Group3

ANALOG CORRECTED HALL PROBE

WITH MINIATURE PROBE HEAD & INTEGRAL POWER SUPPLY

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

with miniature 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-M2 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 01456000

Probe ceramic substrate with epoxy encapsulation
    length 14mm – see separate diagram sheet
    cross section 2.0mm thick (in field direction) x 5mm wide.
    sensor position 1.5mm from free end of probe
    cable length 0.5 min., 30 max. metres (specified by customer)
    polarity output is positive when field vector enters epoxy 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
    output voltage bipolar output range as specified in model code (see above)
    accuracy ±(0.02% of full scale + 0.01% of field +0.00002) tesla up to 10kHz
     ±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/µs
    noise level < 1mV p-p   (over bandwidth 0 to 10kHz, >0.5T full-scale)
    output impedance < 10 Ω
    output load 2 kΩ min.

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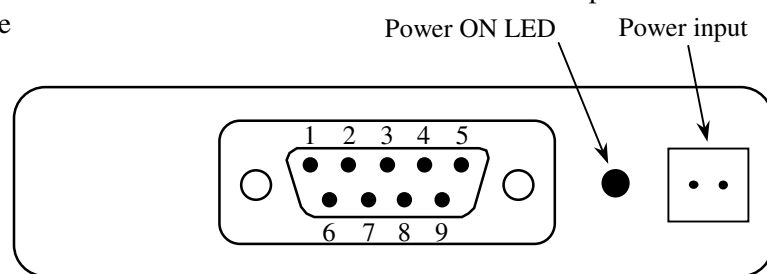   Red LED indicates "power on"

Over temperature output Isolated collector and emitter of optocoupler,
    ON if Hall device temperature exceeds ~70°C

Connector D9 male

Power ON LED   Power input

pin		
1	output ground*	
2	analog ground*	
3	over temp. (collector)	
4	-	
5	-	
6	output signal	
7	analog ground*	Terminate wiring shields to the connector shell
8	over temp. (emitter)	Enclosure dimensions: 142 x 92 x 30mm
9	-	* pins 1, 2, and 7 are connected together internally

1 2 3 4 5
6 7 8 9