



# Williams Controls

## WCS-133284

### Williams Customer Specification

Original Release: 08/07/07  
Original Project: rev 9

#### FEATURES

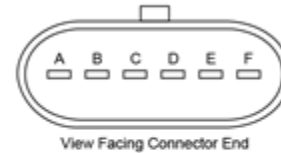
- Ratiometric APS output
- Form C IVS output
- IP66 sealed
- +5V Operation
- Isolated APS/IVS functions
- -40°C to + 85°C Operation
- Integral preload spring
- Metripak 150-series compatible connector



#### APPLICATIONS

- Truck Throttle position sensor
- Commonly applied to the following engines:
  - Cummins
  - Detroit Diesel III, IV, & V
  - International
  - Mack
  - MB NAFTA

#### Connector Pin Configuration



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

#### DESCRIPTION

The WCS-133284 is a contact rotary position sensor that provides a linear output voltage proportional to absolute shaft rotation in either direction from a reference angle. It also provides an independent switched output that closes when the sensor is in the IDLE POSITION and a second output closes ON THROTTLE ACTIVE

<b>CURTISS - WRIGHT</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		



**ABSOLUTE MAXIMUM ELECTRICAL/MECHANICAL RATINGS**

<b>APS Circuit</b>	
Supply Voltage (VCC1, VCC2)	+/-5.5V
Output Current (APS1, APS2 output)	10mA
Short Circuit Duration – to GND or VCC	Indefinite
<b>IVS Circuit</b>	
Supply Voltage	+/-5.5V
Output Current (IVS output)	0-10mA
<b>Whole Sensor</b>	
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

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

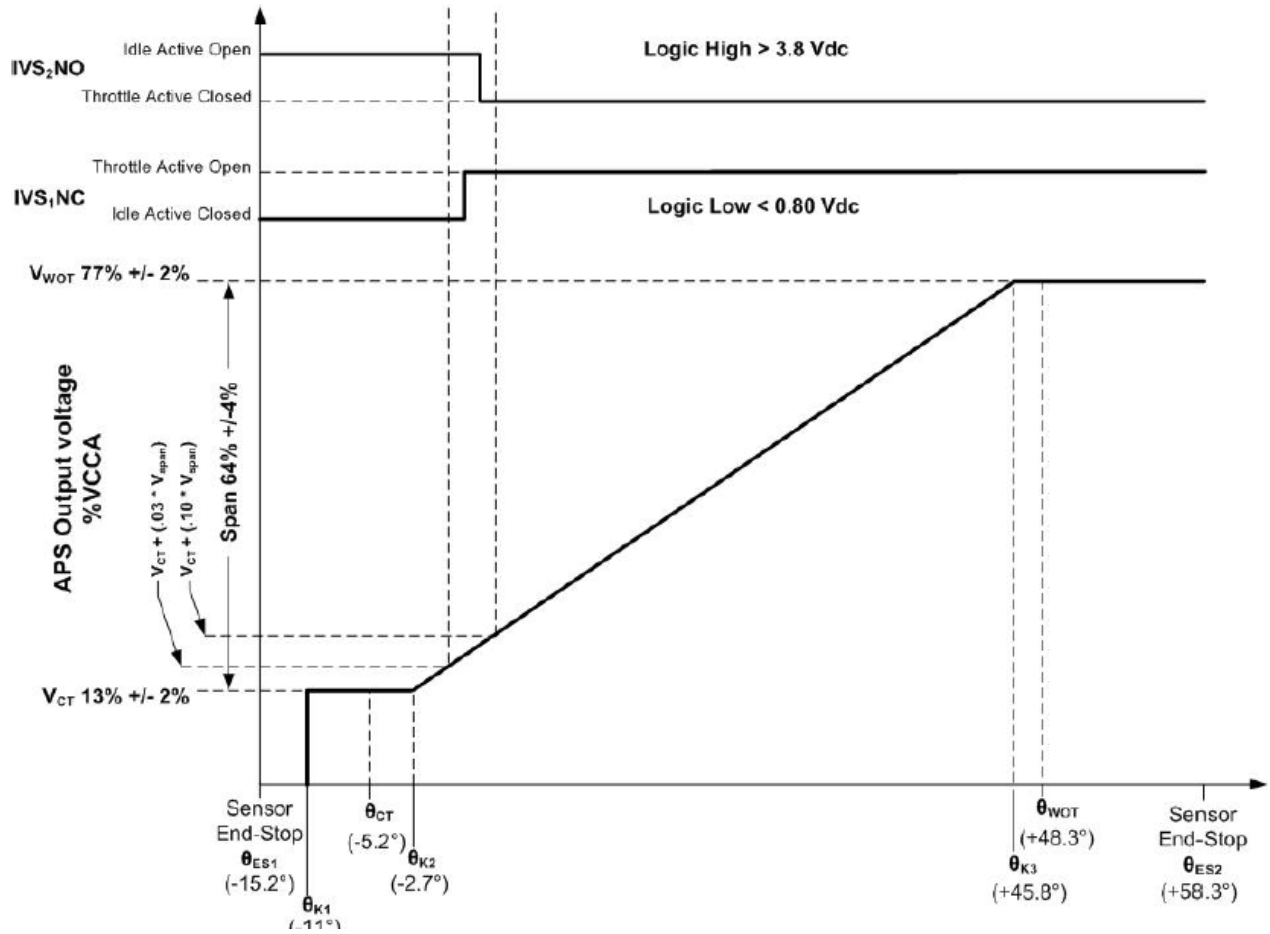
**ENVIRONMENTAL VALIDATION**

Salt Spray	Tested per Williams Controls Specification WDS-010B
Humidity	
Chemical Resistance	
Vibration and Shock	
Thermal Shock	

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**TYPICAL OUTPUT CHARACTERISTICS**

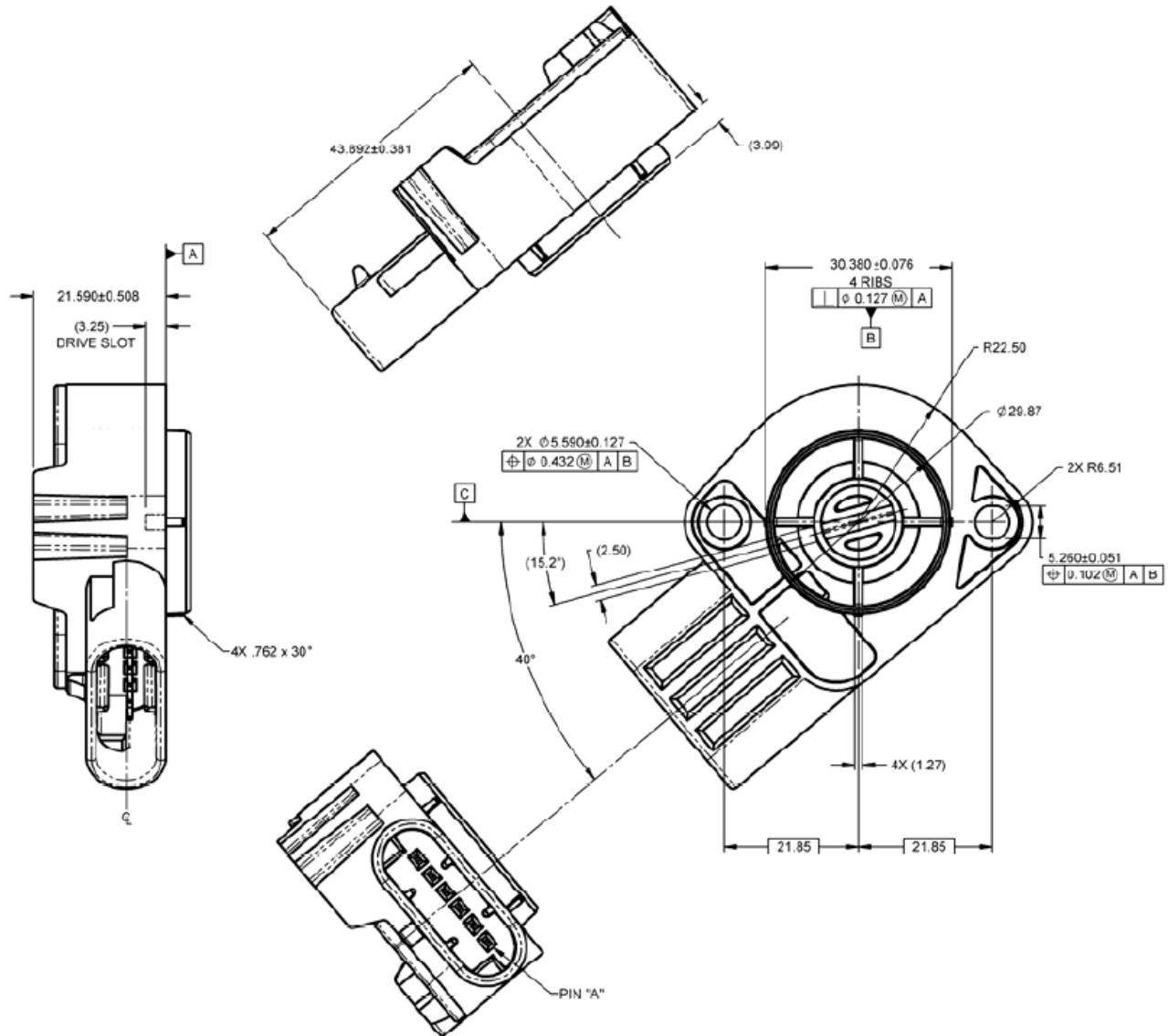


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**MECHANICAL DIMENSIONS AND CHARACTERISTICS (FOR REFERENCE ONLY)**

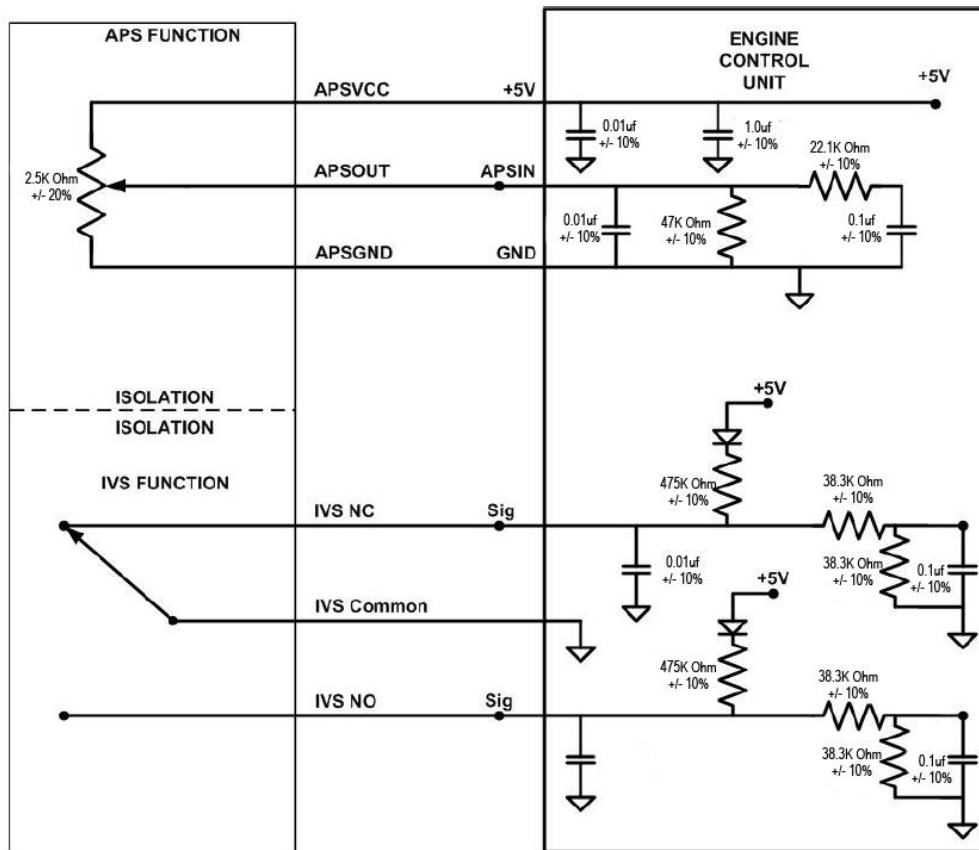
Measurements in mm



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**APPLICATIONS INFORMATION:**



**REVISION HISTORY**

Rev	Date	ECN#	Checked	Approved	Changes/Comments
-	3/21/06		JSM		Advance Information Draft
0	4/07/06		JSM		Minor updates for release
1	4/20/06		CWA		Removed (REF dwg 133284)
2	4/25/06		JSM		Updated Load Circuit
3	5/12/06		JSM		Corrected typo in APS pin out
4	6/29/06		JSM		Corrected Load Circuit
5	8/3/06		JSM		Defined Values
6	8/17/06		JSM		Added full CM850 APS load circuit. Ref table drawing 133913 for dims
7	02/28/07		JSM		Updated IVS terms
8	03/05/07		JSM		Added 0.5V for power supply tol
9	08/07/07		PAH		Changed Max current from ±10 to 0-10mA

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