

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
WAGO I/O-System 750/753

Issued to

WAGO Kontakttechnik GmbH & Co. KG
Minden, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature	B
Humidity	B
Vibration	B
EMC	B
Enclosure	A

Issued at **Hamburg** on **2018-01-12**

This Certificate is valid until **2023-01-11**.

DNV GL local station: **Magdeburg**

for **DNV GL**

Approval Engineer: **Heinz Scheffler**

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Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

The WAGO-I/O-SYSTEM 750/753 is a modular, fieldbus independent I/O system.

The System including the following list of modules:

PFC100/200 Controller

0750-8100	PFC100 CS 2ETH ECO
0750-8101	PFC100 CS 2ETH
0750-8102	PFC100 CS 2ETH RS
0750-8202/*	PFC200 CS 2ETH RS
0750-8203	PFC200 CS 2ETH CAN
0750-8204	PFC200 CS 2ETH RS CAN
0750-8206	PFC200 CS 2ETH RS CAN DPS
0750-8208	PFC200 CS 2ETH RS CAN DPM

Fieldbus Controller

0750-0806	DeviceNet
0750-0812	Prog. Modbus/RS 485/150-19200 Bd
0750-0814	Prog. Modbus/RS 232/150-19200 Bd
0750-0815	Prog. Modbus/RS 485/1.2-115.2 kBd
0750-0816	Prog. Modbus/RS 232/1.2-115.2 kBd
0750-0831	BACnet/ IP
0750-0833	PROFIBUS
0750-0837/*	CANopen
0750-0838/*	CANopen
0750-0841/*	Ethernet 10/100 MBit/s
0750-0842/*	Ethernet
0750-0889	KNX IP with SD-card

Fieldbus Coupler

0750-0303/*	PROFIBUS DP/FMS 12 MBd
0750-0306/*	DeviceNet
0750-0312	Modbus/RS 485/150-19200 Bd
0750-0314	Modbus/RS 232/150-19200 Bd
0750-0315/*	Modbus/RS 485/1.2-115.2 kBd
0750-0316/*	Modbus/RS 232/1.2-115.2 kBd
0750-0323	PROFIBUS DP 12 MBd/Digital
0750-0333	PROFIBUS DP 12 MBd/DPV1
0750-0337/*	CANopen
0750-0341	ETHERNET TCP/IP 10/100 MBit
0750-0342	ETHERNET

Digital Input (DI) Module

0750-0400	2DI 24V DC 3.0ms
0750-0401	2DI 24V DC 0.2ms
0750-0402	4DI 24V DC 3.0ms
0750-0403	4DI 24V DC 0.2ms
0750-0405	2DI 230V AC
0750-0406	2DI 120V AC
0750-0410	2DI 24V DC 3.0ms Proxi Sensor
0750-0411	2DI 24V DC 0.2ms Proxi Sensor
0750-0415	4DI 24V AC/DC 20ms
0750-0418	2DI 24V DC 3.0ms/Diagn./Acknol.
0750-0421	2DI 24V DC 3.0ms/Diagn.
0750-0423	4DI 24V AC/DC S.E.
0750-0424	2DI Intruder Detection
0750-0430	8DI 24V DC 3.0ms
0750-0431	8DI 24V DC 0.2ms
0750-0432	4DI 24V DC 3.0ms/ 2-wire
0750-0433	4DI 24V DC 0.2ms/ 2-wire
0750-0435	1DI NAMUR Ex i
0750-0436	8DI 24V DC 3.0ms/LS-Switch
0750-0437	8DI 24V DC 0.2ms/LS-Switch
0750-0438	2DI NAMUR Ex i
0753-0419	2DI 24V DC 3.0ms/Diagn.

Digital Output (DO) Module

0750-0501/*	2DO 24V DC 0.5A
0750-0502/*	2DO 24V DC 2.0A
0750-0504/*	4DO 24V DC 0.5A
0750-0508/*	2DO 24V DC 2.0A/Diagn.
0750-0509	2DO 230V AC 0.3A Sol. St.
0750-0512	2DO 250V AC 2.0A Rel.2NO
0750-0513	2DO 250V AC 2.0A Rel.2NO Pot.-Free
0750-0514	2DO 125V AC 0.5A Rel.2CO Pot.-Free
0750-0516	4DO 24V DC 0.5A Negative
0750-0517	2DO 250V AC 1.0A Rel.2CO Pot.-Free
0750-0523	1DO 230V AC 16A REL 1A Pot.-Free
0750-0530	8DO 24V DC 0.5A
0750-0531/*	4DO 24V DC 0.5A/ 2-wire
0750-0535	2DO 24V DC Ex i
0750-0536	8DO 24V DC 0.5A/LS-Switch
0750-0537	8DO 24V DC 0.5A/Diagn.

Analogue Input (AI) Module

0750-0450	4AI RTD / adj.
0750-0451	8AI RTD / adj.
0750-0452/*	2AI 0-20mA Diff.
0750-0453	4AI 0-20mA S.E.
0750-0454/*	2AI 4-20mA Diff.
0750-0455/*	4AI 4-20mA S.E.
0750-0456/*	2AI $\pm 10V$ DC
0750-0457	4AI $\pm 10V$ DC S.E.
0750-0458	8AI Thermo / Diagn. / adj.
0750-0459	4AI 0-10V DC S.E.
0750-0461/*	2AI PT100 (RTD)
0750-0462/*	2AI Thermocouple (K)
0750-0468/*	4AI 0-10V DC S.E.
0750-0469/*	2AI Thermocouple K Diagn.
0750-0470/*	2AI 0-20mA S.E/ s.c. protec.
0750-0472/*	2AI 0-20mA 16Bit S.E.
0750-0473/*	2AI 4-20mA S.E./s.c. protec.
0750-0474/*	2AI 4-20mA 16Bit S.E.
0750-0476/*	2AI $\pm 10V$ DC 16Bit S.E.
0750-0478/*	2AI 0-10V DC 16Bit S.E.
0750-0479/*	2AI $\pm 10V$ DC Measurement Input
0750-0481/0003-0000	2AI RTD Ex i
0750-0483	2AI 0-30V DC DIFF./ Measur. Inp.
0750-0485	2AI 4-20MA Ex i
0750-0486	4AI 0/4-20mA Ex i
0750-0494/*	3-Phase Power Measurement 480V/ 1A
0750-0495/*	3-Phase Power Measurement 690V/ 1A
0750-0496	8AI 0-20mA / 4-20mA S.E.
0750-0497	8AI 0-10V/ $\pm 10V$ S.E.

Analogue Output (AO) Module

0750-0550/*	2AO 0-10V DC
0750-0552/*	2AO 0-20mA
0750-0553	4AO 0-20mA
0750-0554/*	2AO 4-20mA
0750-0555	4AO 4-20mA
0750-0556/*	2AO $\pm 10V$ DC
0750-0557	4AO $\pm 10V$ DC
0750-0559/*	4AO 0-10V DC
0750-0585	2AO 0-20MA Ex i

Interface Module

0750-0650/*	RS 232 C
0750-0651/*	TTY
0750-0653/*	RS 485
0750-0655	AS-INTERFACE MASTER
0753-0646	KNX/EIB/TP1
0753-0647	DALI Multi Master

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Special Module

0750-0404/*	Up/Down Counter
0750-0600	End Module
0750-0608	Trimmer-Module/1k/±12V DC
0750-0614	Potential Multiplication Module
0750-0616	Distance Module
0750-0654/*	Data Exchange Module
0753-0110	Connector
0753-0620	DALI Multi Master DC/DC Converter

Power Supply Modules

0750-0601	24V DC Power Supply (Fuse)
0750-0602	24V DC Power Supply
0750-0609	230V AC Power Supply (Fuse).
0750-0610	24V DC Power Supply (Fuse. Diagn.)
0750-0611	230V AC Power Supply (Fuse. Diagn.)
0750-0612	0-230V AC/DC Power Supply
0750-0613	24V DC Power Supply (Bus)
0750-0624	24V DC Field Supply Filter (Surge)
0750-0626	24V DC Supply Filter (Surge)

Accessory

0750-0960	Fieldbus Connector PROFIBUS
0750-0963	Fieldbus Connector CANopen
0750-0970	Fieldbus Connector PROFIBUS PG-Int.
0750-0975	Fieldbus Connector Ethernet RJ45 IP20

/* means: WAGO I/O System 0750/0753 includes modules of type 0750-xxxx and 0753-xxxx. The function of the type 0753-xxxx is the same as 0750-xxxx, type 0753-xxxx uses a pluggable wiring connector 0753-0110. Both types are available with a suffix extension which consists up to 16 digits (xxxx-xxxx/xxxx-xxxx). The suffix extensions mean a variant which describes in e.g. firmware, process image, measuring range or default.

Programming Software:

759-332: WAGO-I/O-Pro 32#
759-333: WAGO-I/O-Pro CAA

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

EX-certification is not covered by this certificate.

Job Id: **262.1-025787-1**
Certificate No: **TAA0000194**

Type Approval documentation

Test reports: 1027-07-GG-07-PP001, 1027-07-GG-07-PP002, 1027-07-GG-07-PP003, 12 ATEX 106032 X, 140034-02-01A-05-e, 140034-03-01B-02_2.1, 140034-05-01A-05-e_1.1., EK0005_05, EK0007_05, EK0016_05, EK0016_1_00, EK0016_2_00, EK0016_3_00, EK0016_4_00, EK0016_5_00, EK0021_04, EK0025_05, EK0027_01_05, EK0027_02_05, EK0027_03_05, EK0027_04_05, EK0027_05_05, EK0054_03, EK0054_1_03, EMVP06_0412, EMPV07_0387, EMVP08_0139, EMVP08_0417, EMVP08_0479, EMVP09_0280, EMVP09_0640, EMVP10_0061, EMVP10_0131, EMVP10_0366, EMVP11_0170_V1, EMVP13_0202, EMVP13_0217, EMVP14_0130, EMVP15_0047, EMVP15_0048, EMVP15_0051, EMVP17_0010, LB15468, LB15469, LB15470, LB17215, LB17580, LB18616, TR00_0206-01, TR00_0206-02, TR00_0206-03, TR00_0206-04, TR00_0206-05

Documents: Document List MC999999_Cert17_012, Rev. 4.0

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE