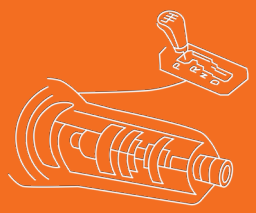

TRANSMISSION EFFICIENCY

Optimize the equation comfort / pleasure / consumption

POSITION SENSOR

TECHNOLOGY

HALL

Application description

This sensor is used to measure a linear or rotary displacement in various applications.
For manual transmissions it is used for the clutch position on the master cylinder or the clutch release bearing.
It can also be used at gearshift lever to detect all gears position.
For dual clutch gearboxes, it measures the position of the forks for ever more responsive, accurate and reliable gear changes.
For automatic transmissions, the position sensor provides information to the ECU about the gear lever (TRS).
For the electrically actuated transmissions, it detects the position of the gear selector.
This multi-purpose sensor can be used as position sensor for the instrumented intake manifolds or automatic transmissions actuator or cam position sensor in the variable lift cam engines.
With a properly designed magnetic circuit it can meet all the position detection needs.

Technical characteristics:

- Absolute Rotary and Linear Position Sensor
- Programmable output transfer linearization functionality that provides high output accuracy and linearity
- Range selection and offset programming by EFI or customer
- Selectable output mode: Analog or PWM
- Open/short on-board diagnostics and voltage protections
- Temperature-stable, mechanical stress immune
- 12 bit resolution
- Wide ambient operating temperature range: -40°C to 150°C
- Sensor tested for vibrations over 1000Hz (36 parts during 99 hours) during DV
- Standard package for EFI Automotive worldwide process.

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Electrical characteristics	Minimum	Typical	Maximum	Units
Technology		Hall type (3 wires)		
Supply voltage	4.5	5	5.5	V
Voltage		24V		V
Reverse voltage		-12V		V
Current supply		13.5	15	mA
Number of signals		1		
PWM frequency		1000		Hz
PWM accuracy		±50		Hz
Voltage value for LOW		0		V
Voltage value for HIGH		At supply voltage = 5V		V
PWM range	10		90	%
Resolution		12		bit
Power-on time		< 5.8		ms
Output load	1	10		KOhm
Clamping level	10		90	
Step response time		1		ms
Rise and fall time – 2kOhm pull up			40	µs

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