Williams Controls

WCS-131507

Williams Customer Specification

Original Release: 01/25/08
Original Project: 328

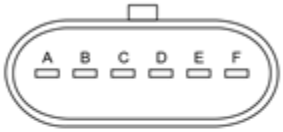
FEATURES

- 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

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



View Facing Connector End

Pin	Function	Pin	Function
A	APSOUT	D	IVS_2NO
B	APSGND	E	IVS_1NC
C	APSVCC	F	IVSCOM

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.

ABSOLUTE MAXIMUM ELECTRICAL/MECHANICAL RATINGS

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

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

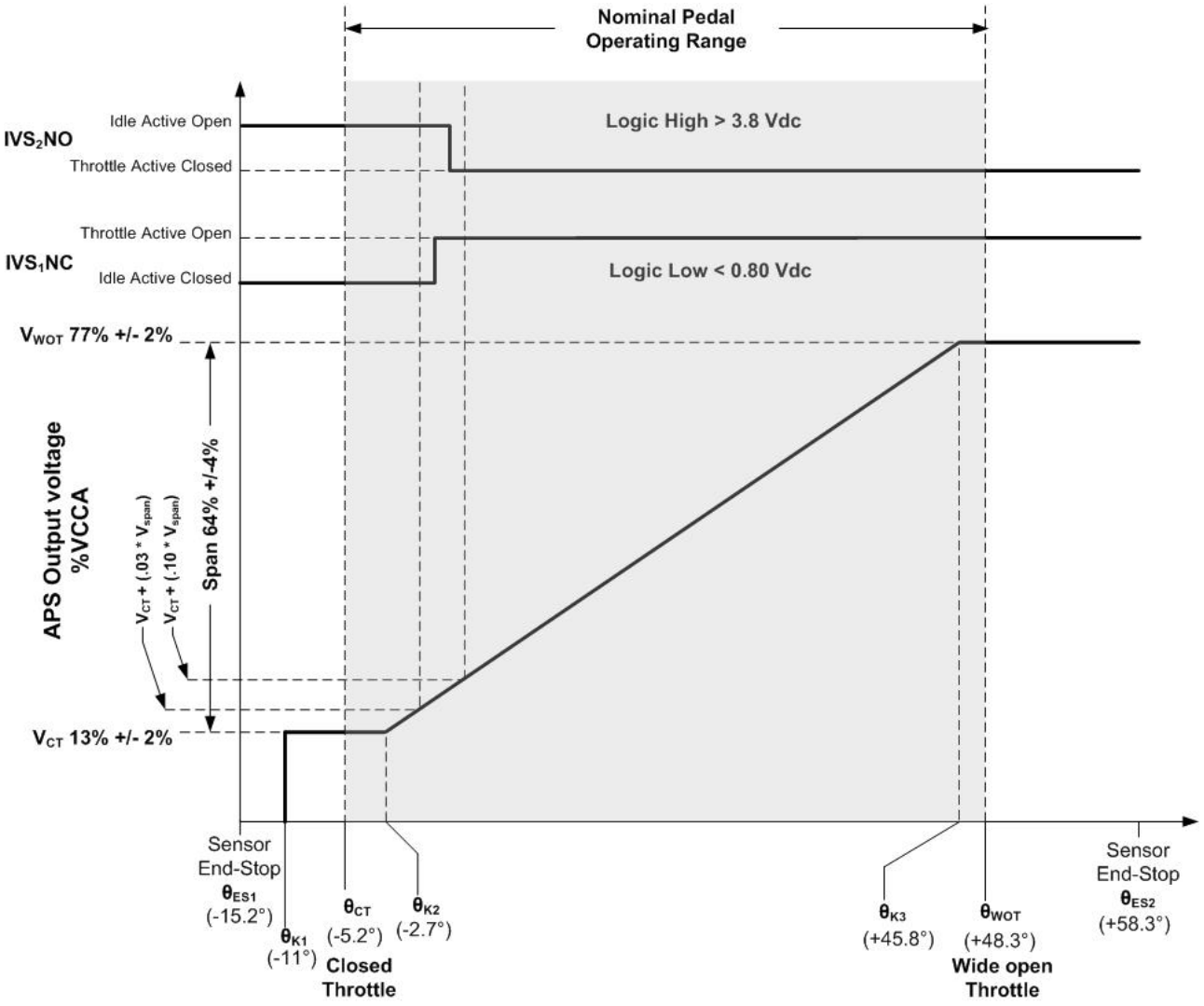
ENVIRONMENTAL VALIDATION

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

MECHANICAL VALIDATION

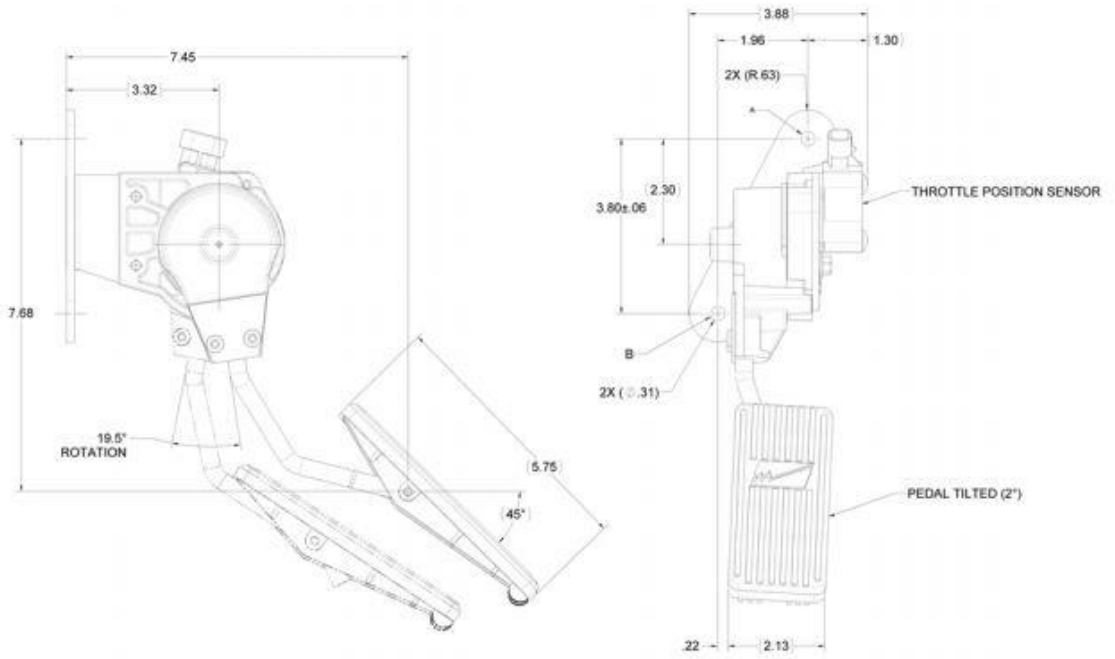
Full Stroke Cycles:	$5x10_6$
Cycle Rate:	1 Hz

TYPICAL OUTPUT CHARACTERISTICS

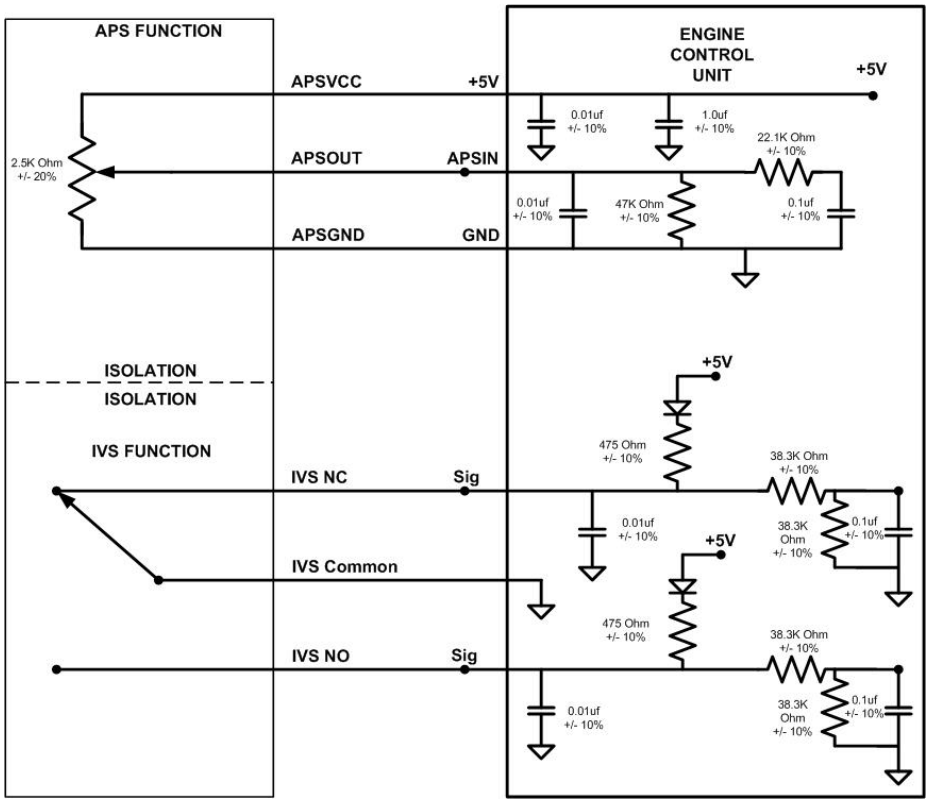


MECHANICAL DIMENSIONS AND CHARACTERISTICS (FOR REFENCE ONLY)

Measurements in mm



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