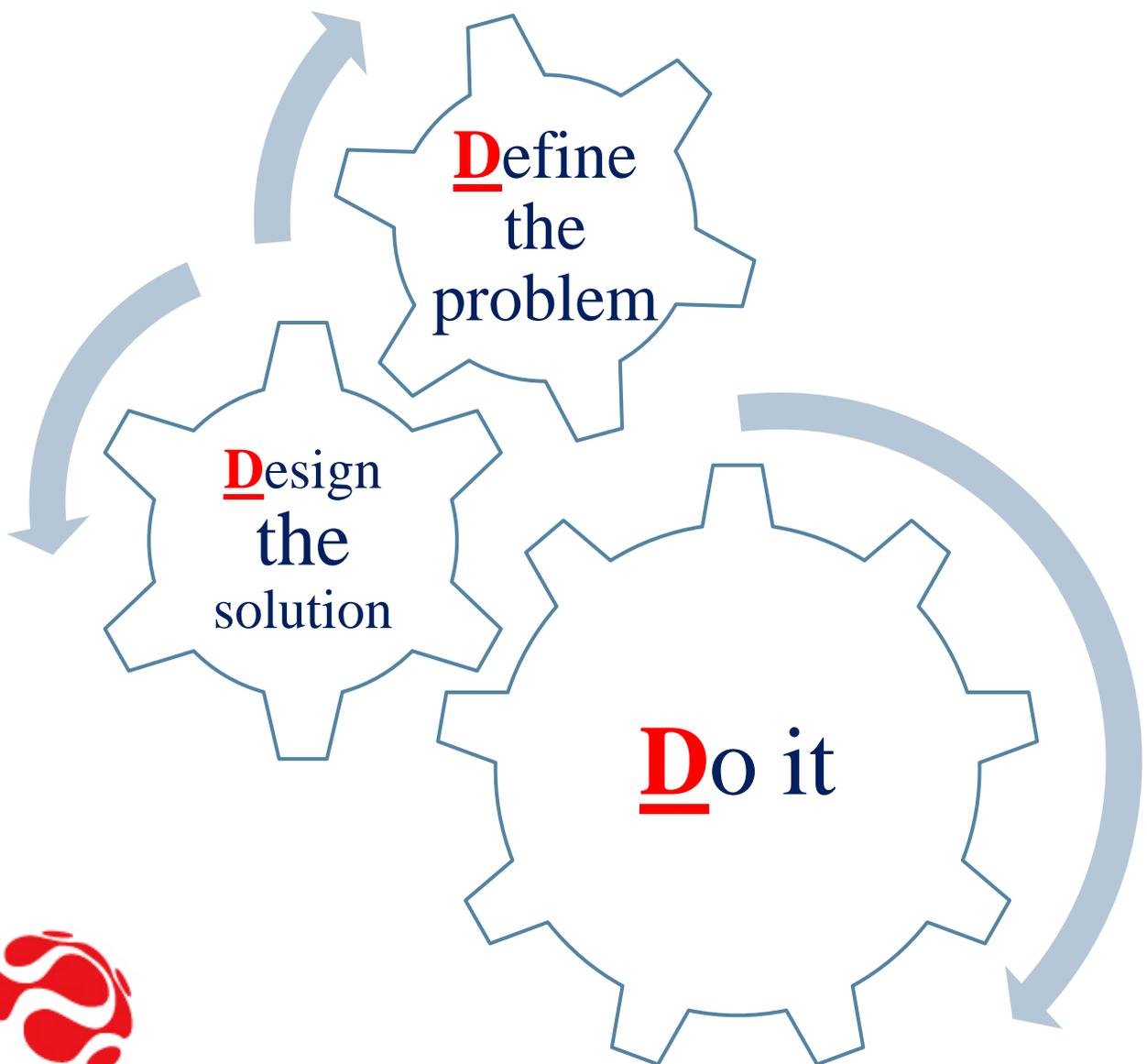


Find Your Solutions



SOLKIT
FIND YOUR SOLUTIONS

We improve the crane safe operation through 3D's steps:



- In 2008 **Solkit Egypt** explore a solution for different types of cranes which will prevent overweight accidents.
- This solution should be :
 - able to monitor the crane readings effectiveness,
 - displays these readings to the operator and prevent the crane movements which may cause accidents



Being said,

- We use **3Ds** steps to produce a solution:
- We have **DEFINED** the problem, composed all the required input data related to the telescopic cranes.
- Furthermore, we **DESIGNED** an accurate electronic device with all needed outputs.
- Finally, we **DO** it.
- Our product is called : **SOL-002**.



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SOL 002 Data sheet & Specifications:

- **SOL 002** is an Automatic Safe Load Indicator, it is a device which is installed on mobile or portal cranes to alert the operator if the lift is exceeding the safe operating range of the machinery. In some cases, the device will physically lock the machinery in circumstances it determines to be unsafe. SOL002 systems are composed of a microprocessor connected to various sensors on the crane itself.

- **Device dimensions** : 229 x 204 x 76 mm

- **Display dimensions** : 107.9 x 57.5 mm

- **Power protections** :

SOL 002 has all the power protections against input reverse polarity, input short circuit, input under voltage, and input over voltage.(for 12 VDC cranes SOL002 works in power range 9-18 VDC, for 24 VDC cranes SOL002 works in power range 18-36 VDC).

- **SOL002 user Interfaces & specifications:**

- **SOL 002** has three screen interfaces (graphic, Arabic & English) with easy way for screens' navigation.

- **SOL002** is very easy to be adjusted by pressing on (Prog 1) & (Prog 2) buttons together for 3 seconds you will enter to programming mode in which you can adjust the boom angle, boom length and the actual weight.

- **SOL 002** has a Self-diagnostics method warns the operator if any sensors of system failure or out of range.

- **SOL002** has ability to store up to Twenty different load tables in individual



SOL 002 Data sheet & Specifications:

- **SOL002** measures the angle and extension of the boom along with the load weight and compares this with the manufacturer's specifications to determine if the lift is safe.
- **SOL002** has the capability of detecting the boom angle, weight of load lifted, boom length, boom height, and ground radius of any lifting device, and also the operator can enter the number of ropes and the device automatically calculate the maximum weight according to the maximum number of ropes for the Crane.
- **SOL002** controls the lifting equipment to the level that it tries to keep the machinery functioning as per the manufacturer's suggested safety charts.
- **SOL002** takes the following actions:
 - 1 - stop three of the crane motions (boom Down, Boom extend, Wire up) if the weight exceeds the maximum limit according to the manufacture load chart.
 - 2 - stop the wire up if the limit switch reached.
 - 3- stop the boom angle up if the boom angle reach the adjusted high angle.
 - The crane is fitted with multiple sensors, for each of the measured parameters, which are then further displayed in the operator's cabin for his benefit.



SOL 002 Data sheet & Specifications:

specifications of **SOL002's** sensors :

1-Two pressure transducers with the following specifications:

- Supply voltage 8-32 VDC.
- output signal (4-20 MA) with range.
- Hydraulic with range 0-400 Bar.

2- One potentiometer for boom angle with the following specifications:

- linearity ± 2.0 %
- Dielectric Withstanding 1000 VRMS
- Insulation Resistance 100 minimum, 500 VDC
- Output Smoothness 0.1 %

3-One potentiometer for boom length with the following specifications:

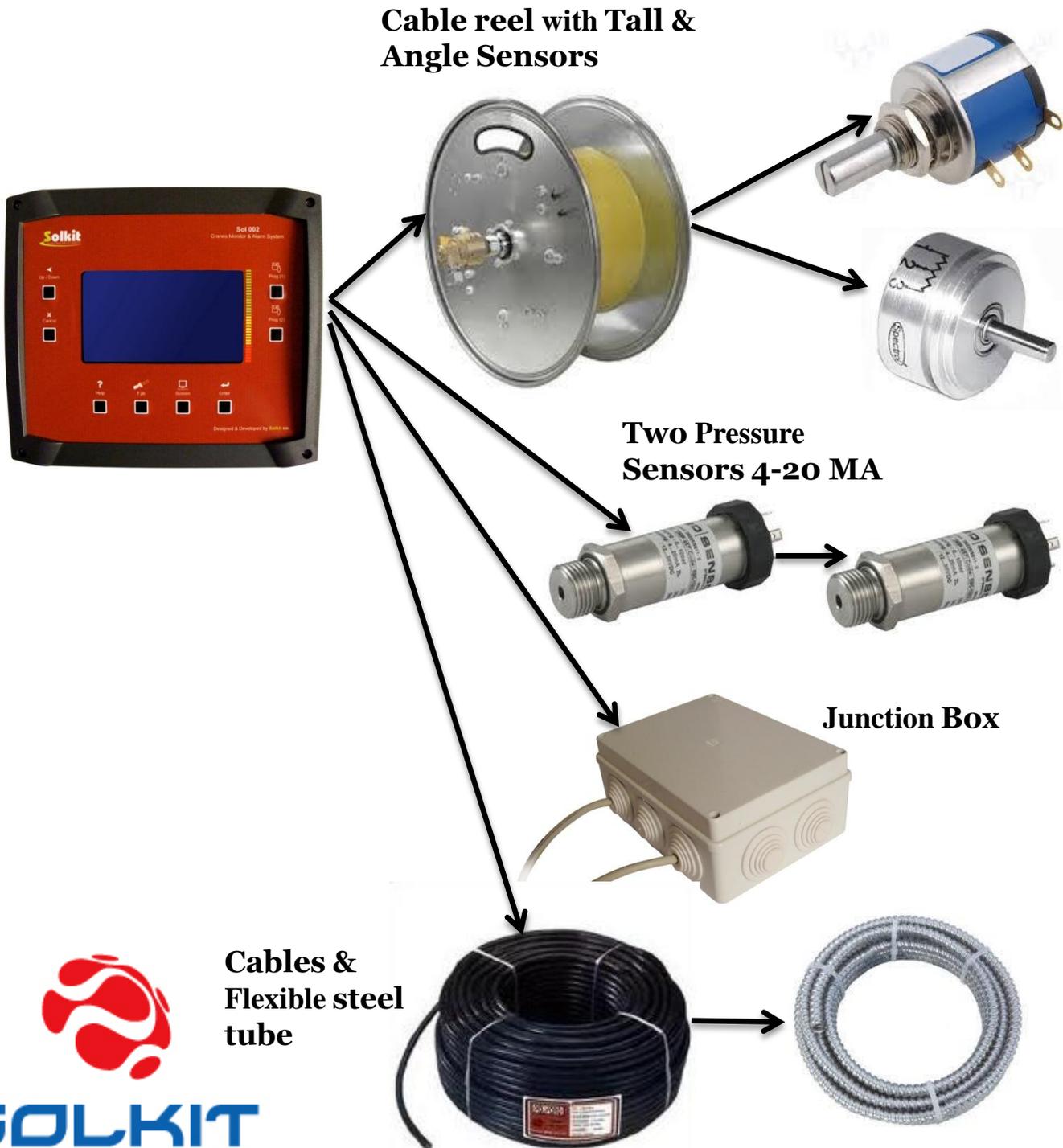
- Linearity ± 0.25 %
- Dielectric Withstanding 1000 VRMS minimum
- Insulation Resistance 1000 M Ω minimum 500 VDC

We will explorer the **SOL002** system components & sensors and Location of each component on the carne.



Cranes Monitor & Alarm System SOL-002

System Components Overview:



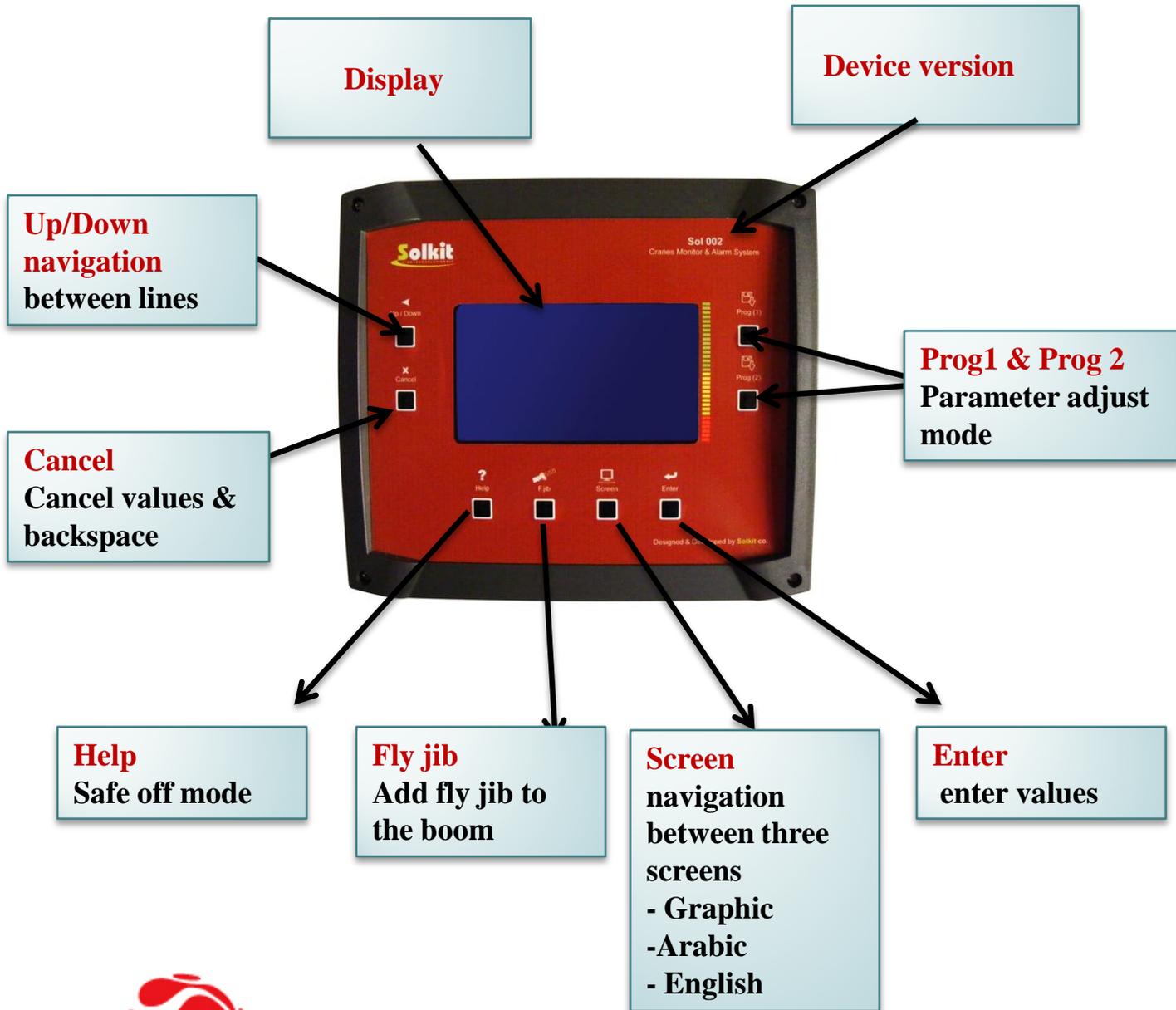
Cranes Monitor & Alarm System SOL-002

Location of each component on the crane:



Cranes Monitor & Alarm System SOL-002

System Display Screen Overview:



Solkit Egypt is interested to produce all solutions that you need in your crane application, if you are also interested please contact us.

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