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



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**

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.

Applications

Networking of process valves with rotary actuators in the areas of

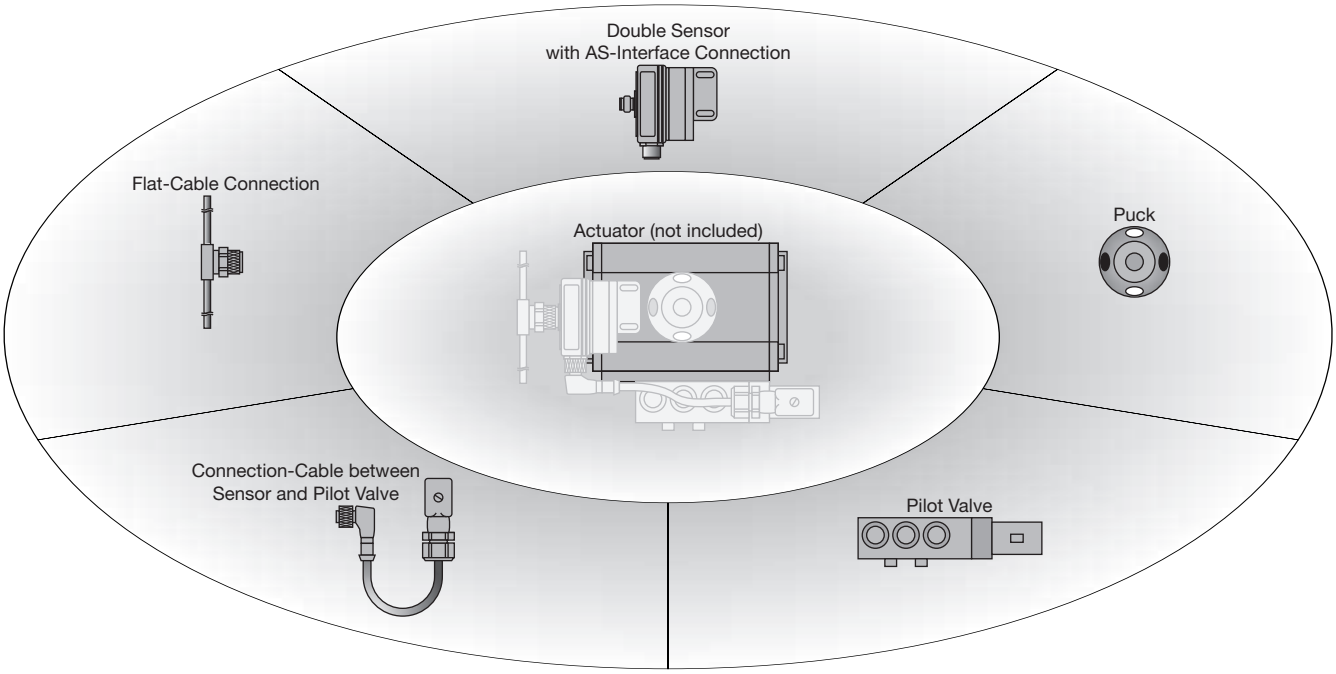
- Dairies
- Bottle filling machines
- Shrink wrap machines
- Food and beverage industry
- Food milles
- Chemical and raw components for foaming industry
- Plastic and rubber manufacturing

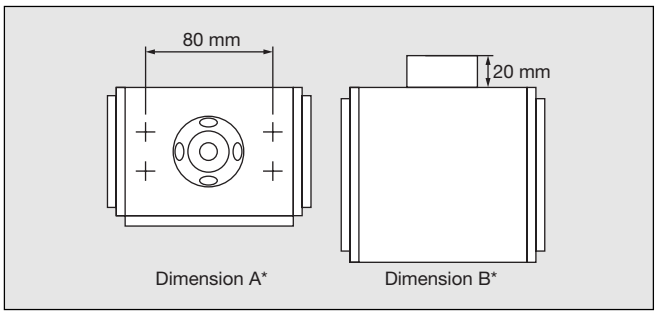
For system integrators and end users

bürkert
Easy Fluid Control Systems

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

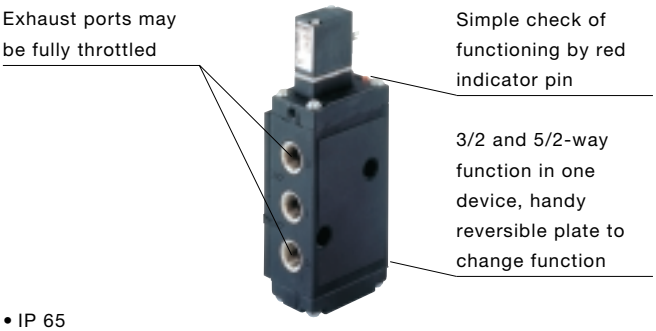
The Components and their Assembly





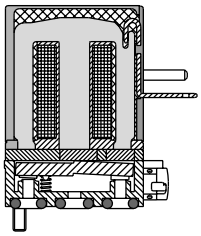
* For rotary process valve actuator with standard attachment to VDI/VDE 3845 with A = 80 mm, B = 20 mm

Valve Type 6517 Namur



- 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.

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 • Double sensor with AS-Interface connection • Puck • Pilot valve • Connection-cable between sensor and pilot valve • Flat-cable connection	434 180 N