



ESPE
UNIVERSIDAD DE LAS FUERZAS ARMADAS
INNOVACIÓN PARA LA

DEPARTAMENTO DE ELÉCTRICA Y ELECTRÓNICA

CARRERA DE TECNOLOGÍA EN ELECTRÓNICA MENCIÓN INSTRUMENTACIÓN & AVIÓNICA

MONOGRAFIA PREVIO A LA OBTENCIÓN DEL TÍTULO DE TECNÓLOGA EN : CARRERA DE TECNOLOGÍA EN

ELECTRÓNICA MENCIÓN INSTRUMENTACIÓN & AVIÓNICA

AUTORA: CHAMBA SARANGO, DAYRA MARÍA

DIRECTORA: ING. GUERRERO RODRÍGUEZ, LUCÍA ELIANA

TEMA: CONFIGURACIÓN DE UN TRANSMISOR DE PRESIÓN MEDIANTE UN MÓDEM HART PARA PRÁCTICAS

DE INSTRUMENTACIÓN INDUSTRIAL

LATACUNGA 2021



CONEXIÓN ELÉCTRICA DEL LD301

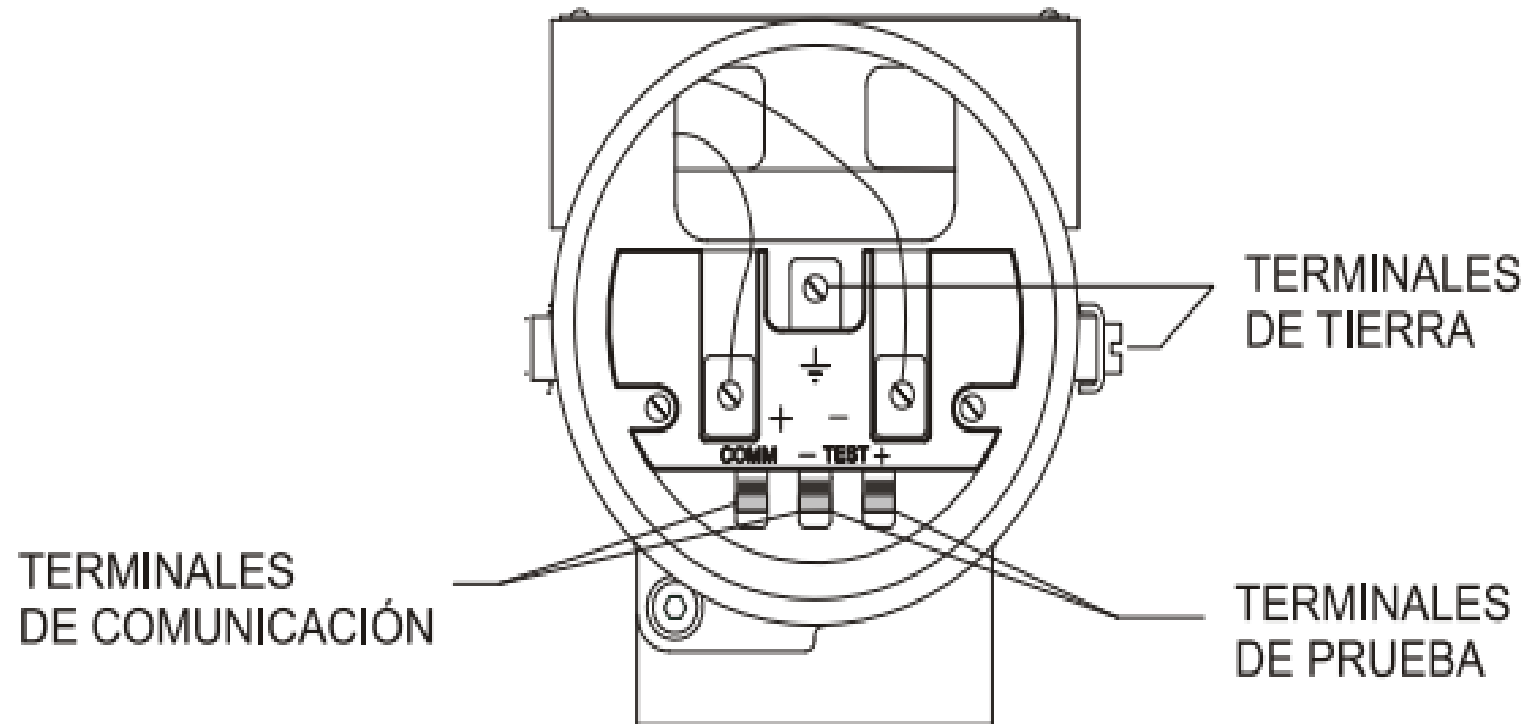
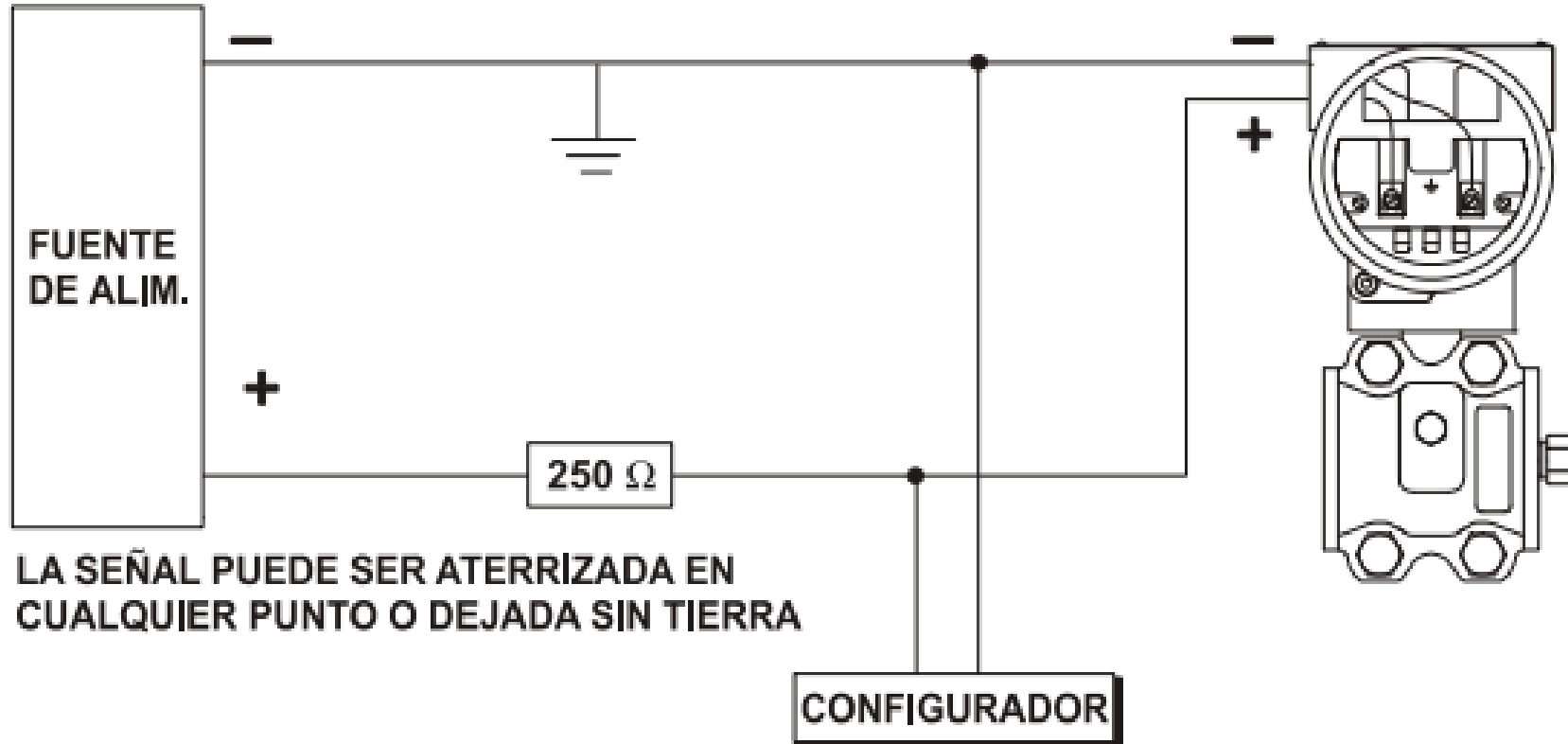
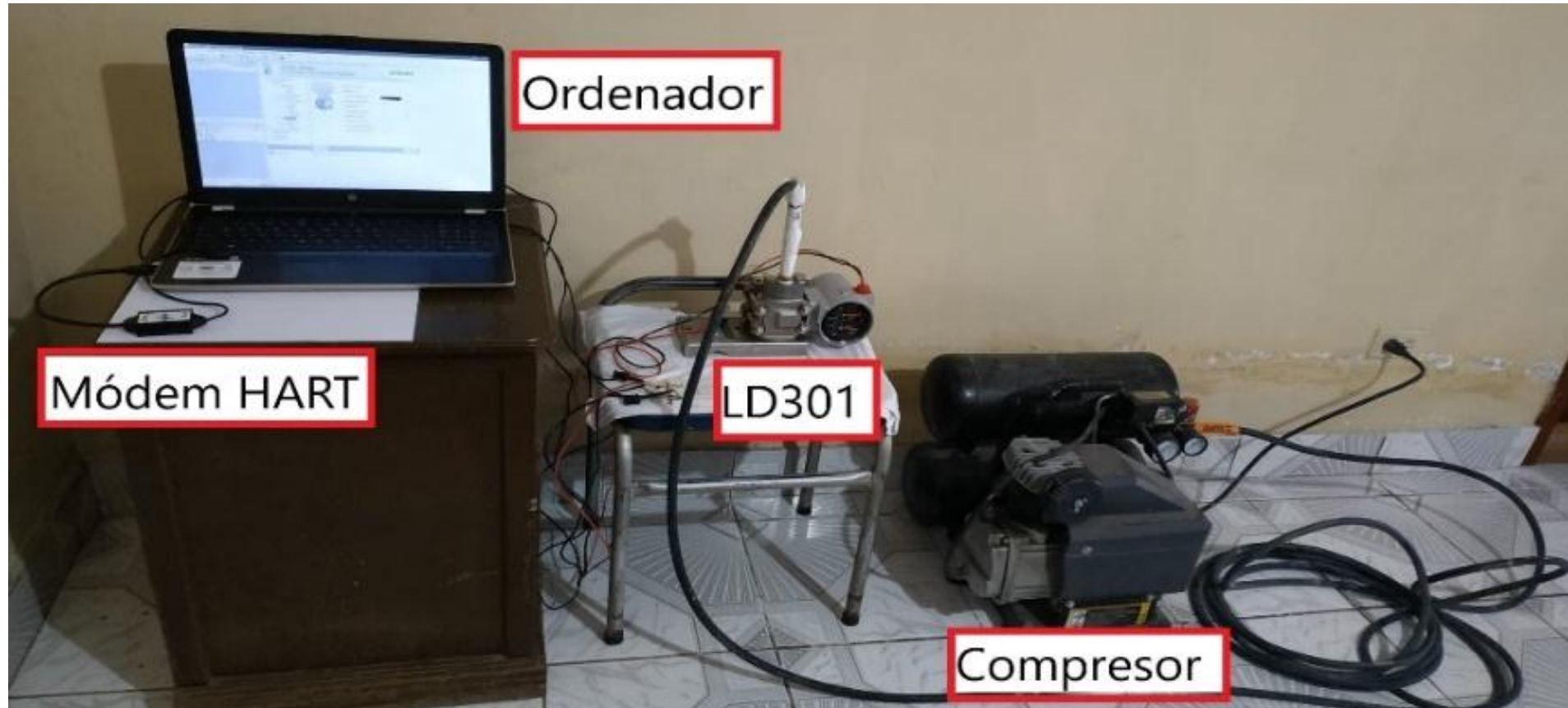


DIAGRAMA DE CONEXIONES

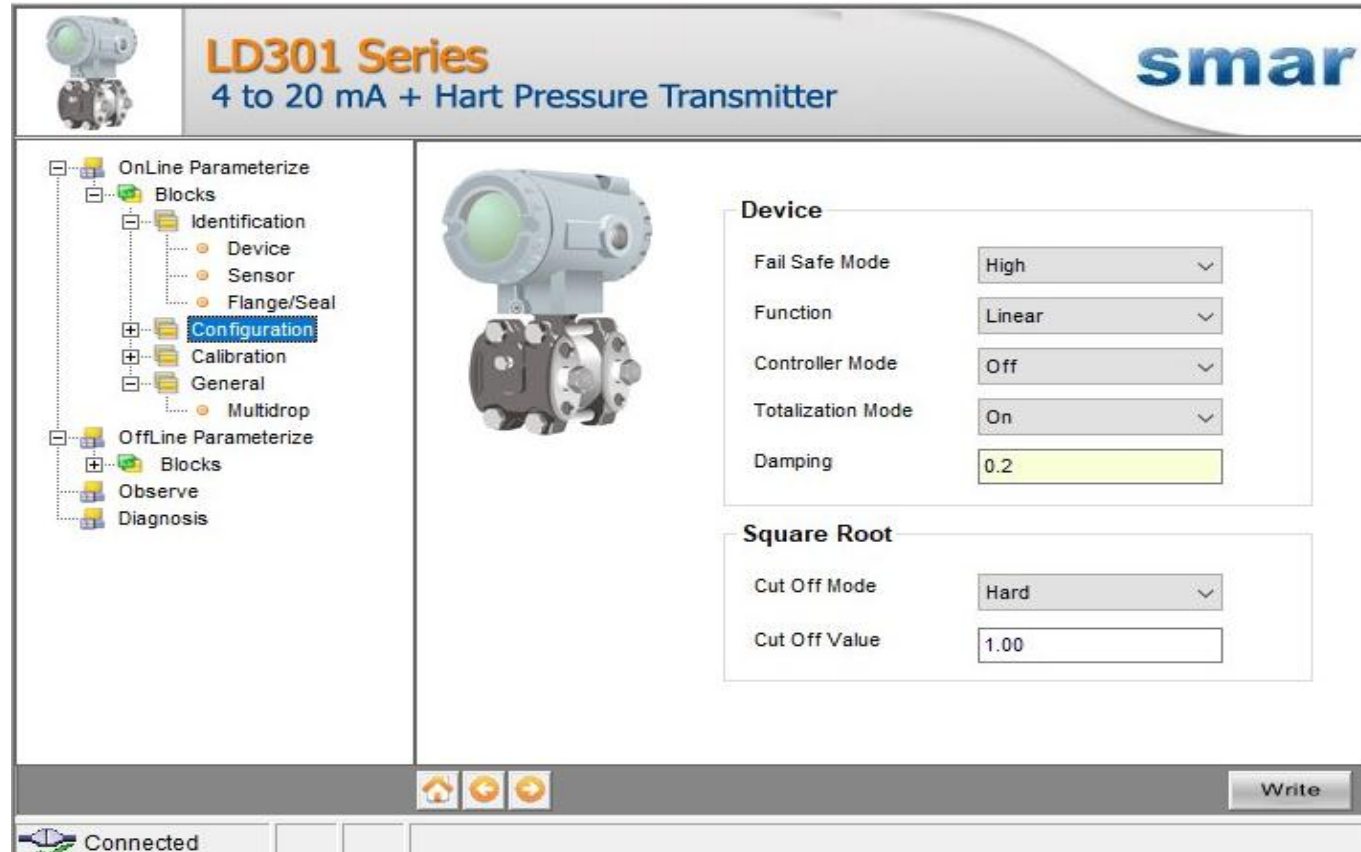


IMPLEMENTACIÓN DEL CIRCUITO



CONFIGURACIÓN

FUNCIÓN CONFIGURACIÓN



The screenshot displays the configuration interface for the LD301 Series 4 to 20 mA + Hart Pressure Transmitter. The interface is organized into several sections:

- Header:** Features the product name "LD301 Series" and "4 to 20 mA + Hart Pressure Transmitter" on the left, and the "smar" logo on the right.
- Navigation Tree (Left):** A hierarchical menu with categories: "OnLine Parameterize" (containing "Blocks"), "Identification" (containing "Device", "Sensor", "Flange/Seal"), "Configuration" (highlighted in blue), "Calibration", "General" (containing "Multidrop"), "OffLine Parameterize" (containing "Blocks"), "Observe", and "Diagnosis".
- Device Image (Center):** A 3D rendering of the LD301 pressure transmitter.
- Device Settings (Right):**
 - Device Section:** Includes "Fail Safe Mode" (High), "Function" (Linear), "Controller Mode" (Off), "Totalization Mode" (On), and "Damping" (0.2).
 - Square Root Section:** Includes "Cut Off Mode" (Hard) and "Cut Off Value" (1.00).
- Footer:** Contains a "Write" button and a status bar showing "Connected".



CONFIGURACIÓN

FUNCIÓN MEDICIÓN

The screenshot displays the configuration interface for the LD301 Series 4 to 20 mA + Hart Pressure Transmitter. The interface is divided into several sections:

- Header:** Features the product name "LD301 Series" and "4 to 20 mA + Hart Pressure Transmitter" on the left, and the "smar" logo on the right.
- Navigation Tree (Left):** A hierarchical menu with categories: "OnLine Parameterize" (containing "Blocks"), "OffLine Parameterize" (containing "Blocks", "Observe", "Diagnosis"), "Identification" (containing "Device", "Sensor", "Flange/Seal"), "Configuration" (containing "Measurement", "User Unit", "Display", "Table", "PID Control", "Totalization"), "Calibration", and "General" (containing "Multidrop").
- Product Image (Center):** A 3D rendering of the LD301 Series pressure transmitter.
- Configuration Panel (Right):** Titled "PV Unit", it includes:
 - "PV Unit Selection": A dropdown menu currently set to "psi".
 - "PV Lower Range Value": A text input field containing "10.00".
 - "PV Upper Range Value": A text input field containing "40.00".
 - "With Applied R": A section containing "Lo -" and "Hi +" buttons.
- Footer:** A status bar at the bottom left shows "Connected" with a green signal icon. On the right, there are navigation icons (home, back, forward) and a "Write" button.



CONFIGURACIÓN

FUNCIÓN UNIDAD DE USUARIO



LD301 Series
4 to 20 mA + Hart Pressure Transmitter

smar

User Unit

EU Unit Mode	Enabled
EU Unit Family	Pressure
EU Unit	psi
EU Unit String	NONE
EU 0%	0.00
EU 100%	100.00

Write



FUNCIÓN CALIBRACIÓN (4mA)

LD301 Series
4 to 20 mA + Hart Pressure Transmitter

smar

- OnLine Parameterize
 - Blocks
 - Identification
 - Device
 - Sensor
 - Flange/Seal
 - Configuration
 - Measurement
 - User Unit
 - Display
 - Table
 - PID Control
 - Totalization
 - Calibration**
 - General
 - Multidrop
 - OffLine Parameterize
 - Blocks
 - Observe
 - Diagnosis

Measured Pressure: 0.00

Calibration Unit: psi

Sns Lower Range Limit: -362.61

Sns Upper Range Limit: 362.61

Minimum Span: 3.02

Measured Temperature: 16.68

Measured Current: 4 mA

Characterization Mode: Off

Last Lower Point Calibration: 0.00

Last Upper Point Calibration: 361.81

Write



FUNCIÓN CALIBRACIÓN (20mA)

LD301 Series
4 to 20 mA + Hart Pressure Transmitter

smar

- OnLine Parameterize
 - Blocks
 - Identification
 - Device
 - Sensor
 - Flange/Seal
 - Configuration
 - Measurement
 - User Unit
 - Display
 - Table
 - PID Control
 - Totalization
 - Calibration
 - General
 - Multidrop
- OffLine Parameterize
 - Blocks
 - Observe
 - Diagnosis

Measured Pressure: 80

Calibration Unit: psi

Sns Lower Range Limit: -362.61

Sns Upper Range Limit: 362.61

Minimum Span: 3.02

Measured Temperature: 16.68

Measured Current: 20 mA

Characterization Mode: Off

Last Lower Point Calibration: 0.00

Last Upper Point Calibration: 361.81

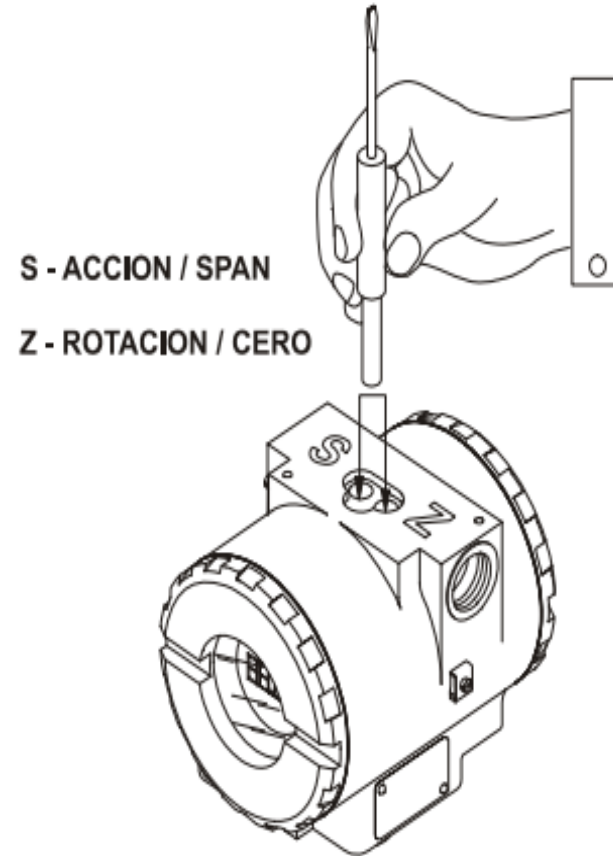
Write

Connected | Reading Xmtr Data...



AJUSTE LOCAL

DESTORNILLADOR MAGNÉTICO





ESPE

UNIVERSIDAD DE LAS FUERZAS ARMADAS
INNOVACIÓN PARA LA EXCELENCIA

