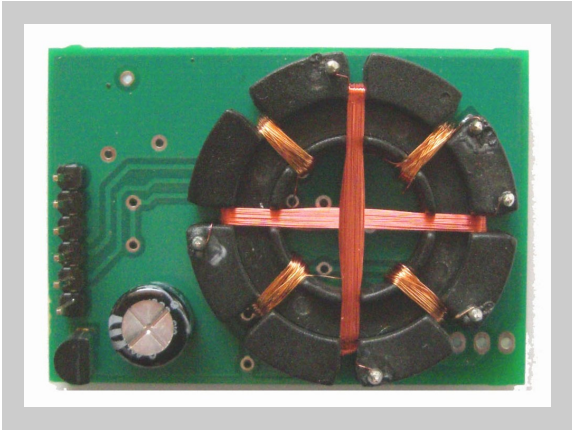


OEM 2-AXIS ANALOGUE MAGNETOMETER



FEATURES

- COMPLETE OEM ANALOGUE COMPASS
- ANALOGUE SIN/COS
- ISOLATED NULL WINDING
- FULL OUTPUT FROM 2.5 μ T to 50 μ T
- COMPACT

APPLICATIONS

- GRADIOMETER
- DIFFERENTIAL
- GEOMAGNETICS
- SECURITY

DESCRIPTION

The A405X series of modules is designed to interface a fluxgate magnetometer sensor to a display or to computer systems. There are two analogue outputs, one for each orthogonal sensor, so that it can be used for compass and field sensing for treasure finding or archeo-magnetic or geomagnetic surveys. In such applications an external nulling field is sometimes needed to remove the Earth's field. Each member of the A405xseries has extra independent windings to accept currents to create these nulling fields.

ABSOLUTE MAXIMUM RATINGS

PARAMETER	DESCRIPTION	NOTES	CONDITIONS	VALUE	UNIT
θ_{STOR}	Storage Temp Range			-20 to +100	$^{\circ}\text{C}$
θ_{OPER}	Operating Temp Range			-10 to +65	$^{\circ}\text{C}$
V_{CC}	Supply Voltage			12	Vdc

DIMENSIONS - mm

Width	34
Length	49
Height	12.5

ORDER INFORMATION

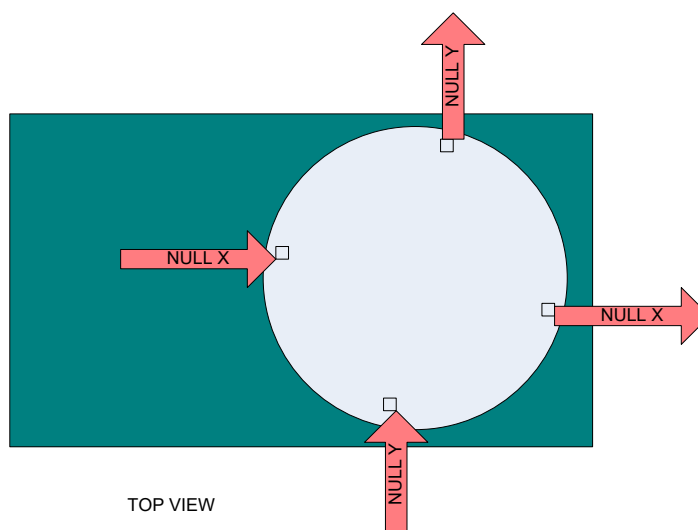
PART	DESCRIPTION
A4051	50uT fixed 2axis
A4052	10uT fixed 2axis
A4053	5uT fixed 2axis
A4054	2.5uT fixed 2axis

CONNECTIONS

CONNECTOR PIN		IN/OUT/POWER	FUNCTION
1	2.5V	O	Output reference for zero field Used as analogue zero
2	X	O	X magnetometer output
3	Y	O	Y magnetometer output
4	GND	P	Ground
5	5V	PI/PO	5v output (max10mA) or 5v input. NOT RECOMMENDED FOR USE—CONSULT FACTORY
6	15V	P	7-15V power input

BACK-OFF WINDINGS

These windings are brought out to pins on the upper surface of the fluxgate component.



PERFORMANCE

PARAMETER	DESCRIPTION	NOTES	CONDITIONS	MIN	TYP	MAX	UNIT
V_o	Output			4.8		0.2	V
T_{pu}	Settling time after power-on					3	S
	Zero		At zero field		2.5		V
	Max/Min Output	A4051			50		μT
		A4052			10		μT
		A4053			5		μT
		A4054			2.5		μT
	Output Offset Error	A4051				40	μV
		A4052				80	μV
		A4053				120	μV
		A4054				250	μV
I_s	Supply current				30		mA
I_B	Back-off current				1.5		μT/mA