

ORBIT PEDESTAL AL-4018-1BSB CONTROL SIGNALS: J2

30 AUG 04, REV 25 MAR 05

UNIT: PEDESTAL UNIT DESIGN. : J2 MNEMONIC: CONTROL CONNECTOR: D38999/24WG41PN				PIN TYPE: Crimped SPARE PINS: 3 MATING CON. : D38999/26WG41SN SIGNAL TYPES: Analog, Open Collector, Synchro Phase			
PIN	Var Name	FUNCTION	RCP8 Connection	DIR.	TYPE	LEVEL	REMARK
A		Elevation synchro S1	J12-3	OUT	Synchro Phase	90V AC 50/60 Hz	
B		Elevation synchro S2	J12-4	OUT	Synchro Phase	90V AC 50/60 Hz	
C		Elevation synchro S3	J12-5	OUT	Synchro Phase	90V AC 50/60 Hz	
D		Elevation Synchro v reference (+)	J12-1, 90VAC Hot	IN	Reference +	90V AC 50/60 Hz	
E		Elevation Synchro v reference (-)	J12-2, 90VAC Neutral	IN	Reference -	90V AC 50/60 Hz	
F		Azimuth synchro S1	J12-9	OUT	Synchro Phase	90V AC 50/60 Hz	
G		Azimuth synchro S2	J12-10	OUT	Synchro Phase	90V AC 50/60 Hz	
H		Azimuth synchro S3	J12-11	OUT	Synchro Phase	90V AC 50/60 Hz	
J		Azimuth Synchro v reference (+)	J12-7, 90VAC Hot	IN	Reference +	90V AC 50/60 Hz	
K		Azimuth Synchro v reference (-)	J12-8, 90VAC Neutral	IN	Reference -	90V AC 50/60 Hz	
N		Elevation tachometer (+)	J9-9	OUT	Analog - Operational AMP Output	±5.6 V DC ¹⁾	
P		Elevation tachometer (-)	J9-22	OUT	GND	0	
R	S1	Elevation Drive Over -Temperature	J9-1	OUT	Output Of Electronic Circuit Fig-1	0V OR 15VDC ⁵⁾	RCP8 pull up resistor
S		Elevation Drive Over -Temperature RTN	J9-11	OUT	GND	0	
T	C1	Elevation Enable (+)	J6-2	IN	Input Of Electronic Circuit Fig-2	0V OR 15VDC ⁶⁾	CP K1NO
U		Elevation Enable (-)	J6-1	IN	GND	0	CP K1CT
V		Elevation Command (+)	J9-23	IN	Analog Differential	±10V DC ²⁾	
W		Elevation Command (-)	J9-24	IN			
X	sUpperEL	Elevation Limit Up	J9-3	OUT	Open Collector with internal pull-up of 100kΩ Fig-3	0V OR 15VDC ⁴⁾	RCP8 pull up resistor
Y	sLowerEL	Elevation Limit Down	J9-4	OUT	Open Collector with internal pull-up of 100kΩ Fig-3	0V OR 15VDC ⁴⁾	
Z		Elevation Limit Return	J9-13	OUT	GND	0	
a		15V DC Controller	No Connection	OUT	15V DC	15V DC up to 15mAMP	
b		15V DC Controller RTN		OUT	GND	0	
c		Azimuth Tachometer (+)	J9-8	OUT	Analog - Operational AMP Output	±5.6 V DC ¹⁾	
d		Azimuth Tachometer (-)	J9-21	OUT	GND	0	
e	C2	Azimuth Enable (+)	J6-5	IN	Input Of Electronic Circuit Fig-2	0V OR 15VDC ⁶⁾	CP K2NO
f		Azimuth Enable (-)	J6-4	IN	GND	0	CP K2CT
g		Azimuth Command (+)	J9-10	IN	Analog Differential	±10V DC ²⁾	
h		Azimuth Command (-)	J9-25	IN			
i	S4	Azimuth Drive Over -Temperature	J9-2	OUT	Output Of Electronic Circuit Fig-1	0V OR 15VDC ⁵⁾	RCP8 pull up resistor
j		Azimuth Drive Over -Temperature RTN	J9-12	OUT	GND	0	
k	S5	Azimuth Stow Lock	J9-14	OUT	Open Collector with internal pull-up Of 100kΩ Fig-3	0V OR 15VDC ⁷⁾	RCP8 pull up resistor
m		Azimuth Stow Lock Return	J9-13	OUT	GND	0	

PIN	Var Name	FUNCTION	RCP8 Connection	DIR.	TYPE	LEVEL	REMARK
<u>n</u>		15V DC Controller	No Connection	OUT	15V DC	15V DC up to 15mAMP	
<u>p</u>		15V DC Controller RTN	No Connection	OUT	GND	0	
<u>q</u>		No Connection	No Connection				
<u>r</u>		Shield Signal Ground	No Connection		SGND	0	
<u>t</u>		Outer shield	No Connection		CGND	0	

Wave Guide Switch Wiring

Termination 1	Termination 2	RCP8 Variable Name	Function
J3-A	External K1-5		Switched + for Pos 1 to WG switch
J3-B	WG Switch PS-		Return voltage from WG switch
J3-C	External K2-5		Switched + for Pos 2 to WG Switch
J3-D	RCP8 J3-1	S15	Indicator Pos 2 from WG Switch RCP8 pull up resistor
J3-E	RCP8 J3-25		Ground Indicator common
J3-F	RCP8 J3-2	S14	Indicator Pos 1 from WG Switch RCP8 pull up resistor
External K1-7	WG Switch PS+		Voltage + for WG switch Pos 1
External K2-7	WG Switch PS+		Voltage + for WG switch Pos 2
External K1-A	RCP8 J6-14	C68	Coil Drive 2 for WG switch Pos 2 relay
External K1-B	RCP8 J6-19		Coil Drive 2 Rtn for WG switch Pos 2 relay
External K2-A	RCP8 J6-15	C67	Coil Drive 1 for WG switch Pos 1 relay
External K2-B	RCP8 J6-20		Coil Drive 1 Rtn for WG switch Pos 1 relay

Miscellaneous Wiring

Termination 1	Termination 2	RCP8 Variable Name	Function
Arc Detect Fault +	RCP8-J7-1	S16	TTL input to RCP8
RF Power Fault +	RCP8-J7-2	S17	TTL input to RCP8
Arc Detect Fault GND	RCP8-J7-24		TTL input to RCP8
RF Power Fault GND	RCP8-J7-25		TTL input to RCP8
Dehydrator Fault+	RCP8 J9-15	S18	External Contact Closure to Ground with RCP8 pull up
Dehydrator Fault GND	RCP8 J9-24		
28 VDC PS VD +	RCP8-J8-4		28 VDC WG Switch PS analog voltage plus
28 VDC PS VD -	RCP8-J8-17		28 VDC WG Switch PS analog voltage minus
12 VDC PS VD +	RCP8-J8-5		12 VDC Misc PS analog voltage plus
12 VDC PS VD -	RCP8-J8-18		12 VDC Misc PS analog voltage minus

Transmitter Wiring

Termination 1	Termination 2	RCP8 Variable Name	Function
DB37-15	RCP8-J3-5	S9	Peak Over Current Status (+24 = OK, GND = Fault) RCP8 no pull resistor
DB37-14	RCP8-J3-6	S10	Avg Over Current Status (+24 = OK, GND = Fault) RCP8 no pull resistor
DB37-13	RCP8-J3-7	~sStandby	Ready Status (+24 = not ready, GND = Ready) RCP8 no pull resistor
DB37-12	RCP8-J3-8	~sRadiate	Radiate Status (+24 = not radiate, GND = Radiate) RCP8 no pull resistor
DB37-2	RCP8-J3-3	sTransmitLocal	Local/Remote Status from transmitter RCP8 pull up resistor
External K3-A	RCP8-J6-16	C66	Coil Drive 3 for Reset relay
External K3-B	RCP8-J6-21		Coil Drive 3 Rtn for Reset relay
External K3-7	DB37-4		Reset
External K3-5	DB37-24		Reset Rtn
External K4-A	RCP8-J6-17	cTransmitPwr	Coil Drive 4 for Power On relay
External K4-B	RCP8-J6-22		Coil Drive 4 Rtn for Power On relay
External K4-7	DB37-9		Power On
External K4-5	DB37-8		Power On Rtn
DB37-1	RCP8-J6-7	cRadiate	Radiate RCP8 CP K3CT
DB37-5	RCP8-J6-8		Radiate Rtn RCP8 CP K3NO
DB37-20	RCP8-J11-3	cPWidth0	PW1 Select RCP8 IO62 K2NO
DB37-21	RCP8-J11-2		PW Select Rtn RCP8 IO62 K2CT
DB37-25	RCP8-J11-4		PW3 Select RCP8 IO62 K2NC

RX Plate Wiring

Termination 1	Termination 2	RCP8 Variable Name	Function
DB25A-1	RCP8-J1-1	C3	Noise source enable (TTL)
DB25A-2	RCP8-J1-2	C64	Coax Switch Command Noise Source (TTL)
DB25A-3	RCP8-J1-3	C65	Coax Switch Command Antenna (TTL)
DB25A-5	RCP8-J3-14	S7	Coax Switch Indicate Noise Source (RCP8 pull up resistor)
DB25A-6	RCP8-J3-15	S8	Coax Switch Indicate Antenna (RCP8 pull up resistor)
DB25A-24	RCP8-J1-24		Ground
DB25A-25	RCP8-J1-25		Ground
DB25B-1	RCP8-J8-1		24 VDC PS analog voltage plus
DB25B-2	RCP8-J8-2		5 VDC PS analog voltage plus
DB25B-3	RCP8-J8-3		15 VDC PS analog voltage plus
DB25B-14	RCP8-J8-14		24 VDC PS analog voltage minus
DB25B-15	RCP8-J8-15		5 VDC PS analog voltage minus
DB25B-16	RCP8-J8-16		15 VDC PS analog voltage minus