

GP ASG product specification

2024-04-08, Rev B



Product description

The GP ASG analogue 0-5V Quickshifter – Blipper is a Cordona proprietary product solution for up and down shift based on strain gauge technology.

Features

- Configurable push or pull direction for upshift.
- Self-calibration, strain gauge sensor can be replaced if broken.
- Wide V_{IN} Range 5-15 V
- High precision CNC machined stainless steel sensor.
- M6 'magical' threads i.e., left and right threads in both sensor ends.
- 32MHz processor, 10-Bits ADC
- Linear output based on function of force and speed when compression or tension. The 'EVO' version has a switch style non-linear output characteristic.
- Dual Output option available.
- Self-compensated for temperature and vibration impact
- Total weight 51g included sensor, electronic module & sensor cable.
- Sensor dimension (LxD) 45x14mm
- Electronic module (LxWxH) 43x25x11mm.
- IP68, electronic and sensor completely sealed.
- CE-approved

Recommended application

- Motorcycles and car ECUs with up and down shift function with an analogue 0-5V interface.

Options

- Linear or Evo 'switch style' analogue output to bike ECU: 0.5 - 2.5V - 4.5V
- Dual output versions available (BMW applications)
- Calibration ranges linear GP ASG 401SBK: 300N, 500N and 1000N.
 V_{out} have a linear relationship to and is a Function of input Force and Speed. I.e., the faster the rider shifts, less force is needed to reach a certain V_{OUT} value.
- Evo 300N version with switch style output characteristics.
The output characteristics is like an OEM 'switch style' shifter with a pre-loaded force (spring load) that needs to be reached before V_{out} is activated.
- Different connectors to ECU interface, cables and cable lengths are available.

Connection

- Wiring: Spec55 cable colors: Red – Vref, Blue – GND, White – Output signal

Electrical Characteristics

PARAMETERS	MIN	TYP	MAX	UNIT
V _{IN} supply voltage	5.0	12.0	15.0	V
V _{IN} tolerance	- 5%		+ 5%	%
V _{IN} ripple V _{P-P}			0.75	V
I _{IN} supply current	100			mA
Power consumption		35		mA
V _{OUT} nominal	0.5	2.5	4.5	V
V _{OUT} tolerance	-0.05		+0.05	V

Operating Information

PARAMETERS	MIN	TYP	MAX	UNIT
Operating temperature	-10		+125 ⁽¹⁾	°C
Temperature drift @ normal operation		0.04		%
Electronic module operating temperature			+85	°C
Sensor operating temperature			+125	°C
Voltage reset time ⁽²⁾			60	S

Note

(1) Max operating temperature applicable for sensor only

(2) Slow static forces applied on the sensor body might be detected as excessive temperature drift, and 60 seconds voltage reset procedure can be triggered.