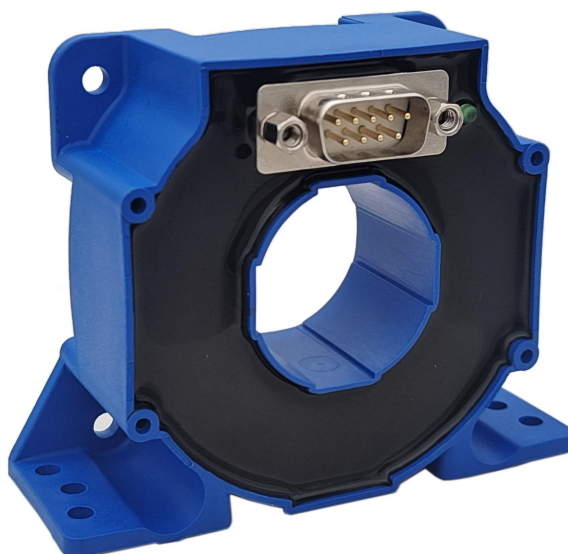


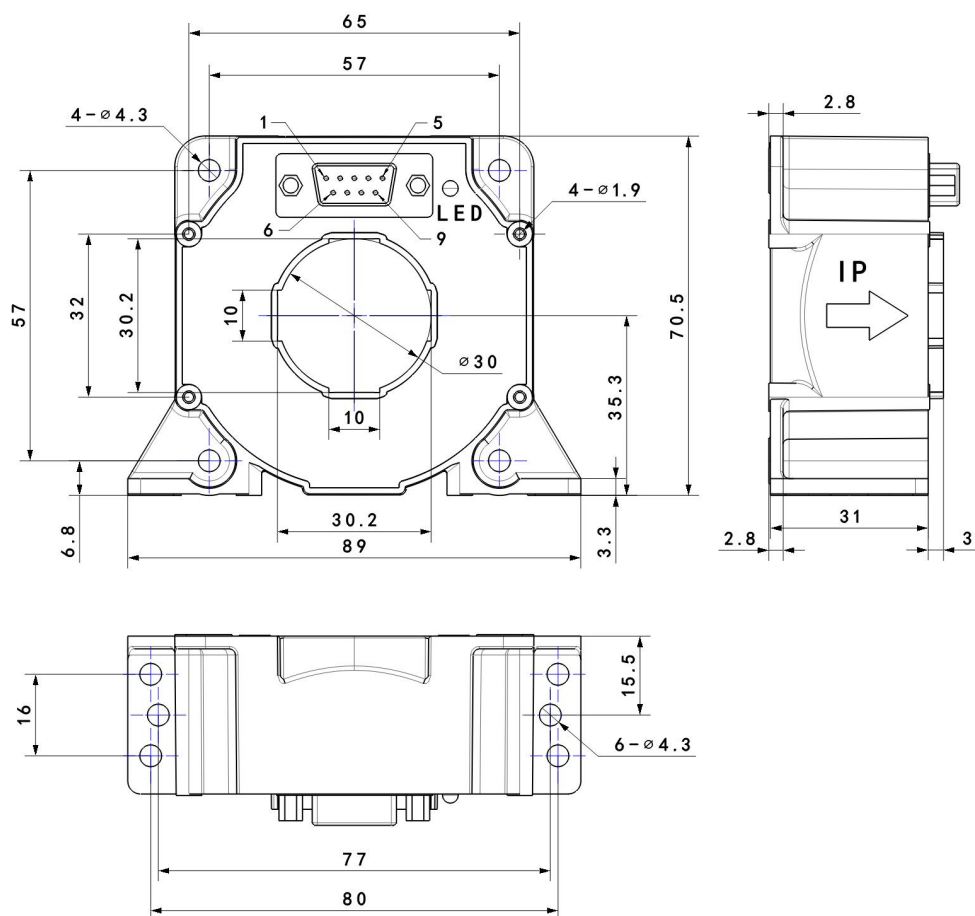
DCSM500LFBH-DB9 High-Precision Current Transducer



DCSM500LFBH-DB9 Current Transducer using the principle of fluxgate. It can measure DC, AC, pulse, and various irregular wave form currents under electrical isolation conditions. It has ultra-high accuracy and linearity features, ultra-high sensitivity and resolution, as well as extremely low offset current and temperature drift. It is widely used in instruments and meters, medical equipment, measurement and calibration, laboratories, high-precision power supplies, new energy vehicles.

Electrical characteristics				
	Type	DCSM500LFBH-DB9		
I_{PN}	Primary nominal input current	± 500		
I_{PNAC}	Primary nominal RMS current	353		
I_P	Measuring range of primary current	$0 \sim \pm 900$		
I_{OUT}	Secondary nominal output current	± 250		
K_N	Conversion ratio	1:2000		
R_M	Measuring resistance	with $\pm 15V$ @ $\pm 500A_{max}$	0(min) 34(max)	Ω
		with $\pm 15V$ @ $\pm 900A_{max}$	0(min) 10(max)	Ω
V_C	Supply voltage	$\pm 15(\pm 5\%)$		
I_C	Current consumption	$15 + I_P / K_N$		
V_D	Insulation voltage	AC/50Hz/1min	5	kV
X	Accuracy	@ $T_A = 25^\circ C$	100	ppm
ϵ_L	Linearity	@ $I_P = 0 \sim \pm I_{PN}$	20	ppm
I_O	Zero offset current	@ $T_A = 25^\circ C$	3	μA
T_C	Offset temperature coefficient	@ $I_{PN} = 0$ $T_A = -40 \sim +85^\circ C$	5	μA
T_R	Response time	@ $100A/\mu S$, 10%-90%	≤ 1	μs
f	Frequency bandwidth	@ -3dB	DC \sim 150	kHz
di/dt	di/dt accurately followed	> 100		
T_A	Ambient operating temperature	$-40 \sim +85$		
T_S	Ambient storage temperature	$-40 \sim +125$		
R_S	Secondary coil resistance	@ $T_A = 85^\circ C$	16	Ω
m	Mass	253		

Dimensions of drawing (mm)

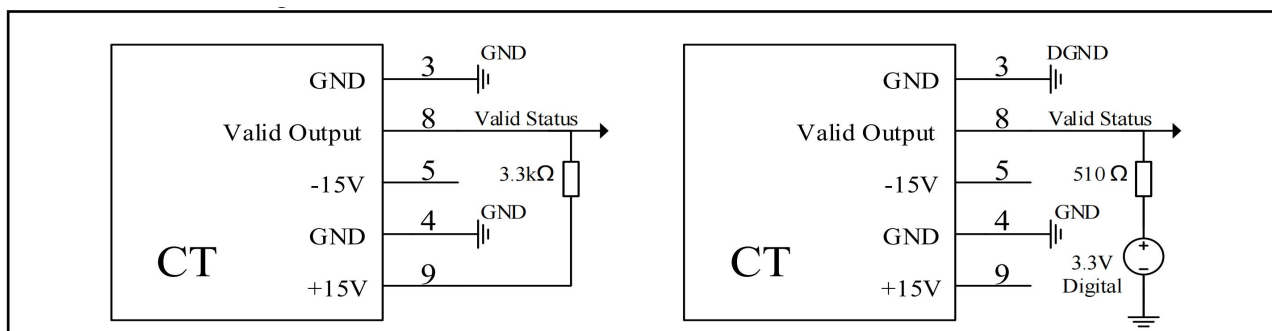


Connection

Pin	1	2, 7	3	4	5	6	8	9
Definition	GND	NC	GND	GND	-15V Supply	I Output	Valid Output	+15V Supply

Status Port

The effective working status detection of the sensor is indicated by Pin3 and Pin8 of D-SUB-9(9 pins connector).As shown in the following figure,If the voltage on Pin8 is about 0.7V, the sensor is working normally.If it is 3.3V Digital or +15V, the secondary output is invalid.



Remarks

- Incorrect connection may lead to the damage of the sensor.
 - I_{OUT} is positive when the I_P flows in the direction of the arrow.
 - Operating Status Instructions
 - 1, Normal Status: The green indicator is "on" under the normal working conditions.
 - 2, Fault Status: The green light is "off" that indicates the sensor is in fault mode.
- Trouble-shooting:
- a) When the green light is off, the power supply should be checked as the first step;
 - b) If the power supply is normal, then the primary current is over the specified measurement range and the sensors will be in overload mode. In this mode, the sensors will be working in non-zero flux status, the secondary and primary currents are not in proportional. Once the primary current return to the specified measurement range, the sensors well be running normally.
- The temperature of the original measuring cable or busbars should not exceed 100℃.