

# PEES

## COMPONENTS

## Digital Module ADN 405



### Outline description: ADN 405

The **ADN 405** has been developed as a digital servo-amplifier for proportional valves featuring two magnets. The valve end stages function without fast de-excitation.

The **ADN 405** is suitable for simple controlled systems in which the setpoints and ramps are specified digitally.

The **ADN 405** can be operated with external analog  $\pm 10V$  signals, or with external 4–20 mA or 12 mA  $\pm 8mA$  signals. Digital setpoint application is effected via the CAN bus.

The 4–20 mA or 12 mA  $\pm 8mA$  input is monitored for wire breakage. Alarms are issued via the separate output, which can be loaded to 24V/100mA.

The **ADN 405** is equipped with five opto-decoupled inputs. In standard configuration, these are one Enable input and four setpoint inputs. Other input configurations are also possible in special cases. The ramps are assigned

to the four internal setpoints and can be set from 0.01s to 30s in increments of 10ms. The module can also be actuated externally via an analog input or the CAN bus.

All settings on the **ADN 405** are effected using the **ADN configurator** via an **RS232** interface linked to a PC or laptop computer.

The input software **ADN configurator** is available on the Internet.

The **ADN 405** can, of course, also be used for applications with one magnet in which a choke or a pressure adjustment valve is used. Only the values for the B magnet must be then set to 0 on the **ADN configurator**.

Further information:

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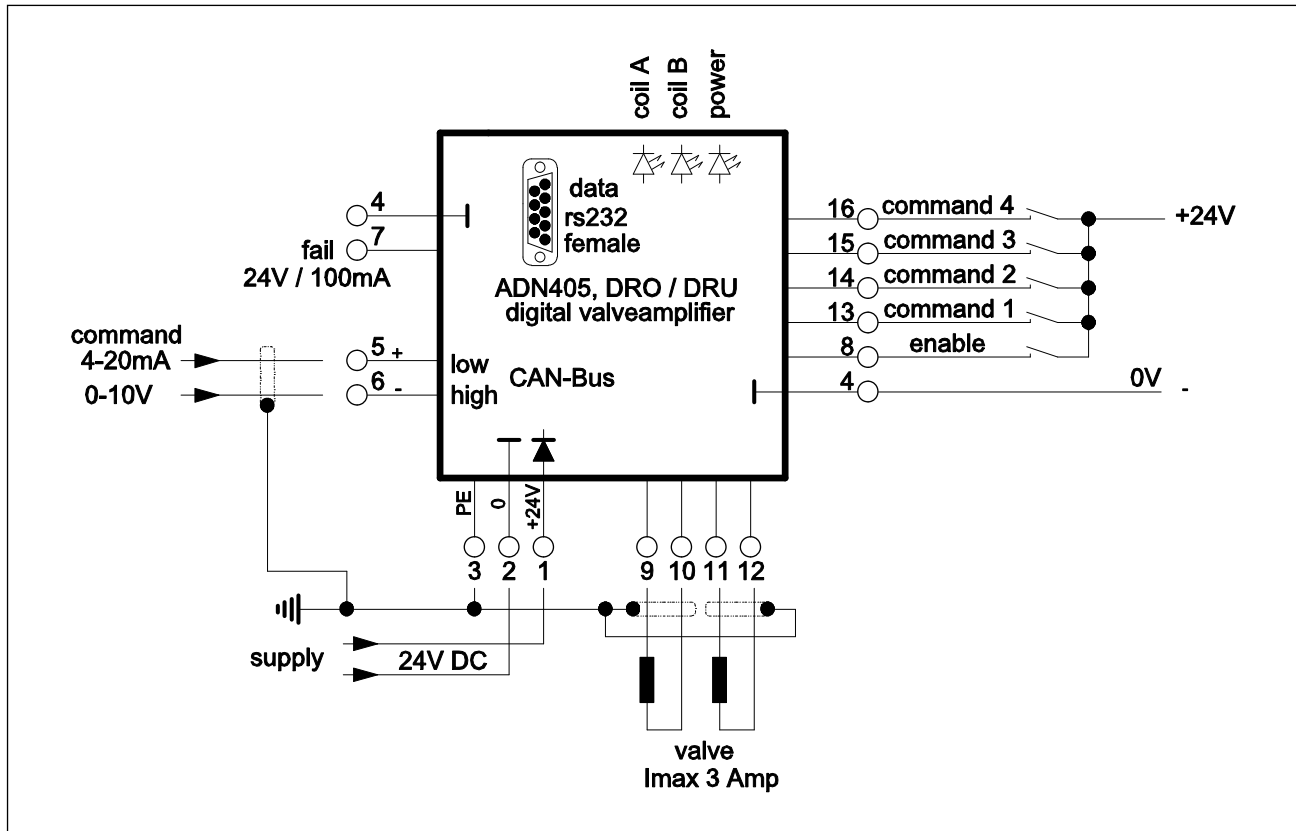
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#### Technical data:

Supply voltage	24V DC, nominal (22 to 28V) DC
Bias current (idling)	approx. 70 mA
Valve current	can be entered in six ranges, 0.85A to 3A
PWM (valve current)	9.7 kHz, with fast de-excitation and short-circuit monitoring
Inputs	5, opto-decoupled, of which 1 x Enable, 1 x Ramp OFF and 4 x setpoint (internal)
Alarm output	1 x 24V/100 mA
Dither generator	selectable, 50 to 150 Hz, amplitude 0 to 10%, referred to the selected current
Imin	Imin can be selected as a jump or constant
Level display	via LED display, separately for the A and the B magnet
Ambient temperature	-20 to +60°C
Microprocessor	16 bit signal processor with a processing speed of 40 MIPS
Program cycle time	9.7 kHz for the entire computer program, approx. 0.1 ms
Fault signalization	Wire breakage at 12 mA +/- 8 mA 4-20 mA in case of short-circuit in the valve end stage. Signalization via the 24V/100 mA alarm output, flashing LED and display on the <b>ADN configurator</b> .
Parametering	Parameters are entered on the <b>ADN configurator</b> . This input software is available via the Internet.

An USB-to-RS232 adapter is required for use with laptops with a USB interface.