



Current Sensor DXE-50...400-C1FS

$I_{PN} = 50A \dots 400A$

DXE-50...400-C1FS series are a linear Hall effect sensor used to isolate and measure the magnitude of current in a universal linear Hall sensor device. The output voltage of the linear source is set by the power supply voltage and varies linearly with the current intensity. Adopting CMOS technology, it has the advantages of low voltage and low power consumption, and can operate between 3V and 5.5V. This circuit has the advantages of stable output and good temperature characteristics. It is widely used in commercial, industrial and other fields.



Features

- Integrated design
- Excellent accuracy- Accuracy error<1%
- Very good linearity- Linearity error<0.5%
- Sensor operating temperature range- -40°C to $+125^{\circ}\text{C}$
- Wide application range

Application Domain

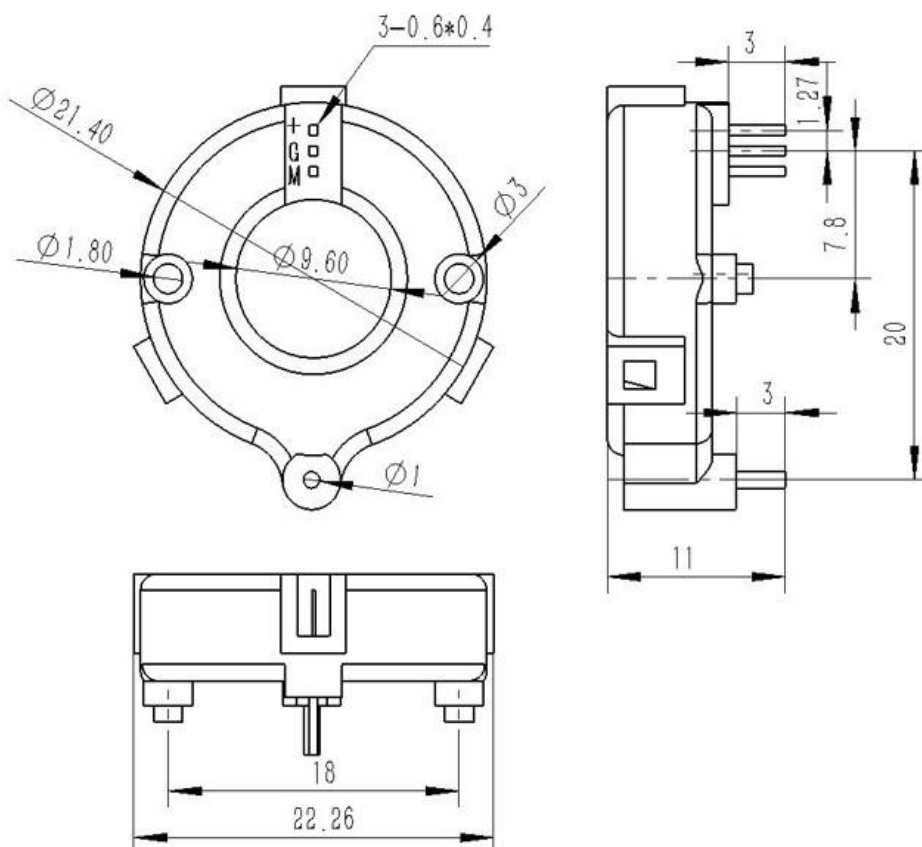
- Motor control
- New energy vehicle
- Electric forklift
- others



Electrical data (Ta=25°C±5°C)

Type	Symbol	DXE-50	DXE-100	DXE-150	DXE-200	DXE-300	DXE-400
		-C1FS	-C1FS	-C1FS	-C1FS	-C1FS	-C1FS
Rated input	IPN	±50A	±100A	±150A	±200A	±300A	±400A
Max rangIPM	IPM	±55A	±110A	±165A	±220A	±330A	±440A
Rated output voltage	VOUT	2.5V±2*(IP/IPN)					
Supply voltage	Vc	+5V					
Linearity	εL	0.005					
Accuracy	X	0.01					
Offset voltage	Vo	±20mV					
Bandwidth-3db	BW	DC~100kHz					
Current consumption	Ic	≤15mA					
Offset voltage drift		≤0.01%/°C					
Response time		<5μs					
Galvanic isolation	Vd	50Hz,1min,3kV					
Operating temperature	TA	-25~+85°C					
Storage temperature	TS	-40~+95°C					
Mass	m	≈12g					

Mechanical dimension (mm)





Mechanical characteristics

Characteristic	Rating	Unit
General tolerance	± 0.5	mm
Other tolerance execution	GB/T 1804-2000-M	
Fixed Pin size	$\Phi 1^*4, \Phi 1.5 \times 2$	mm
Recommended welding temperature	265 ± 5	$^{\circ}\text{C}$
Recommended fastening torque	$0.75\text{Nm}(\pm 10\%)$	Nm

Output curve diagram of sensor input current I_P and output voltage V_{OUT}

$2.5V \pm 2 \times (I_P / I_{PN})$

