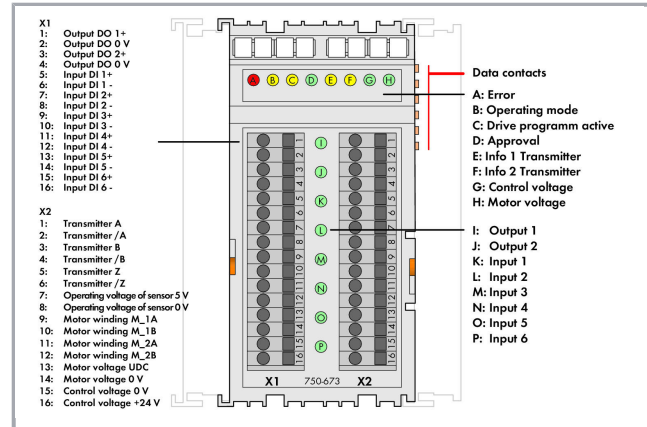
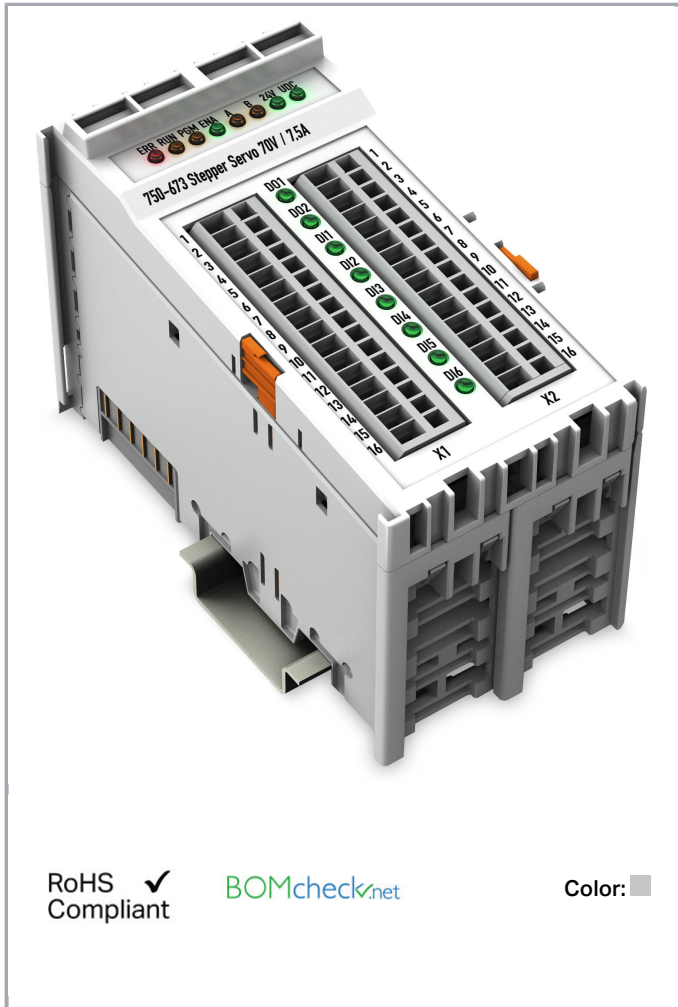


Data sheet | Item number: 750-673

Servo Stepper Controller; 70 VDC; 7.5 A; 6 Inputs; 2 Outputs; light gray

www.wago.com/750-673



RoHS
Compliant

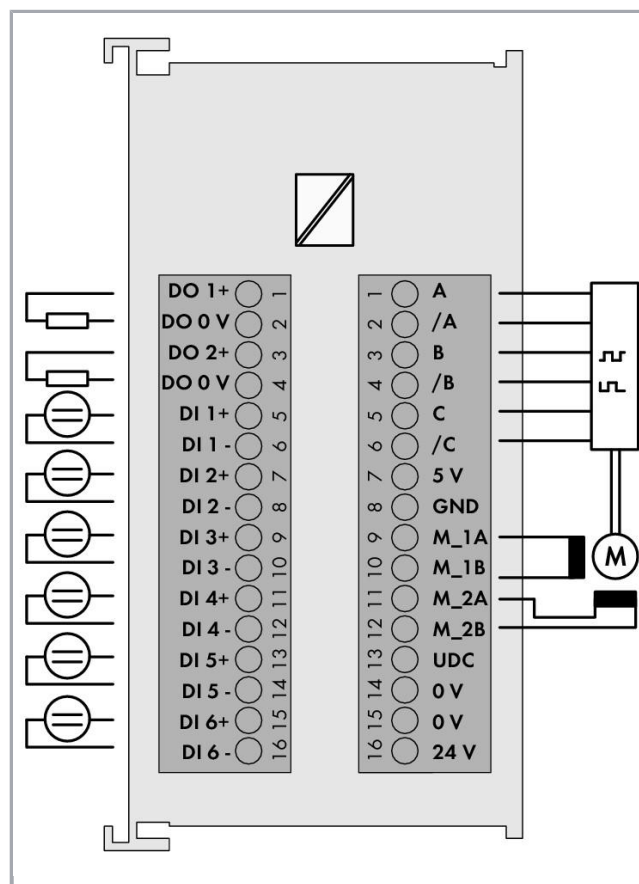
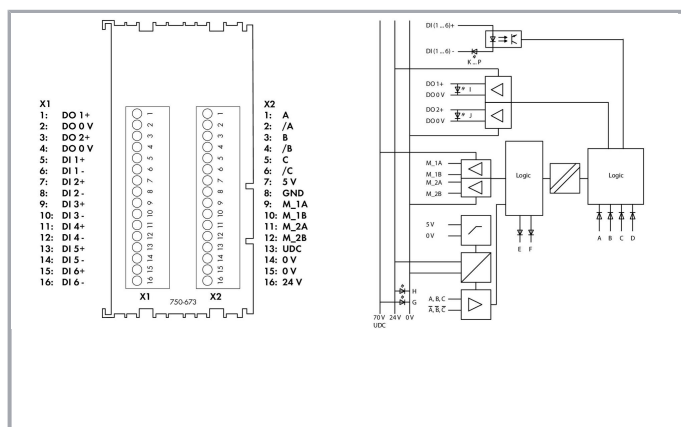
BOMcheck.net

Color:

Subject to changes. Please also observe the further product documentation!

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Item description

The 750-673 is an intelligent servo stepper controller with on-board power driver and incremental encoder evaluation to control 2-phase stepper motors up to 70 V/7.5 A. The 64 times microstepping prevents step losses due to resonance in the acceleration phases and reduces wear on the mechanical parts

The controller features vector control that, together with the incremental encoder, contributes to an efficient and dynamic rotation speed characteristic. Six configurable inputs for start/stop, end-stop, reference, jog/tip, etc., can be directly processed by the internal software without delay. Two outputs can be linked with internal functions or used freely.

Versatile functions, such as positioning with different acceleration slopes, command tables, camshaft controller, auto referencing and other event-dependent properties provide this controller with a wide spectrum of possible uses. The programmer's interface is the same for all WAGO Stepper Controllers.

Data

Technical Data

Device-specific

Inputs (preset): DI 1: Drive stop, DI 2: Reference input, DI 3: Jog switch in positive direction, DI 4: Jog switch in negative direction, DI

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5: Limit switch in positive direction, DI 6: Limit switch in negative direction, Outputs (preset): DO 1: Target reached, DO 2: Error, Inputs and outputs can be freely reconfigured.

Number of digital outputs	2
No. of outputs	1 stepper motor (2 phases)
Counter depth	32 Bit
Sensor connection	A, /A, B, /B, C, /C
Sensor frequency	1 MHz
Sensor supply	5 VDC, 300 mA, short-circuit-protected
Quadrature decoder	4x evaluation
Input filter	100 µs, software filter can be connected
Input current typ.	2.8 mA
Output current per channel	0.5 A
Output current	short-circuit-protected
Switching frequency max.	5 Hz; Inductive load per IEC 947-5-1, DC 13
Type of load	Resistive load, inductive load (max. 2 H), lamps
Motor current	2 x 5.0 A (2 x 7.5 A transient)
Output voltage	Control voltage: 24 VDC (-25 % ... +30 %), Closed current 120 mA + 2 x 0.5 A (DO1, DO2, load-dependent) + approx. 100 mA (encoder) Motor voltage: Nominal value 55 VDC, Absolute upper limit: 71.5 V, Absolute lower limit: 18 V, Closed current typ. = 5 mA, Protection via external fuse 5 A
Voltage range for signal (0)	-3 ... +5 VDC
Voltage range for signal (1)	15 ... 30 VDC
Signal voltage	Compatible with RS-485/-422, common GND with motor voltage and control voltage
Diagnostics	Overcurrent, short circuit or ground fault, overtemperature, supply voltage monitoring, motor wire break, wrong rotational direction incremental encoder - motor
Resolution	15 bits + 16 bit prescaler; 64 microsteps per full step
Resolution Stepper	23 bits + sign bit
Load type of the switching frequency	Inductive load per IEC 947-5-1, DC 13
Schrittfrequenz, Vollschrift max	7,812 Hz
Bit width	12-byte input/output
Protection	Short circuit monitoring of motor connections: Winding short circuit and short circuit to 0 V and 24 V 24 V supply: Reverse voltage protection Motor supply: Reverse voltage protection via external fuse
Terminating resistor	internal 120 Ω
Functions	Positioning, sin ² -shaped ramps, setpoint change on the fly, torque control

Subject to changes. Please also observe the further product documentation!



System supply voltage	DC 5 V; via data contacts
Current consumption, system supply (5 V)	70 mA
Isolation	500 V system/field

Connection data

Connection technology: In-/Outputs	32 x CAGE CLAMP®
Connection type (1)	Inputs/Outputs
Solid conductor	0,08 ... 1,5 mm² / 28 ... 14 AWG
Fine-stranded conductor	0,08 ... 1,5 mm² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inch
Anschlussanforderung zulässige Leitungslänge	30 m
Connection requirement (permissible cable type)	Motor connection: shielded
Note (conductor cross-section)	14 AWG: THHN, THWN

Geometrical Data

Width	48 mm / 1.89 inch
Height	69,8 mm / 2.748 inch
Height from upper-edge of DIN-35 rail	62,6 mm / 2.465 inch
Depth	100 mm / 3.937 inch

Mechanical data

Type of mounting	DIN-35 rail
------------------	-------------

Material Data

Color	light gray
Housing material	Polycarbonate, polyamide 6.6
Weight	183 g
Conformity marking	CE

Environmental Requirements

Surrounding air (operating) temperature	0 ... 55 °C
Surrounding air (storage) temperature	-40 ... 85 °C
Protection class	IP20
Degree of pollution (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying); vertical

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Relative air humidity (no condensation)	95 %
Vibration resistance	per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per 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

Commercial data

Product Group	15 (Remote I/O)
Packaging type	BOX
Country of origin	DE
GTIN	4045454957193
Customs Tariff No.	85371091990

Approvals / Certificates

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 61800-5-1	E336763

Counterpart

Compatible products

system box

Item no.: 850-804

IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip

www.wago.com/850-804

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	Item no.: 850-804/000-001 IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip	www.wago.com/850-804/000-001
	Item no.: 850-805 IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip	www.wago.com/850-805
	Item no.: 850-814/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate	www.wago.com/850-814/002-000
	Item no.: 850-815/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate	www.wago.com/850-815/002-000
	Item no.: 850-816/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate	www.wago.com/850-816/002-000
	Item no.: 850-817/002-000 IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate	www.wago.com/850-817/002-000
	Item no.: 850-825 IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20	www.wago.com/850-825
	Item no.: 850-826 IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip	www.wago.com/850-826
	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	www.wago.com/850-826/002-000
	Item no.: 850-827 IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip	www.wago.com/850-827
	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	www.wago.com/850-827/002-000
	Item no.: 850-828 IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip	www.wago.com/850-828
	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	www.wago.com/850-828/002-000
	Item no.: 850-834 IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20	www.wago.com/850-834
	Item no.: 850-835 IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable	www.wago.com/850-835

Subject to changes. Please also observe the further product documentation!

grip

**Item no.: 850-836**

IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip

www.wago.com/850-836**Marking accessories****Item no.: 2009-145**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

www.wago.com/2009-145**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; white /000-002

www.wago.com/2009-145**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

www.wago.com/2009-145

/000-005

**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

www.wago.com/2009-145

/000-006

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; white /000-007

www.wago.com/2009-145**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

www.wago.com/2009-145

/000-012

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

www.wago.com/2009-145

/000-023

**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

www.wago.com/2009-145

/000-024

**Item no.: 248-501**

Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card

www.wago.com/248-501**Item no.: 248-501/000-002**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

www.wago.com/248-501

/000-002

Item no.: 248-501/000-005

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

www.wago.com/248-501

/000-005

Item no.: 248-501/000-006

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/248-501

/000-006

Subject to changes. Please also observe the further product documentation!

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Item no.: 248-501/000-007

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

www.wago.com/248-501/000-007**Item no.: 248-501/000-012**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/248-501/000-012**Item no.: 248-501/000-017**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

www.wago.com/248-501/000-017**Item no.: 248-501/000-023**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/248-501/000-023**Item no.: 248-501/000-024**

Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/248-501/000-024**Item no.: 750-103**

Group marker carrier; transparent

www.wago.com/750-103**Item no.: 750-106**

Group marker carrier; transparent

www.wago.com/750-106**Carrier rail****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

www.wago.com/210-112**Item no.: 210-113**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715

www.wago.com/210-113**Item no.: 210-114**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715

www.wago.com/210-114**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

www.wago.com/210-115**Item no.: 210-118**

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

www.wago.com/210-118**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

www.wago.com/210-196**Item no.: 210-197**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715

www.wago.com/210-197**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

www.wago.com/210-198**Item no.: 210-504**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715

www.wago.com/210-504

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**Item no.: 210-505**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715

www.wago.com/210-505**Item no.: 210-506**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715

www.wago.com/210-506**Item no.: 210-508**

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715

www.wago.com/210-508**shield connection****Item no.: 790-108**

Shield clamping saddle; 11 mm wide; diameter of compatible conductor; 3 ... 8 mm

www.wago.com/790-108**Item no.: 790-116**

Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm

www.wago.com/790-116**Item no.: 790-124**

Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm

www.wago.com/790-124**Item no.: 790-140**

Shield clamping saddle; diameter of compatible conductor

www.wago.com/790-140**Item no.: 790-208**

Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm

www.wago.com/790-208**Item no.: 790-216**

Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm

www.wago.com/790-216**Item no.: 790-220**

Shield clamping saddle; 30 mm wide; 6 ... 20 mm

www.wago.com/790-220**tools****Item no.: 210-719**

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

www.wago.com/210-719**Downloads****Documentation****Manual**

Servo stepper controller 70 V / 7.5 A 6IN, 2OUT

V 1.0.3

pdf
3.0 MB[Download](#)**Additional Information**

Disposal; Electrical and electronic equipment, Packaging

V 1.0.0

pdf
265.8 kB[Download](#)**System Description**

Use in Hazardous Environments

V 1.0.0

pdf

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Term definition, marking and installation regulations		1.0 MB	
Design Notes	V 2.0.0	pdf	Download
Basic conditions and recommendations for higher operational safety		1.5 MB	
750/753 Series I/O-System – General Product Information		pdf	Download
		1.7 MB	
Overview on WAGO-I/O-SYSTEM 750 approvals		pdf	Download
		780.2 kB	

Application Notes

Application Note CoDeSys 2.3

How to use Matlab code in a CODESYS project (a500710)	V1.0.0	zip	Download
An example showing how to use matlab code in a CODESYS program for controlling an inverted pendulum.	Apr 9, 2014	2.6 MB	

Application note SIEMENS

Benutzung der Stepper Module 750-670,750-671,750-672,750-673 mit Siemens Step 7 (a114903)	V1.1.0	zip	Download
Dieser Anwendungshinweis beschreibt die Bausteine, die zur Nutzung der verschiedenen Stepper Module bereitgestellt werden.	Feb 3, 2017	8.9 MB	

Libraries

Library

Function blocks for the stepper modules 750-670,750-671,750-672,750-673	V1.0.5	zip	Download
Function blocks for the stepper modules 750-670,750-671,750-672,750-673.	May 29, 2017	601.7 kB	

CAD/CAE-Data

CAD data

2D/3D Models 750-673	URL	Download
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CAE data

EPLAN Data Portal 750-673	URL	Download
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WSCAD Universe 750-673	URL	Download
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Device Files

Device Driver

WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 Sep 10, 2014	zip 4.8 MB	Download
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Installation Notes

Product family

750/753 Series – I/O System
[Show all products from the family](#)

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