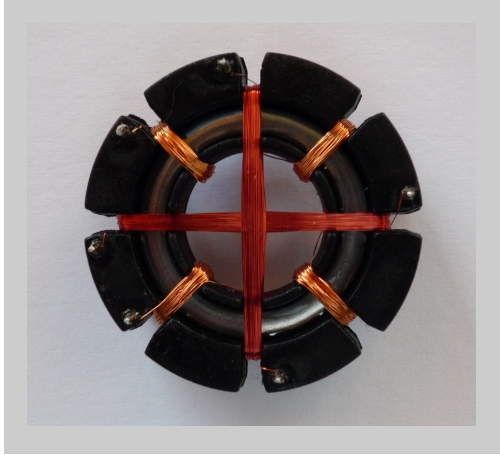


## DUAL AXIS FLUXGATE MAGNETOMETER WITH FIXED CORE



### APPLICATIONS

- Rotary Position Sensing
- Wind Angle
- Shaft Angle
- Compass
- General 2-axis magnetometry

### FEATURES

- Two orthogonal Sense Windings
- Available with different core metal area
- Large diameter for good signal/noise

### ABSOLUTE MAXIMUM RATINGS

PARAMETER	DESCRIPTION	NOTES	CONDITIONS	VALUE	UNIT
$Q_{STOR}$	Storage Temp Range			-60 to +100	°C
$Q_{OPER}$	Operating Temp Range			-60 to +90	°C
	Shock Resistance		Single impact	±100	g
	Vibration Resistance		60Hz, 10Min	±11	g
	Climate Test		+71°C at 95% Humidity -20°C at 85% Humidity	6	Hours
$I_{E(MAX)}$	Max Current in Excitation Winding			200	mA
$I_{S(MAX)}$	Max Current in Sense Winding			80	mA

### SPECIFICATIONS

PARAMETER	DESCRIPTION	NOTES	TYPICAL VALUE	UNIT
$ERR_{OFFSET}$	Offset Error		3	Degrees
$ERR_{LIN}$	Linearity Error		1	Degrees

### ORDER INFORMATION

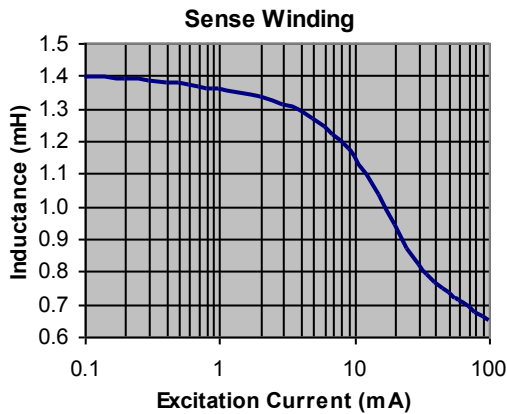
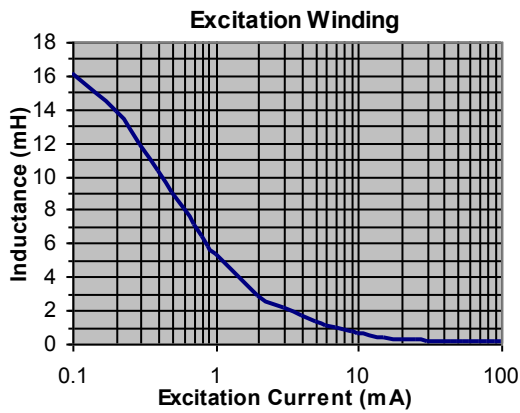
PART	DESCRIPTION
A1015-1	Fluxgate, fixed core, sensitivity optimised for Earth's field
A1015-3	Fluxgate, fixed core, sensitivity optimised for 10mT magnet



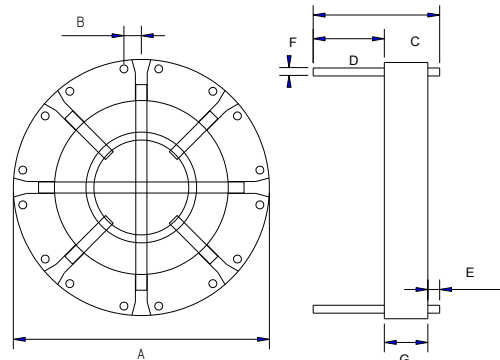
## ELECTRICAL CHARACTERISTICS AT 20°C

A1015-1 EXCITATION WINDING							
PARAMETER	DESCRIPTION	NOTES	CONDITIONS	MIN	TYP	MAX	UNIT
$I_{E(SAT)}$	Saturation Current	1			60		mA
$R_E$	DC Resistance				7.1		Ohms
$L_E$	Inductance	3	$I_E = 1 \text{ mA}$		5.3		mH
			$I_E = 10 \text{ mA}$		0.63		
			$I_E = 100 \text{ mA}$		0.09		
A1015-1 SENSE WINDINGS							
PARAMETER	DESCRIPTION	NOTES	CONDITIONS	MIN	TYP	MAX	UNIT
$R_S$	DC Resistance				42		Ohms
$L_S$	Inductance	4	$I_E = 1 \text{ mA}$		1.36		mH
			$I_E = 10 \text{ mA}$		1.15		
			$I_E = 100 \text{ mA}$		0.65		
$V_S$	Typical Output	2	Core Fully Saturated, 1 kW load.		3.3		V/mT

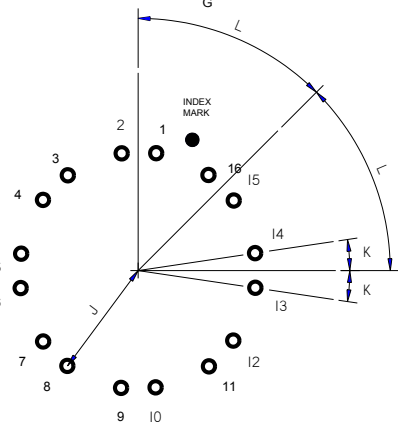
A1015-3 EXCITATION WINDING							
PARAMETER	DESCRIPTION	NOTES	CONDITIONS	MIN	TYP	MAX	UNIT
$I_{E(SAT)}$	Saturation Current	1			TBA		mA
$R_E$	DC Resistance				7.1		Ohms
$L_E$	Inductance	3	$I_E = 1 \text{ mA}$		TBA		mH
			$I_E = 10 \text{ mA}$		TBA		
			$I_E = 100 \text{ mA}$		TBA		
A1015-3 SENSE WINDINGS							
PARAMETER	DESCRIPTION	NOTES	CONDITIONS	MIN	TYP	MAX	UNIT
$R_S$	DC Resistance				42		Ohms
$L_S$	Inductance	4	$I_E = 1 \text{ mA}$		TBA		mH
			$I_E = 10 \text{ mA}$		TBA		
			$I_E = 100 \text{ mA}$		TBA		
$V_S$	Typical Output	2	Core Fully Saturated, 1 kW load.		TBA		V/mT



Typical Output  
Horizontal: 20ms/div Vertical: 100mV/div



Pad size = N  
Hole size = M



SYMBOL	DIMENSION (Note 1)	TOLERANCE	NOTES
A	32.4	±0.1	
B	2.2	+0.05	
C	16.3	±0.1	
D	8.0	±0.1	
E	2.5	±0.1	
F	0.8	±0.05	
G	5.8	±0.1	
J	15.0	±0.1	
K	8.33*	±0.5*	
L	45.0*	±2*	
M	1.00∅		
N	2.54∅		

PCB PIN LOCATION (Note 2)		
PIN No.	X	Y
1	-2.2	14.8
2	2.2	14.8
3	9.0	12.0
4	12.0	9.0
5	14.8	2.2
6	14.8	-2.2
7	12.0	-9.0
8	9.0	-12.0
9	15.0	-14.8
10	-2.2	-14.8
11	-9.0	-12.0
12	-12.0	-9.0
13	-14.8	-2.2
14	-14.8	2.2
15	-12.0	9.0
16	-9.0	12.0

NOTE:  
1. All dimensions in millimeters unless otherwise specified.

