ACM20B

Introduction

Vinbelltech's ACM20B miniature, open-loop current sensors incorporate our AH69X Series miniature ratiometric linear Hall-effect sensor. The sensing element is encapsulated in a printed circuit board-mountable plastic package. The combination of sensor, flux collector and housing comprises the current sensor assembly. These sensors are ratiometric output.

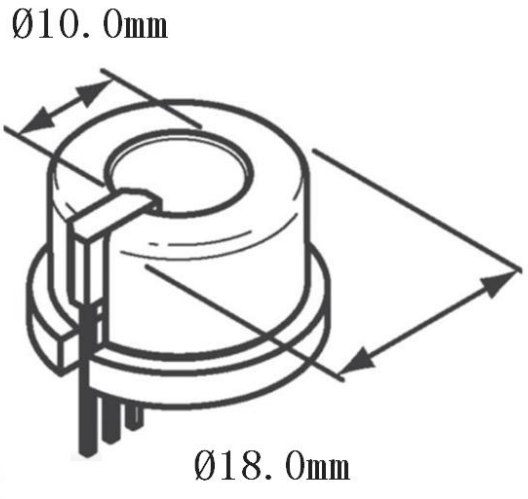
Features

- Open-loop, through-hole design
- Output voltage isolation from input
- ac or dc current sensing
- Linear ratiometric output
- Current sinking or sourcing output for interfacing flexibility
- Fast response time
- Compact size
- Accurate, low-cost sensing
- Minimum energy dissipation
- Maximum current limited only by conductor size
- Built-in temperature compensation promotes reliable operation
- Operating temperature range -40 °C to 125 °C
- RoHs compliant (lead-free)

Applications

- Motor control in appliances, HVAC and consumer tools
- Current monitoring of electronic circuits
- Overcurrent protection
- Ground fault detectors
- Robotics
- Industrial process control
- UPS and telecommunication power supplies
- Welding current monitoring
- Battery management systems in mobile equipment
- Watt meters
- Variable speed drives

Package

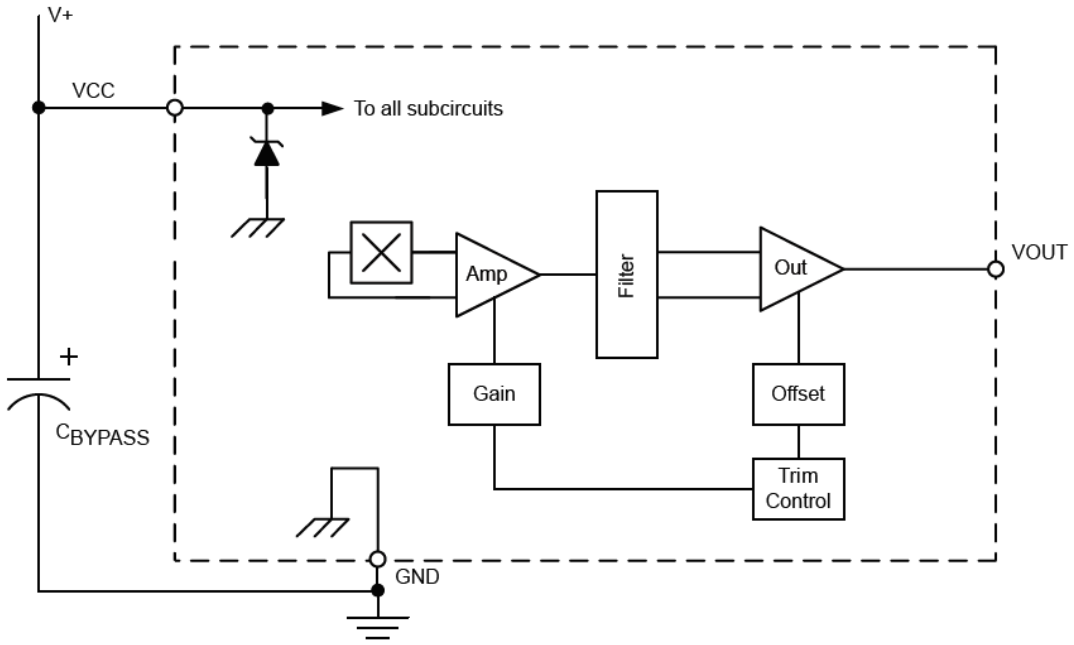


Product specification

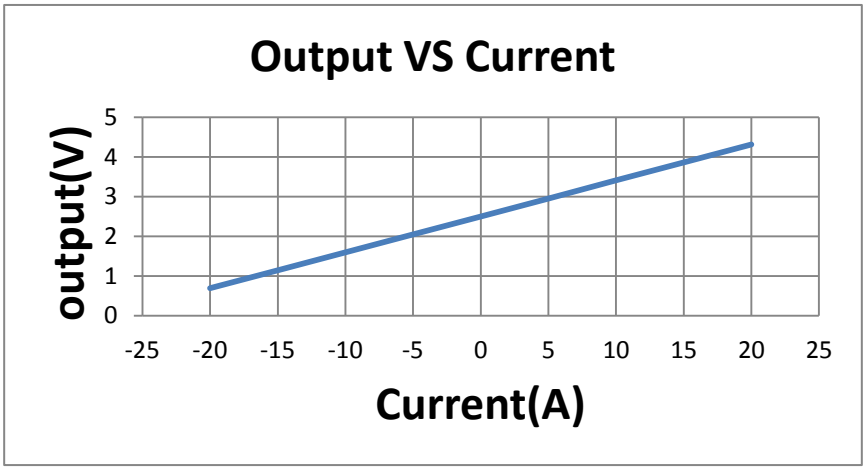
Product type	Hall-effect linear open-loop current sensor
ackage quantity	25 per box
Package style	PC board mount - radial lead IC
Supply voltage	4.5 Vdc to 10.5 Vdc
Output type	sink/source
Magnetic actuation type	analog ratiometric

Parameter	Symbol	Min.	Typ.	Max	Units	Condition
Current range	Ip		±22		A	<±1.5 % error (-40℃ to 125℃)
Supply voltage	Vs	4.5	5	10.5	V	
Vout @ 0 NI	Vo	2.41	2.5	2.59	V	
Supply current	Is		4.8	7	mA	no load
Sensitivity	Sens	87.5	90.5	93.5	mV/A	-40 to 125℃
Hysteresis	Hys			0.5	%	+/-22A
Temp error-null	TCnull	-0.054		0.054	%/℃	-40℃ to 125℃
Temp error-gain	TCgain	-0.08		0.08	%/℃	-40℃ to 125℃
Rise time	tr		3		us	

Block diagram



Typical transfer function (25 °C)



Dimensional drawing (mm)