SPECIFICATIONS

Sensor Type:	**Wind Monitor-HD (Model 05108)** NOTE: use with other models will result in wind speed errors.
Wind Speed Input:	YOUNG Wind Monitor-HD AC sine wave, Frequency proportional to wind speed. 3 pulses per revolution. Input sensitivity nom. 40 mV p-p
Wind Direction Input:	Analog voltage from azimuth potentiometer. Regulated excitation voltage (nom 5.0vdc) is supplied from interface circuit to potentiometer.
Wind Speed Output:	4 to 20 mA = 0-100 M/S
Wind Direction Output:	4 to 20 mA = 0 to 360°
Overall accuracy:	± 1% of full scale over temperature and supply voltage range
Dimensions:	110 mm W x 75 mm H x 56 mm D (4.3 in W x 2.9 in H x 2.2 in D)
Mounting:	U-bolt for vertical pipe 25-50mm (1-2 in) Diameter
Power Requirement:	12-30 VDC
Temperature Range:	-50 to 60°C (-58 to 140°F)

INTRODUCTION

The Wind Line Driver converts raw signals from Wind Monitor-HD sensor to proportional 4 to 20 mA current loop values. The Line Driver acts like a variable resistance that draws 4 - 20 mA when powered with 12 to 30 VDC. Although it has only one PC board, the Line Driver contains two completely independent circuits - one for wind speed and the other for wind direction. See wiring diagram.

IMPORTANT!
The Wind Line Driver provides a calibrated current signal for wind speed and wind direction. Externally connected devices should be reviewed for compatibility and correct signal scaling.

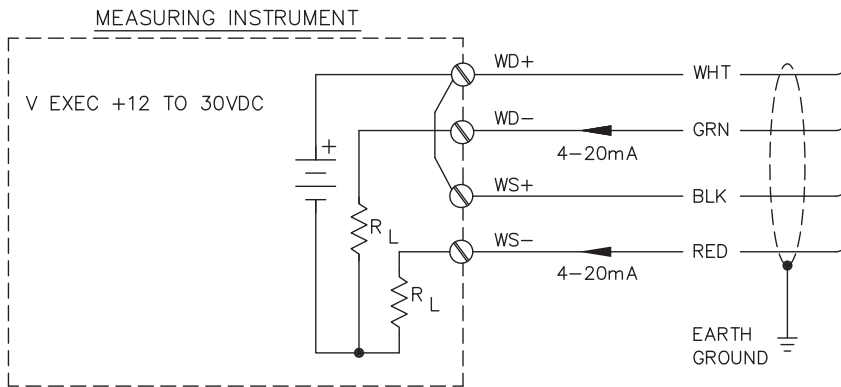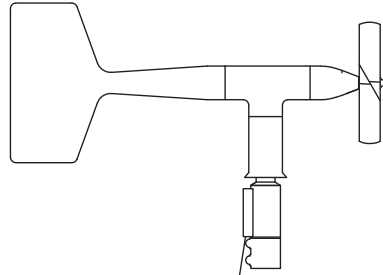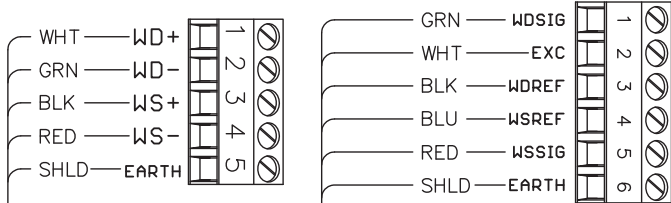Repairs should be attempted only by qualified service personnel.

CALIBRATION FORMULAS

WIND SPEED	vs	mA OUTPUT
m/s	=	(6.250 x mA) - 25
knots	=	(12.149 x mA) - 48.6
mph	=	(13.980 x mA) - 56
km/h	=	(22.500 x mA) - 90

WIND DIRECTION	vs	mA OUTPUT
DEGREES	=	(22.5 x mA) - 90

WARRANTY

CE COMPLIANCE

This product has been tested and shown to comply with European CE requirements for the EMC Directive. Please note that shielded cable must be used.

Declaration of Conformity

R. M. Young Company
2801 Aero Park Drive
Traverse City, MI 49686 USA

Model 05638C Wind Line Driver conforms to the provisions of Council Directive 2004/108/EC (December 15, 2004) on Electromagnetic Compatibility

MODEL 05638C
WIND LINE DRIVER

MODEL 05108
WIND MONITOR—HD

05648C REPLACEMENT CB

WHT ——— WD+ 1
GRN ——— WD− 2
BLK ——— WS+ 3
RED ——— WS− 4
SHLD ——— EARTH 5

GRN ——— WDSIG 1
WHT ——— EXC 2
BLK ——— WDREF 3
BLU ——— WSREF 4
RED ——— WSSIG 5
SHLD ——— EARTH 6

MEASURING INSTRUMENT

V EXEC +12 TO 30VDC

WD+ ——— WHT
WD− ——— GRN   4−20mA
WS+ ——— BLK
WS− ——— RED   4−20mA

R_L
R_L

EARTH
GROUND

$$\text{MAX LOAD RESISTOR } (R_L) \text{ VALUE} = \frac{V_{EXC} - 12}{0.02} = R_L$$

V SUPPLY (MIN) $= 0.02 \times R_L + 12$ (R_L IS WIRE RESISTANCE)