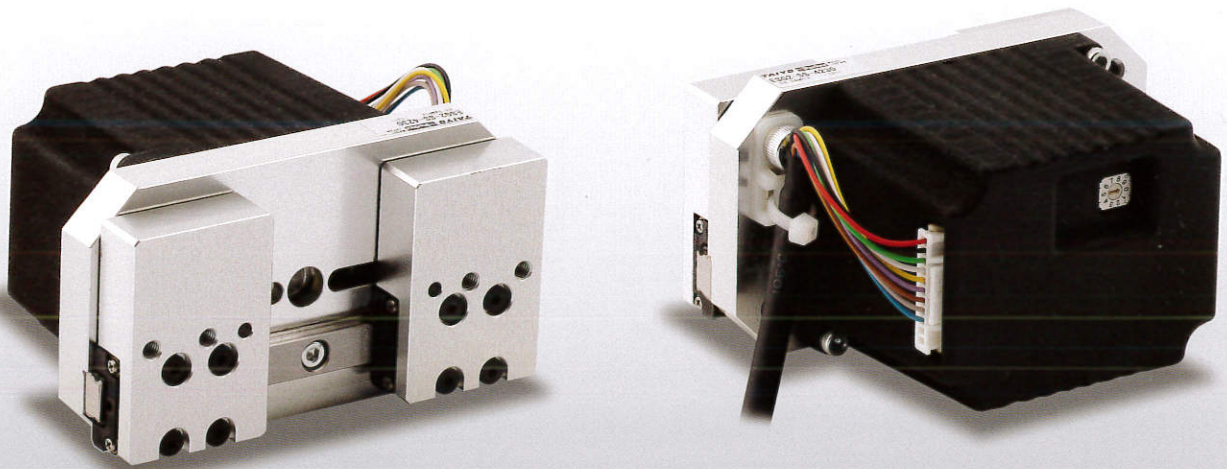


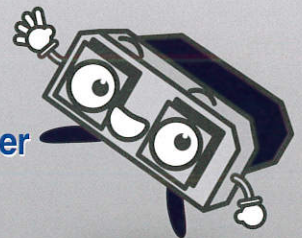
Newly Released ESG2 Series Electric Gripper

Comparable to the cost of pneumatic grippers!
Now at a reduced price!

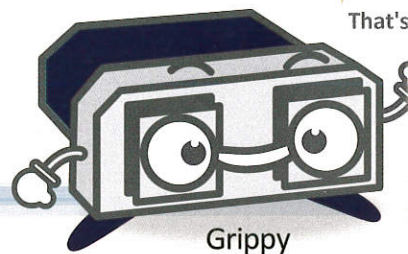


Features:

- Motorization equal to the total cost of a pneumatic gripper
- Smoother substitutions than pneumatic grippers
 - ⇒ No need to change I/O wiring for a pneumatic gripper; Operable with only an open/close signal
 - ⇒ Hassle-free substitution (No program editing necessary)
- Control capabilities only possible with electric
 - ⇒ Gripping force and speed control
 - ⇒ Workpiece damage prevention, Acceleration/deceleration control
 - ⇒ HOLD signal and present position confirmation
- Cam adoption, with a built-in controller for enhanced compactness, lightness, and convenience
- Improved durability



Get to know the Feat

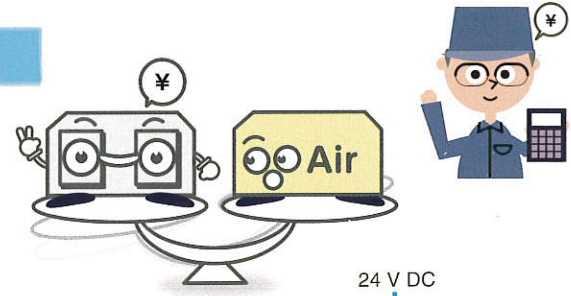


Q. I want to use an electric gripper, but...
Isn't electric troublesome?

A. It's not troublesome at all! It's easy to use!

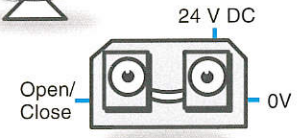
1. Isn't the cost expensive?

- ▶ Motorization has been achieved equal to the total cost of a pneumatic gripper.
- ▶ By combining the benefits of the pneumatic type and the electric type, we have managed to retain the required functionality in harmony with motorization.



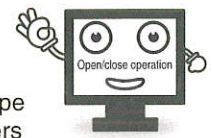
2. Is the wiring a hassle?

- ▶ Just as with a pneumatic gripper, operation is possible with only 4 I/O wires.
- ▶ Operation is possible with only an open/close signal.
- ▶ Also, with additional wiring, output of "OPEN," "CLOSE," "HOLD," "ALM," and "Current position" signals are possible.



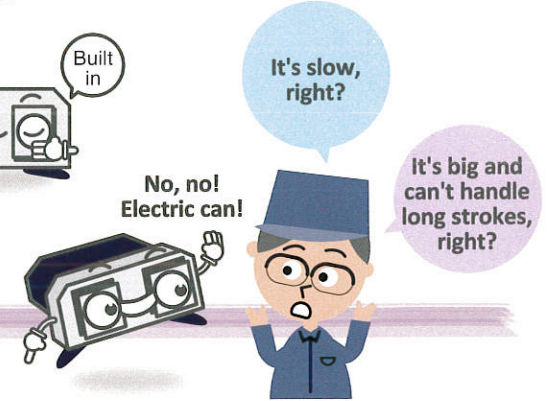
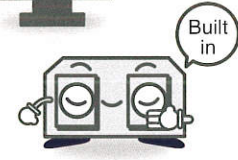
3. Don't I need an operating program?

- ▶ Nope!
- ▶ Because operation is just like the pneumatic type with "Open" and "Close" commands, parameters and point editing are unnecessary.



4. Is it necessary to install a separate controller?

- ▶ Nope!
- ▶ This gripper sports the industry's first built-in controller. This results in even less wiring.



Q. When compared to air...
Compared to air,
isn't the gripper slower and larger?

A. We've incorporated the merits of pneumatic grippers into electric grippers.

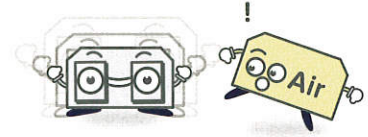
1. Isn't the speed slower?

- ▶ Our gripper boasts a maximum speed of 150 mm/sec.
- ▶ The idea that electric is slow is being remedied.



2. Isn't the size larger and the ability to handle long strokes difficult?

- ▶ With the adoption of a special cam, our grippers are small and lightweight, and can even handle long strokes.
- ▶ Stroke: 30 mm (both sides)
- ▶ Weight: 400 g (including controller)



Small! Light!

Features of the ESG2 Series!



I see...

It's got all the great features!

right!

Air just isn't enough!

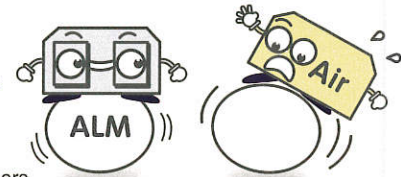
Only with an electric gripper you can such advanced features.

Q When a pneumatic gripper just isn't cutting it...electric gripper to the rescue!
Are you concerned about air's capabilities?

A. Once you go electric, difficult operations and functions become possible!

1. Get operation assurance!

- ▶ Let our electric gripper tackle the operations that would be unstable with air.
- ⇒ With guaranteed operation (erroneous operation is determined by an alarm), it's possible to get accurate tact time calculations and reductions.



2. No external sensor necessary for open and close terminals!

- ▶ We've solved the external sensor issues (location, adjustment, slipping) that come pneumatic grippers.
- ▶ Thanks to the equipped encoder, electric grippers don't have to worry about adjustment and the like.
- ▶ Additional wiring allows for OPEN and CLOSE signal output.



3. Controllable and adjustable speed and gripping force!

- ▶ Adjustment is possible with air by using a speed controller and a regulator, but it's unstable. Plus, there's no repeatability.
- ▶ Setup is easy with the electric gripper's built-in "Rotary switch."



4. Get gripping confirmation!

- ▶ Gripping confirmation is not possible with a pneumatic gripper. A separate sensor of some sort is needed.
- ▶ With electric, additional wiring allows grip confirmation to be output as a HOLD signal.



5. Energy-saving!

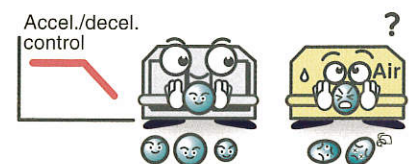
- ▶ Thanks to continuous operation, the energy savings are excellent!

Q With electric, there's room for growth!
Will I gain such merits as workpiece damage prevention and other added values?

A. With electric grippers, you gain the highest levels of added value.

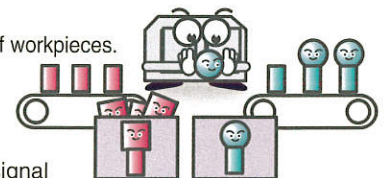
1. Prevent workpiece damage!

- ▶ By controlling the acceleration and deceleration immediately preceding gripping of a workpiece, it's possible to prevent damage to the workpiece.
- ▶ Our grippers are perfect for workpieces you don't want scratched or damaged.
- ▶ Through automatic workpiece recognition, "acceleration/deceleration control" is performed in the second and subsequent grip operations.



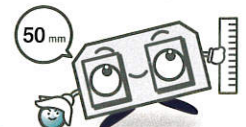
2. Reduce changeover time!

- ▶ Replacement of the actuator and other parts is unnecessary when working with a variety of workpieces.
- ▶ With the SET signal, the acceleration/deceleration control to meet various workpiece requirements is easily set.



3. Output the current position!

- ▶ When workpiece dimension checking is necessary for quality control, the RS485 signal allows the workpiece dimensions to be supervised every time a workpiece is gripped.
- ▶ No need for external position sensors or cameras.



4. Improved durability!

- ▶ With more than 10 million gripping cycles, durability is not an issue.
- ▶ Compared with pneumatic grippers, our electric grippers have double or even quadruple the durability. (According to our comparisons.)



* For an even more advanced, more precise electric gripper, we also offer the ESG1 Series.

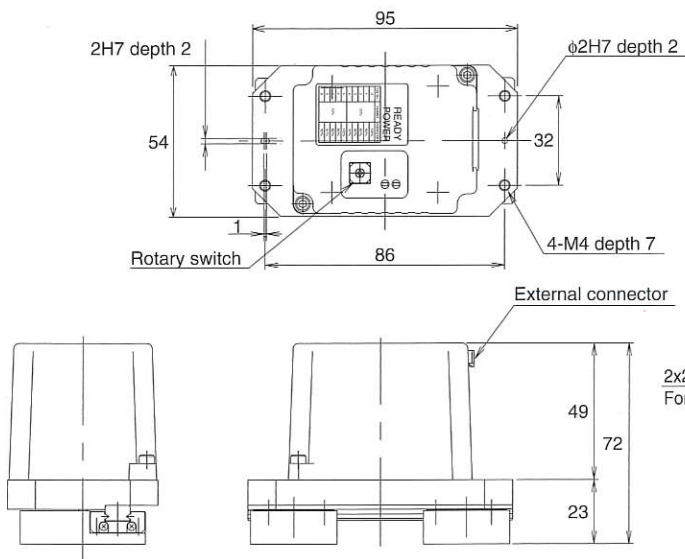
Specifications

Gripping force	Max. gripping force	15 N
	Set value	5 stages (100 % - 30 %)
Position	Open/close stroke	30 mm
	Repeated accuracy	±0.05 mm*
Speed	Max. speed	150 mm/sec
	Set value	2 stages (100 % and 50 %)
Guide section	Guide structure	Linear guide
	Allowable load (F)	500 N
	Allowable pitching moment (MP)	3.7 N·m
	Allowable yawing moment (My)	3.7 N·m
	Allowable rolling moment (Mr)	5.9 N·m
Fingers	Max. mass (1 pair)	50 g
	Maximum gripping position (L)	60 mm
	Overhang (H)	60 mm
	Max. gripping mass	0.15 kg

*Under similar grip conditions.

Controller	Speed setting	2 stages (rotary switch)
	Gripping force setting	5 stages (rotary switch)
	Input	2-point operation direction inputs (ON: Close, OFF: Open) SET ON: Workpiece position setting When an alarm occurs, use SET input to reset the alarm
	Output	4 points (OPEN, CLOSE, HOLD, ALM)
	Serial network	RS485, 1 port Position output (Resolution: 0.1 mm)
	LED	Power indicator, READY (flashes when alarm occurs)
General	Power supply	24 V DC ±10 %
	Operating temperature	0 °C to +40 °C
	Operating humidity	35 % to 85 % (but non-condensing)
	Storage temperature	-10 °C to +65 °C (but non-freezing)
	Weight	0.4 kg
	Related equipment	Cables (1 m, 3 m)

External Dimensions Unit: mm



Model codes

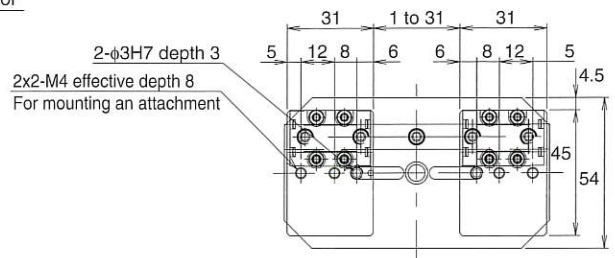
ESG2 - LS - 4230 - L11

Series

blank No cable

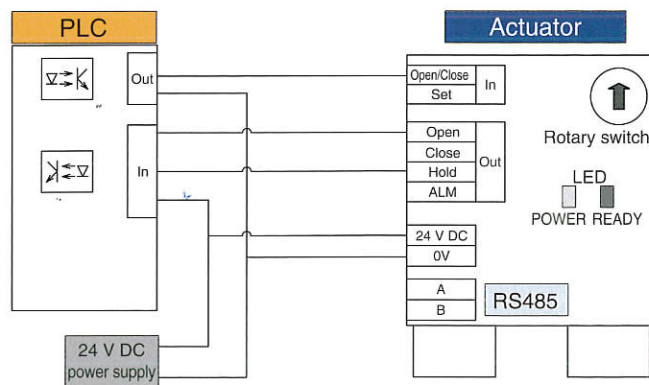
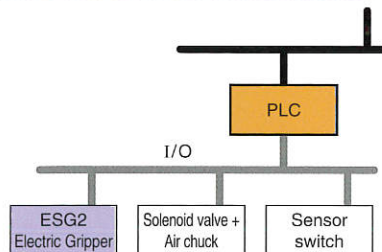
L11 Cable included (1 m)

L13 Cable included (3 m)



System Configuration

- PC-based settings for the parameters and such become unnecessary, allowing for use similar to a solenoid valve.
- This electric gripper requires no programming.



Rotary switch settings

SW_No	Speed	Gripping force
0		100%
1	100%	80%
2		60%
3		40%
4		30%
5	50%	100%
6		80%
7		60%
8		40%
9		30%

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