ASM 400
ASM 405

Display and Switching Units

- for 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire signals
- easy mounting in fixing hole ∅ 20.5 mm
- electrical connection via cords
- **ASM 400:** digit height 7 mm, external diameter 46 mm
- **ASM 405:** digit height 10 mm, external diameter 49.5 mm

Description

Our display and switching units are intended to equip different devices with a digital display on the easiest way. Additionally, the option is given to offer up to 2 PNP open collector contacts for a limiting value control.

Operation

Configuration of the display and switching units ASM 400 and ASM 405 is menu-driven via two miniature push buttons, located in the front. Following parameters could be configured: decimal point, zero point, end point, damping, measuring value update, switch-on and switch-off points, hysteresis- or compare mode as well as switch-on and switch-off delay of the contacts. Those parameters are being stored in an EEPROM and, thus, are being kept also in case of power breakdown. Limit exceeding in both directions can be displayed as a message. Furthermore an access protection is provided.

Applications

- manufacturing of transmitter
- mechanical engineering
- process control

Characteristics

- rugged, rotatable plastic housing
- easy configuration via two push buttons
- 4-digit, red LED display, digit height 7 mm or 10 mm
- up to two configurable contacts
- ASM 400: optionally with Ex-protection for 4 ... 20 mA / 2-wire
- ASM 405: optionally with component Ex- approval for 4 ... 20 mA / 2-wire

ASM 400 /ASM 405
Display and Switching Units

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ASM 400 / ASM 405

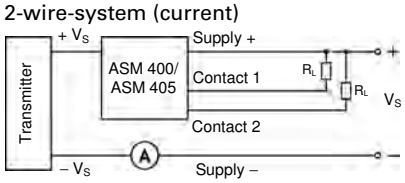
Display and Switching Units — Technical Data

Analogue signal		
2-wire-system	4 ... 20 mA	Ex-protection: 4 ... 20 mA
3-wire-system	0 ... 10 V (on request)	
Supply		
2-wire-system	supplied by current loop; voltage drop ≤ 6 V; $V_S = (V_{T\,min} \ldots V_{T\,max}) + 6\ V_{DC}$ with V_T = supply of the used transmitter	
	Ex-protection: max. 28 V_{DC} (for combination of transmitter and ASM 400 / ASM 405)	
3-wire-system	display is supplied parallel with the transmitter; $V_{S\,min} = 8\ V_{DC} \ldots V_{T\,min}$; ASM 400: $V_{S\,max} = V_{T\,max} \ldots 36\ V_{DC}$ / ASM 405: $V_{S\,max} = V_{T\,max} \ldots 24\ V_{DC} + 10\ \%$ with V_T = supply of the used transmitter	
Contact (optional)		
Number, type	max. 2 independend PNP open collector contacts	
Switching performance	$V_{Switch} = V_S - 2$ V; contact rating max. 125 mA, short-circuit resistant	
Repeatability	≤ ± 0.1 % FSO	
Switching frequency	max. 10 Hz	
Switching cycles	> 100 x 10^6	
Delay time	0 ... 100 sec.	
Electrical protection		
Short-circuit protection	permanent	
Reverse polarity protection	no damage, but also no function	
Ingress protection	unmounted: IP 00; mounted: front sided up to IP 65 (ASM 400) or IP 60 (ASM 405); ingress protection of the total appliance depends on the customer's housing	
Miscellaneous		
Display	4-digit, 7-segment LED display, digit height 7 mm (ASM 400) or 10 mm (ASM 405), range of indication -1999 ... +9999; accuracy 0.1 % ± 1 digit; digital damping 0.3 ... 30 sec. (programmable); measured value update 0.0 ... 10 sec. (programmable)	
Permissible temperatures	electronics / environment: -25 ... 80 °C	storage: -40 ... 85 °C
Material of display housing	PA 6.6, polycarbonate	
Explosion protection (optionally for 4 ... 20 mA / 2-wire)		
Ex-designation	ASM 400: zone (0) 1: II (1) 2 G EEx ia IIC T4 (AX11-ASM 400) ASM 405: zone 0: II 1 G EEx ia IIC T4 (component approval ASM 405)	
Safety technical maximum values	$U_i = 28$ V, $\Sigma I_i = 93$ mA, $\Sigma P_i = 660$ mW; max. switching current [1]: 70 mA, max. $L_O = 2$ mH; max. $C_O = 40$ nF	
Permissible temperature	environment: -25 ... 70° C	

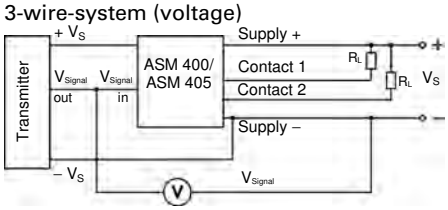
[1] *the real switching current in the application depends on the power supply unit*

Wirings diagrams

2-wire-system (current)



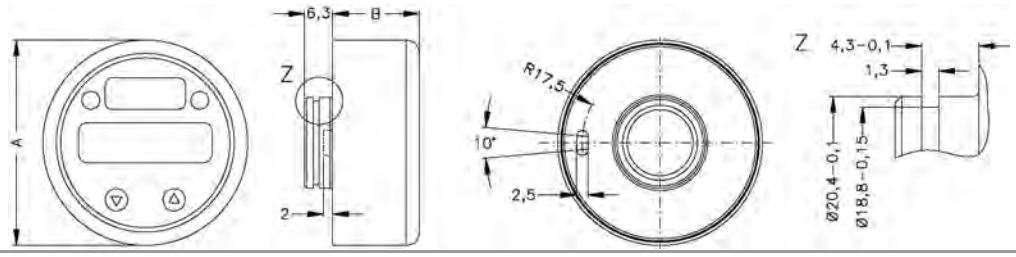
3-wire-system (voltage)



Pin configuration

electrical connection via cords (length 150 mm)	cord colours (DIN 47100)	
	2-wire-system	3-wire-system
Supply +	white	white
Supply –	brown	brown
Contact 1	green	green
Contact 2	yellow	yellow
Signal input +	-	red
Signal input –	-	brown

Dimensions



	ASM 400	ASM 405
A	46	49.5
B	19.5	18

This data sheet contains product specification; properties are not guaranteed. Subject to change without notice.

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