Pneumatic Gripper Operation Instructions APG 40.1 BR2 AS

1. Description

The pneumatic gripper is a high performance tool, developed primarily for sheet metal assembly tasks. The clamp consists of a pneumatic cylinder, a metal housing – mountable front and rear – and a gripping jaw to which the clamping, gripping devices are attached.

Beim Greifvorgang wirkt der Pneumatikzylinder zur Kraftverstärkung auf ein integriertes Kniehebelgelenk, das die Bewegung des Greifhebels auslöst und den Druck intensiviert. Die Stellungskontrolle des Greifhebels erfolgt über im Gehäuse integrierte Abfrageelemente.

2. Safety

Since the pneumatic gripper is not designed to be an independent complete tool, it is not equipped with any unique safety measures or devices. Safety requirements can be met only when properly installed into an assembly system, according to prescribed safety regulations.

In case of malfunction, which may endanger personnel, operation of the pneumatic gripper must be terminated at once. Maintenance must only be performed by properly trained personnel with the system stopped. After system service procedures are completed, all safety devices must be properly reinstalled prior to operation.

3. Assembly of the Pneumatic Gripper

The pneumatic gripper is mounted on front or rear faces using screws and the keyway. For torques please see data sheet „Torques for screws and head rests, DIN 912, 931, 934, 6912“. Pipes or hoses connect the gripper to the control valve.

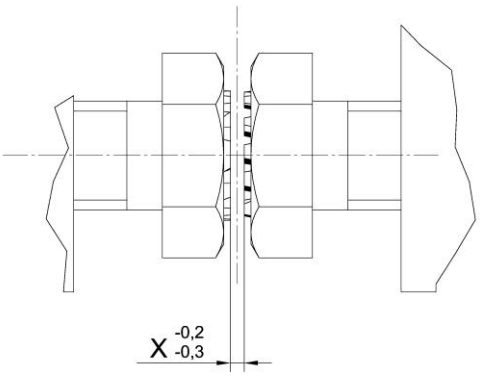
Installation of directional flow control valves is required to both ports to reduce the gripper opening and closing speed and to adjust to the proper system / line speed.

Caution: Moving heavy gripper jaws too fast may cause damage to the gripper mechanical parts. Cycle time must not be below 2 sec. (1 sec. to open / 1 sec. to close).

4. Set-Up Procedure

Caution! Danger of Crushing!
When the gripper jaw is being set, fingers could be severed or crushed. Do not reach into the swivel area of the gripper jaw while the pneumatic gripper is in operation. Before adjusting the gripping components, the air supply must be shut off.

- Attach gripping screws or blocks to gripper jaw
- Close pneumatic gripper
- Adjust the distance between gripping jaw / contour piece. Setting dimension = workpiece dimension X + prestress (-0.2 - 0.3 mm).
- Open gripper
- Check clamping



5. Release of Toggle

The toggle mechanism can be unlocked, when the gripper jaw is in closed (locked) position, by removing air pressure, removing the prox. switch cartridge and pressing the bearing in slot down. Replace prox. switch cartridge after opening gripper.

CAUTION, Danger of Pinching: Keep hands out of gripper jaw movement range.

6. Replacement of Proximity Switch Cartridge

- Disconnect cable connection.
- Remove two socket head screws.
- Replace cartridge.
- Install in reverse order.
- Test LED function.

Caution:

Operation with incorrect or too high voltage can lead to short-circuiting and danger to personnel.

7.Maintenance

Bearings and wear faces on the power clamp have been designed with consideration for high production applications. This technical concept allows operation in excess of 2 million cycles without significant component wear.

Attention:
To provide protection from welding slag and other debris, the clamp is equipped with a fully enclosed housing; therefore, no special maintenance is required.

Cleaning with high-pressure steam, water or dry ice may damage the power clamp mechanism and accumulate excessive moisture in clamp mechanism area.

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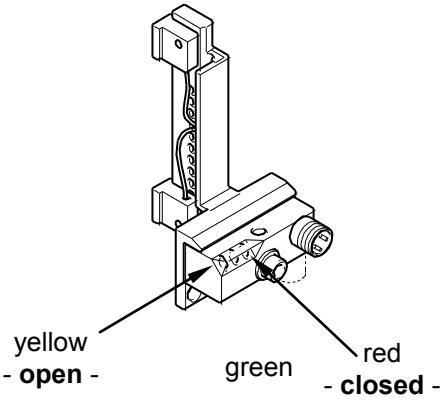

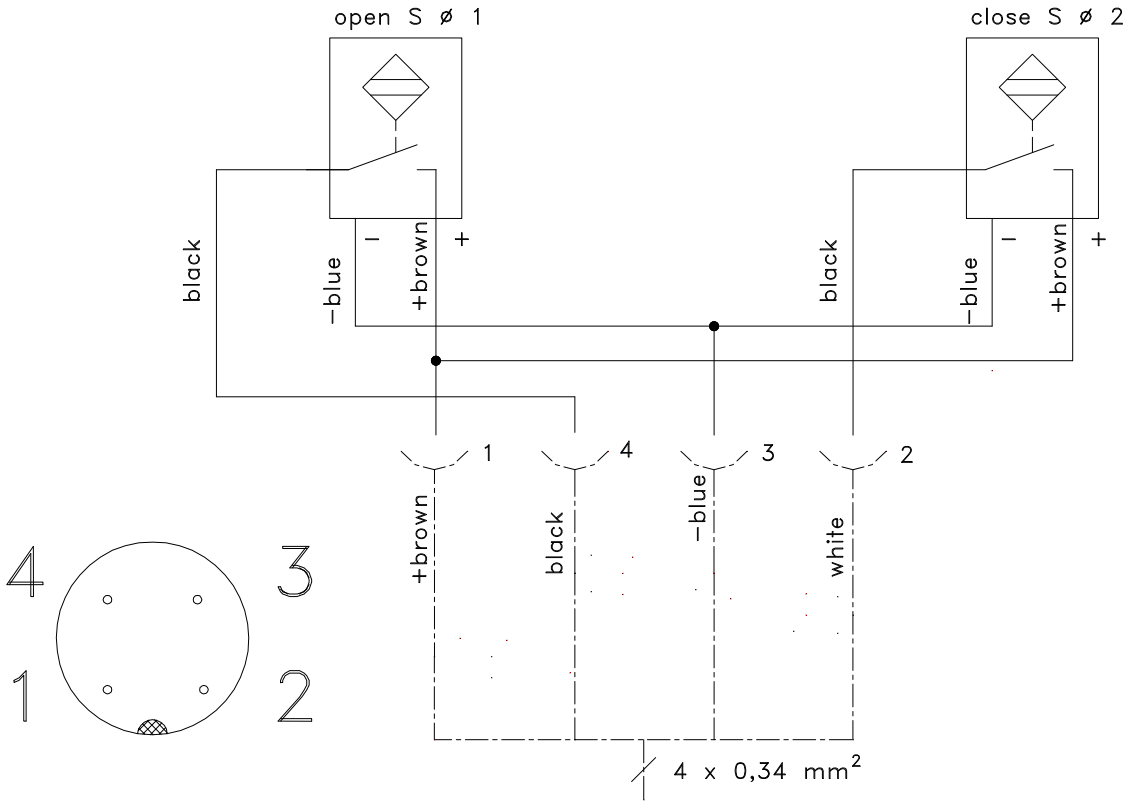

Technical Specifications

Inductive switch (Standard version)
Short circuit proof

Rated voltage	10-30 V
Working current	32 mA (one initiator connected with PLC)
Closer	PNP exit

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