping and insulating properties!

The components are not resistant to materials having seeping and insulating properties such as: aerosols, silicones and triglycerides (found in some hand creams). If you cannot exclude that such materials will appear in the component environment, then install the components in an enclosure being resistant to the above-mentioned materials. Clean tools and materials are imperative for handling devices/modules.

NOTICE

Cleaning only with permitted materials!

Clean soiled contacts using oil-free compressed air or with ethyl alcohol and leather cloths.

NOTICE

Do not use any contact spray!

Do not use any contact spray. The spray may impair contact area functionality in connection with contamination.

NOTICE

Do not reverse the polarity of connection lines!

Avoid reverse polarity of data and power supply lines, as this may damage the devices involved.

NOTICE



Avoid electrostatic discharge!

The devices are equipped with electronic components that you may destroy by electrostatic discharge when you touch. Pay attention while handling the devices to good grounding of the environment (persons, job and packing).

3 Device Description

The I/O module 750-624 (24V DC Field Side Power Supply Filter) is used to supply a fieldbus node.

This module is equipped with surge suppression for the field side power supply via power jumper contacts.

With this module, the WAGO-I/O-SYSTEM 750 can also be used in shipping industry applications. Suitable onshore and offshore installations are: platforms, loading facilities, cranes, monitor systems for containers, and other onboard systems. This is possible via certification under the standards of leading agencies such as Germanischer Lloyd and Lloyd's Register. Proper system operation is ensured (certified) by using this overvoltage protection module.



Note

Observe area of application!

The primary version 750-624 or variant 750-624/020-000 must be used for the vessel certified operation in conjunction with bus terminals of the 750 series. Variant 750-624/020-000 is optimized for the use in systems with insulation monitoring.

The primary version 750-624 must be used for the vessel certified operation in conjunction with the Ex-i power supply module 750-625 or for the use with PROFIsafe module.

The I/O module receives the 24V voltage supply for the field level from an upstream I/O module or from the fieldbus coupler/controller via the power contacts used as blade contacts. It then provides this potential to subsequent I/O modules via the power contacts used as spring contacts.

NOTICE

Do not exceed maximum current via power contacts!

The maximum current to flow through the power contacts is 10 A.

Greater currents can damage the power contacts.

When configuring the system, ensure that this current is not exceeded. If exceeded, an additional potential feed module must be used.

The I/O module 750-624 can be used with all fieldbus couplers/controllers of the WAGO-I/O-SYSTEM 750.

3.1 View

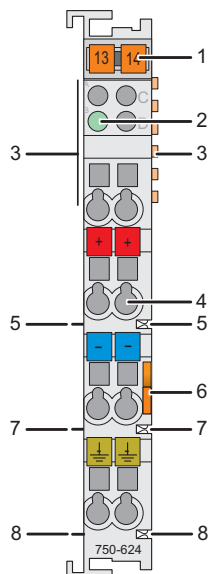


Fig. 1: View

Table 4: Caption acc. to figure “View“

No.	Designation	Description	Details see chapter
1	---	Marking possibility with Mini-WSB	---
2	B	Status-LEDs	“Device Description” > “Display Elements”
3	---	Data contacts	“Device Description” > “Connections”
4	2, 6, 3, 7, 4, 8	CAGE CLAMP®-supplies input 24 V DC, 0 V and earth	“Device Description” > “Connections”
5	---	Power jumper contact +24 V	“Device Description” > “Connections”
6	---	Release clip	“Assembly” > “Insert and remove device”
7	---	Power jumper contact 0 V	“Device Description” > “Connections”
8	---	Power jumper contact earth	“Device Description” > “Connections”

3.2 Connectors

3.2.1 Data Contacts/Internal Bus

Communication between the coupler/controller and the bus modules as well as the system supply of the bus modules is carried out via the internal bus. It is comprised of 6 data contacts, which are available as self-cleaning gold spring contacts.



Figure 2: Data contacts

NOTICE

Do not place the I/O modules on the gold spring contacts!

Do not place the I/O modules on the gold spring contacts in order to avoid soiling or scratching!

NOTICE



Ensure that the environment is well grounded!

The modules are equipped with electronic components that may be destroyed by electrostatic discharge. When handling the modules, ensure that the environment (persons, workplace and packing) is well grounded. Avoid touching conductive components, e.g. data contacts.

3.2.2 Power Contacts/Field Supply

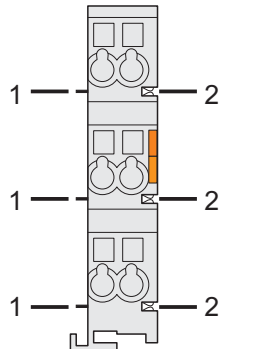
⚠ CAUTION

Risk of injury due to sharp-edged male contacts!

The male contacts are sharp-edged. Handle the module carefully to prevent injury.

The I/O module 750-624 has 3 self-cleaning power jumper contacts that supply and transmit power for the field side. The contacts on the left side of the I/O module are designed as male contacts and the contacts on the right side as spring contacts.

Table 5: Power jumper contacts

	Connection	Type	Number	Function
 <p>Fig 3: Power jumper contacts</p>	1	Blade contact	3	Infeed of the field supply voltage (U _V , 0 V and earth)
	2	Spring contact	3	Forwarding of the field supply voltage (U _V , 0 V and earth)

NOTICE

Do not exceed maximum current via power contacts!

The maximum current to flow through the power contacts is 10 A.

Greater currents can damage the power contacts.

When configuring the system, ensure that this current is not exceeded. If exceeded, an additional potential feed module must be used.

3.2.3 CAGE CLAMP® Connections

Table 6: Connections

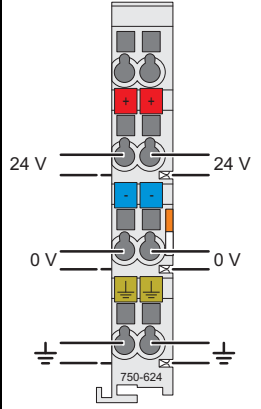

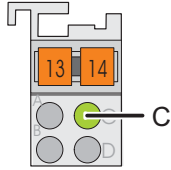
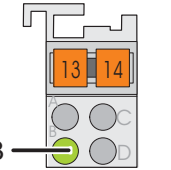
	Connection	Designation	Function
24 V	2, 6	24 V	Input field supply 24 V
0 V	3, 7	0 V	Input field supply 0 V
24 V	4, 8	Earth	Input field supply Earth
0 V	Power jumper contacts	24 V	Field supply 24 V
0 V	Power jumper contacts	0 V	Field supply 0 V
	Power jumper contacts	Earth	Field supply Earth

Fig. 4: Connections

3.3 Display Elements

Table 7: Display Elements

	LED	Designation	State	Function
 <p>Figure 5: Display Elements</p>	C or B*)	Status of operating voltage – power jumper contacts	Off	No 24V field supply voltage on the power jumper contacts.
<p>or</p>  <p>Figure 6: Display Elements</p>			Green	24V field supply voltage on the power jumper contacts.
<p>*) LED position is manufacturing dependent (B from HW02).</p>				

3.4 Operating Elements

The I/O module 750-624 has no operating elements.

3.5 Schematic Diagram

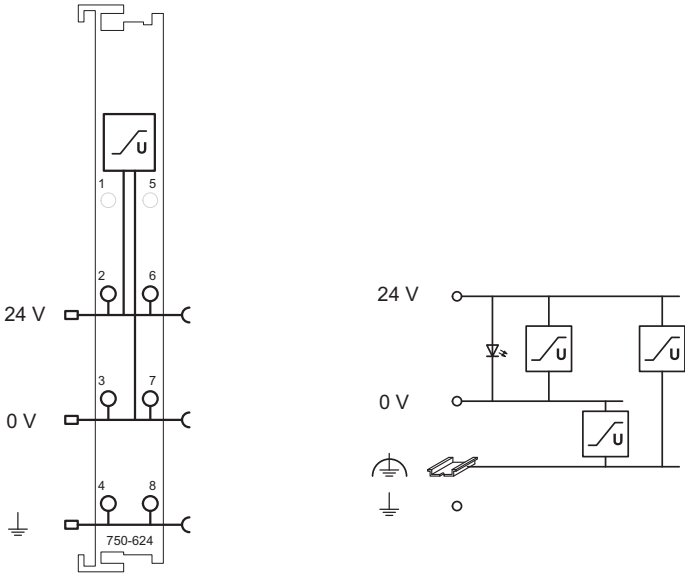


Figure 7: Schematic diagram

3.6 Technical Data

3.6.1 Device data

Table 8: Technical data device

Width	12 mm
Height (from upper edge of 35 DIN rail)	64 mm
Depth	100 mm
Weight	45 g

3.6.2 Supply

Table 2: Technical data supply

Voltage supply	Via power jumper contacts 24 V DC
Voltage via power jumper contacts	DC 24 V (-25 % ... +30 %)
Current via power jumper contacts _{max.}	10 A

3.7 Approvals

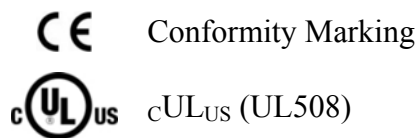


Information

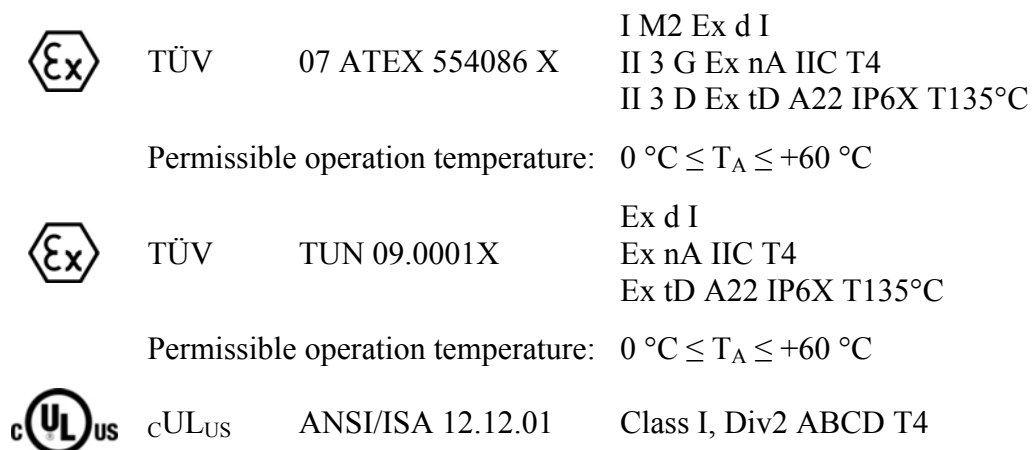
More Information about Approvals

Detailed references to the approvals are listed in the document "Overview Approvals **WAGO-I/O-SYSTEM 750**", which you can find on the DVD "AUTOMATION Tools and Docs" (Item-No.: 0888-0412) or via the internet under: www.wago.com → Service → Documentation → WAGO-I/O-SYSTEM 750 → System Description.

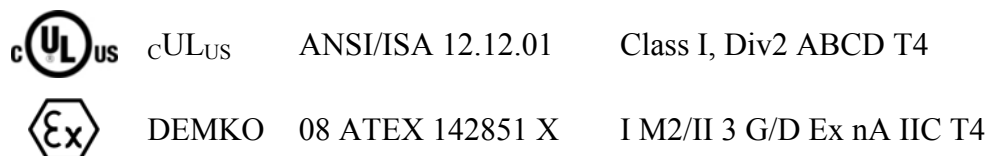
The following approvals have been granted to 750-624 I/O modules:



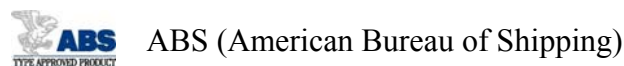
The following Ex approvals have been granted to the basic version of 750-624 I/O modules:



The following ship approvals have been granted to 750-624/020-000 I/O module variations:



The following ship approvals have been granted to the basic version of 750-624 I/O modules:





Federal Maritime and Hydrographic Agency



BV (Bureau Veritas)



DNV (Det Norske Veritas) Class B



GL (Germanischer Lloyd) Cat. A, B, C, D (EMC 1)



KR (Korean Register of Shipping)



LR (Lloyd's Register) Env. 1, 2, 3, 4



NKK (Nippon Kaiji Kyokai)



PRS (Polski Rejestr Statków)



RINA (Registro Italiano Navale)

The following ship approvals have been granted to 750-624/020-000 I/O module variations:



GL (Germanischer Lloyd) Cat. A, B, C, D (EMC 1)

3.8 Standards and Guidelines

All variations of 750-624 I/O modules meet the following requirements on emission and immunity of interference:

EMC CE-Immunity to interference acc. to EN 61000-6-4: 2007

EMC CE-Immunity to interference acc. to EN 61000-6-2: 2005

EMC marine applications-Emission of interference acc. to Germanischer Lloyd (2003)

EMC marine applications-Immunity to interference acc. to Germanischer Lloyd (2003)

4 Assembly

4.1 Assembly Sequence

All system components can be snapped directly on a carrier rail in accordance with the European standard EN 50022 (DIN 35).

The reliable positioning and connection is made using a tongue and groove system. Due to the automatic locking, the individual components are securely seated on the rail after installation.

Starting with the coupler/controller, the bus modules are assembled adjacent to each other according to the project design. Errors in the design of the node in terms of the potential groups (connection via the power contacts) are recognized, as the bus modules with power contacts (male contacts) cannot be linked to bus modules with fewer power contacts.

CAUTION

Risk of injury due to sharp-edged male contacts!

The male contacts are sharp-edged. Handle the module carefully to prevent injury.

NOTICE

Connect the I/O modules in the required order!

Never plug bus modules from the direction of the end terminal. A ground wire power contact, which is inserted into a terminal without contacts, e.g. a 4-channel digital input module, has a decreased air and creepage distance to the neighboring contact in the example DI4.

NOTICE

Assemble the I/O modules in rows only if the grooves are open!

Please take into consideration that some bus modules have no or only a few power jumper contacts. The design of some modules does not allow them to be physically assembled in rows, as the grooves for the male contacts are closed at the top.

Note



Don't forget the bus end module!

Always plug a bus end module 750-600 onto the end of the fieldbus node! You must always use a bus end module at all fieldbus nodes with the WAGO I/O System 750 fieldbus couplers/controllers to guarantee proper data transfer.

4.2 Inserting and Removing Devices

DANGER

Use caution when interrupting the PE!

Make sure that people or equipment are not placed at risk when removing an I/O module and the associated PE interruption. To prevent interruptions, provide ring feeding of the ground conductor, see section "Grounding/Ground Conductor" in manual "System Description WAGO-I/O-SYSTEM 750".

NOTICE

Perform work on devices only if the system is de-energized!

Working on devices when the system is energized can damage the devices. Therefore, turn off the power supply before working on the devices.

4.2.1 Inserting I/O Module

1. Position the I/O module so that the tongue and groove joints to the fieldbus coupler/controller or to the previous or possibly subsequent I/O module are engaged.



Figure 8: Insert I/O module

2. Press the I/O module into the assembly until the I/O module snaps into the carrier rail.

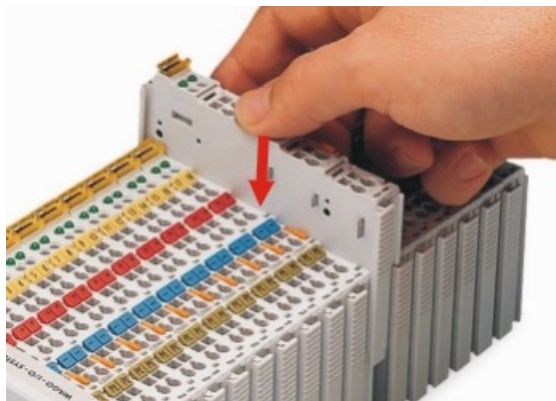


Figure 9: Snap the I/O module into place

With the I/O module snapped in place, the electrical connections for the data contacts and power contacts (if any) to the fieldbus coupler/controller or to the previous or possibly subsequent I/O module are established.

4.2.2 Removing the I/O Module

1. Remove the I/O module from the assembly by pulling the release tab.

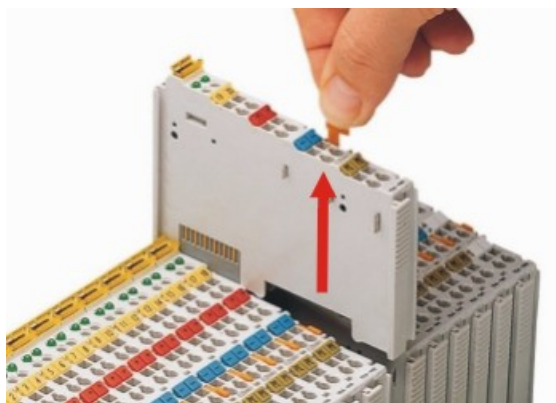


Figure 10: Removing the I/O module

Electrical connections for data or power contacts are disconnected when removing the I/O module.

5 Connect Devices

5.1 Connecting a conductor to the CAGE CLAMP®

The WAGO CAGE CLAMP® connection is appropriate for solid, stranded and finely stranded conductors.

Note



Only connect one conductor to each CAGE CLAMP® connection!

Only one conductor may be connected to each CAGE CLAMP® connection.

Do not connect more than one conductor at one single connection!

If more than one conductor must be routed to one connection, these must be connected in an up-circuit wiring assembly, for example using WAGO feed-through terminals.

Exception:

If it is unavoidable to jointly connect 2 conductors, then you must use a ferrule to join the wires together. The following ferrules can be used:

Length	8 mm
Nominal cross section _{max.}	1 mm ² for 2 conductors with 0.5 mm ² each
WAGO Product	216-103 or products with comparable properties.

1. To open the CAGE CLAMP® insert the actuating tool into the opening above the connection.
2. Insert the conductor into the corresponding connection opening.
3. To close the CAGE CLAMP® simply remove the tool - the conductor is then clamped firmly in place.

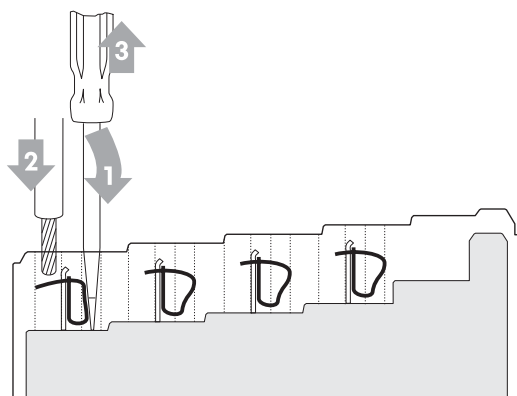


Figure 11: Connecting a conductor to a CAGE CLAMP®

5.2 Power Supply Concept

The following illustration shows the power supply concept of a WAGO-I/O-SYSTEM 750 fieldbus node for the certified application according to GL/LR.

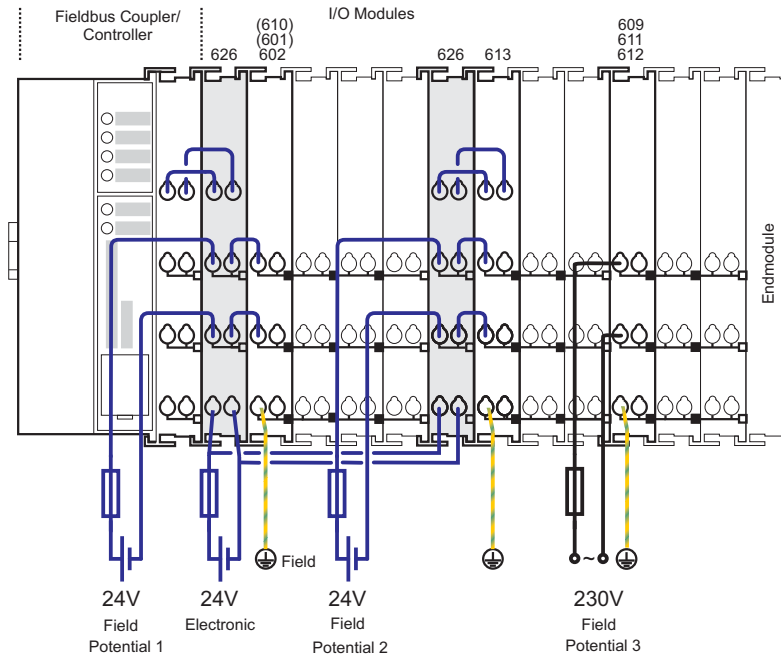


Figure 12: Power supply concept GL/LR

The 24 V system power supply of the coupler / controller must be filtered using the filter module 750-626 and protected against overvoltages.

The 24 V field power supplies must be protected against overvoltage using the filter modules 750-624 or 750-626.

When supplying the ground (earth) potential via the power jumper contacts or if a fuse protection or monitoring of the field power supply is required, a supply module 750-601 (24 V power supply with fuse), 750-602 (24 V power supply without fuse) or 750-610 (24 V power supply with fuse and diagnostics) should be used in addition to the filter module 750-626.

Otherwise the use of a supply module is not required in addition to the filter module 750-626. The downstream modules can then be directly supplied via the power jumper contacts of the filter module 750-626.

For each additional 24 V field side power supply, a filter module 750-624 is to be used in addition to the supply module 750-601, 750-602 or 750-610.

No filter module is required using 230 V field side power supply.

6 Use in Hazardous Environments

The **WAGO-I/O-SYSTEM 750** (electrical equipment) is designed for use in Zone 2 hazardous areas.

The following sections include both the general identification of components (devices) and the installation regulations to be observed. The individual subsections of the "Installation Regulations" section must be taken into account if the I/O module has the required approval or is subject to the range of application of the ATEX directive.

6.1 Identification

6.1.1 For Europe according to CENELEC and IEC

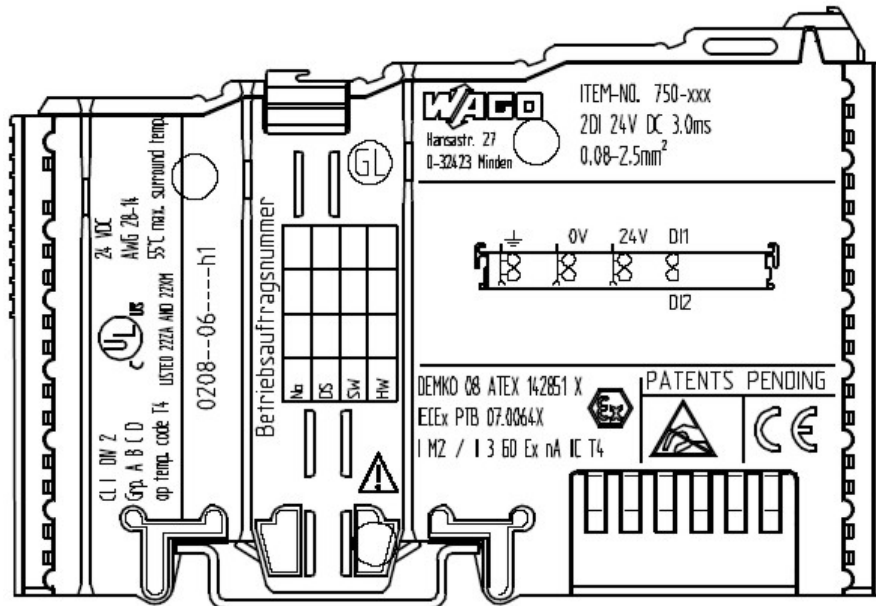


Figure 13: Example for lateral labeling of bus modules


DEMKO 08 ATEX 142851 X
 IECEX PTB 07.0064X 
 I M2 / II 3 GD Ex nA IIC T4

Figure 14: Printing on text detail in accordance with CENELEC and IEC

Table 9: Description of Printing on

Printing on Text	Description
DEMKO 08 ATEX 142851 X IECEX PTB 07.0064X	Approval body and/or number of the examination certificate
I M2 / II 3 GD	Explosion protection group and Unit category
Ex nA	Type of ignition and extended identification
IIC	Explosion protection group
T4	Temperature class

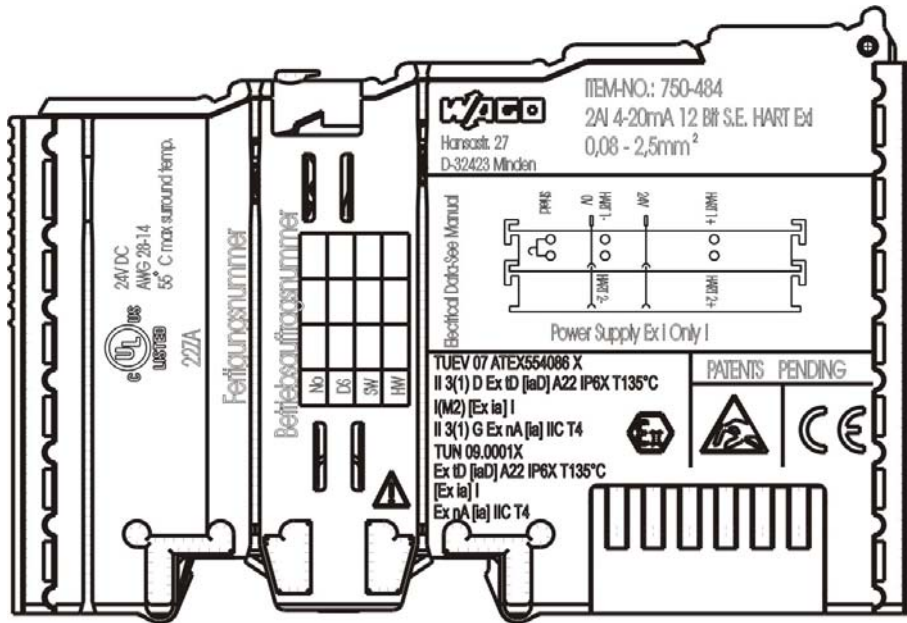


Figure 15: Example of side marking of Ex i and IEC Ex i approved I/O modules

TUEV 07 ATEX554086 X
II 3(1) D Ex tD [IaD] A22 IP6X T135°C
I(M2) [Ex ia] I
II 3(1) G Ex nA [Ia] IIC T4
TUN 09.0001X
Ex tD [IaD] A22 IP6X T135°C
[Ex ia] I
Ex nA [Ia] IIC T4



Figure 16: Inscription text detail acc. CENELEC and IEC

Table 10: Description of the inscription

Inscription text	Description
TÜV 07 ATEX 554086 X TUN 09.0001X	Approving authority or certificate numbers
Dust	
II	Device group: All except mining
3(1)D	Device category: Zone 22 device (Zone 20 subunit)
Ex	Explosion protection mark
tD	Protection by enclosure
[iaD]	Approved in accordance with "Dust intrinsic safety" standard
A22	Surface temperature determined according to Procedure A, use in Zone 22
IP6X	Dust-tight (totally protected against dust)
T 135°C	Max. surface temp. of the enclosure (no dust bin)
Mining	
I	Device group: Mining
(M2)	Device category: High degree of safety
[Ex ia]	Explosion protection: Mark with category of type of protection intrinsic safety: Even safe when two errors occur
I	Device group: Mining
Gases	
II	Device group: All except mining
3(1)G	Device category: Zone 2 device (Zone 0 subunit)
Ex	Explosion protection mark
nA	Type of protection: Non-sparking operating equipment
[ia]	Category of type of protection intrinsic safety: Even safe when two errors occur
IIC	Explosion Group
T4	Temperature class: Max. surface temperature 135°C

6.1.2 For America according to NEC 500

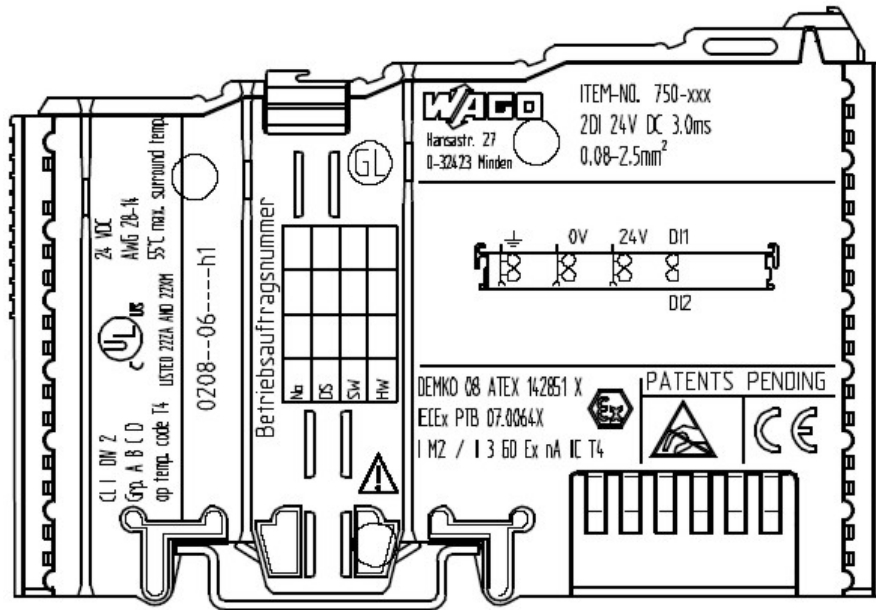


Figure 17: Example for lateral labeling of bus modules



Figure 18: Printing on text detail in accordance with NEC

Table 11: Description of Printing on

Printing on Text	Description
CL 1	Explosion protection group (condition of use category)
DIV 2	Area of application (zone)
Grp. ABCD	Explosion group (gas group)
Optemp code T4	Temperature class

6.2 Installation Regulations

In the **Federal Republic of Germany**, various national regulations for the installation in explosive areas must be taken into consideration. The basis for this forms the working reliability regulation, which is the national conversion of the European guideline 99/92/E6. They are complemented by the installation regulation EN 60079-14. The following are excerpts from additional VDE regulations:

Table 12: VDE Installation Regulations in Germany

DIN VDE 0100	Installation in power plants with rated voltages up to 1000 V
DIN VDE 0101	Installation in power plants with rated voltages above 1 kV
DIN VDE 0800	Installation and operation in telecommunication plants including information processing equipment
DIN VDE 0185	lightning protection systems

The **USA** and **Canada** have their own regulations. The following are excerpts from these regulations:

Table 13: Installation Regulations in USA and Canada

NFPA 70	National Electrical Code Art. 500 Hazardous Locations
ANSI/ISA-RP 12.6-1987	Recommended Practice
C22.1	Canadian Electrical Code

NOTICE

Notice the following points

When using the **WAGO-I/O SYSTEM 750** (electrical operation) with Ex approval, the following points are mandatory:

6.2.1 Special Conditions for Safe Operation of the ATEX and IEC Ex (acc. DEMKO 08 ATEX 142851X and IECEx PTB 07.0064)

The fieldbus-independent I/O modules of the WAGO-I/O-SYSTEMs 750-.../...-... Must be installed in an environment with degree of pollution 2 or better. In the final application, the I/O modules must be mounted in an enclosure with IP 54 degree of protection at a minimum with the following exceptions:

- I/O modules 750-440, 750-609 and 750-611 must be installed in an IP 64 minimum enclosure.
- I/O module 750-540 must be installed in an IP 64 minimum enclosure for 230 V AC applications.
- I/O module 750-440 may be used up to max. 120 V AC.

When used in the presence of combustible dust, all devices and the enclosure shall be fully tested and assessed in compliance with the requirements of IEC 61241-0:2004 and IEC 61241-1:2004.

I/O modules fieldbus plugs or fuses may only be installed, added, removed or replaced when the system and field supply is switched off or the area exhibits no explosive atmosphere.

DIP switches, coding switches and potentiometers that are connected to the I/O module may only be operated if an explosive atmosphere can be ruled out.

I/O module 750-642 may only be used in conjunction with antenna 758-910 with a max. cable length of 2.5 m.

To exceed the rated voltage no more than 40%, the supply connections must have transient protection.

The permissible ambient temperature range is 0 °C to +55 °C.

6.2.2 Special conditions for safe use (ATEX Certificate TÜV 07 ATEX 554086 X)

1. For use as Gc- or Dc-apparatus (in zone 2 or 22) the fieldbus independent I/O modules WAGO-I/O-SYSTEM 750-*** shall be erected in an enclosure that fulfils the requirements of the applicable standards (see the marking) EN 60079-0, EN 60079-11, EN 60079-15, EN 61241-0 and EN 61241-1. For use as group I, electrical apparatus M2, the apparatus shall be erected in an enclosure that ensures a sufficient protection according to EN 60079-0 and EN 60079-1 and the degree of protection IP64. The compliance of these requirements and the correct installation into an enclosure or a control cabinet of the devices shall be certified by an ExNB.
2. If the interface circuits are operated without the fieldbus coupler station type 750-3./...-... (DEMKO 08 ATEX 142851 X) measures must be taken outside of the device so that the rating voltage is not being exceeded of more than 40% because of transient disturbances.
3. DIP-switches, binary-switches and potentiometers, connected to the module may only be actuated when explosive atmosphere can be excluded.
4. The connecting and disconnecting of the non-intrinsically safe circuits is only permitted during installation, for maintenance or for repair purposes. The temporal coincidence of explosion hazardous atmosphere and installation, maintenance resp. repair purposes shall be excluded.
5. For the types 750-606, 750-625/000-001, 750-487/003-000, 750-484 the following shall be considered: The interface circuits shall be limited to overvoltage category I/II/III (non mains/mains circuits) as defined in IEC 60664-1.
6. For the type 750-601 the following shall be considered: Do not remove or replace the fuse when the apparatus is energized.
7. The ambient temperature range is: $0^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$ (for extended details please note certificate).

6.2.3 Special conditions for safe use (IEC-Ex Certificate TUN 09.0001 X)

1. For use as Dc- or Gc-apparatus (in zone 2 or 22) the fieldbus independent I/O modules WAGO-I/O-SYSTEM 750-*** shall be erected in an enclosure that fulfils the requirements of the applicable standards (see the marking) IEC 60079-0, IEC 60079-11, IEC 60079-15, IEC 61241-0 and IEC 61241-1. For use as group I, electrical apparatus M2, the apparatus shall be erected in an enclosure that ensures a sufficient protection according to IEC 60079-0 and IEC 60079-1 and the degree of protection IP64. The compliance of these requirements and the correct installation into an enclosure or a control cabinet of the devices shall be certified by an ExCB.
2. Measures have to be taken outside of the device that the rating voltage is not being exceeded of more than 40% because of transient disturbances.
3. DIP-switches, binary-switches and potentiometers, connected to the module may only be actuated when explosive atmosphere can be excluded.
4. The connecting and disconnecting of the non-intrinsically safe circuits is only permitted during installation, for maintenance or for repair purposes. The temporal coincidence of explosion hazardous atmosphere and installation, maintenance resp. repair purposes shall be excluded.
5. For the types 750-606, 750-625/000-001, 750-487/003-000, 750-484 the following shall be considered: The interface circuits shall be limited to overvoltage category I/II/III (non mains/mains circuits) as defined in IEC 60664-1.
6. For the type 750-601 the following shall be considered: Do not remove or replace the fuse when the apparatus is energized.
7. The ambient temperature range is: $0^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$ (for extended details please note certificate).

6.2.4 ANSI/ISA 12.12.01

This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D or non-hazardous locations only.

NOTICE

Explosion hazard!

Explosion hazard - substitution of components may impair suitability for Class I, Div. 2.

NOTICE

Disconnect device when power is off and only in a non-hazardous area!

Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

When a fuse is provided, the following marking shall be provided:

”A switch suitable for the location where the equipment is installed shall be provided to remove the power from the fuse”.

The switch need not be integrated in the equipment.

For devices with Ethernet connectors:

”Only for use in LAN, not for connection to telecommunication circuits”.

NOTICE

Use only with antenna module 758-910!

Use Module 750-642 only with antenna module 758-910.



Information

Additional Information

Proof of certification is available on request. Also take note of the information given on the module technical information sheet. The Instruction Manual, containing these special conditions for safe use, must be readily available to the user.

List of Figures

Fig. 1: View	15
Figure 2: Data contacts	16
Fig 3: Power jumper contacts	17
Fig. 4: Connections	18
Figure 5: Display Elements or	19
Figure 6: Display Elements	19
Figure 7: Schematic diagram	20
Figure 8: Insert I/O module	25
Figure 9: Snap the I/O module into place	26
Figure 10: Removing the I/O module	26
Figure 11: Connecting a conductor to a CAGE CLAMP®	27
Figure 12: Power supply concept GL/LR	28
Figure 13: Example for lateral labeling of bus modules	30
Figure 14: Printing on text detail in accordance with CENELEC and IEC	30
Figure 15: Example of side marking of Ex i and IEC Ex i approved I/O modules	31
Figure 16: Inscription text detail acc. CENELEC and IEC	31
Figure 17: Example for lateral labeling of bus modules	33
Figure 18: Printing on text detail in accordance with NEC	33

List of Tables

Table 1: Variants	5
Table 2: Number Notation.....	9
Table 3: Font Conventions	9
Table 4: Caption acc. to figure “View“	15
Table 5: Power jumper contacts	17
Table 6: Connections	18
Table 7: Display Elements	19
Table 8: Technical data device.....	21
Table 9: Description of Printing on.....	30
Table 10: Description of the inscription.....	32
Table 11: Description of Printing on.....	33
Table 12: VDE Installation Regulations in Germany	34
Table 13: Installation Regulations in USA and Canada.....	34

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