

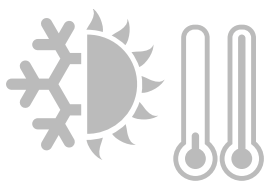
WAGO-I/O-SYSTEM 750 XTR

Taking it to the eXTReMe – The Standard for 750 XTR



TAKING IT TO THE eXTReme

The Standard for 750 XTR



**eXTReme
temperatures**

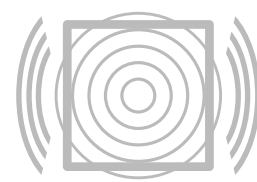
from $-40\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$



**eXTReme
isolation**

up to 5 kV of impulse voltage

DIN EN 60870-2-1



**eXTReme
vibrations**

up to 5g of acceleration

DIN EN 60068-2-6



ADVANTAGES:

- Fine modularity
- Large variety of components
- Compact design (up to 16 channels in a 12 mm wide housing)
- CAGE CLAMP® connection technology

The WAGO-I/O-SYSTEM 750 XTR is instantly recognizable by its dark gray housings. Take advantage of this system and the unique, value-added benefits it brings to demanding applications in extreme environments:

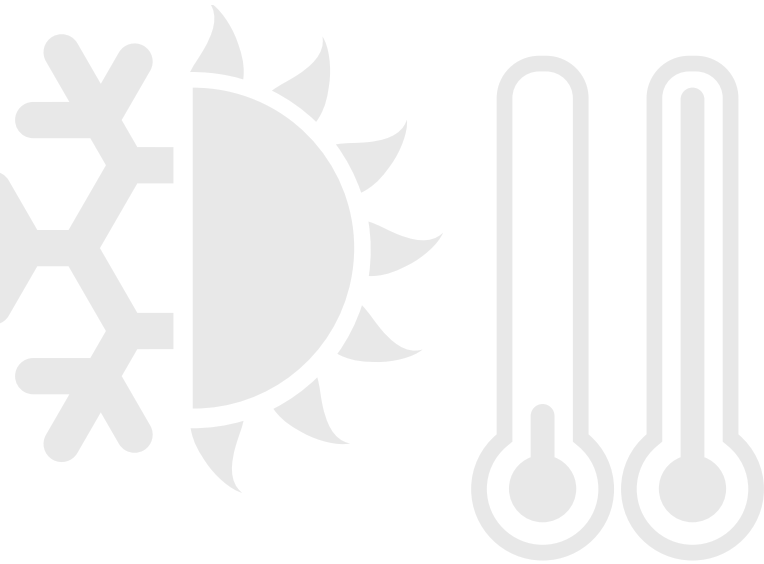
- Less space requirements
- Lower purchase costs
- Minimal energy costs
- Lower maintenance costs
- Safe investment
- Maximum system uptime
- Greater productivity

The WAGO-I/O-SYSTEM 750 XTR features outstanding characteristics: It is extremely temperature-resistant, immune to interference, as well as insensitive to vibrations and impulse voltages. This is what makes 750 XTR the first choice for demanding applications, including:

- Marine systems and onshore/offshore installations
- Renewable energy systems (wind turbines, solar systems and biogas plants)
- Transformer stations and power distribution systems
- Petrochemical industry
- Water and wastewater industry
- Custom machines
- Railway applications

eXTReMe TEMPERATURES

from $-40\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$



ADVANTAGES:

- No air conditioning required
- Reduced space requirements
- Lower energy and maintenance costs


Superior Reliability in Extreme Climates

Automation systems are increasingly being located in outdoor and remote locations where components are directly affected by widely fluctuating temperatures and weather conditions (e.g., wind turbines, rolling stock and transformer stations).

Regardless of freezing cold, extreme heat and high humidity, the WAGO-I/O-SYSTEM 750 XTR is engineered for absolute dependability in virtually any weather. As the robust variant of the WAGO-I/O-SYSTEM 750, XTR is unfazed by both freezing cold down to $-40\text{ }^{\circ}\text{C}$ and scorching heat up to $+70\text{ }^{\circ}\text{C}$. And this applies equally to both start-up and continual operation.

The maximum approved **operating altitude of 5,000 m** is another highlight. Even in the thin air of a mountain-top station, the system impressively demonstrates its high performance and availability.

WAGO's 750 XTR helps minimize space requirements by offering a compact footprint, but the savings go well beyond cabinet dimensions. XTR does not require additional heating/cooling equipment, which significantly reduces both energy consumption and maintenance costs. This brings four major benefits to your operation: No configuration, purchase, follow-up costs and space for extra air-conditioning are required.



**TAKING IT TO THE
eXTReme –**

**THE STANDARD FOR
750 XTR**



**TAKING IT TO THE
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eXTReme ISOLATION AND IMMUNITY TO INTERFERENCE

Up to 5 kV of Impulse Voltage



ADVANTAGES:

- Can be used in unshielded areas
- Ideal for standard telecontrol equipment and railway applications
- Increased system uptime

Additional Protection Against Interference Pulses

Increasing demands for high productivity are shaping manufacturing processes, and placing particularly high demands on automaton systems.

The WAGO-I/O-SYSTEM 750 XTR provides greater **isolation up to 5 kV of impulse voltage**, lower EMC emission of interference and higher insensitivity to EMC interference. These strengths add up to trouble-free operation.

Within an application, the 750 XTR Series seamlessly communicates with other parts of the system, without creating interference or disrupting other system components. This ensures successful communication and reliability you can trust.

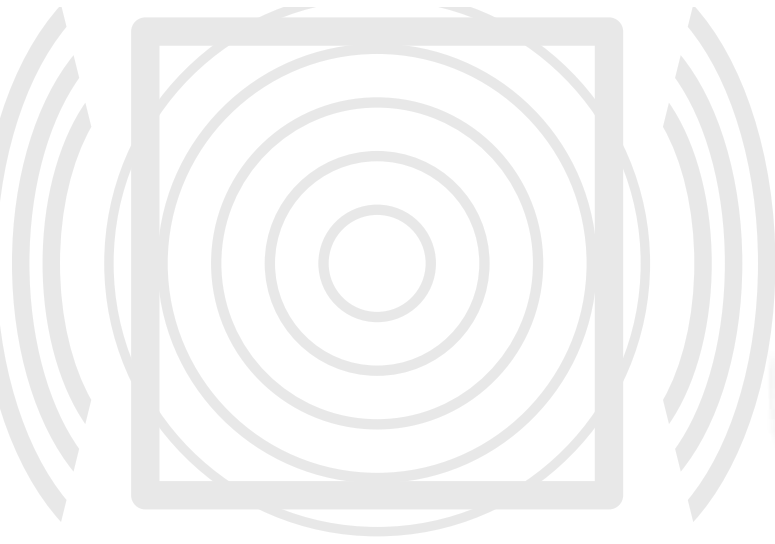
Extensively engineered, the WAGO-I/O-SYSTEM 750 XTR is also an ideal solution for telecontrol applications for two good reasons:

First, the 750 XTR Series Telecontroller speaks the right languages (**DNP3, MODBUS and telecontrol protocols adhering to IEC 60870-5-101/-103/-104, IEC 61850 and IEC 61400-25**). Second, it fully meets **EN 60870-2-1** impulse voltage withstand requirements.

The result is a tailor-made solution for demanding telecontrol applications that readily meets all requirements.

eXTReMe VIBRATIONS

Up to 5g of Acceleration



ADVANTAGES:

- Install close to vibrating and shock-generating system components
- Increased system uptime
- Investment security

High Mechanical Performance

Automation systems must be particularly vibration-resistant, especially when installed close to vibration-prone and shock-generating system components. Powerful motors and power circuit breakers are just two examples from a wide field of torturous applications.

The WAGO-I/O-SYSTEM 750 XTR is also setting new standards: With **5g of vibration resistance** per DIN EN 60068-2-6 (acceleration: 50 m/s²) and **15g** (150 m/s²) **of shock resistance**, as well as **25g** (250 m/s²) **of continuous shock resistance** per IEC 60068-2-27, the system is engineered for dependability – no matter what.

Count on long-lasting, trouble-free operation and industry-topping levels of safety – even in the most severe applications, such as tunnel boring machines.

The extreme ruggedness of the 750 XTR Series pays off twice, maximizing both uptime and investment security to save you time and give you peace of mind.



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750 XTR**

GENERAL SPECIFICATIONS

Approvals, Standards and Guidelines

For WAGO, only the highest quality will do! This is why the research and development of all WAGO components occurs in our own accredited test lab with criteria that far exceeds industry mandates. This attention to detail ensures that all relevant standards, guidelines and international approval requirements are met by the 750 XTR Series.

GENERAL SPECIFICATIONS

Increased insulation withstand voltages:

- Modules \leq 50 V: 510 VAC/775 VDC
- Modules $>$ 50 V: 2.5 kVAC/3.5 kVDC
- Isolation: Rated impulse voltage
 - Modules \leq 50 V: 1 kV (Class VW1 per EN 60870-2-1)
 - Modules $>$ 50 V: 5 kV (Class VW3 per EN 60870-2-1)
- Surge:
 - Modules \leq 50 V: 1 kV (L - L) / 2 kV (L - E)
 - Modules $>$ 50 V: 2 kV (L - L) / 4 kV (L - E)
- Overvoltage category for modules $>$ 50 V: III

Temperature:

- Ambient operating temperature: -40 °C ... $+70$ °C
- Storage temperature: -40 °C ... $+85$ °C

Condensation:

- Short-term condensation per class 3K7/IEC EN 60721-3-3 (except wind-driven precipitation, water and ice formation) is permitted due to conformally coated circuit boards.

Mixed operation:

Mixed operation (standard/XTR modules) within a node is possible when groups of modules are electrically isolated on the field side (i.e., electrically isolated power supply).

Vibration:

5g per EN 60068-2-6

Interference-free:

All digital outputs are interference-free for safety function applications.

Approvals*:

- CE
- UL 508
- Marine applications
- Application in Zone 2/22 hazardous areas

Temperature derating, operating altitude:

- 0.5 K/100 m from 2,000 m to 5,000 m, which means a maximum ambient operating temperature of 70 °C for 2,000 m, maximum 55 °C for a 5,000 m operating altitude

STANDARDS AND REGULATIONS

Mechanical Stability

Vibration resistance:

- IEC 60068-2-6 (5G ACCELERATION)
- EN 61131-2
- IEC 60721-3-1
- IEC 60721-3-3
- EN 60870-2-2
- EN 50155
- EN 61373

Shock resistance:

- IEC 60068-2-27
 - 15G/11 MS/HALF-SINE/1,000 SHOCKS
 - 25G/6 MS/1,000 SHOCKS
- EN 50155
- EN 61373

EMC

Immunity to interference:

- EN 61000-6-1
- EN 61000-6-2
- EN 61131-2
- Marine applications
- EN 50121-3-2
- EN 50121-4
- EN 50121-5
- EN 60255-26
- EN 60870-2-1
- EN 61850-3
- IEC 61000-6-5
- IEEE 1613
- VDEW: 1994

Emission of interference:

- EN 61000-6-3 AND EN 61000-6-4
- EN 61131-2
- EN 60255-26
- Marine applications
- EN 60870-2-1 (industrial + residential environment)
- EN 61850-3 (industrial + residential environment)
- EN 50121-3-2
- EN 50121-4
- EN 50121-5

WAGO-I/O-SYSTEM 750 XTR

Overview

PFC200 Controllers	
PFC200 2ETH RS XTR	750-8202/040-000
PFC200 2ETH RS CAN DPS XTR	750-8206/040-000
PFC200 2ETH RS Tele XTR	750-8202/040-001
PFC200 2ETH RS CAN DPS Tele XTR	750-8206/040-001
Controllers	
ETHERNET Controller G3 SD XTR	750-880/040-000
ETHERNET Controller G3 SD Tele XTR	750-880/040-001
CANopen Controller M3 DSub XTR	750-838/040-000
Fieldbus Couplers	
FC PROFIBUS XTR	750-333/040-000
FC ETHERNET G2 XTR	750-352/040-000
FC CANopen DSub XTR	750-338/040-000
Digital Inputs and Outputs	
8DI 24 VDC 3ms 2-wire XTR	750-1415/040-000
8DI 24 VDC 0.2ms 2-wire XTR	750-1416/040-000
16DI 24 VDC 3ms XTR	750-1405/040-000
2DI 60 VDC 3ms XTR	750-429/040-001
2DI 110 VDC 3ms XTR	750-427/040-000
2DI 220 VDC 3ms XTR	750-407/040-000
2DO 24 VDC 2A Diagn XTR	750-508/040-000
8DO 24 VDC 0.5A 2-wire XTR	750-1515/040-000
2DO 230 VAC 1A Relay2CO XTR	750-517/040-000
Analog Inputs and Outputs	
4AI 0-20mA SE XTR	750-453/040-000
4AI 4-20mA SE XTR	750-455/040-000
4AI 0-10 VDC SE XTR	750-468/040-000
4AI ±10 VDC SE XTR	750-457/040-000
2/4AI RTD Adjust XTR	750-464/040-000
2AI TC Adjust XTR	750-469/040-000
3-PHASE POM 690VAC 1A XTR	750-495/040-000
3-PHASE POM 690VAC 5A XTR	750-495/040-001
3-PHASE POM 690VAC R.C. XTR	750-495/040-002
2AI 4-20mA Diff NE43 XTR	750-492/040-001
2AO 0/4-20mA 16bits 6-18 VDC XTR	750-563/040-000
4AO 0-10 VDC XTR	750-559/040-000
4AO ±10 VDC XTR	750-557/040-000
Communication, Supply and Segment Modules	
RS232/485 Interface XTR	750-652/040-000
Power Supply 24 VDC XTR	750-602/040-000
Power Supply 0-230 VAC/VDC XTR	750-612/040-000
System Power Supply 24 VDC XTR	750-613/040-000
Distance Module XTR	750-616/040-000
Field Supply Filter 24 VDC HI XTR	750-624/040-001
Supply Filter 24 VDC HI XTR	750-626/040-000
Potential Distribution 16*24V XTR	750-1605/040-000
Potential Distribution 16*0V XTR	750-1606/040-000
End Module XTR	750-600/040-000



750-8206/040-000



750-880/040-000



750-1405/040-000



750-652/040-000

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