YAMAR Electronics Ltd

Preliminary Information

ISL40 - Independent DC-LIN Slave I/O Peripheral Device

Description

The ISL40 operates as an independent LIN slave in a network controlled by a SIG40 master device in a DC-LIN network. Any change on its Input pins is automatically sent over the battery powerline to the network master device. Any data received from a remote SIG40 Master device is reflected to its output pins.

The communication is performed over a single wire or a battery power line using LIN protocol. It provides the means for an economical network of multiple slave devices for applications as controlling motors, reading sensors etc., eliminating the need for a dedicate controller for slave modules.

The device is controlled by the Master with four types of messages; Read, Write, Sleep and Change Frequency. The device identifies a LIN message addressed to its ID. When a Write message is received, the data part of the message is directed to the corresponding 4 or 8 output pins. When a Read header is detected, the slave responds with a LIN2.0 message that contains information on all its 8 or 4 input pins. A sleep mode enables power saving. Wakeup messages awaken remote devices.

The device is based on an original multiplex signaling technology. The ISL40 contains a LIN message handler, a unique signaling modem and coder/decoder that overcomes the hostile communication environment over vehicle battery lines.

The ISL40 capability of communicating over battery-powered line is useful for a wide range of vehicular industrial, Avionic and other applications such as motors, doors, seats, mirrors, climate control, lights etc.

Applications

- **Motor control**
- **Sensor-actuator control**
- **Light control**
- **Appliance control**
- **Entertainment Control**
- **Security Monitoring**

Features

- **Noise robust.**
- **Eliminates data wire and transceiver.**
- **Selectable bit rate between 19.2 Kbps and 57.6 Kbps.**
- **Saves micro controllers in slave modules.**
- **Operates on up to 36V battery power lines.**
- **Two selectable carrier frequencies.**
- **Sleep Mode for low power consumption.**

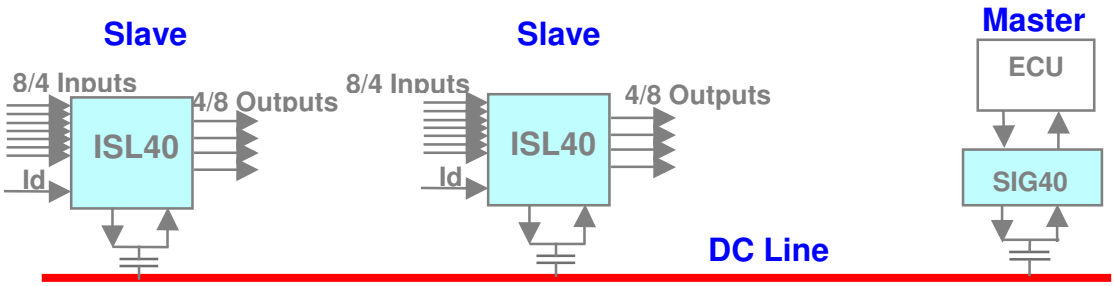

Figure 1 - Typical Network consisting of a SIG40 Master with ISL40 Slaves

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