



# JK3000A1

# JK3000A2

Isolated process analog transmitters JK3000A1, JK3000A2 are designed to provide simple solution for all transmissions problems and signals isolation.

This transmitters range is designed in JM Concept unit unplugged from its rail DIN base.

Use of components that are efficient in a wide temperature ensures a very high level of reliability and very low thermal drift.



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## JK3000A1 & JK3000A2

To provide solutions for all problems, isolated process analog transmitters are designed in 3 ranges :

- JK3000A1 : Input current, voltage transmitter , 1 current or voltage output.
- JK3000A2 : Input current, voltage transmitter , 2 separated non isolated current and/or voltage output.

JK3000A1 and JK3000A2 references exist in lightning impulse protected version :

- JK3000A1-F
- JK3000A2-F

## ANALOG PROCESS TRANSMITTERS CHARACTERISTICS

### INPUT CHARACTERISTICS

CURRENT (DC)	0/20 mA ; 4/20 mA
VOLTAGE (DC)	0/100mV ; 0/10V ; +/-10V
HIGH VOLTAGE (DC)	other values on request
SENSOR POWER SUPPLY	2 or 3 wires sensor - Sensor power supply 24Vdc-22mA max

### OUTPUT CHARACTERISTICS

CURRENT OUPUT 1 IN	0/20 mA ; 4/20 mA
VOLTAGE OUTPUT 1 IN	0/10V
OUTPUT 2 IN CURRENT (JK3000A2 & JK3000A2I)	0/20 mA ; 4/20mA
OUTPUT 2 IN VOLTAGE (JK3000A2 & JK3000A2I)	0/10V ; +/-10V (JK3000A2)

### OTHER CHARACTERISTICS

<b>INPUT IMPEDANCE</b>	
Current input	4.75Ω
Voltage input	>10MΩ
<b>OUTPUT IMPEDANCE</b>	
Current output 1	< 900Ω
Voltage output 1	> 4.7KΩ
Output 2 in current (JK3000A2 & JK3000A2I)	< 650Ω
Output 2 in tension (JK3000A2 & JK3000A2I)	> 4.7KΩ
<b>SENSOR</b>	
Sensor power supply	$U < 24Vdc - I < 22Ma$
<b>TECHNICAL CHARACTERISTICS</b>	
Precision class	< 0.10
Current output residual ripple	< 20μA
Voltage output residual ripple	< 20mV
Response time	< 100μs – other values on request
Thermal drift	< 50ppm
<b>ISOLATION</b>	
Power supply/ Input/ output 1/ output 2	2500Vac - 1mn - 50Hz
Input/ output 1/ output 2	2500Vac - 1mn - 50Hz
Output 1 / Output 2 (JK3000A2)	no isolation
<b>AUXILIARY SOURCE</b>	
Universal Auxiliary source	20Vdc/370Vdc & 80Vac/256Vac
Option	20Vac/60Vac

### GENERAL CHARACTERISTICS

Precision class	0.1
Current output residual ripple	< 20μA
Voltage output residual ripple	< 20mV
Response time	< 100μs – autres valeurs sur demande
Thermal drift	< 50ppm



## ANALOG PROCESS TRANSMITTERS CHARACTERISTICS

<b>CONSUMPTION</b>	
Maximal consumption	< 4VA
<b>TEMPERATURE</b>	
Operating temperature	-10°C/+60°C
Storage temperature	-25°C/+80°C
<b>PROTECTION</b>	
Protection index	IP20
<b>CASE</b>	
Case	Self extinguishable black polyamide ULV0
<b>SPECIFIC CHARACTERISTICS</b>	
	JK3000A1-F - JK3000A2-F K3000A1 & JK3000A2 versions allowing automaton input protection against lightning strikes 60031114-529387 LCIE Report

## SWITCHES CONGIGURATION

**INPUT CONFIGURATION SWITCH**  
For JK3000A until 07/11 (TG batch)

	SWITCH D'ENTREE	1	2	3	4	5	6	7
<b>OFF</b> <b>ON</b> ↓	0/100 mV		●		●		●	●
	0/10V				●		●	●
	+/-10V							●
	0/20mA	●	●		●		●	
	4/20mA	●	●	●	●	●	●	

**OUTPUT 2 CONFIGURATION SWITCH**  
For JK3000A until 07/11 (TG batch)

	SWITCH DE LA SORTIE 2	1	2	3	4
<b>OFF</b> <b>ON</b> ↓	Courant 0/20mA			●	
	Courant 4/20mA			●	
	Tension 0/10V		●		
	Tension +/-10V	●			

**INPUT CONFIGURATION SWITCH**  
For JK3000A since 08/11 (TH batch)

	SWITCH D'ENTREE	1	2	3	4	5	6	7
<b>OFF</b> <b>ON</b> ↓	0/100 mV		●		●	●		●
	0/10V		●		●		●	
	+/-10V		●				●	
	0/20mA	●	●		●	●		
	4/20mA	●	●	●		●		

**OUTPUT 2 CONFIGURATION SWITCH**  
Pour JK3000A since 08/11 (TH batch)

	SWITCH DE LA SORTIE 2	1	2	3	4
<b>OFF</b> <b>ON</b> ↓	Courant 0/20mA			●	
	Courant 4/20mA			●	
	Tension 0/10V		●		
	Tension +/-10V	●			

## CONFIGURATION - WIRING - DIMENSIONS

### INPUTS WIRINGS



### OUTPUTS WIRINGS

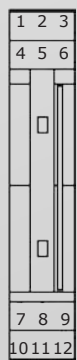


### AUXILIARY POWER SUPPLY WIRINGS

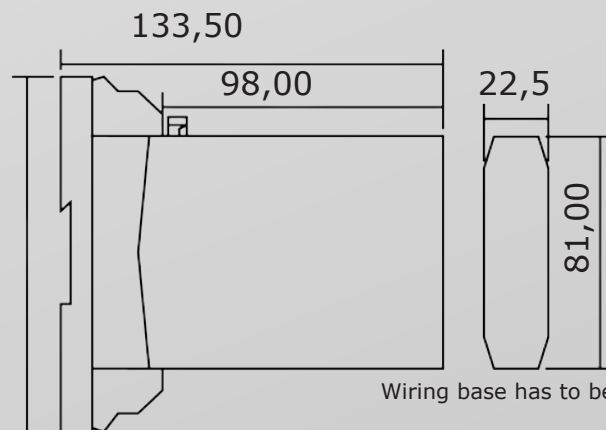


## DIMENSIONS AND TERMINALS

BASELINE  
screw or spring



121,50



22,5mm CASE

Wiring base has to be separately ordered.



## OPTIONS REFERENCES

OPTIONS	PRODUCT CODE
Passive output option - $15V < U < 36V$ - 0/4/20mA	JK3000-P
Varnish option	JK300XA1-T ou JK300XA2-T
Power supply option 20Vac / 60Vac	JK3009A1 ou JK3009A2

## JK3000A1 & JK3000A2 : ADJUSTMENTS

- On the front face, output 1 is pointed S1, output 2 is pointed S2 (JK3000A2 version)
- Outputs are independant from each others, the begining and the end of scale of each output can be separatly adjusted.

### Input and outputs selection :

- Select with the input switch, chosen input type.
- Select with the output switch (for JK3000A2 & JK3000A2I), chosen output type.

### Adjustment principle :

- Wire on input terminals, a current or voltage generator according to used input type.
- Wire on output terminals to adjust, a multimeter in current or in voltage, according to chosen output.
- With generator, generate signal corresponding to input signal low value.
- Adjust with potentiometer called « OFFSET » bottom output scale.
- With generator, generate signal corresponding to input signal high value.
- Adjust with potentiometer « SCALE » top output scale.

Start again successively these 2 operations as much as it is necessary until you have low and high right scale values.

## JK3000A1 & JK3000A2 : FACTORY SET UP

- The factory set up for JK3000A1 is :  
Entrée 4/20mA  
Sortie 4/20mA
- The factory set up for JK3000A2 is :  
Entrée 4/20mA  
Sortie 1 4/20mA  
Sortie 2 4/20mA