



MEDCO

Modelling Engineering & Development Company Limited

Emergency Pump Stop System

EPSS



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Emergency Pump Stop System *EPSS*

Overview

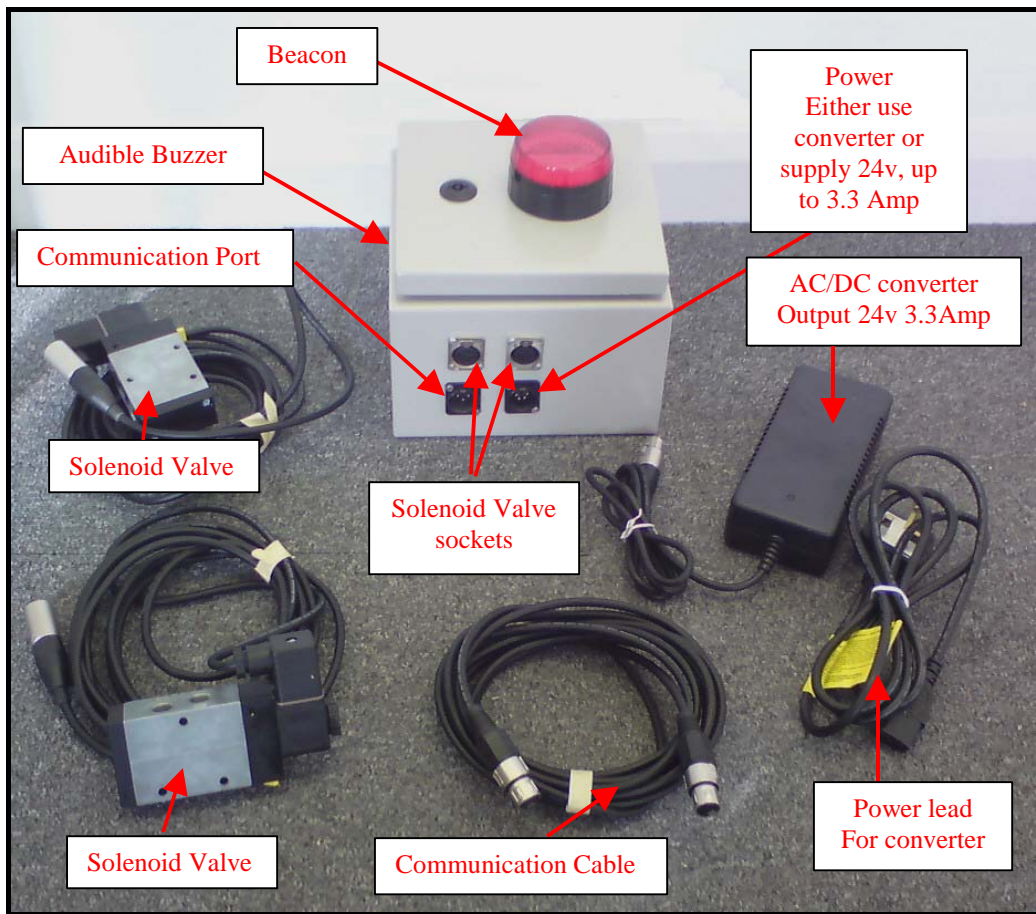
EPSS is a combined alarm and control system used to alert pump operators and to control the pump throttle in case of an imminent danger, thus preventing accidents.

The system consists of a control module with two alarm outputs. Each alarm output is connected to a solenoid valve, which in turn is connected to the pump engine throttle air-supply. When an alarm is triggered, the solenoid valve will close the air-supply to the throttle, stopping the engine. Simultaneously, an audible buzzer and a visual beacon will be activated to alert the operator.

The EPSS is compatible with MEDCO's REAM HMI data acquisition system. EPSS can also be used with other data acquisition systems that are capable of sending commands to the control module via Modbus RTU protocol.

The REAM HMI allows the user to enter operational limits on pump pressures.

The picture below shows the components of the system.

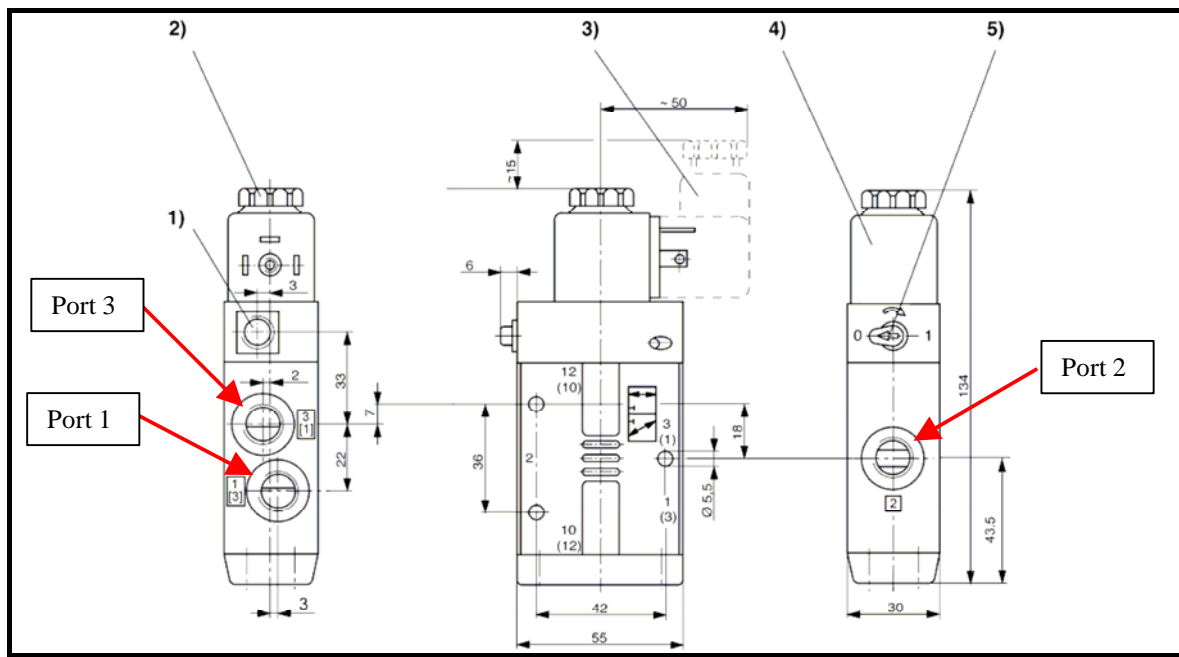


Solenoid Valve

Bosch Rexroth model number 5772070220.

The solenoid valve has the following specifications:

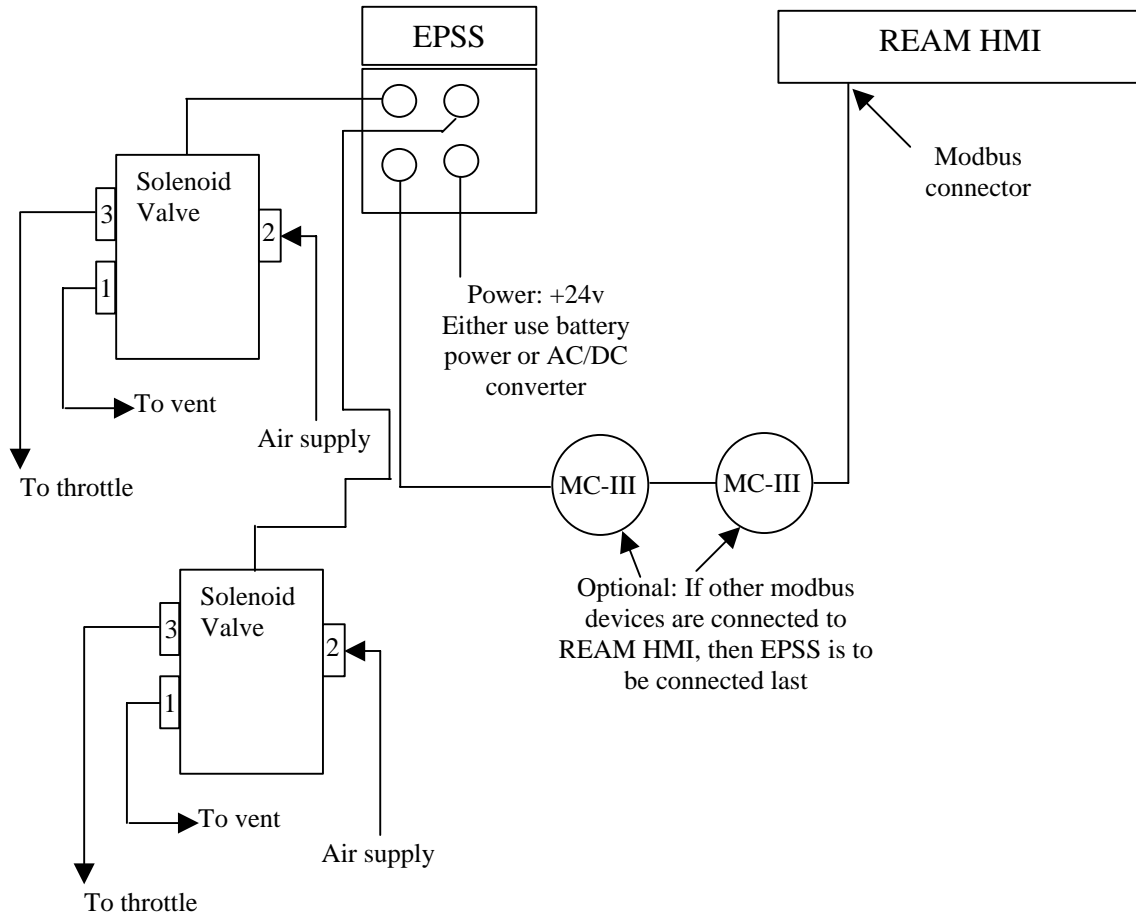
- Power supply: 24 vdc
- Power consumption: up to 6 w
- Operating pressure: up to 420 bar (6100 psi)
- Operating temperature: -25 to 50°C
- Maximum flow: 1400 ltr/min (370 gpm)
- Process connection G 1/4"



The solenoid valve is Normally Open (NO) when port 2 is connected to port 3. For normal operation of the pump, the air-supply will be connected to port 2 and taken from port 3. When the solenoid valve receives an electrical signal (activated), the air supply will go to port 1. Port 1 should be connected to a vent away from personnel.

Further details of the solenoid valve may be obtained from the valve manual in the document “p31064.pdf”.

Connection Diagram



Wiring Diagram

