DUXAOIL
TEXAS LLC

SMART Hydraulic Self-Contained Emergency Shutdown Controller Model "ESD-211"

Our ESD-211 is a SIL2 device designed with smart electronic assistance. It can operate automatically using an independent flowline and wellhead pressure hi-low presetting by the user, either remotely or manually at the location.
The friendly 7" HMI allows easy operation and configuration, you can see graphics, pressure, alarms, and events on site, just with one touch.

Applications

Our ESD-211 can be used on oil & gas wells to protect the people, installations, and environment on Emergency Shutdown Valves (ESDV), Surface Safety Valves (SSV), and any other flowline valves with a single effect actuator.

Features

- Touch screen HMI.
- Flowline pressure sensor input, hi-low set points, and reposition mode configuration capability. It also has a timed override.
- Well pressure sensor input, hi-low set points, and reposition mode configuration capability. It also has a timed override.
- Flexible SCADA command voltage input, automatic range from 4 to 36 VDC.
- Position indicator OPEN & CLOSE sensor inputs.
- Automatic actuator pressure control "bump", capabilities to compensate for pressure variation for thermal effects and small leaks.
- Internal memory storage, 5-year minute-by -minute datalogger, and events when they appear.
- Emergency shutdown button.
- Complies with standard IEC 61508 (SIL2).

IEC61508
SIL2
APPROVED RANGE

DUXAOIL TEXAS LLC

Benefits

- Compact design with input and output located below the box permits an easy and quick installation (Less than 2 hours).
- Environmentally friendly, zero discharge or vent.
- The ESD-211 is compatible with the remote operation of even existing installations, you won't need to adapt the existing SCADA tension. It can work usual tension available.
- Quick closing speed provides fast safety (3.5 seconds with 2 1/16" #5000 SDV), further preventing washout trim valve, prolonging its useful life.
- Automatic hydraulic pressure compensation prevents the valve from staying in the intermediate position, avoids washout, also production loss by unexpected closure of the well, reducing management overhead.
- The ESD-211 can sense two different pressures at the same time, Flowline & Well, with independent configurations of set points.
- The huge memory capacity allows store a lot of data and to know the history of what happened in the well in our absence.
  Battery, charger regulator, and hydraulic fluid are included for FREE.

Outstanding Features

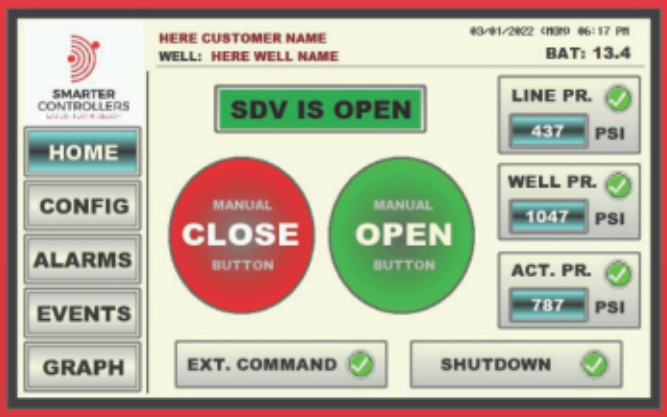
- The Touch Screen HMI feature causes the feeling that you are using your cell phone. You have the operation, configuration, graphics and alarms, and events data at the palm of your hand with a single touch.
- The SIL2 design provides confidence and peace of mind, security is guaranteed.
- A website is available for use to upload the stored data in your ESD-211. You can see and analyze it there, COMPLETELY FREE.

Specifications

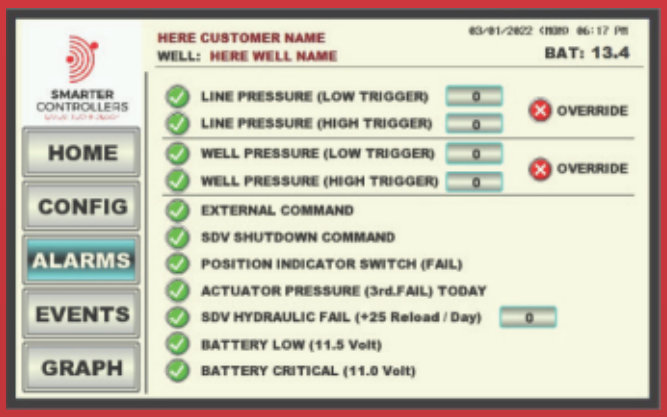
- Dimensions: (L-H-W): 20” x 20” x 8” (500 x 500 x 200 mm)
- Temperature range: -40 to 185°F (-40 to 85°C)
- Hydraulic pressure range: 300 to 3.000 PSI (21 to 207 Bar)
- Oil reservoir capacity: 0.8 Gallons (3.0 Liters)
- Electric power supply requirements: 14 to 70 VDC. (Nominal 100 Watts)
- Digital input for SCADA remote command from 4 to 36 VDC.

Optional Upgrade

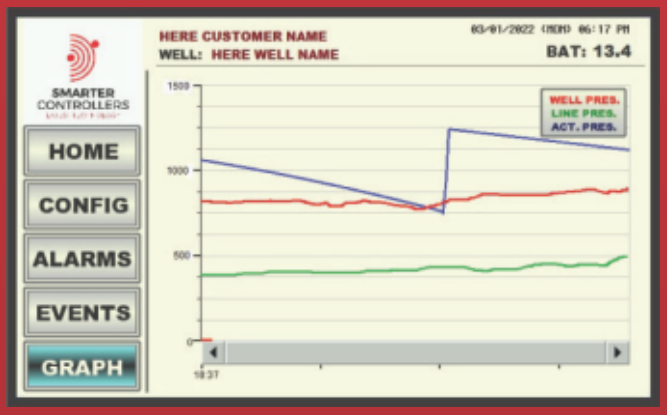
- Standing Skid.
- Pressure sensor Kit, available for classified areas or not.
- Solar Panel Kit with a mountain bracket.
- Extra battery pack with box.
- Fire fusible plug.
- Communication kit GPRS / LTE.
-
- Low temperature kit. Up to -65°F (-53°C)



Main screen, allow you to operate, view the status of the SDV and the measured pressures.



Alarms status screen.



Graphics screen, allow you to know the pressures of the well and actuator in real time and also the historical data stored in the ESD-211 Controller.

CHARACTERISTIC		ESD-211	CONVENTIONAL AUTO CONTENT
Local & Automatic Emergency Shut Down (ESD)		✓	✓
Remote Emergency Shut Down (ESD)		✓ (a)	✓
SIL2 Approved Range (Less than 1% Fail on Demand Provability)		✓	✗
Automatic Actuator Pressure Stabilization		✓	✓ (b)
Hi-Low on Flowline Pressure		✓	✓
Hi-Low on Well Pressure		✓	✗
Individual and Programmable Override Time for Inputs		✓	✗
Partial Stroke Test (PST)		✓ (c)	✗
Data Loging (5 Years Capacity)	Flowline Pressure	✓	✗
	Well Pressure	✓	✗
	Actuator Pressure	✓	✗
	Events & Alarms	✓	✗
Pressures Graph on Site (Flowline, Well and Actuator)		✓	✗
Alarms & Events List on Site		✓	✗
Existing SCADA Ready		✓	✓ (c)
Comunications GPRS / LTE		✓ (c)	✗
Open Time (With 2/16 #5.000 HD without Pressure Inside of Body)		5.7 Sec.	90 a 150 Sec. (d)
Close Time (With 2/16 #5.000 HD without Pressure Inside of Body)		3.3 Sec.	15 Sec.
Operation Temperature		-40 to 185*F	-40 to 185*F

(a) Multivoltage Automatic (4 - 36 Volt)
(b) Partial Stabilization Using Hydraulic Accumulator
(c) Optional Feature
(d) Using Manual Pump, depend of Operator

SMARTER CONTROLLERS
LATEST TECHNOLOGY

DUXAOIL TEXAS LLC
www.duxaoil.com

HEADQUARTERS
19315 Dickson Park Dr.- Houston
Texas - TX 77373

WAREHOUSE
1920 WW Thorne Dr. - Houston
Texas - TX 77373 - Ph.: +1 832.515.5543