EMS121 is designed to measure load on a polished rod of sucker rod pump (SRP unit), based on dual strain gauge bridge, that changes its resistance upon the application of the load. Output voltage level depends on the load. Load cell has heavy duty explosive protection design for application in oil industry and is corrosion resistant.

EMS121 has a durable stainless steel casing adapted for the harsh environments and explosive atmospheres.

EMS121 has a classic shape and can be installed in place of obsolete sensors of other manufacturers.

EMS121 load cell is easy to install and maintain.

Fig. 1 EMS121

Features:

- Precise measurements
- Thermal stability
- Explosive protection
- Standardized design
- Wide operating temperature range
- Easy to install

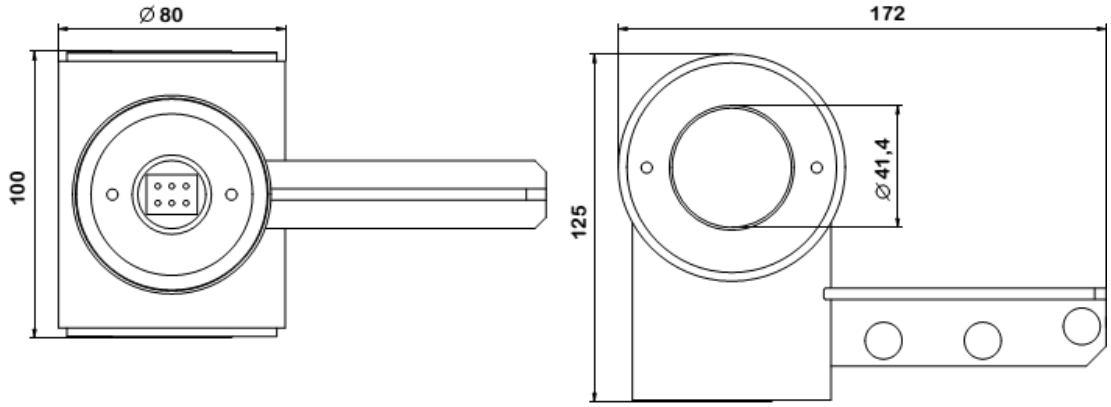


Fig. 2 EMS121 Dimensions in mm

Basic specifications

Operating temperature	-40°C to +60°C
Humidity	0-100%
Load range	0-133,36kN (30 000 lbs) 0-222,4kN (50 000 lbs)
Safe overload	130% F.S.
Protection	IP65
Explosive protection	1Ex ia mb IIC T4 Gb X
Load measurement accuracy	0,5%
Operating voltage	10-15V
Input impedance	725Ω ± 20Ω
Output impedance	700Ω ± 10Ω
Insulation impedance	> 5000 MΩ
Zero balance	2 % F.S.
Rated output	2 mV/V ± 2%
Non-linearity, %F.S.	0.25
Hysteresis, %F.S.	0.25
Temperature effect	0.02 %F.S./°C on zero 0.01 %F.S./°C on value
Weight	2,60 kg

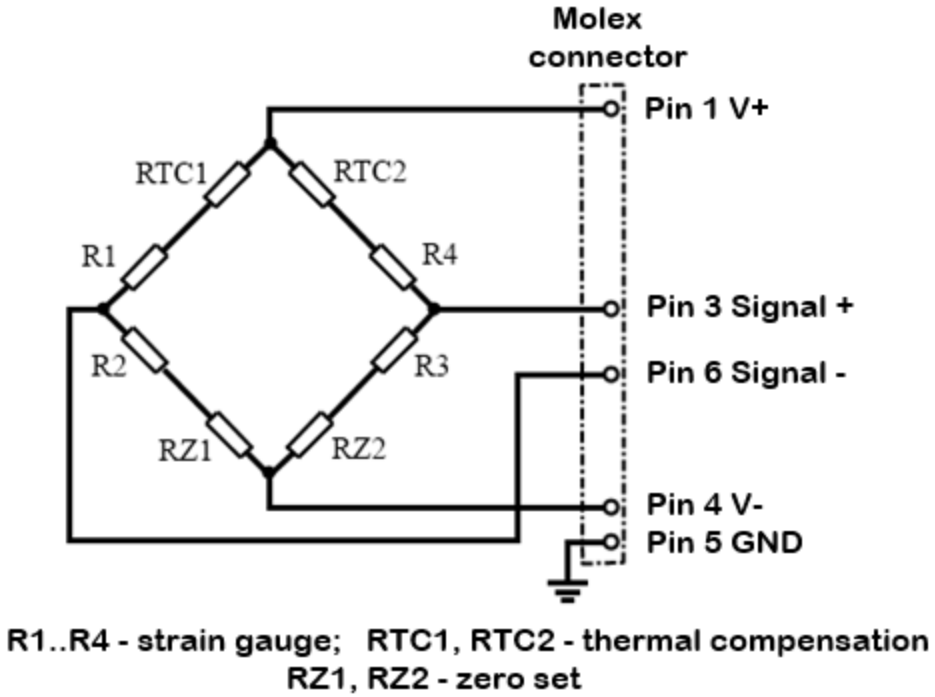


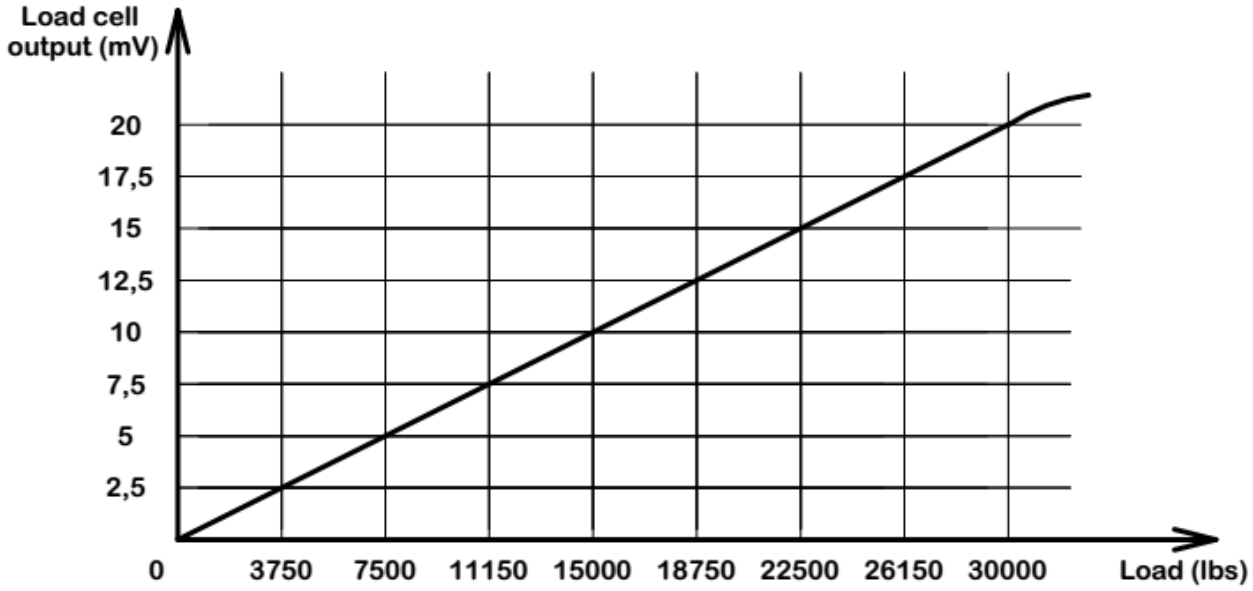
Fig. 3 EMS 121 electrical circuit

EMS121 power and signal connector – Molex .093" Pin 03-09-2061

Mating connector - Molex .093" Socket 03-09-1064

EMS121 connector pinout

Pin	Net
1	Vcc+
3	Strain gauge +
4	Vcc-
5	Shield
6	Strain gauge -



Load/signal relation (Vcc = 10V)