

PROVEN

## Quality, Dependability and Reliability

AvtechTyee's Waste & Water System Controller (WWSC) has the ability to control all aspects of both the waste system and the water system of the aircraft. The waste system may be either a self-contained recirculating toilet assembly or a vacuum system, selected via a program pin. The water system is divided into two functions; the potable water system and the gray water system.



### WASTE & WATER SYSTEM CONTROLLER (WWSC)

AvtechTyee's WWSC is installed on Embraer's ERJ series of aircraft. The unit monitors and controls the potable water, gray water and vacuum or recirculating waste system based upon the status of fill and drain valves, tanks and external switches and control.

- The WWSC receives aircraft information and transmits fault status messages to the CMC via an ARINC 429 data bus
- Twelve discrete pin programming inputs are provided to determine aircraft configuration such as tank size, toilet system type, lavatory quantity and position etc.
- The WWSC incorporates BITE to detect functional failures which include power supply, ROM, RAM, processor and ARINC 429 errors
- Software development per RTCA DO-178B, Level D
- Provides indications and status information to the flight attendants status panel
- Provides control to external fill and drain valves for potable water system

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## SPECIFICATIONS

Requirement	DO-160D Section	Category	Remarks
Temperature and Altitude	4	A3Y	
In-Flight Loss of Cooling	4.5.4	-	Not Applicable
Temperature Variation	5	B	
Humidity	6	A	
Operational Shocks and Crash Safety	7	A	
Vibration	8	S	Curve C
Explosion Proofness	9	H	
Waterproofness	10	W	
Fluids Susceptibility	11	X	
Sand and Dust	12	X	
Fungus Resistance	13	F	
Salt Spray	14	X	
Magnetic Effect	15	A	
Power Input	16	A	Category A. Except test of 16.5.4.4 shall be performed at 50 VDC. Min operating voltage shall be 17 VDC
Voltage Spike	17	A	
Audio Frequency Conducted Susceptibility, Power Input	18	A	
Induced signal Susceptibility	19	Z	
R. F. Susceptibility, Radiated & Conducted	20	V	
Emission of RF Energy	21	L	
Lightning Induced Transient Susceptibility	22	XXC1	
Lightning Direct Effects	23	X	
Icing	24	X	
Electrostatic Discharge	25	A	

