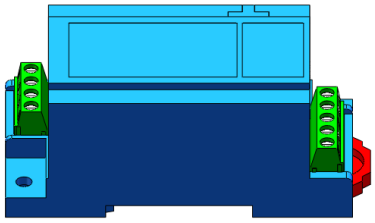
Voltage Sensor Series



SVL1, SVL2, SVL3, SVL4

Product description

Features

- Using the principle of electrical isolation, the measured high-voltage signal is converted into a linear low-voltage signal, which is convenient for measurement.
- The isolation voltage between primary and secondary is greater than 3000VAC.
- PCB soldering of terminal blocks, high reliability.
- Standard rail (35mm) installation, easy to disassemble.
- Strong anti-interference performance and high accuracy (0.5%).
- Comply with UL94-V0 flame retardant rating.

Applications:

- Widely used in various industrial voltage online isolation detection systems.

Implementation standards

- GB/T 7665-2005
- JB/T 25480-2010
- SJ 20792-2000
- GB/T 13850-1995

Certifications:

SVL1 Technical Parameters

Model / Parameters (25℃)	SVL1-				
	75V	100V	300V	500V	1000V
Primary input Voltage V_{PN} (DC)	75V	100V	300V	500V	1000V
Primary voltage Max.V_{PM}	+90V	+120V	+360V	+600V	+1200V
Output Voltage V_{out} @±I_{PN}, R_L=10KΩ	DC 0～5V				

Electrical Data

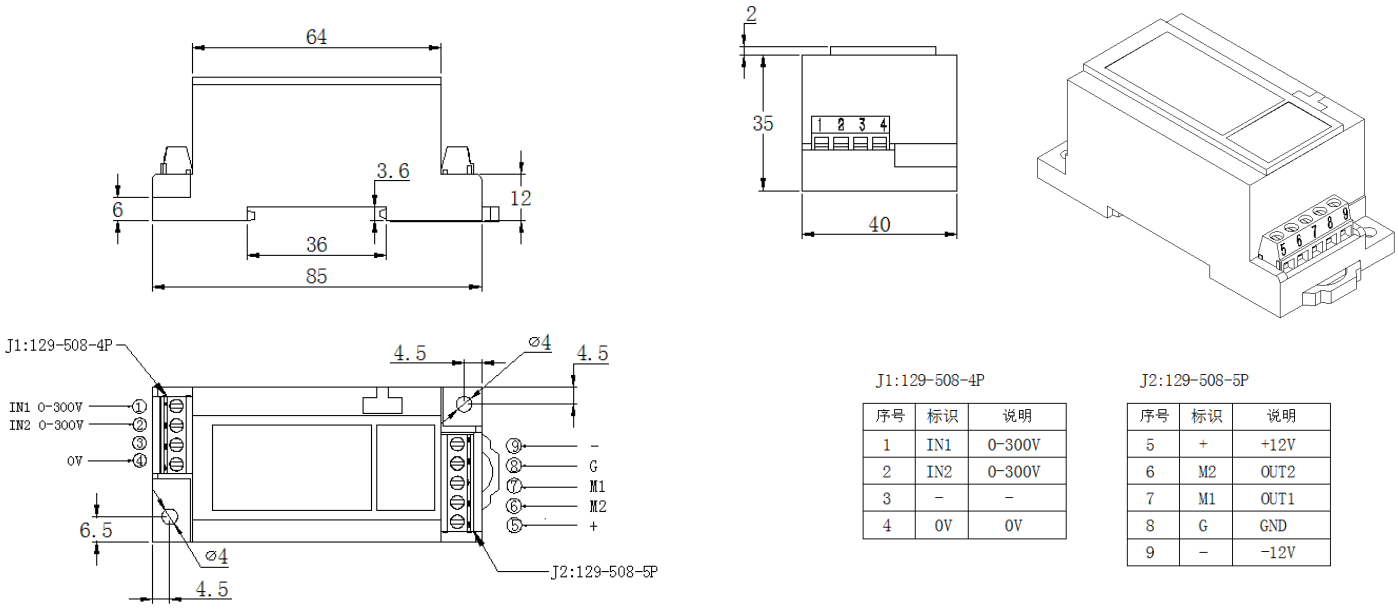
Item	Min.	Max.	Typical	Unit
Input power supply voltage range Vc (±5%) (Remark 1)	±11	±12	±18	V_{DC}
Current consumption Ic	<60mA			mA
Output voltage Vout @I_{PN}, R_L=10KΩ, T_A= 25℃	$V_{OUT} = 5.000 * \frac{V_P}{V_{PN}} + V_{OE}$			V
Load Resistance R_L	10	-	-	KΩ
Accuracy X @I_{PN}, T_A= 25℃	-	±1	-	%
Linearity ε_L @R_L=10KΩ, T_A= 25℃	-	±0.5	-	%I_{PN}
Offset voltage V_{OE} @T_A= 25℃	-	±25	-	mV
Temperature coefficient of offset voltage TCV_{OE}	-	±0.5	±1	mV/℃
Output voltage temperature coefficient TCV_{out}	-	±0.05	±0.1	%/℃
Response time t_D @ 0→I_{PN}	-	300	-	mS
Operating ambient temperature range T_A	-40	25	85	℃
Storage ambient temperature range T_s	-40	25	85	℃
Insulation withstand voltage VD@50Hz, 60s, 0.1mA	-	3000	-	V_{AC}
Weight m	-	70	-	g

Remark:

If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

Dimensions (in :mm)

SVL1 Series

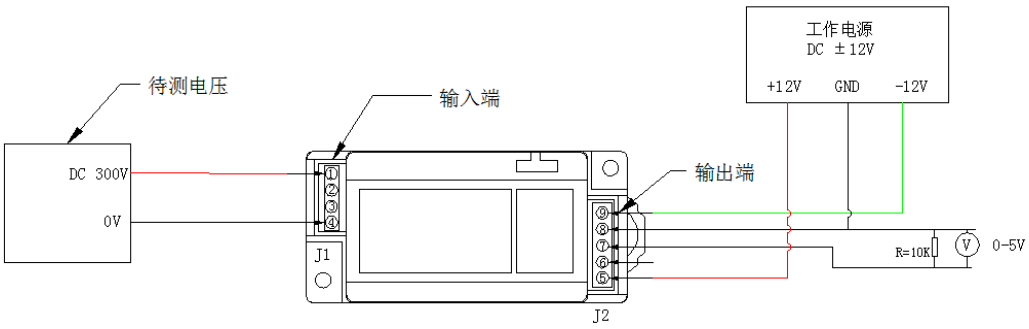


J1:129-508-4P

序号	标识	说明
1	IN1	0-300V
2	IN2	0-300V
3	-	-
4	0V	0V

J2:129-508-5P

序号	标识	说明
5	+	+12V
6	M2	OUT2
7	M1	OUT1
8	G	GND
9	-	-12V



Concentrate:

1. Size error: ±1mm;
2. If the rated voltage ≥ 500V, the input/output is a single channel detection.
3. The product installation and use environment should be free of conductive dust and corrosion.
4. When wiring, please pay attention to the exposed conductive part of the terminal block, and the input, output and power supply must be connected correctly.

Do not make mistakes or reverse connections, incorrect wiring may cause damage to the sensor.

5. Severe vibration or high temperature may also cause damage to the product, please pay attention to the occasion of use.

SVL2 Technical Parameters

Model / Parameters (25℃)	SVL2-				
	75V	100V	300V	500V	1000V
Primary input Voltage V_{PN} (DC)	75V	100V	300V	500V	1000V
Primary voltage Max.V_{PM}	+90V	+120V	+360V	+600V	+1200V
Output Current Signal @±I_{PN}, R_L=10KΩ	DC 4~20mA				

Electrical Data

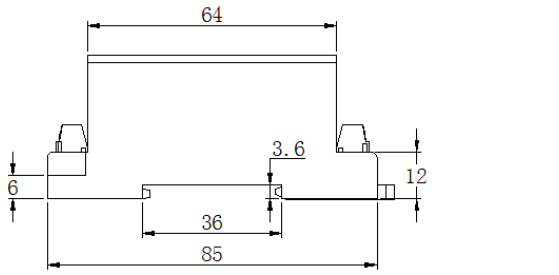
Item	Min.	Max.	Typical	Unit
Input power supply voltage range Vc (±5%) (Remark 1)	±11	±12	±18	V_{DC}
Current consumption Ic	<60mA +Current output I_S			mA
Output voltage Vout @I_{PN}, R_L=10KΩ, T_A= 25℃	$I_{OUT} = 4 + 16 * \frac{V_P}{V_{PN}} + I_{OE}$			V
Load Resistance R_L	0	-	500	Ω
Accuracy X @I_{PN}, T_A= 25℃	-	±1	-	%
Linearity ε_L @R_L=10KΩ, T_A= 25℃	-	±0.5	-	%I_{PN}
Offset current I_{OE} @T_A= 25℃	-	±0.125	-	mA
Temperature coefficient of offset voltage TCV_{OE}	-	±0.0016	±0.0032	mA/℃
Output voltage temperature coefficient TCV_{out}	-	±0.05	±0.1	%/℃
Response time t_D @ 0→I_{PN}	-	300	-	mS
Operating ambient temperature range T_A	-40	25	85	℃
Storage ambient temperature range T_s	-40	25	85	℃
Insulation withstand voltage VD@50Hz, 60s, 0.1mA	-	3000	-	V_{AC}
Weight m	-	70	-	g

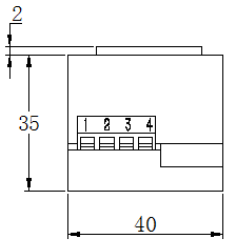
Remark:

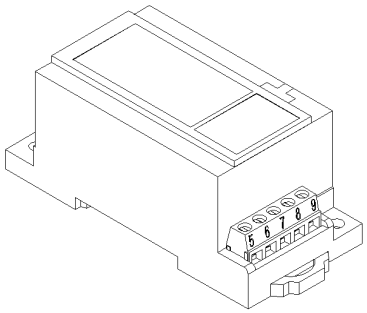
If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

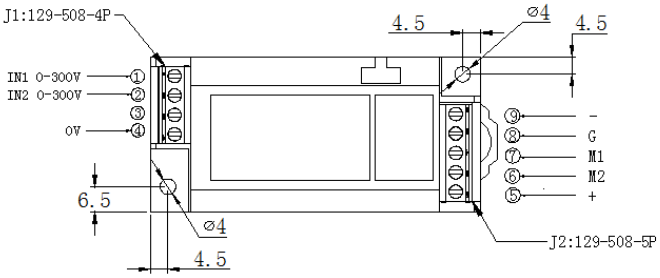
Dimension (in mm):

SVL2







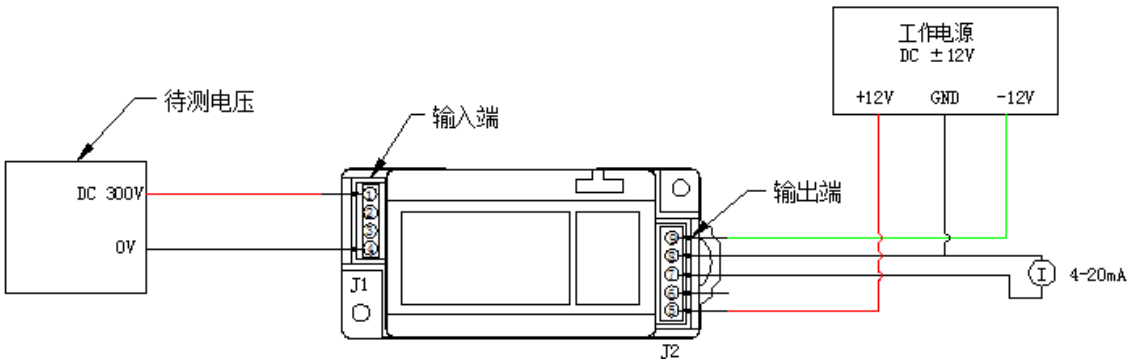


J1:129-508-4P

序号	标识	说明
1	IN1	0-300V
2	IN2	0-300V
3	-	-
4	0V	0V

J2:129-508-5P

序号	标识	说明
5	+	+12V
6	M2	OUT2
7	M1	OUT1
8	G	GND
9	-	-12V



Concentrate:

1. Size error: ±1mm;
2. If the rated voltage ≥ 500V, the input/output is a single channel detection.
3. The product installation and use environment should be free of conductive dust and corrosion.
4. When wiring, please pay attention to the exposed conductive part of the terminal block, and the input, output and power supply must be connected correctly,
Do not make mistakes or reverse connections, incorrect wiring may cause damage to the sensor.
5. Severe vibration or high temperature may also cause product damage, please pay attention to the occasion of use.

SVL3 Technical Parameters

Model / Parameters (25℃)	SVL3-				
	75V	100V	300V	500V	1000V
Primary input Voltage V_{PN} (AC)	75V	100V	300V	500V	1000V
Primary voltage Max.$V_{PM\ (AC)}$	+90V	+120V	+360V	+600V	+1200V
Output Voltage V_{out} @±I_{PN}, R_L=10KΩ	DC 0～5V				

Electrical Data

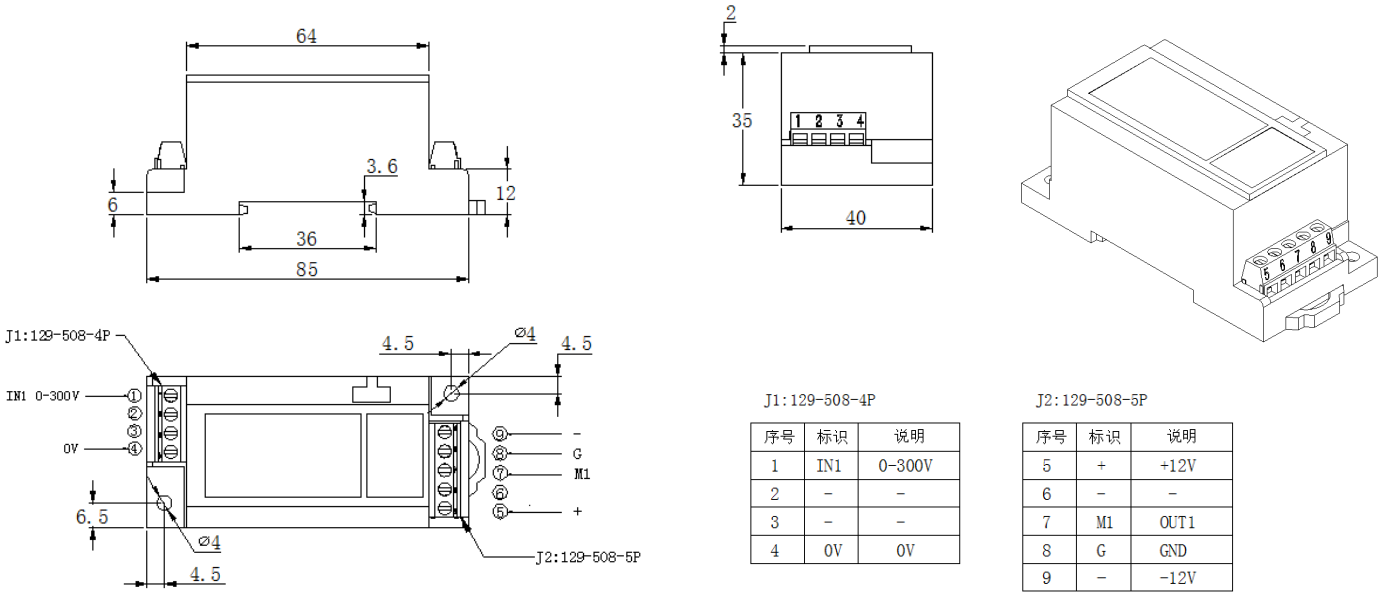
Item	Min.	Max.	Typical	Unit
Input power supply voltage range Vc (±5%) (Remark 1)	±11	±12	±18	V_{DC}
Current consumption Ic	<60mA			mA
Output voltage Vout @I_{PN}, R_L=10KΩ, T_A= 25℃	$V_{OUT} = 5.000 * \frac{V_P}{V_{PN}} + V_{OE}$			V
Load Resistance R_L	10	-	-	KΩ
Accuracy X @I_{PN}, T_A= 25℃	-	±1	-	%
Linearity ε_L @R_L=10KΩ, T_A= 25℃	-	±0.5	-	%I_{PN}
Offset voltage V_{OE} @T_A= 25℃	-	±25	-	mV
Temperature coefficient of offset voltage TCV_{OE}	-	±0.5	±1	mV/℃
Output voltage temperature coefficient TCV_{out}	-	±0.05	±0.1	%/℃
Response time t_D @ 0→I_{PN}	-	300	-	mS
Operating ambient temperature range T_A	-40	25	85	℃
Storage ambient temperature range T_s	-40	25	85	℃
Insulation withstand voltage VD@50Hz, 60s, 0.1mA	-	3000	-	V_{AC}
Weight m	-	70	-	g

Remark:

If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

Dimension (in mm):

SVL3 Series

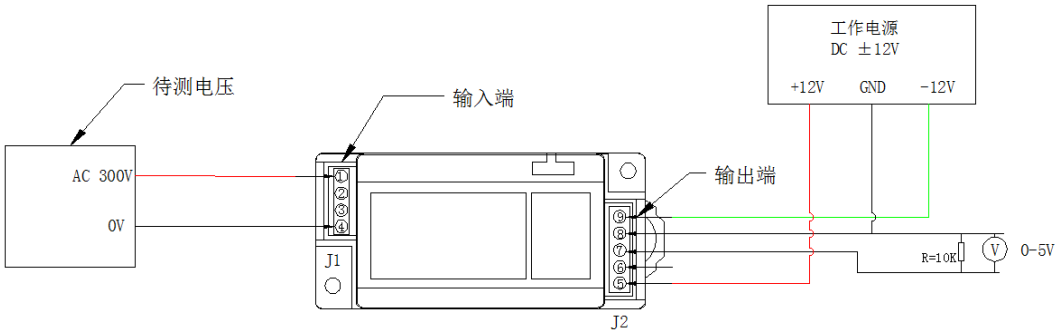


J1:129-508-4P

序号	标识	说明
1	IN1	0-300V
2	-	-
3	-	-
4	0V	0V

J2:129-508-5P

序号	标识	说明
5	+	+12V
6	-	-
7	M1	OUT1
8	G	GND
9	-	-12V



Concentrate:

1. Size error: ±1mm;
2. AC testing, all are single-channel testing.
3. The product installation and use environment should be free of conductive dust and corrosion.
4. When wiring, please pay attention to the exposed conductive part of the terminal block, and the input, output and power supply must be connected correctly.
Do not make mistakes or reverse connections, incorrect wiring may cause damage to the sensor.
5. Severe vibration or high temperature may also cause damage to the product, please pay attention to the occasion of use.

SVL4 Technical Parameters

Model / Parameters (25℃)	SVL4-				
	75V	100V	300V	500V	1000V
Primary input Voltage V_{PN} (AC)	75V	100V	300V	500V	1000V
Primary voltage Max.$V_{PM\ (AC)}$	+90V	+120V	+360V	+600V	+1200V
Output Current V_{out} @±I_{PN}, R_L=10KΩ	DC 4~20mA				

Electrical Data

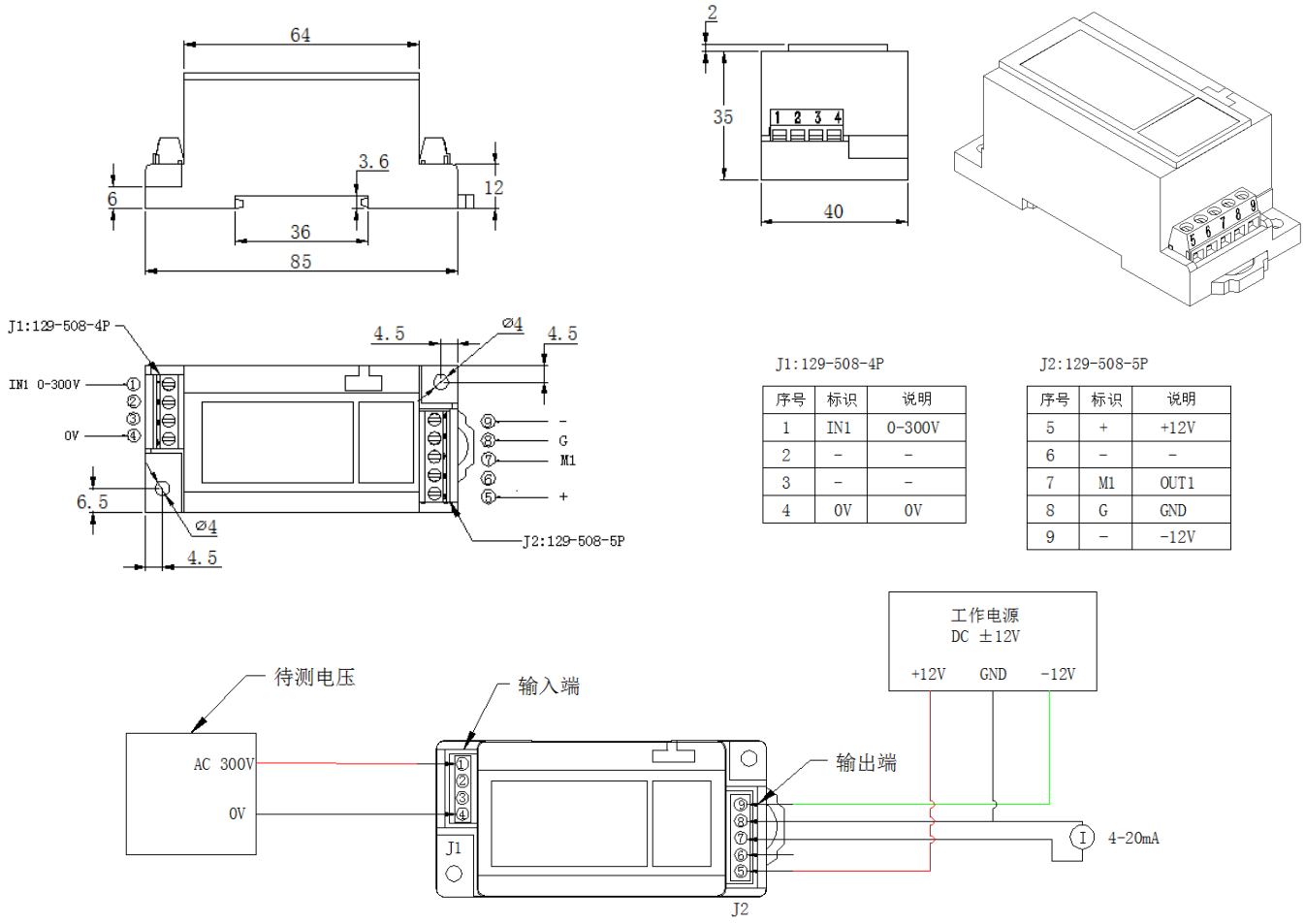
Item	Min.	Max.	Typical	Unit
Input power supply voltage range Vc (±5%) (Remark 1)	±11	±12	±18	V_{DC}
Current consumption Ic	<60mA +Current output I_S			mA
Output voltage Vout @I_{PN}, R_L=10KΩ, T_A= 25℃	$I_{OUT} = 4 + 16 * \frac{V_P}{V_{PN}} + I_{OE}$			V
Load Resistance R_L	0	-	500	Ω
Accuracy X @I_{PN}, T_A= 25℃	-	±1	-	%
Linearity ε_L @R_L=10KΩ, T_A= 25℃	-	±0.5	-	%I_{PN}
Offset current I_{OE} @T_A= 25℃	-	±0.125	-	mA
Temperature coefficient of offset voltage TCV_{OE}	-	±0.0016	±0.0032	mA/℃
Output voltage temperature coefficient TCV_{out}	-	±0.05	±0.1	%/℃
Response time t_D @ 0→I_{PN}	-	300	-	mS
Operating ambient temperature range T_A	-40	25	85	℃
Storage ambient temperature range T_s	-40	25	85	℃
Insulation withstand voltage VD@50Hz, 60s, 0.1mA	-	3000	-	V_{AC}
Weight m	-	70	-	g

Remark:

If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

Dimension (in mm):

SVL4 series



J1:129-508-4P

序号	标识	说明
1	IN1	0-300V
2	–	–
3	–	–
4	0V	0V

J2:129-508-5P

序号	标识	说明
5	+	+12V
6	–	–
7	M1	OUT1
8	G	GND
9	–	-12V

Concentrate:

1. Size error: ±1mm;
2. AC testing, all are single-channel testing.
3. The product installation and use environment should be free of conductive dust and corrosion.
4. When wiring, please pay attention to the exposed conductive part of the terminal block, and the input, output and power supply must be connected correctly.
Do not make mistakes or reverse connections, incorrect wiring may cause damage to the sensor.
5. Severe vibration or high temperature may also cause damage to the product, please pay attention to the occasion of use.