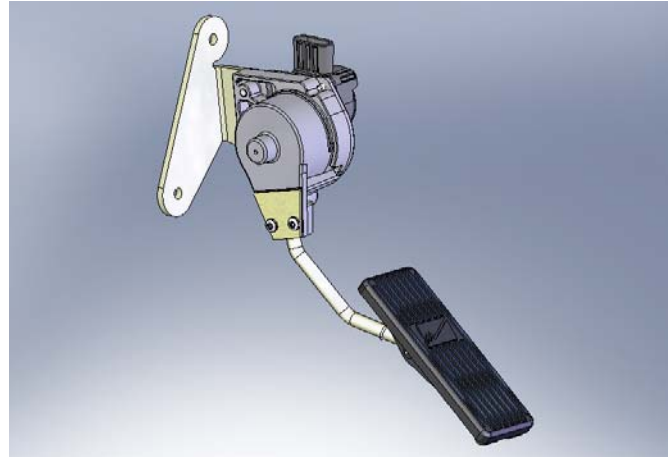


- Compliant with SEE SECTION 8.0

### 1.0 Features:

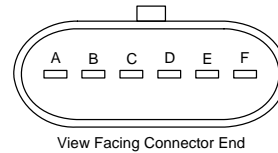
- 19.5° Angular Rotation
- Single Ratiometric APS output
- Isolated APS/IVS functions
- Form C IVS output
- IP66 Sealed Sensor
- +5V Operation
- 40°C to + 85°C Operation
- Interfaces with Metripak 150-series Connector #12066317 with terminal pins #12103881-L
- Protected against Electrical Misconnection (indefinite duration)
- Steel Rod Lever Arm
- Steel Mounting Bracket



### 2.0 Applications:

- The Celect ESPA is a firewall-mounted Electronic Suspended Pedal Assembly.
- The application is for Diesel Trucks and Buses.
- Commonly applied to the following engines:
  - Cummins
  - Detroit Diesel III, IV, & V
  - International
  - Mack
  - MB NAFTA


### Connector Pin Configuration



Pin	Function	Pin	Function
A	APSOUT	D	IVS <sub>2</sub> NO
B	APSGND	E	IVS <sub>1</sub> NC
C	APSVCC	F	IVSCOM

### 3.0 Description:

The Celect ESPA is designed to provide an electrical signal to the engine control module in response to the operator's demand for engine power. A sensor provides a linear voltage output proportional to the pedal angular displacement. It also provides an independent switched output that closes when the sensor is in the IDLE POSITION and a second output that closes ON THROTTLE ACTIVE.

		PROCEDURE NAME:	DEPT:		030	
		<b>Williams Customer Specification Form</b>				
DOCUMENT NUMBER:	<b>WQF-030-021</b>	REVISION LEVEL:	A	DATE EFFECTIVE:	11/13/07	DAF# 00396
QEMS Representative	Mary Knight	Process Owner	Michael Cooper	Department Manager	Scott Thiel	

## Absolute Maximum Electrical/Mechanical Ratings

### APS Circuit:

Supply Voltage (VCC1, VCC2)	+/-5.5V
Output Current (APS1, APS2 output)	+/-10 mA
Short Circuit Duration – to GND or VCC	Indefinite

### IVS Circuit:

Supply Voltage	+/-5.5V
Output Current (IVS output)	+/-10 mA

Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Static Load Limit	489 N at the treadle pivot pin, centered horizontally on the treadle and normal to Pedal Rotation


*Operation of this device beyond absolute maximum ratings may result in permanent damage.*

## Environmental Validation

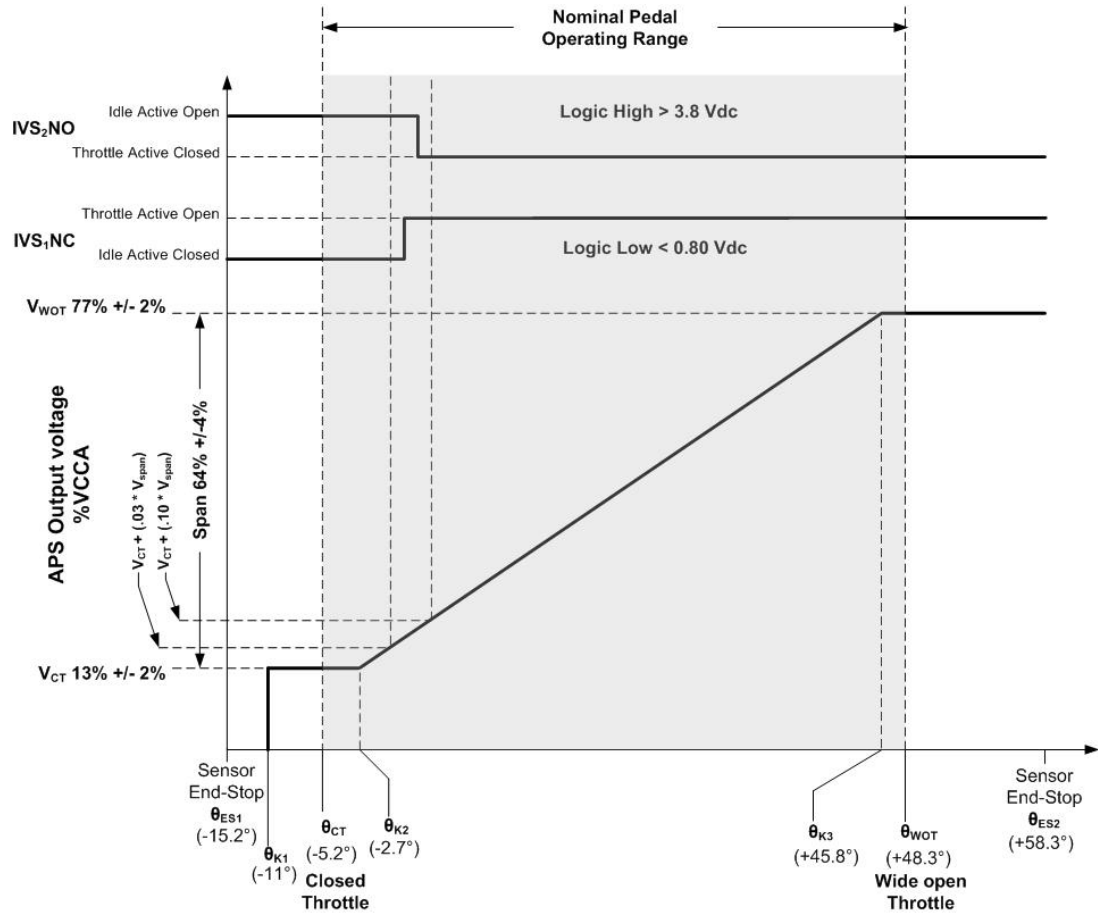
Thermal Cycle:	<b>Refer to Williams Spec WDS-010</b>
Thermal Stress:	
Thermal Shock:	
Humidity:	
Vibration:	
Salt Fog:	
Dust Exposure:	
Chemical Immersion:	
Pressure Wash:	
Mechanical Shock:	


## Mechanical Validation

Full Stroke Cycles:	5x10 <sup>6</sup>
Cycle Rate:	1 Hz

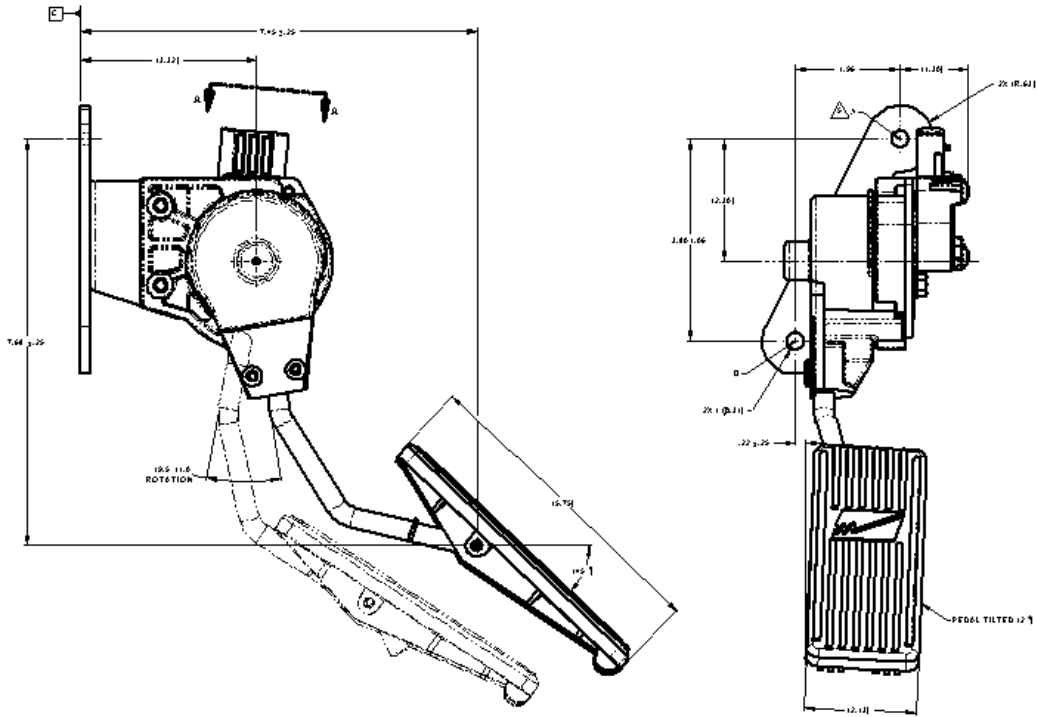
 <b>WILLIAMS CONTROLS</b>		PROCEDURE NAME:	DEPT:		030	
		<b>Williams Customer Specification Form</b>				
DOCUMENT NUMBER:	<b>WQF-030-021</b>	REVISION LEVEL:	A	DATE EFFECTIVE:	11/13/07	DAF# 00396
QEMS Representative	Mary Knight	Process Owner	Michael Cooper	Department Manager	Scott Thiel	


## Typical Output Characteristics



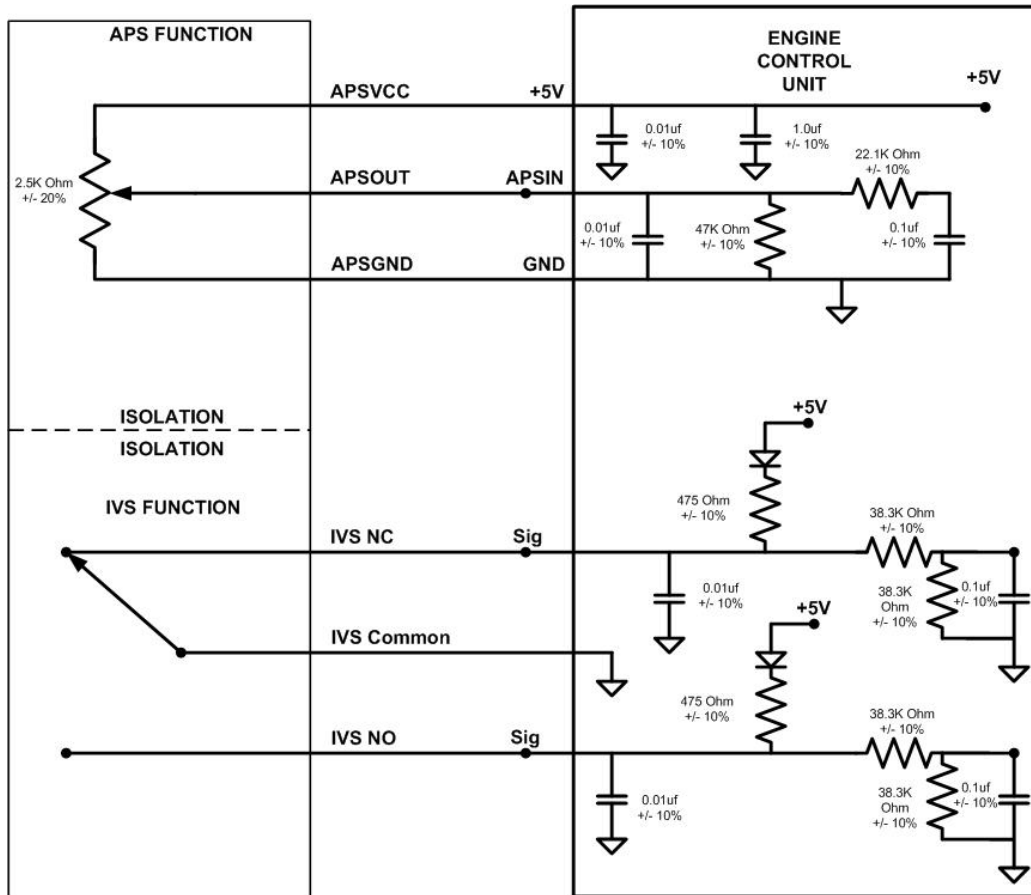
 <b>WILLIAMS CONTROLS</b>	PROCEDURE NAME:	DEPT:	030				
	<b>Williams Customer Specification Form</b>						
DOCUMENT NUMBER:	<b>WQF-030-021</b>	REVISION LEVEL:	A	DATE EFFECTIVE:	11/13/07	DAF#	00396
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Mechanical Dimensions and Characteristics (for reference only)



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### Applications Information:



### Referenced Documents:


- Williams Controls DWG #131507
- Williams Controls Specification # WDS-010

### Revision History

Rev	Date	ECN#	Checked	Approved	Changes/Comments
A	01/18/08	41818	WJ	D. Holt	Initial Release

Williams Controls  
14100 S.W. 72<sup>nd</sup> Avenue  
Portland, OR. 97224

Phone (503) 684-8600  
Fax (503) 624-3812  
Email [info@wmco.com](mailto:info@wmco.com)

 <b>WILLIAMS CONTROLS</b>	PROCEDURE NAME:	DEPT:	030				
	<b>Williams Customer Specification Form</b>						
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