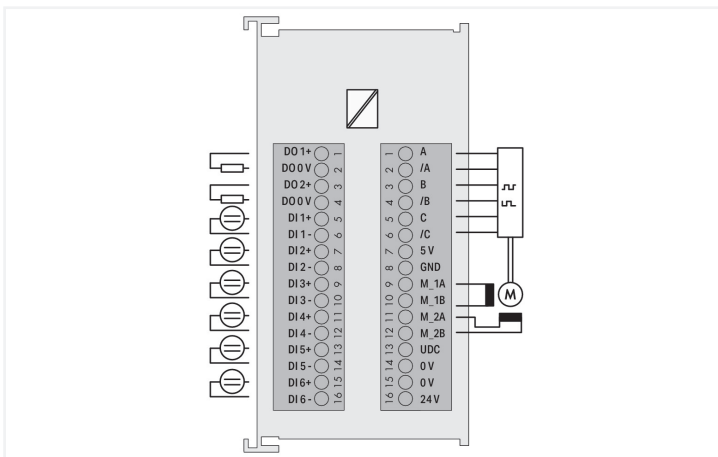
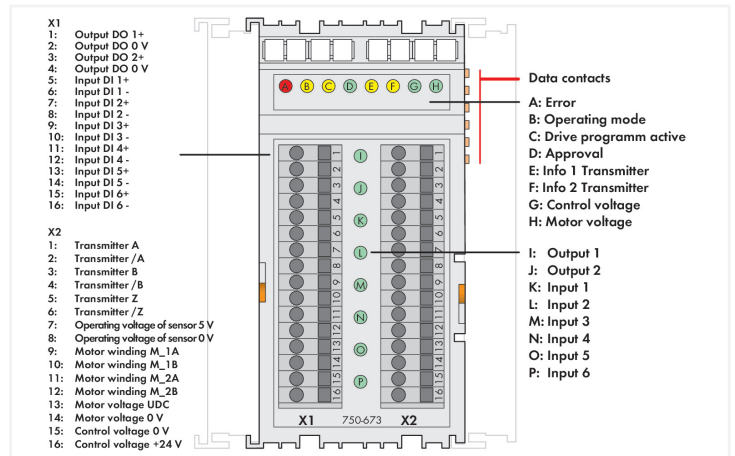
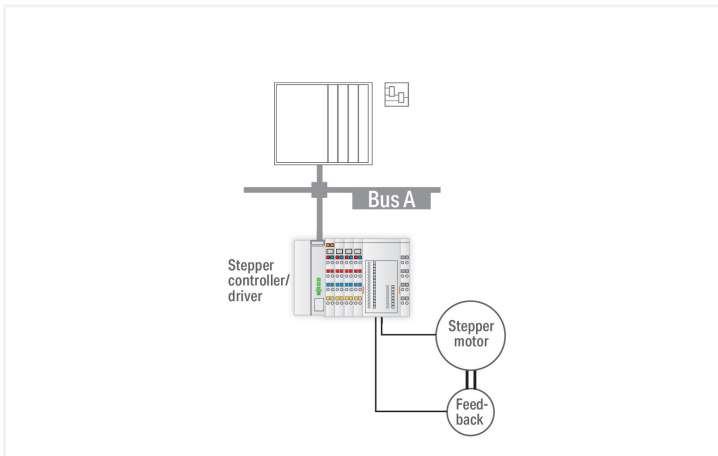


Color: ■ light gray



The intelligent 750-673 Servo Stepper Controller has an on-board power driver and an incremental encoder evaluation for controlling 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-de-

pendent properties provide this controller with a wide spectrum of possible uses. The programmer's interface is the same for all WAGO Stepper Controllers.

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 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
Counter depth	32 bits
Encoder connection	A, /A, B, /B, C, /C
Encoder 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
Load type	Resistive load, inductive load (max. 2 H), lamps
Output current (max.) (motor)	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: 55 VDC nominal value; 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
Stepper resolution	23 bits + sign bit
Stepper frequency (full-step) max.	7812 Hz
Data 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
Function	Positioning, sin ² -shaped ramps, setpoint change on the fly, torque control
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	70 mA
Isolation	500 V system/field
Indicators	LED (A) red: Error; LED (B, C, E, F) yellow: Operation, Run Program Active, Info 1 Encoder, Info 2 Encoder; LED (D, G, H) green: Enable, Control Voltage, Motor Voltage

Connection Data	
Connection technology: I/O	32 x CAGE CLAMP®
Connectable conductor materials	Copper
Connection type	Inputs/outputs
Solid conductor	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 1.5 mm ² / 28 ... 14 AWG
Strip length	5 ... 6 mm / 0.2 ... 0.24 inches
Connection requirement (permissible cable length)	30 m
Connection requirement (permissible cable type)	Motor connection: shielded
Note (conductor cross-section)	14 AWG: THHN, THWN

Physical data

Width	48 mm / 1.89 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

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	1.711 MJ
Weight	183 g
Conformity marking	CE

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	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 (I/O System)
PU (SPU)	1 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454957193
Customs tariff number	85371091990

Product Classification

UNSPSC	39121021
eCl@ss 10.0	27-24-26-05
eCl@ss 9.0	27-24-26-05
ETIM 9.0	EC001601
ETIM 10.0	EC001601
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-MCM750	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc.	UL 61800-5-1	E336763			

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 750-673	↓

Documentation

Manual				System Description		
Product Manual Servo stepper controller 70 V / 7.5 A 6IN, 2OUT	V 1.0.3	pdf	2908.96 KB	750/753 Series I/O-System – General Product Information	pdf	953.35 KB
System Manual Series 750/753			↓	Overview on WAGO-I/O-SYSTEM 750 approvals	pdf	770.48 KB
			↓			↓

Bid Text			
750-673	19.02.2019	xml	9.08 KB
			↓
750-673	09.10.2017	doc	34.50 KB
			↓

Application Notes

Application Note CoDeSys 2.3			
How to use Matlab code in a CODESYS project (a500710)	1.0.0 09.04.2014	zip 2633.79 KB	↓

Application Note e!COCKPIT			
e!COCKPIT Application Note WagoAppStepper	1.0.1 06.12.2021	pdf 3306.34 KB	↓

Application note SIEMENS			
	1.1.0 03.02.2017	zip 8659.49 KB	↓
Using stepper modules with TIA Portal (a114904)	1.2.5 05.01.2021	zip 9967.41 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 750-673	↓

CAE data	
EPLAN Data Portal 750-673	↓
WSCAD Universe 750-673	↓
ZUKEN Portal 750-673	↓

Device Files

Device Driver			
WAGO USB Service Kabel Treiber / Serie 750 und 857	6.5.3.0 10.09.2014	zip 4721.96 KB	↓

Libraries

Library			
Stepper_03.lib	1.0.5 18.01.2021	zip 588.94 KB	↓

1 Compatible Products

1.1 Optional Accessories

1.1.1 DIN-rail

1.1.1.1 Mounting accessories



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



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



Item No.: 210-197

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



Item No.: 210-114

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

1.1.1.1 Mounting accessories



Item No.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



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; silver-colored



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; silver-colored



Item No.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

1.1.2 Marking

1.1.2.1 Group marker carrier



Item No.: 750-106
Group marker carrier

1.1.2.2 Marker



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



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; gray



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



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



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



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



Item No.: 2009-145
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



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; yellow



Item No.: 248-501/000-006
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 248-501/000-007
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green



Item No.: 248-501/000-017
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



Item No.: 248-501/000-012
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange



Item No.: 248-501/000-005
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red



Item No.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet



Item No.: 248-501
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white



Item No.: 248-501/000-002
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow



1.1.2.3 Marker carrier



Item No.: 750-103
Group marker carrier

1.1.3 Shield termination

1.1.3.1 Shield clamping saddles



Item No.: 790-108

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



Item No.: 790-208

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



Item No.: 790-116

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



Item No.: 790-216

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



Item No.: 790-124

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



Item No.: 790-220

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



Item No.: 790-140

Shield clamping saddle; diameter of compatible conductor

1.1.4 System enclosure

1.1.4.1 System enclosure



Item No.: 850-825

IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20



Item No.: 850-826

IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-827

IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip



Item No.: 850-828

IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip



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



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



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



Item No.: 850-834

IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20



Item No.: 850-835

IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip



Item No.: 850-836

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



Item No.: 850-814/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate



Item No.: 850-815/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate



Item No.: 850-816/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate



Item No.: 850-817/002-000

IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate

1.1.5 Tool

1.1.5.1 Operating tool



Item No.: 210-719

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