



COMPASS PICKUP



FEATURES

- IP67
- NMEA-0183
- 5V NMEA-0183
- 8-15V Supply
- Auto calibration
- Set Zero

APPLICATIONS

- Marine Compass Pickup

This sub-system is based on the A3030 encoder. It senses the angle of a strong external magnetic field. Such a field is produced by large marine permanent-magnet compasses. By placing the A4030 under the compass the angle of the magnet is sensed and available as a NMEA sentence.

ABSOLUTE MAXIMUM RATINGS

PARAMETER	DESCRIPTION	NOTES	CONDITIONS	VALUE	UNIT
q _{STOR}	Storage Temp Range			-20 to +100	°C
q _{OPER}	Operating Temp Range			-20 to +65	°C
	Shock Resistance		Single impact	±200	G
	Climate Test		+71°C, 95% Humidity -20°C, 85% Humidity	6	Hours
V _{CC}	Supply Voltage			15	Vdc
P _{MAX}	Operating Pressure Range			-2 to +20	Bar

MECHANICAL

DESCRIPTION	NOTES	CONDITIONS	TYPICAL VALUE	UNIT
Dimensions			See Drawing	
Sensor Mounting			Any	
Cable Length			1	m
Weather Resistance			Sealed to IP67	

ORDER INFORMATION

PART	DESCRIPTION
A4030	NMEA Compass Pickup

ELECTRICAL CHARACTERISTICS AT 20°C

PARAMETER	DESCRIPTION	NOTES	MIN	TYP	MAX	UNIT
V _{CC}	Supply Voltage		8	12	15	Vdc
I _{CC}	Current consumption			25		mA
V _{out}	Data output voltage range	Note: not NMEA signal levels	0.4 (low)		4.6 (high)	V

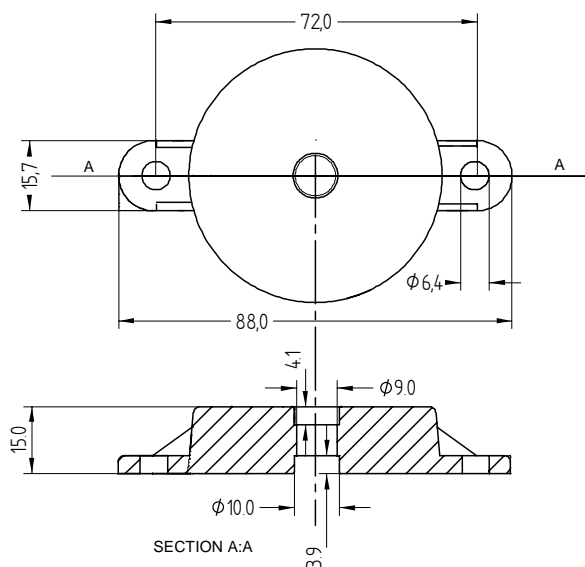
NMEA-0183 OUTPUT FORMAT

The output from the compass is a standard NMEA-0183 sentence which can be configured to be in one of several standard forms: Eg: \$HCHDG,hhh.h,,,,,*ss<CR><LF> or \$HCHDT,hhh.h,T<CR><LF>

where hhh.h represents the magnetic heading with one decimal place of precision, i.e: 000.0 to 359.9 degrees.

The two HEX digits, ss, are a checksum. Serial output is RS422, 4800 Baud, 8 data bits, 1 stop bit, no parity.

Many commands are listed in the Manual to set damping, output interval, calibration and a rich set of other options.



CONNECTIONS

Brown	Supply + 8 to 15v
Black	Supply – and signal ground
Blue	Serial digital input
Green	Serial digital output
Grey	Analogue output (not used)

