

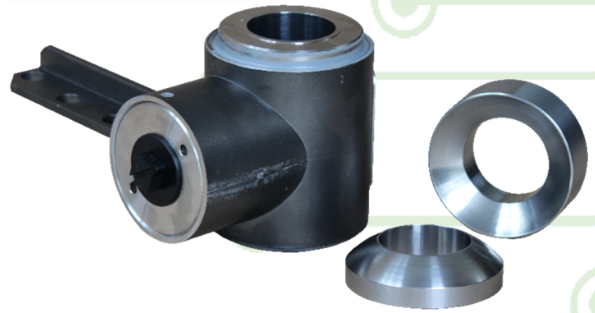
EMS-122 Load and position sensor

EMS-122 designed to measure load on a polished rod of sucker rod pump (SRP unit) and its acceleration, based on dual strain gauge bridge, which changes its resistance upon the application of the load and on accelerometer that measures polished rod acceleration to provide data to calculation of polished rod position. EMS-122 has heavy duty explosive protection design for application in oil industry and is corrosion resistant

EMS-122 has a durable stainless steel adapted for the harsh environments and explosive atmospheres

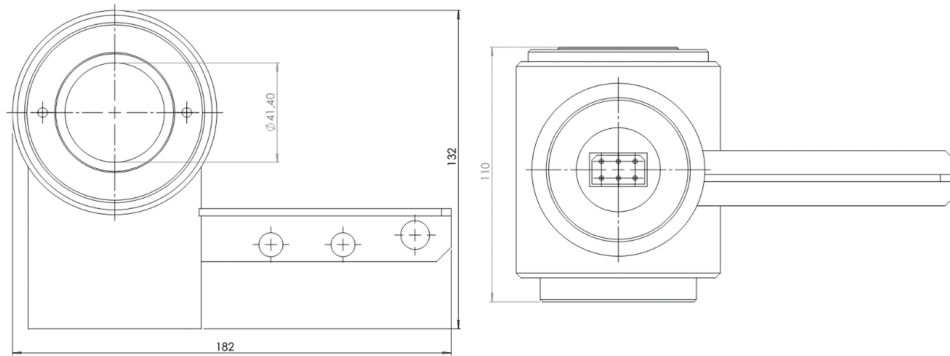
EMS-122 has a classic shape and can be installed in place of obsolete sensors of other manufacturers.

Monolith design makes EMS-122 easy to install and maintain.



Features:

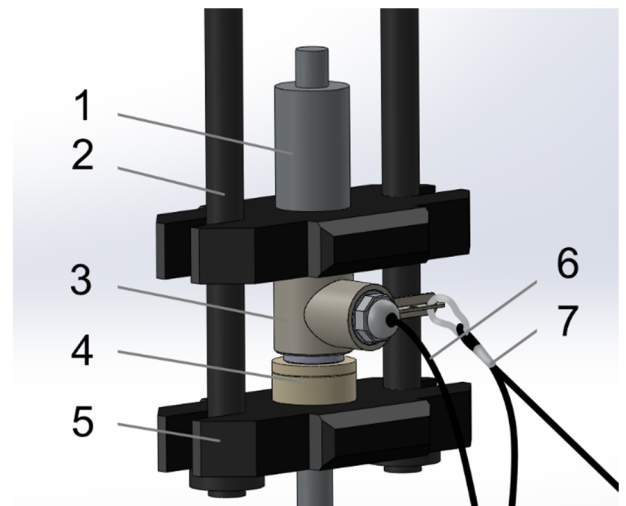
- Precise measurements
- High amplitude output
- Thermal stability
- Durable monolith casing
- Explosive protection
- Standardized design
- Wide operating temperature range
- Easy to install and maintain



EMS-122 dimensions in mm

EMS-122 installed on polished rod

1 – collet; 2 – wireline; 3 – sensor; 4 – spherical washers;
5 – carrier bar; 6 – cable; 7 – cable fasteners.



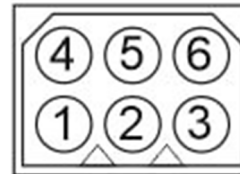
Basic specifications

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%
Position measurement accuracy	2,0%
Operating voltage	9-18V
Insulation impedance	> 5000 MΩ
Zero(load)	5 V±0,01
Zero(acceleration)	1,65 V ±0,01
Zero balance	2 % F.S.
Scale(load)	Minus 18,7 mV/kN ± 2%
Scale(acceleration)	0,22 V/g
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	3,00 kg

Connector

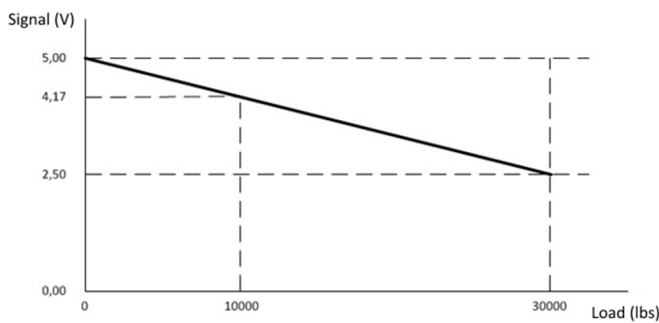
EMS121 power and signal connector –
Molex .093" Pin 03-09-2061

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

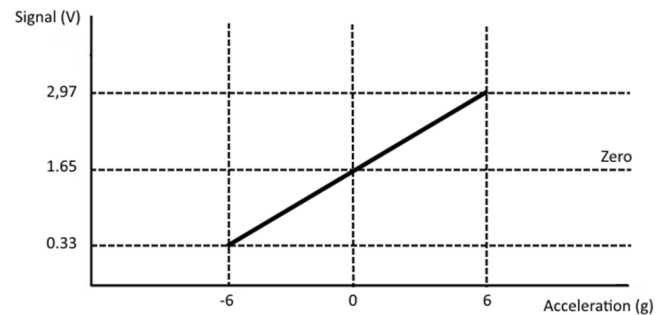


EMS121
connector
pinout

Pin	Net
1	Accelerometer signal
2	Shield
3	GND power
4	Load signal
5	GND signal
6	9-18 V



Load/signal relation



Acceleration/signal relation

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