

Complete Actuator Connection for Rotary Actuators* with Pilot Valve, Position Transmitter and AS-Interface



Design/Function

The system, consisting of pilot valve and position sensor with integral AS-Interface connection, reduces the effort for connection of a rotary actuator to a minimum.

The individual components are matched to each other so that the complete connection is installed and ready to use within a short time. Coding of the plug connections eliminates the possibility of incorrect wiring.

The AS-Interface offers the option of connecting up to 31 slaves per line to the controller or the higher level bus system with a minimum of wiring at low cost (in future 62 units will be able to be connected).

Current and data supply to the system is provided simultaneously via the yellow AS-Interface bus cable.

In this way, economy in cabling can be fully realized. Nevertheless, the energy that can be transmitted over the AS-Interface line is limited and the power consumption of the system must be considered.

Through the use of a low-power pilot valve (1 Watt), the current consumption of the overall connection from the AS-Interface was able to be limited to 75 mA. Thus, for example, it is possible to supply 31 connections with an AS-Interface power supply for 2.8 A, line losses included.

Integral pre-failure checking of the valve assures a high degree of reliability for the user. For example, the short circuiting of a first few windings by the penetration of moisture can be recognized prior to complete failure of the valve through the further effects of moisture.

Advantages/Benefits



- ▶ Easy and safe installation, hence rapid change of actuator also possible
- ▶ Easy cabling by means of coded plug connections



- ▶ Up to 31 actuators can be connected by means of a simple two-wire circuit
- ▶ Low loading of the AS-i power supply thanks to low-power 1 Watt valve
- ▶ Pre-failure checking of valve, diagnosis message via AS-Interface

Applications

Networking of process valves with rotary actuators in the areas of

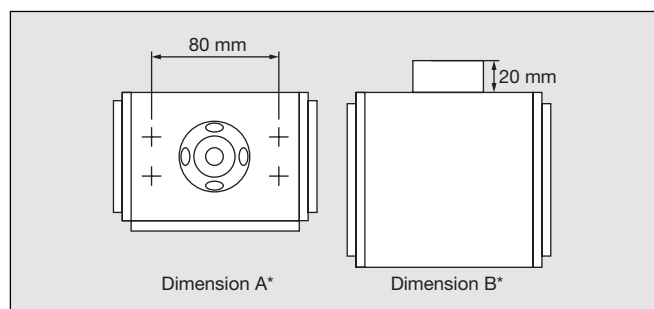
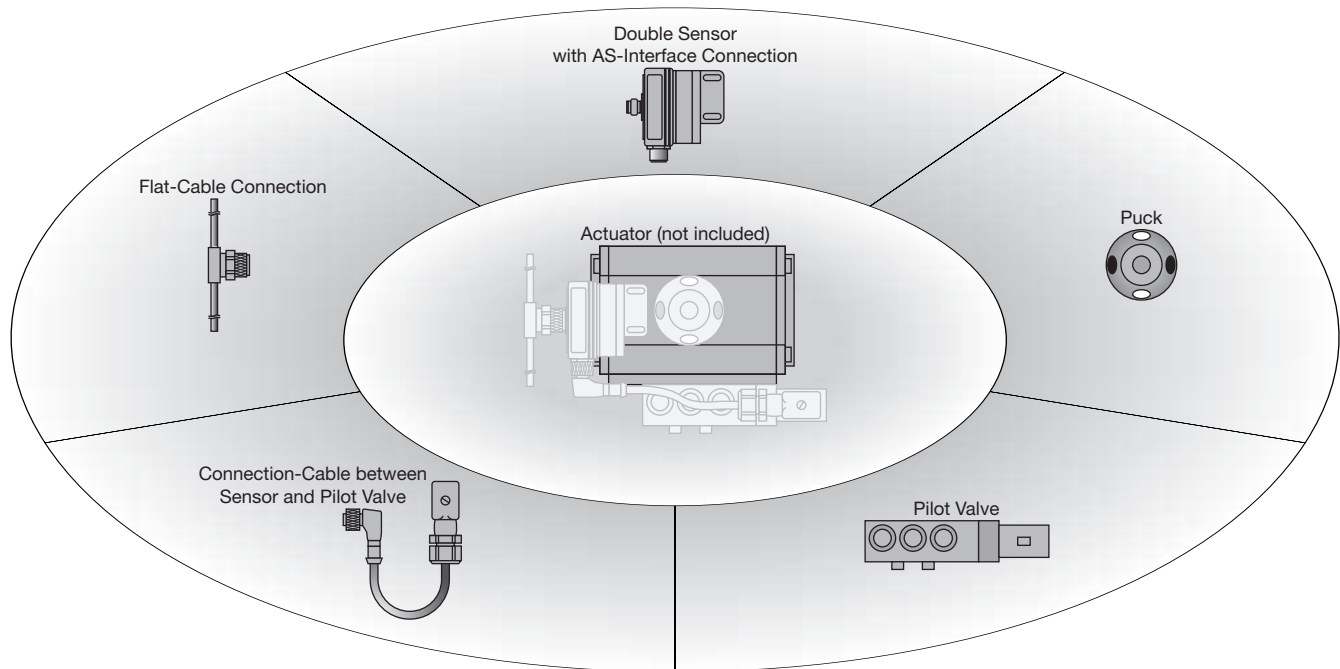
- Dairies
- Bottle filling machines
- Shrink wrap machines
- Food and beverage industry
- Food milles
- Chemical and raw components for foaming industry
- Plastic and rubber manufacturing

For system integrators and end users

bürkert
Easy Fluid Control Systems

* For rotary process valve actuator with standard attachment to VDI/VDE 3845 (dimensions see next page)

The Components and their Assembly



* For rotary process valve actuator with standard attachment to VDI/VDE 3845 with A = 80 mm, B = 20 mm

Valve Type 6517 Namur

Exhaust ports may be fully throttled

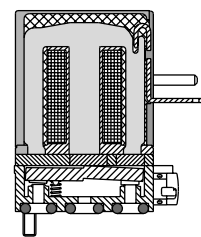


Simple check of functioning by red indicator pin

3/2 and 5/2-way function in one device, handy reversible plate to change function

- IP 65
- Safety position by means of mechanical spring
- Reliable switch back even after being switched on for a long time
 - The diaphragm controlled seat valve works to a large extent without dynamically loaded seals, which prevents sticking owing to temperature effects, gumming or swelling of seals
- Suitable for aggressive atmospheres (e.g. solvent vapour)
 - The housing is made of glass fibre reinforced plastic
 - The metal parts are optionally available in stainless steel
- Version for operation with auxiliary control air
- On single-action actuators, exhaust air return to the spring chamber of the actuator

Rocker-Action Pilot Type 6106



- Almost frictionless system guarantees long service life and reliable switching
- Low electric power consumption (1 W)
- Suitable for oily or oil-free air

Double Sensor and Pilot Valve with Integral AS-Interface



Features

- Passes control signals on to solenoid valve
- Monitors position of solenoid valve
- Transmits it via a switching signal

Chief Advantages

- Complete potting of position sensor prevents condensation from changing temperature
- One sensor for all sizes of actuators without adapter plates (to VDI / VDE 3845)
- Optical signalling of valve position by the puck
- For a redundant signal with reflecting puck, a second sensor can be used.

Phase out

Allocation of Data Bits

Data bit	Type	Designation	Status / LED	Description
D0	Input	Switching signal Sensor 1	0 / -	Sensor position 1 not damped
			1 / yellow	Sensor position 1 damped
D1	Input	Switching signal Sensor 2	0 / -	Sensor position 2 not damped
			1 / yellow	Sensor position 2 damped
D2	Input	Error Actuator	0 / -	No error
			1 / red	Cable breakage / Short circuit at actuator
D0	Output	Actuator	0 / -	Solenoid valve not switched
			1 / yellow	Solenoid valve switched

Ordering Chart

Model / Description	Item No.
Complete actuator connection for rotary actuators including <ul style="list-style-type: none"> • Double sensor with AS-Interface connection • Puck • Pilot valve • Connection-cable between sensor and pilot valve • Flat-cable connection 	434 180 N

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Phase out