

twilight

INSTRUMENTOS DE MEDICIÓN INDUSTRIAL

Sensor de Velocidad NA-FA133A

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Standards : Q/V CZV 1



FA133A/FA13

5A



FA133B/FA

135B



FA133

D/FA135D



Application

Special design for large equipments of factory, wind industry, engineering machinery, port machinery, Bridge inspection vehicle, etc.

Major functions & features

- Anemometer sensor use magnetic sensor measuring principle.
- Sensor data collected with high precision and reliability.
- Wind speed measurement with wide range, low wind speed start.
- Wind speed sensor use metal enclosure, corrosion resistant and strong anti-wind capability
- Wind cup stainless steel, can be used in harsh conditions.
- Compact sensor design, set wind speed measurement, heating device in one, easy installation and maintenance.
- Sensor fault-tolerant design, sensor will not be damaged even wrong wiring.
- Surge protection design.
- wide supply power voltage range.

Specification :

Operating voltage	DC12V-DC30V	Operation current	<50mA
Threshold	≤0.5m/s	Measuring range	0.5-50m/s
Anti-wind level	>70 m/s	Resolution	0.01m/s
Accuracy	±0.5 m/s (<5m/s) Measuring vale±3% (≥5 m/s)	Heating type	Automatic
Heating voltage	DC18V-30V	Heating power	≤50W
Surge protection	4kV/2kA	ESD protection	15kV
Ambient temperature	-40°C~+70°C	Relative humidity	0%~95%(no coagulation)
Body material	Aluminum alloy/polyester coating	Ingress protection	IP65
Wind cup material	Stainless Steel	Bearing material	Stainless Steel 440C
Weight	FA13XA/FA13XD/ FA13XF=0.6kg FA13XB=2.5kg		

Signal and model selection:

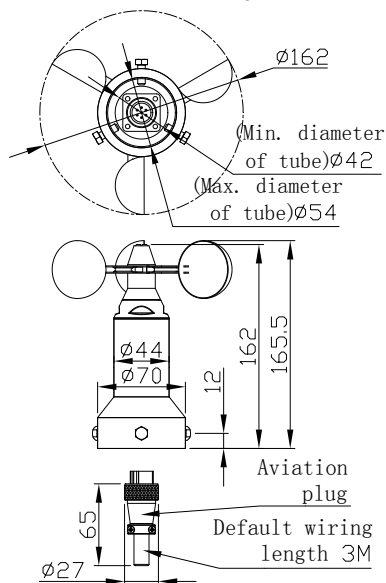
Model	Mounting method	Wiring	Signal
FA133A	Φ42~Φ54 pipe	Aviation plug	4 ~ 20mA three-wire current loop(linear corresponding 0~50m/s) ; load resistance≤500Ω; Connect with FA220C or FA130C display is available
FA133B	Self-balanced	Wire out directly	
FA133D	G3/4" whorl	Aviation plug	
FA133F	Φ80 Flange	Wire out directly	4 ~ 20mA three-wire current loop(linear corresponding 0~30m/s)
FA135A	Φ42~Φ54 pipe	Aviation plug	NPN pulse signal ; 0.5m/s=2Hz ; 50m/s=573Hz V[m/s]=0.08669×f[Hz]+0.32
FA135B	Self-balanced	Wire out directly	
FA135D	G3/4" whorl	Aviation plug	
FA135F	Φ80 Flange	Wire out directly	

Note : FA13+3/5 is different signal output, A/B/D is different mounting type

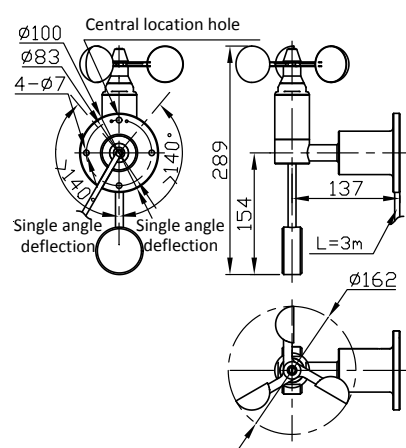
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FA133B/FA135B Special design for Crawler crane, Truck crane, Bridge inspection vehicle etc.

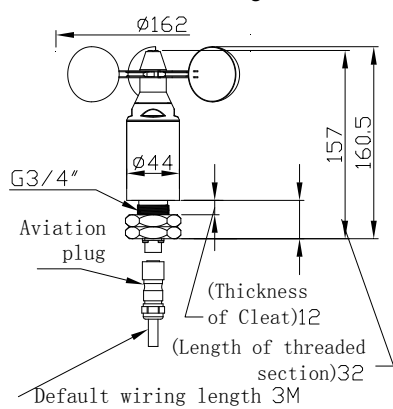
FA133A/FA135A mounting size (unit : mm)



FA133B/FA135B mounting size (unit : mm)



FA133D/FA135D mounting size (unit : mm)



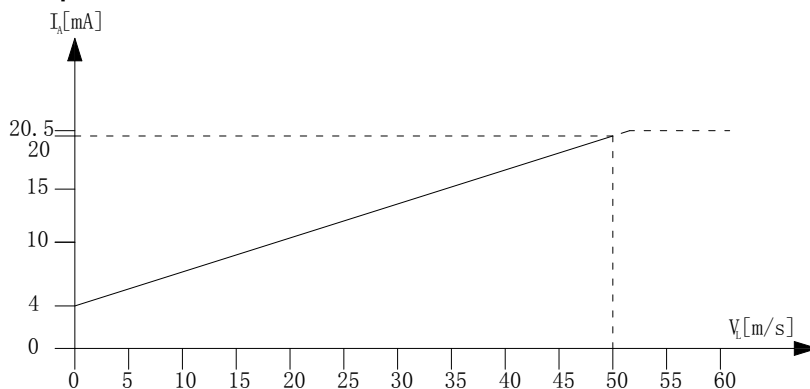
large lift, cantilever machinery.

•Mounting :

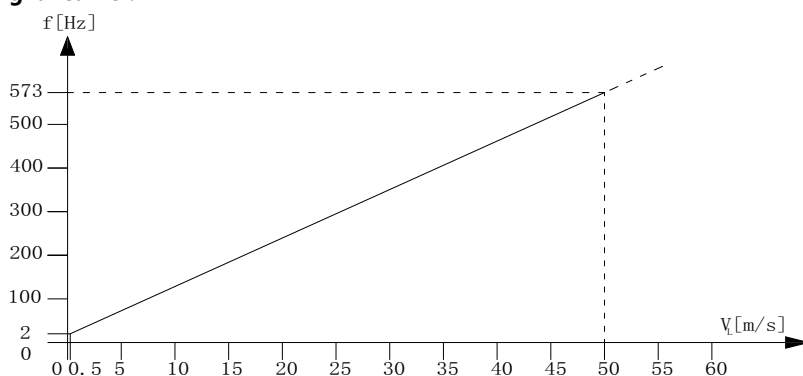
Install wind speed sensor on high spot of equipment, ensure no defend, fix wind speed sensor with four M6 screws.

•Refer to mounting diagram and central location hole, ensure wind speed sensor vertical all the time to assure measuring wind speed accurately and decrease equipment shock damage wind speed sensor.

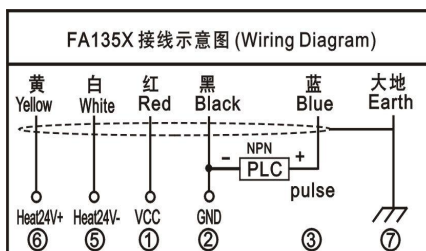
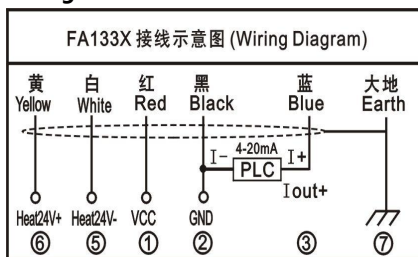
Current output curve :



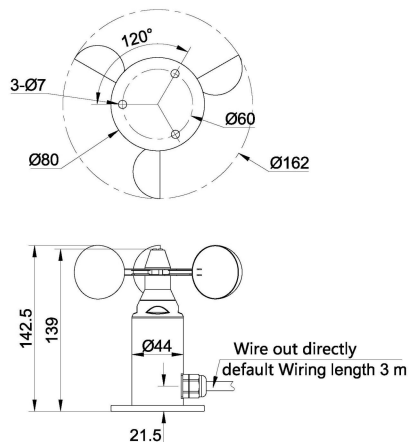
pulse signal curve :



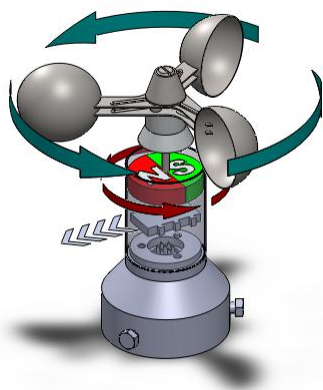
Wiring chart:



FA133F/FA135F mounting size (unit : mm)



Sensor measuring principle chart



Application



Communications cable

Communication cable RVVP / 5 pin / 0.5mm² / copper / low-temperature shield cord, the default wiring length L = 3m (customizable); maximum communication distance of 1000m.

Note: Blue wire marked Signal, indicate wind speed signal output.

Note

- Please use the product strictly in accordance with the instruction above.
- Ensure wire connection correctly before power on.
- Cable shielding layer and housing must be reliably grounded.
- It is recommended to inspect every 18 months.

Annex : wind scale, wind speed, wind pressure check list (structural design reference)

Wind scale	Name	Wind speed		Wind pressure	Status on ground	Status at sea
		km/h	m/s	$W_0 = V^2/16(\text{kg/m}^2), 10\text{N/m}^2$		
0	Calm	<1	0 ~ 0.2	0 ~ 0.0025	Calm	Sea like a mirror
1	Gentle breeze	1 ~ 5	0.3 ~ 1.5	0.0056 ~ 0.014	Smoke rises vertically. Direction of wind shown by smoke drift, but not by wind vanes.	Ripples
2	Light wind	6 ~ 11	1.6 ~ 3.3	0.016 ~ 0.68	Wind felt on face; leaves rustle; ordinary vanes move by wind.	Small wavelets
3	Gentle breeze	12 ~ 19	3.4 ~ 5.4	0.72 ~ 1.82	Leaves and small twigs in constant motion; wind extends light flag	Small wavelets
4	Moderate breeze	20 ~ 28	5.5 ~ 7.9	1.89 ~ 3.9	Raises dust and loose paper;	Small waves, becoming larger;
5	Fresh breeze	29 ~ 38	8.0 ~ 10.7	4 ~ 7.16	Small trees in leaf begin to sway	Moderate waves
6	Strong breeze	39 ~ 49	10.8 ~ 13.8	7.29 ~ 11.9	Large branches in motion; whistling heard in telegraph wires;	Large waves
7	Moderate gale	50 ~ 61	13.9 ~ 17.1	12.08 ~ 18.28	Whole trees in motion; inconvenience felt when walking against the wind	Sea heaps up
8	Fresh gale	62 ~ 74	17.2 ~ 20.7	18.49 ~ 26.78	Breaks twigs off trees; generally impedes progress.	Moderately high waves
9	Strong gale	75 ~ 88	20.8 ~ 24.4	27.04 ~ 37.21	Slight structural damage occurs (chimney-pots and slates removed).	Moderately high waves
10	Very strong wind	89 ~ 102	24.5 ~ 28.4	37.52 ~ 50.41	Trees uprooted; considerable structural damage occurs	Moderately high waves
11	Storm	103 ~ 117	28.5 ~ 32.6	50.77 ~ 66.42	Seldom experienced inland; accompanied by wide-spread damage	Moderately high waves
12	Hurricane	>117	32.7 ~ 36.9	66.42 ~ 85.1	Very rarely experienced; accompanied by serious damage	The air is filled with foam and spray
13			37.0 ~ 41.4			
14			41.5 ~ 46.1			
15			46.2 ~ 50.9			
16			51.0 ~ 56.0			
17			56.1 ~ 61.2			

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