

TLE8088

One Chip Engine Management Power Interface Solution for Smallest 1 Cylinder Engines

The TLE8088EM is an Engine Management System IC which includes the minimum features to support 1 cylinder combustion engines with focus on the state-of-the-art technology Electronic Fuel Injection (EFI).

The TLE8088EM contains a 5V power supply, a K-line transceiver and 2 power stages.

Basic protection and diagnosis features are included: Overtemperature, overcurrent protection, undervoltage reset and open-load in Off.

Applications

4 stroke small combustion engine for:

- Motorcycle, 2- and 3- wheelers and scooters
- Watercraft, marines and jet-ski
- Snow mobiles, lawn-tractors or -mowers
- Small gasoline power generating sets

Key Features

- 5V supply including watch dog and reset
- 1 low-side driver for fuel injector
- 1 low-side driver for multifunction indication lamp
- K-line transceiver

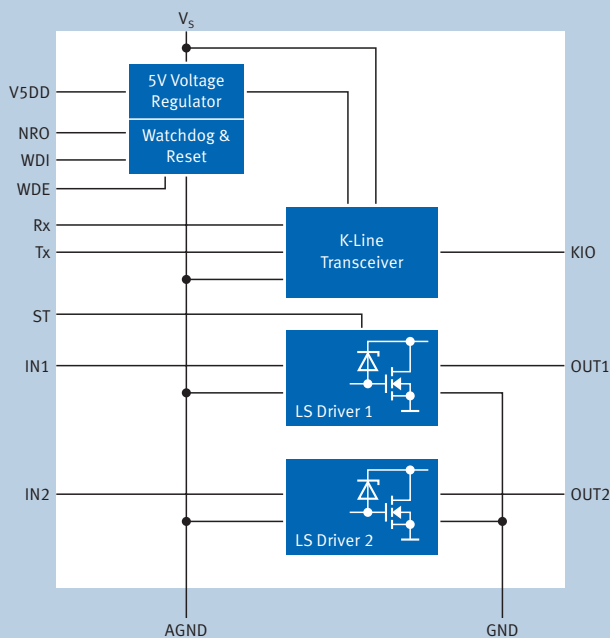
Key Benefits

- Basic 1 cylinder engine management system functionality in one chip
- Small 150 mil SSOP-24 package saves board space
- Qualified according automotive standard AEC-Q100



TLE8088

Block Diagram



TLE8088EM

The **5V voltage regulator** supplies up to 150mA current and features under-voltage reset, power-on reset and watchdog. It includes protection circuits against over-load, short circuit and over-temperature conditions. The low-side switch function and the K-line transceiver are independent of the reset and watchdog signals.

The **K-line transceiver** is a serial link bus interface. It provides bi-directional half-duplex communication interfacing using the special ISO K-line and meets the ISO norm 9141 specification. The K-line bus output is protected against bus shorts and over temperature conditions.

The **low-side channels** are optimized for the use in engine management systems.

The recommended loads are:

- 1 channel for injectors or similar loads
- 1 channel for lamps or LEDs

Product	Supply Voltage Funct. Range [V]	5V Supply I_{V5DD} (max.) [mA]	Injector/Valve I_{OUT} Max. < 2.6A (Nom. = 1.3A)	MIL I_{OUT} Max. < 3A (Nom. = 300mA)	Relay Driver Max. < 350mA (Nom. = 300mA)	VRS I/F Variable Reluctance Interface	K-Line acc. ISO 9141	SPI I/F Diagnosis/Control Interface
TLE8088	6 – 18	150	✓	✓	–	–	✓	–
TLE8080	6 – 18	250	2x ✓	✓	2x ✓	✓	✓	✓

MIL = Malfunction Indication Lamp

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