

Sensors & Controls Automotive Business Unit

Low Cost Automotive Air Conditioning Pressure Switches

TI's pressure switches provide low cost, on/off controls for many automotive systems. The snap action disc reacts to changing pressure by reversing its curvature and activating electrical switch contacts.

Key Features Include:

- · Designed for underhood environment
- · Low weight
- · Custom packaging for specific application needs
- Automotive temperature range of -30 to 125°C
- Normally open and normally closed contact logic
- Dual function capability
- Line mount or compressor pocket mount capability
- Industry proven since 1984



Typical A/C Pressure Switch Applications

DFPS: Dual Function pressure switch combines High

Pressure cut-out with Fan function or High Pressure cut-out with High side low pressure function.

HPCO: Disables A/C compressor when system

pressure becomes excessively high.

• Fan: Energizes fan to supplement condensor cooling.

Compressor cycling: Controls A/C compressor cycling

to optimize vehicle cooling.

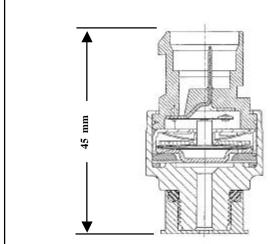
• Loss of charge: Disable A/C compressor when

system pressure becomes too low.

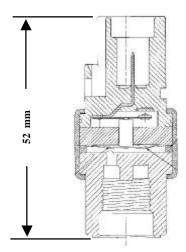
High side low pressure: Disables compressor when

system pressure become too low

Dimensions (typical examples, other styles available)



Dual Function Pressure Switch: HPCO / Fan HPCO / HSLP



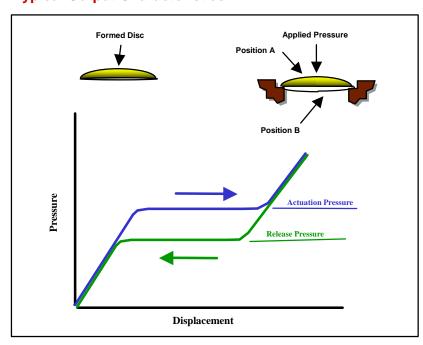
Compressor Cycling Switch / Loss of Charge



Technical Specifications

Electrical		Durability	
Supply voltage Supply current	5 VDC - 24 VDC 5.0 mA resistive 3.5 A inductive	Cycle Life Dual function pressure switch High pressure cut-out	50,000 Cycles min. 50,000 Cycles min.
Response time	<10mS	Loss of charge	50,000 Cycles min.
Environmental		Fan Switch Compressor cycling switch	300,000 Cycles min. 300,000 Cycles min.
Operating temperature Pressure ranges ¹	-30°c - 125°c 10 - 500 psig	Proof pressure ¹	500 psig
1	typical	Burst pressure ¹	1250 psig
*	Performance data is available upon request.		

Typical Output Characteristics



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