EN

WEISS ROBOTICS

WSG Series

Intelligent Mechatronic Grippers

Reliable gripping made easy.

Weiss Robotics introduces the WSG series of mechatronic gripping modules that brings leading edge technology to your handling process.
The WSG series combines high quality mechanics with a network-enabled control unit into a powerful gripping module with compact dimensions. This makes the WSG series a perfect match for challenging tasks in robotics and automation.

Smart

The integrated gripper controller guarantees a high performance gripping process even in difficult applications. By continuously monitoring the finger position and the gripping force, the WSG series automatically detects its mechanical contact to the workpiece with minimum delay. The established grip is monitored throughout the complete handling process to ensure a secure handling, even if the parts are difficult to handle using conventional grippers. External position switches are no longer required, as position sensing is fully integrated. The WSG series brings process simplicity with minimal effort on integration.

Sensitive

The WSG's gripping force is controlled by a factory calibrated force approximation. Together with the separately available WSG-FMF force measurement fingers, the WSG gripper modules unlock their full potential by realizing a precise gripping force control for a secure handling of even fragile parts.

Connective

The integrated Ethernet interface allows the gripper module to be directly connected into existing networks. Auxiliary interfaces such as PROFIBUS, CAN-Bus and digital I/O are available, too[1].
The members of the WSG family provide a user-friendly web-based setup and diagnosis interface with a built-in documentation. Communication between the process control and the WSG gripping modules is realized by a powerful command protocol which is functionally optimized for handling tasks.
To simplify direct PLC interaction, PROFINET and Modbus/TCP communication protocol packages are optionally available.

Flexible

WSG gripping modules have a built-in Lua scripting support[1]. This enables the implementation of application-specific tasks, such as special motion profiles and higher-level network communication protocols. To create and execute scripts, the web-based configuration interface provides an easy-to-use scripting editor with syntax highlighting and error reporting capabilities turning the WSG family into versatile gripping modules with an unprecedented degree of flexibility.

[1] model dependent

	WSG 25	WSG 32	WSG 50	WSG 70
				
Stroke	64 mm	68 mm	110 mm 210 mm	110 mm
Gripping force	5 ... 20 N	5 ... 50 N	5 ... 80 N	80 ... 600 N
Max. Finger speed	300 mm/s	400 mm/s	420 mm/s	100 mm/s
Power supply	24 VDC	24 VDC	24 VDC	24 VDC
Power consumption (typ., holding)	8 W	Logic: 0.6 W Drive: 12 W	Logic: 0.6 W Drive: 19 W	Logic: 0.6 W Drive: 25 W
Safe Torque Off (STO)	-	✓	✓	✓
Finger sensor ports	-	2	2	2
Gripping force retention	-	-	-	✓
Position encoder (resolution)	incremental (2 µm)	incremental (2 µm)	incremental (2 µm)	incremental (2 µm), absolute[1]
Repeatability	0,03 mm	0,03 mm	0,03 mm	0,03 mm
Protection class	IP 20	IP 40	IP 20	IP 40
Operating temperature	5 ... 50 °C	5 ... 50 °C	5 ... 50 °C	5 ... 50 °C
Dimensions (L x W x H)	100 x 25 x 57 mm	118 x 32 x 78 mm	146 x 50 x 97 mm 246 x 50 x 97 mm	215 x 70 x 78 mm
Total weight	0,32 kg	0,55 kg	1,2 kg 1,6 kg	2,8 kg
Controller type	Integrated	Integrated	Integrated	Integrated
Scripting	✓[1]	✓	✓	✓
Web-Interface	✓	✓	✓	✓
Memory Type	Solid state	microSD	microSD	microSD
Ethernet	✓	✓	✓	✓
Modbus/TCP	✓[1]	✓[1]	✓[1]	✓[1]
PROFINET	-	✓[1]	✓[1]	✓
PROFIBUS	-	-	✓	-
CAN-Bus	-	✓[1]	✓	-
RS 232	-	-	✓	-

[1] optional feature

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