

EMS121 Load Cell

EMS121 designed to measure load on a polished rod of sucker rod pump (SRP unit), based on dual strain gauge bridge, which 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.



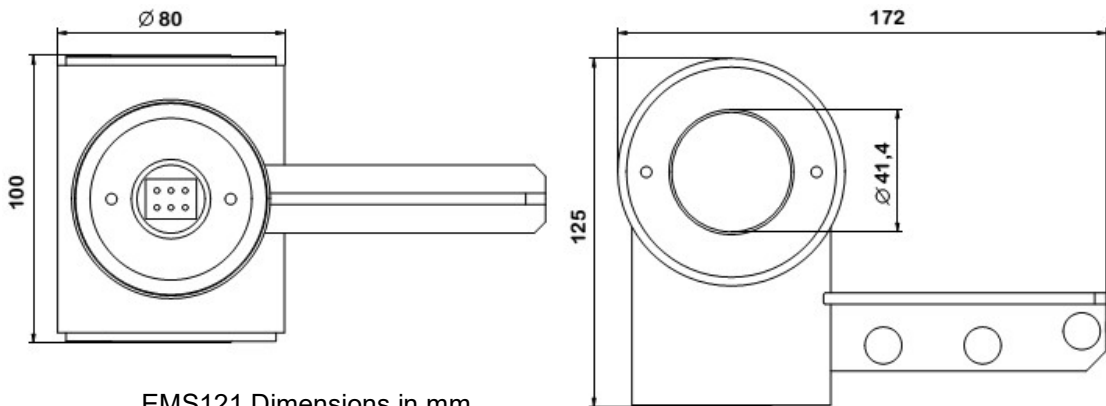
Features:

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

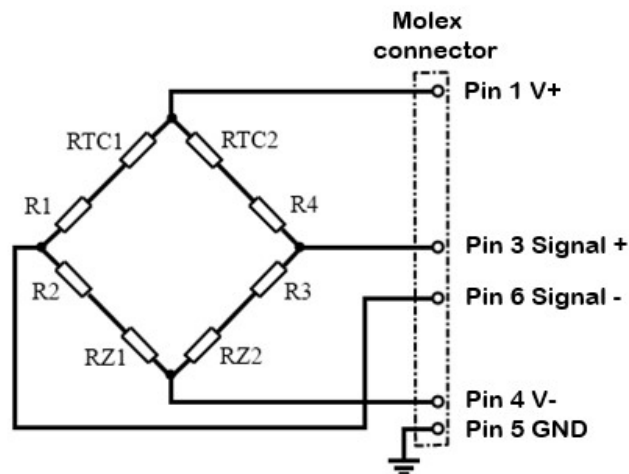
EMS121 has a durable stainless steel casing adapted for the harsh environments and explosive atmospheres

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

EMS121 load cell are easy to install and maintain.



EMS121 Dimensions in mm



R1..R4 - strain gauge; RTC1, RTC2 - thermal compensation
RZ1, RZ2 - zero set

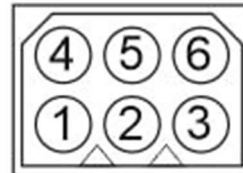
Basic specifications

Connector

Operating temperature	-55°C to +80°C
Humidity	0-100%
Load range	0-133,36kN (30 000 lbs) 0-222,4kN (50 000 lbs)
Safe overload	200% F.S.
Protection	IP68
Sealing	Sealed and filled by silicon compound
Explosive protection	1Ex ia mb IIC T4 Gb X
Load measurement accuracy	0,5%
operating voltage	10-15V
Input impedance	800Ω ± 50Ω
Output impedance	700Ω ± 35Ω
Insulation impedance	> 500 MΩ
Zero balance	± 3% % F.S.
Rated output	2 mV/V ± 0.5%
Non-linearity, %F.S.	0.05
Hysteresis, %F.S.	0.05
Temperature effect	0.027 %F.S./°C on zero 0.036 %F.S./°C on value
Weight	2,54 kg

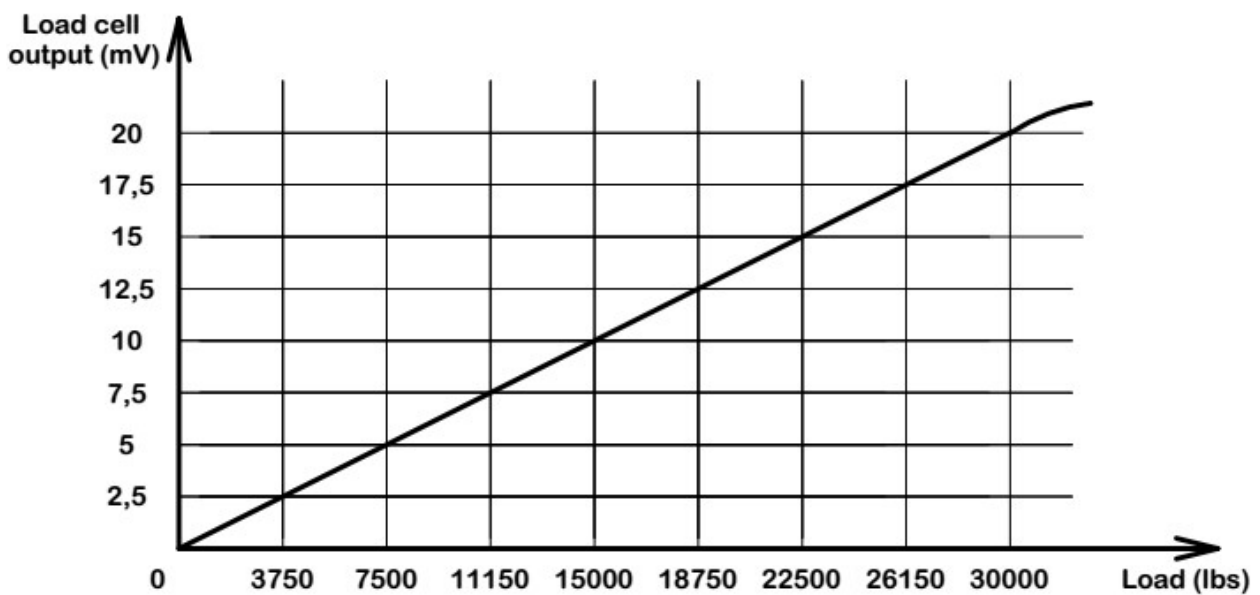
EMS121 power and signal connector –
Molex .093" Pin 03-09-2061

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)