



## Analog to frequency pulse signal converter (V/F converter)

### Features:

- ◆ Low cost, ultra-thin design, international standards DIN35mm rail mounting
- ◆ Three-port isolation (input, output and power supply )
- ◆ Passed CE Certificate
- ◆ High accuracy (0.1% F.S, 0.2% F.S)
- ◆ High linearity (0.1% F.S)
- ◆ High isolation voltage (3000VDC/60S)
- ◆ Low temperature drift (80PPM/°C)
- ◆ Wide industrial class operation temperature (-45~+85°C)
- ◆ High reliability (MTBF>50 Wan hour)
- ◆ Ultra-wide range power supply design (9~36VDC single power)
- ◆ International standard signal input (0-5V/0-10V/1-5V/4-20mA/0-20mA/0-10mA/0-2.5Vetc.)
- ◆ International standard signal output (0-5KHz/0-10KHz/1-5KHz/0-20KHz/0~50KHz/0-100KHz etc.)
- ◆ Except 5V voltage frequency pulse (9V,12V,15V,24V voltage frequency pulse can also be customized)

### Application:

- ◆ Sensor signal acquisition, isolation, conversion and transmission
- ◆ Industrial Automatic control precision measurement and AD acquisition conversion
- ◆ Analog signal to frequency pulse signal isolation transmitter
- ◆ Instrumentation equipment ground interference suppression
- ◆ Data FM phase modulation measurement and control
- ◆ Machine process control and digital control technology
- ◆ Digital instrumentation acquisition isolation and signal conversion
- ◆ Wireless signal Long-distance transmission without distortion
- ◆ Analog signal/digital signal conversion
- ◆ Digital voltmeter, data measurement
- ◆ Long-distance telemetry remote control device
- ◆ Medical electronic monitoring, environmental protection equipment long-distance measurement-control

### General Description:

Jieshengda Technology(JSD) **JSD TAF-1001S** ultra-thin series 1-in-1-out analog to frequency pulse signal converter is a high accuracy isolation transmitter.it can isolate and transform the inputting analog voltage/current signal into corresponding digital pulse frequency signal . **JSD TAF-1001S** series V/F frequency pulse signal isolation transmitter adopts ultra-thin shell and ultra-wide operating power supply design, its internal SMD chip technology and modular design makes the performance is more stable and reliable, The new isolation technology makes the product achieve three-port isolation (input, output and power supply),and the isolation voltage between them is up to 3000VDC. The V/F frequency pulse signal converter is widely used in phase modulation, frequency modulation, analog/digital conversion, digital voltmeter, data measurement and remote telemetry remote control device. The product has been corrected, the transmitter isolation adopts international standard DIN35mm rail installation for easy user installation. If the product fails to meet user, we provide customized. if need putting feeding power to two-wire sensor please purchase **JSD TAF-1021S** series or **JSD TAF-2002** 2-in-2-out analog to frequency pulse converter, data sheet please contact Jieshengda technology .



**Selections and Definitions:**

Product Selection Parameter List:							
Signal input code				Power supply code		Frequency signal output code	
Voltage input code		Current input code		W:	9-36VDC	1:	0-5KHz (5V voltage pulse)
1:	0-5V	A:	0-1mA	1:	24VDC	2:	0-10KHz (5V voltage pulse)
2:	0-10V	B:	0-10mA	2:	15VDC	3:	1-5KHz (5V voltage pulse)
3:	0-75mV	C:	0-20mA	3:	12VDC	4:	0-5KHz (Open collector)
4:	0-2.5V	D:	4-20mA	4:	5VDC	5:	0-10KHz (Open collector)
U:	user-defined	U:	user-defined	U:	user-defined	6:	1-5KHz (Open collector)
						U:	user-defined
<b>Note:</b> When ordering ,please determine input、 output and power , special can customize							

**Selection Example:**

- Example 1: Signal Input: 0-5V; Signal Output :0-10KHz (5V voltage pulse); Power Supply: 9-36VDC;  
Model: JSD TAF-1001S-1W2
- Example 2: Signal Input: 4-20mA; Signal Output:0-5KHz (Open collector); Power Supply: 24VDC;  
Model: JSD TAF-1001S-D14
- Example 4: Signal Input: 1-5V; Signal Output:0-15KHz (5V voltage pulse); Power Supply: 9-36VDC;  
Model: JSD TAF-1001S-UWU

**Electrical Characteristics:**

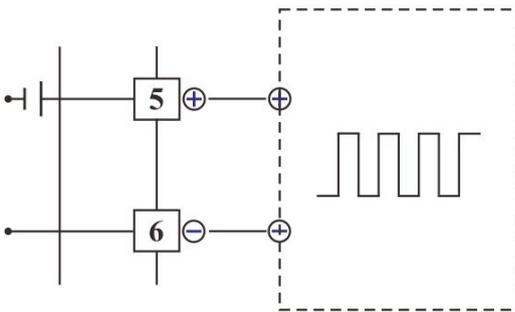
Signs	Item		Test Condition	Min	Type	Max	Units
<b>Isolation characteristics</b>	Isolation voltage		AC,50Hz,(Tested for 1minute,humidity<70% ,leakage current< 1mA)		3000		V(rms)
<b>Accuracy characteristics</b>	Non-linearity				0.1	0.2	%FSR
<b>Input characteristics</b>	Signal input	voltage		0		15	V
		current		0		30	mA
	Input impeda	voltage			100		KΩ
		current			100		Ω
<b>Output characteristics</b>	Signal output	1:0~5KHz	(5V voltage pulse)	High level: 3.0 ~ 5.5V Low level: < 0.5V load resistance:>250Ω			
		2:0~10KHz	(5V voltage pulse)				
		3:1~5KHz	(5V voltage pulse)				
		4:0~5KHz	(Open collector)	5	12	24	VDC
		5:0~10KHz	(Open collector)				
		6:1~5KHz	(Open collector)				
	Response time				≤50		mS
<b>Power input characteristics</b>	Power supply	voltage		5	24	36	VDC
		Power loss			1		W
		Rage		-10		+10	%
<b>Other characteristics</b>	operating temperature			-45		85	℃
	storage temperature			-55		105	℃
	size			115x100x12.5			mm
	weight					100	g
<b>Note:</b>		When ordering, please determine input、 output and power, special can customize					

**Pin Function Description:**

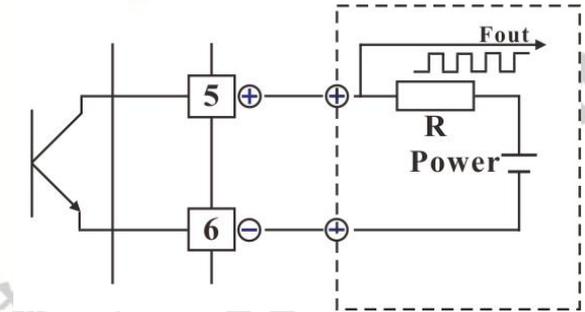
Signal Type	Pin	Function Description	Pin	Function Description	Package
Frequency Output	1	Power +	5	Signal Out +	Standard DIN35 Rail Mounting
	2	Power -	6	Signal Out -	
	3	Signal In +	7	No pin (NC)	
	4	24VDC Power out +	8	No pin (NC)	

**Output wiring diagram:**

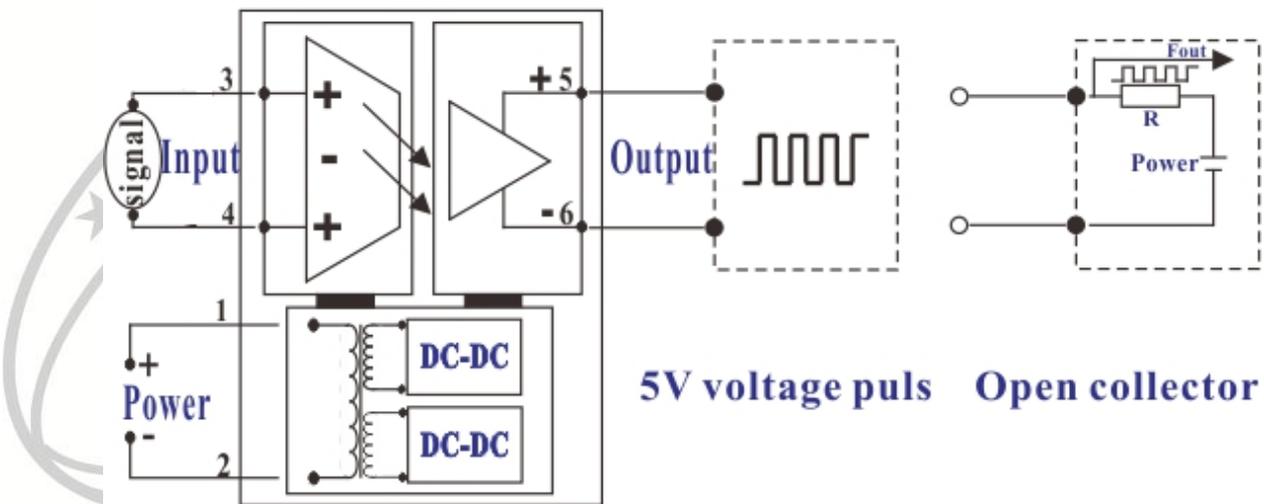
◆ **5V voltage pulse**



◆ **Open collector**



**Wiring diagram:**

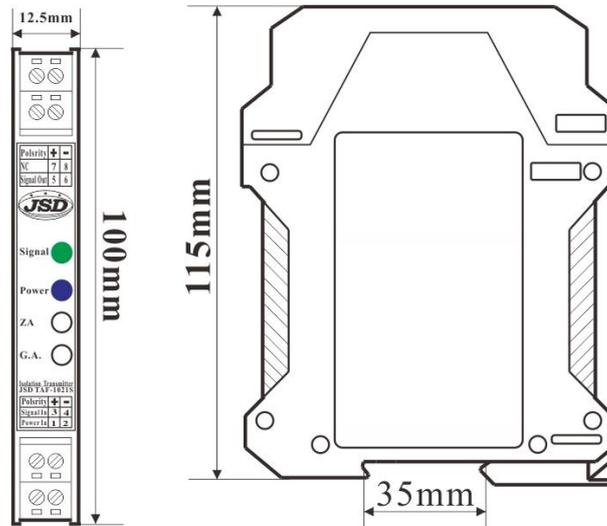


**Open collector output recommended resistance table:**

Power	R(Resistance)
+5VDC	2 KΩ
+12VDC	5.1 KΩ
+15VDC	6.8 KΩ
+24VDC	15 KΩ



**Dimensions:**



**Notes:**

- 1、 Please read the user manual carefully before using. If any question please contact our technical support department.
- 2、 Please do not use this product in hazardous area. The power supply of this product should be DC power source. It is forbidden to use 220VAC power supply. "NC" pin must not be connected to any external circuit, otherwise it will damage the product itself;
- 3、 This product layout dimension are "mm" and "inch" as the unit, within "[ ]" are inch;
- 4、 Calculating from the date of delivery, during normal use of the product, any quality problems are free repair or replacement by company during 3 years warranty,
- 5、 the product is strictly forbidden demolish without permission for not damage
- 6、 All specifications measured at Ta=25 °C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
- 7、 In this datasheet, all the test methods of indications are based on corporate standards.