



World Leaders in Fluxgate Technology

WIND SPEED & DIRECTION



FEATURES

- Sealed to IP67
- Magnetic sense of Direction
- Optical sense of Speed
- NMEA-0183
- Analogue SIN/COS [B]

APPLICATIONS

- Marine
- Tower Cranes
- Platform environment
- Agriculture

ABSOLUTE MAXIMUM RATINGS

PARAMETER	DESCRIPTION	NOTES	CONDITIONS	VALUE	UNIT
θ_{stor}	Storage Temp Range			-40 to +100	°C
θ_{op}	Operating Temp Range			-25 to +85	°C
V_{CC}	Supply Voltage			30	V
S_{MAX}	Wind Speed			80	Knots

PERFORMANCE

PARAMETER	DESCRIPTION	NOTES	CONDITIONS	MIN	TYP	MAX	UNIT
ERR _{WS}			10-40 knots		3	5	%
ERR _{DIR}			20knots		3	4	Degrees
t_{DSET}	Direction Settling Time		Minimum filtering			1.3	Second
t_{WSSET}	Speed Settling Time		Minimum filtering			2	Second

ELECTRICAL CHARACTERISTICS AT 20°C

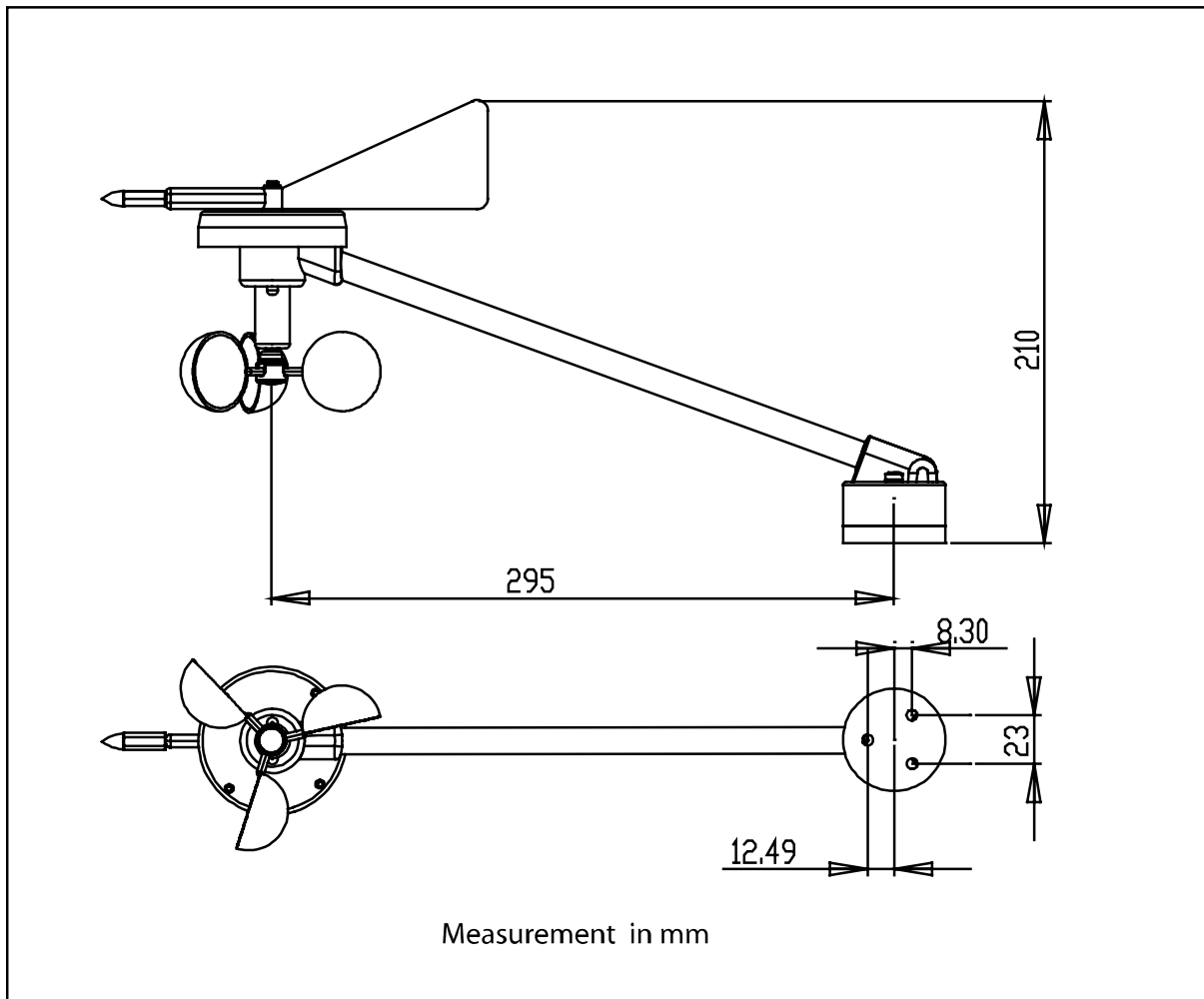
PARAMETER	DESCRIPTION	NOTES	MIN	TYP	MAX	UNITS
V_{CC}	Supply Voltage		8	12	28	Vdc
I_{CC}	Current consumption	No NMEA loads		20		mA
	Output Load				4	NMEA loads

ORDER INFORMATION

PART	DESCRIPTION	SHIPPING WEIGHT
A5012-1	Wind NMEA	2kg
A5012-1N	Wind NMEA no cable	1kg
A5012-2	Wind Analogue	2kg
A5012-2N	Wind Analogue no cable	1kg

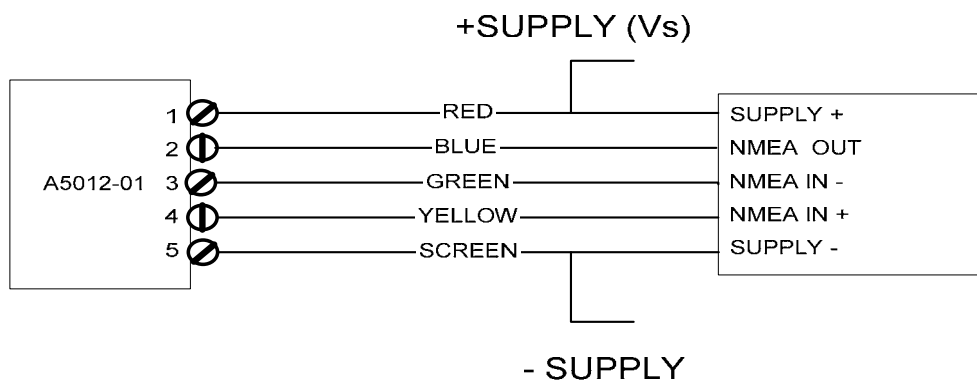


MECHANICAL



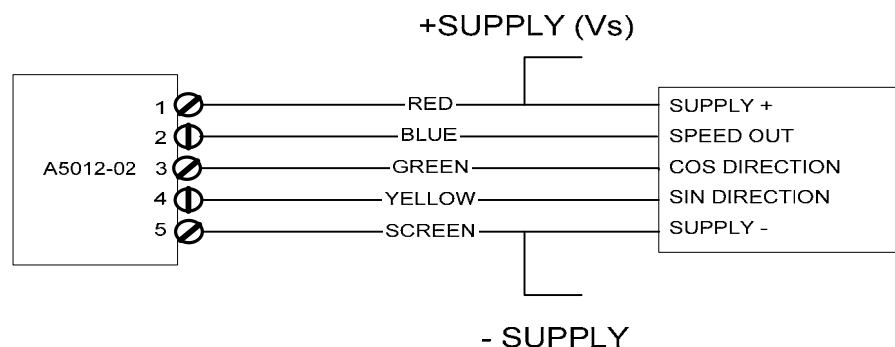
Cable is 20m grey 4-core with screen type

NMEA CONNECTIONS





ANALOGUE CONNECTIONS



Speed: 0kt = 50mV 50kt = 1.800v

Direction: SIN = $2.5v + 0.7\sin\theta$ COS = $2.5v + 0.7\cos\theta$

NMEA COMMANDS

Output sentences

\$WIMWV,a.a,R,s.s,N,A*hhhh<CR><LF>

where a.a = dir s.s= speed (kn)

*hhhh is set by the configure command: x=0 omit; x=1 hhhh = 2char checksum; x=2 hhhh = ID

\$YXXDR,C,x.x,C,WND*hhhh<CR><LF>

x.x = °C. This sentence not sent if y in configure command = 0; sent regularly if y=1 without *hhhh; if y=2 regularly with ID=hhhh

\$YXXDR,Q,a.a,b.b,cc <CR><LF> where a.a is max temp and b.b is min (cc is for factory use only)

\$PATC,WIMWV,ACK<CR><LF> acknowledgement that a command was received

\$PATC,WIMWV,RID,xxxx<CR><LF> ID = xxxx

Input sentences

\$PATC,IIMWV,AHD,x.x<CR><LF> set reference offset

\$PATC,IIMWV,DWD,x.x<CR><LF> set dir damping % - 0.0 to 100.0

\$PATC,IIMWV,TXP,x.x<CR><LF> output rate in ms

\$PATC,IIMWV,ASP,x.x<CR><LF> set speed scale – current value set to x.x

\$PATC,IIMWV,ISP,x.x<CR><LF> speed integration period

\$PATC,IIMWV,DSP,x.x<CR><LF> set speed damping % - 0.0 to 100.0

\$PATC,XDR,Q<CR><LF> report max and min temp values

\$PATC,IIMWV,WSC <CR><LF> calibrate wind speed sensor

\$PATC,IIMWV,RID<CR><LF>report ID

\$PATC,IIMWV,CFG,xy<CR><LF> configure command. Default x=y=0. See Output sentences

FLUXGATE WORLD®