Headlamp Swiveling Actuator

EGC Lin 2.2

JOHNSON ELECTRIC

Characteristics:

Main function :

The EGC "Sirius" actuator allows the rotation of a headlamp light unit in order to optimize the light distribution in the curves according to a signal coming from the steering wheel.

It has an integrated electronic driving unit communicating with the headlamp through Lin bus protocol. Its motor is a 2 phase bipolar stepper.

It has an integrated position sensor and a triple play compensation system.

Performance:

Performance (typical, other requirements can be passed)

■ Voltage range (V)	10 to 16
■ Speed range (°/s)	14 to 25
■ Nominal torque (Ncm)	>50 at 13V / 23°C / 729Hs/s
■ Minimal torque (Ncm)	>35 at 10V / -40°C / 729Hs/s
■ Maximal torque (Ncm)	<70 at 16V / 23°C / 729Hs/s
■ Angle range (°)	+/-20
■ Resolution (°/HS)	0.0354
■ Temperature range (°c)	-40 / +105
■ Duty cycle (%)	40
■ Protection	IP40
■ Angular play (°)	<0.65 under 8Ncm
■ Weight (g)	100

Electrical connexion and control

■ Motor type	2 phase bipolar stepper motor
■ Communication	Single Wire Lin bus (Lin 2.2)
■ Driver	Onsemi NCV70628
■ Connexion	JST XA7 pins (3 not used)
■ Solder	Leadfree
■ Reference run	Managed by internal sensor. No referencing on mechanical stop
■ EMC	Specific test plan per OEM specification

Design features (see drawing for details)

■ Fixation on headlamp	By screws : 5 locations possible, minimum 3 including 2 central.
■ Installation position	Reversible
■ Location	Internal to headlamp below optical unit
■ Dimensions (mm)	78x89x29 (see drawing)
■ Option	Direct driving (no Lin bus)