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	<b>Dressler User Port (based on C3): Pin Descriptions</b>	Rev. date 30-Oct-06	Rev. A 04

**Products: Power Generators with C3 Technology  
( made beginning of September 2002 )  
Subject: Analog User Port Pin Descriptions**

**Analog Interface: The Dressler type of User Port**

The Analog Interface consists of a 15-pin, D-type Cannon connector (male) that connects the Dressler RF Power Generator with an external remote control unit. The 15-pin connector is wired as follows :

Pin Number	Function	In/Out	Level	Description																				
1	Operating Mode A	Input	5V or $V_{Interface}$																					
2	Operating Mode B	Input	5V or $V_{Interface}$	<p>Connecting Pin 1 and Pin 2 to a high or low level allows to set the operating mode as :</p> <table border="1"> <thead> <tr> <th>Level A</th> <th>Level B</th> <th>Control</th> <th></th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>Low</td> <td>Local</td> <td>no remote control function</td> </tr> <tr> <td>Low</td> <td>High</td> <td>Remote</td> <td>RF Forward Power Mode</td> </tr> <tr> <td>High</td> <td>Low</td> <td>Remote</td> <td>DC Bias Mode</td> </tr> <tr> <td>High</td> <td>High</td> <td>Remote</td> <td>Real Power Mode</td> </tr> </tbody> </table>	Level A	Level B	Control		Low	Low	Local	no remote control function	Low	High	Remote	RF Forward Power Mode	High	Low	Remote	DC Bias Mode	High	High	Remote	Real Power Mode
Level A	Level B	Control																						
Low	Low	Local	no remote control function																					
Low	High	Remote	RF Forward Power Mode																					
High	Low	Remote	DC Bias Mode																					
High	High	Remote	Real Power Mode																					
3	Ready status	Output	5V or $V_{Interface}$	Indicates, that the generator is ready for operation.																				
4	Error	Output	5V or $V_{Interface}$	Error message that indicates any error like overload due to temperature, mismatch or an open interlock loop.																				
5	maximum XF power level accessed	Output	5V or $V_{Interface}$	<p>This error message indicates, that more XF power is demanded than available by the XF generator. This may happen in operating mode :</p> <p>DC Bias control For a wanted DC Bias voltage, the XF power necessary will be higher than the generator is able to deliver. Or the XF power has reached the programmed limit.</p> <p>RF Real power mode For a wanted Real power, the forward power necessary will be higher than the generator is able to deliver</p>																				
6	RF on	Output	5V or $V_{Interface}$	RF Power On signal, occurs when more than 1% of the nominal power is present.																				

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Pin Number	Function	In/Out	Level	Description
7	Interface voltage $V_{\text{Interface}}$	Input	5 V to 24 VDC	Will be no voltage applied to this pin , <b>5 V</b> is the standard level for outputs and inputs. Is any other output and input level desired, this voltage has to be applied to Pin 7 and will be used as supply voltage for the digital outputs at Pin 3, 4, 5 and 6. The voltage range is 5 - 24 V DC and the required current is up to 300 mA depending on the load at the outputs.
8	Ground			Reference pin ( GND )
9	Blanking / Pulse mode	Input	5V TTL level	Pulse signal input. A TTL square wave input that allows RF blanking. Use this input if the internal pulsing capabilities do not meet your requirements. Alternatively, you can use this input to switch between continous wave operation and internal pulsing. This alternat function can be enabled by changing the unit setting.
10	RF on	Input	5V or $V_{\text{Interface}}$	Allows to switch the RF power on
11	DC self bias setting	Input	0 - 10 V linear	Select the DC bias voltage desired by a control voltage of 0 - 10 V DC in linear mode. 5 V = 50% of the maximum DC bias ( 4KV ), 10 V = 100% etc...
12	RF power setting	Input	0 - 10 V linear	Select the RF power desired by a control voltage of 0 - 10 V DC in linear mode. 5 V = 50% of the nominal generator power, 10 V = 100% etc...
13	Test voltage for forward power	Output	0 - 10 V linear	Readout of the RF forward power in linear mode. 5 V = 50% of the nominal generator power, 10 V = 100% etc...
14	Test voltage for reflected power	Output	0 - 10 V linear	Readout of the RF reflected power in linear mode. 5 V = 50% of the nominal generator power, 10 V = 100% etc...
15	Test voltage for DC self bias	Output	0 - 10 V linear	Readout of the DC self bias voltage in linear mode. 5 V = 50% of the nominal DC bias ( 4 KV ), 10 V = 100% etc...

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