



ASM 430

Display and Switching Unit

- ▶ for 4 ... 20 mA / 2-wire or 0 ... 10 V / 3-wire signals
- ▶ easy mounting on transmitters with thread M27x1.5
- ▶ electrical connection via cords

Description

The display and switching module ASM 430 has been specially designed for rotationally symmetrical transmitters which already having a M27x1.5 thread or allow an easy adaption to this. It is intended to equip transmitters with a digital display on an easy way. Additional up to 2 PNP open collector contacts for a limiting value control can be offered.

Operation

The configuration of the display and switching module ASM 430 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 optional 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
- ▶ process control

Characteristics

- ▶ rugged, plastic housing
- ▶ display 330 ° rotatable
- ▶ plug and M27x1.5 thread insertion 300° rotatable
- ▶ easy configuration via two push buttons
- ▶ 4-digit, red LED display with digit height 7 mm
- ▶ up to two configurable contacts
- ▶ optionally with Ex-protection for 4 ... 20 mA / 2-wire



ASM 430

Display and Switching Module

Analogue signal				
2-wire-system	4 ... 20 mA	Ex-protection: 4 ... 20 mA		
3-wire-system	0 ... 10 V			
Supply				
2-wire-system	supplied by current loop; voltage drop $\leq 6\text{ V}$; $V_s = (V_{T\min} \dots V_{T\max}) + 6 V_{DC}$ with V_T = supply of the used transmitter			
	Ex-protection: max. $28 V_{DC}$ (for combination of transmitter and ASM 430)			
3-wire-system	display is supplied parallel with transmitter $V_{S\min} = 8 V_{DC} \dots V_{T\min}$; $V_{S\max} = V_{T\max} \dots 36 V_{DC}$ with V_T = supply of the used transmitter			
Contact (optional) ¹				
Number, type	max. 2 independent PNP open collector contacts			
Switching performance	$V_{\text{Switch}} = V_s - 2\text{ V}$; contact rating max. 125 mA, short-circuit resistant			
Repeatability	$\leq \pm 0.1\%$ FSO			
Switching frequency	max. 10 Hz			
Switching cycles	$> 100 \times 10^6$			
Delay time	0 ... 100 sec.			
¹ max. 1 contact for: 4 ... 20 mA / 2-wire with plug ISO 4400; 0 ... 10 V / 3-wire with Binder 723; Ex-protection no contact possible with 0 ... 10 V / 3-wire with plug ISO 4400				
Electrical protection				
Short-circuit protection	permanent			
Reverse polarity protection	no damage, but also no function			
Ingress protection	IP 00; ingress protection of the total appliance depends on the customer's housing (max. IP 65)			
Miscellaneous				
Display	4-digit, 7-segment LED display, digit height 7 mm; range of indication -1999 ... +9999; accuracy $0.1\% \pm 1$ 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)				
Approval AX11-ASM 430	zone (0) 1: II (1) 2 G EEx ia IIC T4			
Safety techn. maximum values	$U_i = 28\text{ V}$, $\Sigma I_i = 93\text{ mA}$, $\Sigma P_i = 660\text{ mW}$; max. switching current ² : 70 mA; max. inductivity: 4.7 mH			
Permissible temperature	environment: -25 ... 70° C			
² 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 (plug sided)				
Cords (length 45 mm)	ISO 4400	M12x1 plastic	M12x1 metal	Binder 723
Supply +	1	1	1	3
Supply -	2	3	3	4
Signal + (for 3-wire)	3 ¹	2	2	1 ¹
Contact 1	3 ¹	4	4	2
Contact 2	-	5	5	1 ¹
Ground	ground contact	-	plug housing	5
Dimensions				
		M12x1 (5-pin)	Binder 723 (5-pin)	ISO 4400