Mid-size Fuel Pump

Technical Spec

ECOTRONS LLC

Note: If you are not sure about any specific details, please contact us at info@ecotrons.com.

Product: **Mid-size Fuel Pump**

Part＃: **EFP-45R**

Comment: All data given in this document are nominal values and might be subject of change at all time

Index	Page	Revision	Date	Note
1	----	**First Edition**	12.10.2013	V1.3
2	----	**Second Edition**	12.16.2013	V1.3.1
3	----	**Third Edition**	4.11.2014	V1.3.2
4	----	**Fourth Edition**	7.11.2014	V1.3.3
5	----	**Fifth Edition**	2.18.2017	V1.3.4

Contents

General

Fuel pump is one of the all basic components in fuel injection system. It takes fuel from the tank, then boosts the fuel pressure and provides the fuel to flow into the fuel injector in fuel injection system. The fuel pump can provide the stable 43psi fuel pressure together with fuel pressure regulator.

1 Characteristic

1.1 Picture of Fuel pump

Mid-size Fuel Pump

1.2 Basic characteristic

Supply voltage…….....12V DC

Working current…….....<3.5A

Pressure…….…...300kPa

Flow……..…….45L/h

Working life…….…….>3000h

Weight…….460g

Installation Style…….…….External

Working temperature…….…….-40°C…80°C

Fuel:

……..….….Gasoline

…….....Gasoline with <=20% ethanol

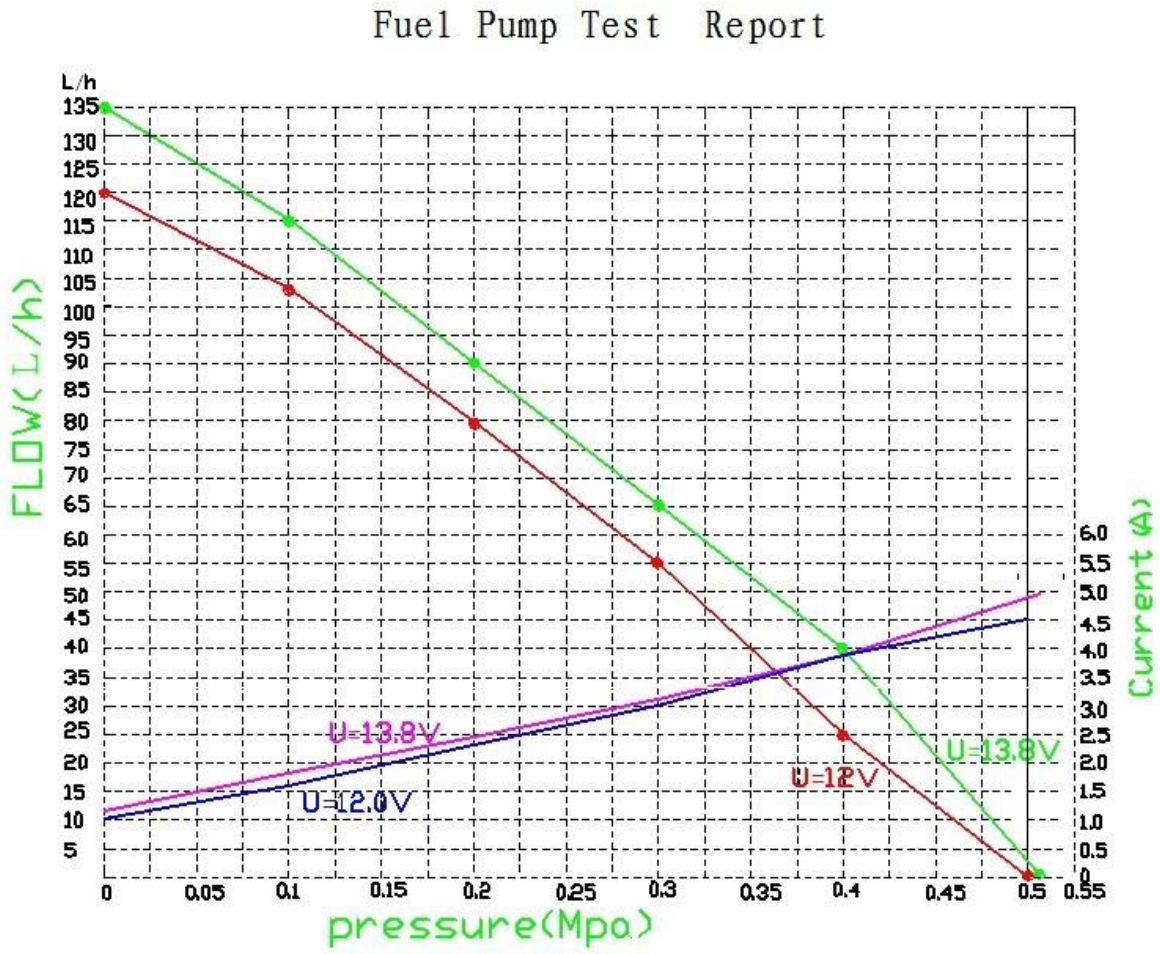
Storage:

Storage Temp Range …….…….-30°C …60°C

Humidity…….…<=60%

Storage period…….……..……<=2 years

1.3 Characteristic curve and table (Flow, Pressure, Current)



Voltage: 12.00V Provider: KESHEN KS50B

Pressure (Mpa)	0	0.1	0.2	0.3	0.4	0.5
Flow (L/h)	120	103	80	55	25	0
Current (A)	1.0	1.6	2.3	3.0	3.8	4.5

Voltage: 13.8V Provider: KESHEN KS50B

Pressure (Mpa)	0	0.1	0.2	0.3	0.4	0.52
Flow (L/h)	135	115	90	65	40	0
Current (A)	1.2	1.7	2.4	3.1	3.8	4.9

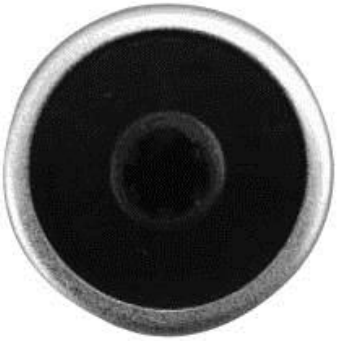
2 Applications and Installation instructions

2.1 Applications

The fuel regulator works with fuel pump to provide the enough and stable pressure fuel in fuel supply, so that fuel is injected to engine successfully. If there is no enough fuel, it will affect the performance of engine.

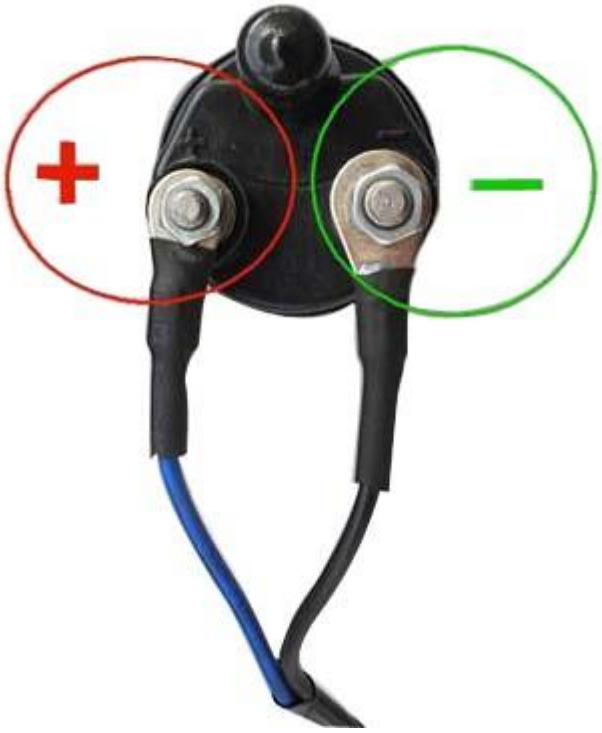
So, please install the fuel pump in accordance with SE-EFI installation Manual and pay an attention to maintain.

2.2 Mechanical Dimensions of fuel pump:



2.3 Installation instructions:

Connect the 12V power to fuel pump



Note: there is a connector from ECU harness, you just need connect it.

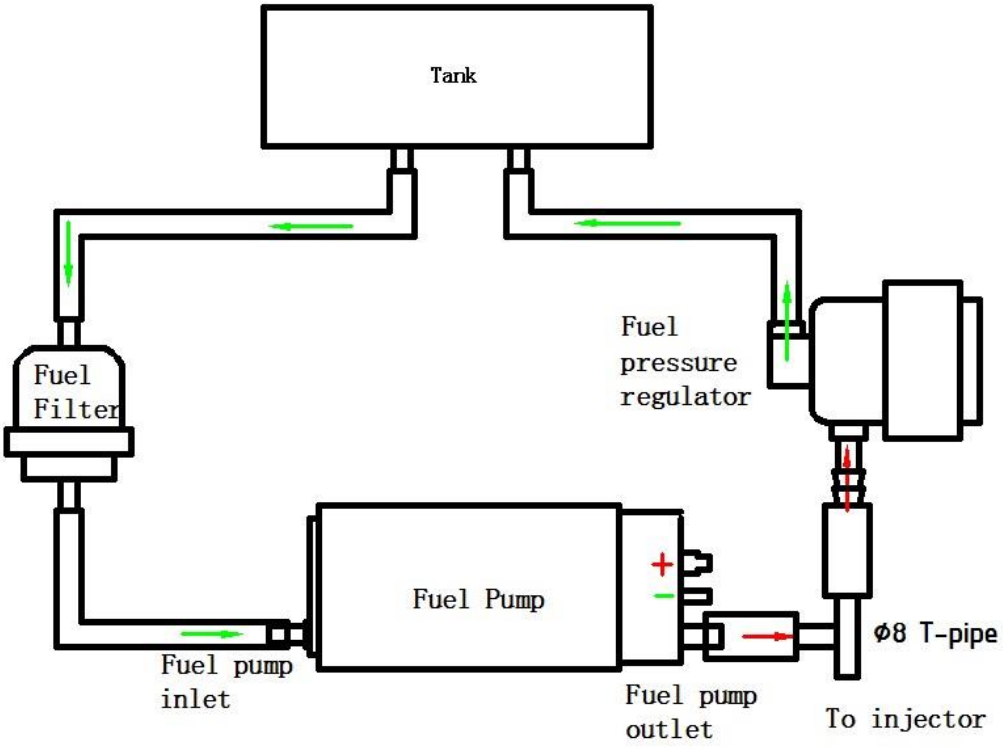
1. Please install the fuel filter between the fuel tank and fuel pump to avoid blocking the fuel pump.

2. The fuel pump must be installed at the below of the tank. Correct levels of different fuel supply components should be: the fuel pump and the fuel filter must be lower than the lowest point of the fuel tank.
3. Install the fuel hose with a correct connection; make sure there are no bubbles in the fuel line, secure all fuel lines with suppling clamps, make sure everything is no leak.
4. Install the fuel pump in the correct direction, if not, the fuel pump will not provide the enough 3Bar.
5. You should install the fuel pump in a “Safe Place”, no vibration and must be tight.
6. Don’t fall it, and if the fuel pump falls to ground, it may be broken, you need change a new one, don’t use the broken fuel pump.
7. Power on the fuel pump with a right connection, please don’t be short-circuited.

Attention:

1. The fuel is combustible, so when you re-install or check the fuel pump, please remove all source of ignition and don’t power on it.
2. When you uninstall the fuel pump, the fuel line has a high pressure, so please be careful. Please take care and prevent a firestorm.

Fuel supply system schematics:



3 Diagnoses and aftermarket

1. If the fuel pump doesn't work (run), please check the power supply system. Check whether the 12V battery voltage is enough, and **blue wire (12V+)** of fuel pump is connected to positive of battery, the **black wire (12V-)** of fuel pump is connected to the negative of battery.
2. If the power supply doesn't have a problem, please check whether the fuel pump is hot, if it is hot, maybe it is blocked by impurities, please change the fuel filter and a new fuel pump.
3. If the fuel pump works well, but the fuel pressure is not enough 3Bar, please check whether the fuel pressure regulator is good firstly.
4. If the fuel pressure regulator is broken, please change a good new one. And if the fuel pressure regulator is good, please measure fuel pressure, the current, and the voltage. If the fuel pressure is lower than 280kPa and the current is lower than 1.3A, it means the fuel pump is broken, please change a new one.

4 Appendixes: Mechanical CAD Drawing