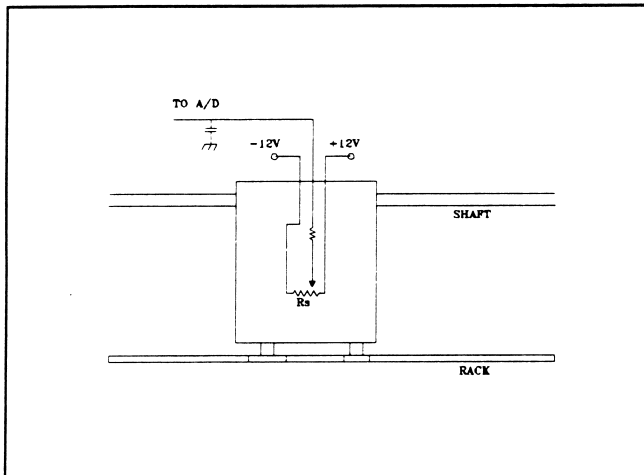


SYSTEM PARAMETERS

5.2.3 INVERTED PENDULUM

PARAMETER	SYMBOL	VALUE	UNITS
PENDULUM LENGTH	$L_p = 2 l_p$	0.61	m
PENDULUM MASS	m_p	0.210	Kg
ANGLE SENSOR RESISTANCE	R_s	10	$K\Omega$
BIAS RESISTORS	R_b	0	Ω
BIAS VOLTAGE	V_b	+/- 12	Volts
SENSITIVITY	K_s	0.068	V/deg
RANGE		+/- 26	Deg

The equivalent circuit that is achieved using the Quick Connect Module (QCM) is shown below in figure WI-9.



WI-9 Wiring the angle sensor on the inverted pendulum cart

CAUTION

To zero the angle measurement you should hold the pendulum vertical (with the motor turned off) and hit the letter 'z' from the main menu of the controller. This takes the present measurement as zero. Do this before you start the controller.

Always start the controller with the pendulum held vertical!