

ANALOG CORRECTED HALL PROBE



WITH BARE PROBE & INTEGRAL POWER SUPPLY

Model HPCS-[F]-[V]-C[n]

with bare probe on flexible cable, length [n] meters

[F] = full-scale magnetic field in tesla, 0.1T min., 2.2T max.

[V] = full-scale output voltage, 5.0V min., 10.0V max.

In fractional full-scale values, the decimal is replaced by the units symbol.

Example: HPCS-T2-5V-C2 has a full-scale range of -0.2 to +0.2 tesla giving -5 to + 5 volt output, with a 2 meter probe cable.

Group3 PIC code 01454000

Probe	epoxy-glass laminate (standard pcb material)
length	100mm (min.) from cable strain relief to Hall sensor
cross section	1.6mm thick (in field direction) x 10mm wide.
sensor position	2.5mm from free end of probe
cable length	0.5 min., 30 max. metres (specified by customer)
polarity	output is positive when field vector enters flat side of probe

Operating conditions for full correction

Magnetic field	bipolar field range as specified in model code (see above)
Temperature	10°C to 50°C

Output

Voltage	bipolar output range as specified in model code (see above)
Accuracy	$\pm(0.02\%$ of full scale + 0.01% of field + 0.00002) tesla $\pm 1\%$ approx for field components above 10kHz
bandwidth (small signal)	0 to >200kHz (-3dB point)
bandwidth (full output)	0 to 35kHz sine wave (20 volt peak-to-peak output)
slew rate	>2V/ μ s
noise level	< 1mV p-p (over bandwidth 0 to 10kHz, >0.5T full-scale)
output Impedance	< 10 Ω
output load	2 k Ω min.

Power input requirement

24V nominal ac or dc red LED power indicator
ac: 28V max., 17V min., 3VA nom.
dc: 36V max., 20V min., 2W nom.
Red LED indicates "power on"

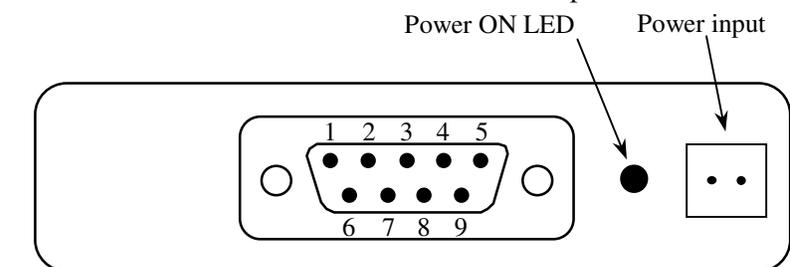
Over temperature output

Isolated collector and emitter of optocoupler,
ON if Hall device temperature exceeds $\sim 70^{\circ}\text{C}$

Connector

D9 male

pin	
1	output ground*
2	analog ground*
3	over temp. (collector)
4	-
5	-
6	output signal
7	analog ground*
8	over temp. (emitter)
9	-



Terminate wiring shields to the connector shell
Enclosure dimensions: 142 x 92 x 30mm
* pins 1, 2, and 7 are connected together internally