

PRRC System

Pressure Regulator Remote Control



GASCAT

DESCRIPTION

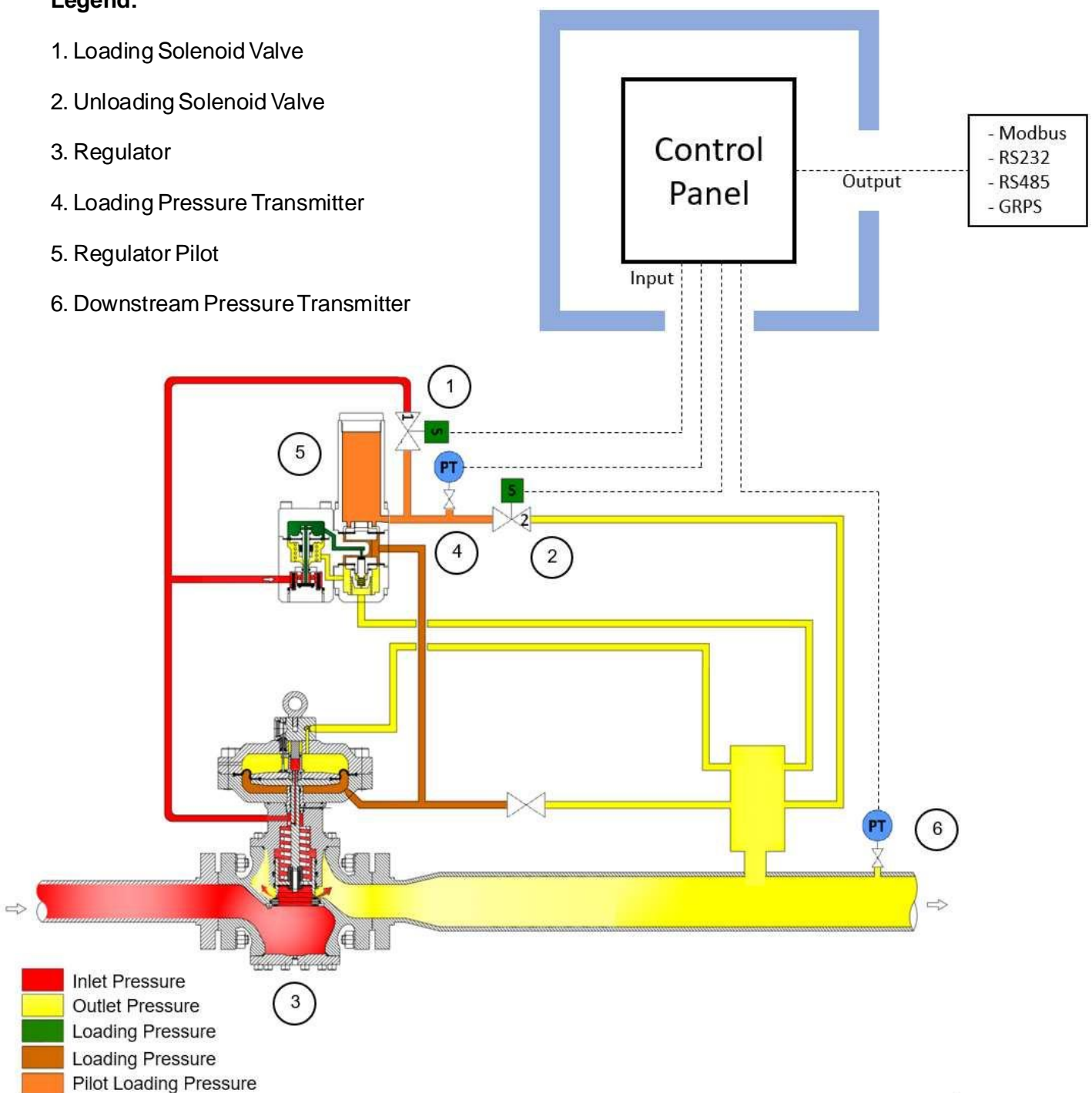
GASCAT Pressure Regulator Remote Control (PRRC) is a single system to allow manage by remote automatic way, through programmed logic control customized without any operator intervention, the different sections constituting a plant for NG pressure Reduction.

The PRRC electronic system makes it possible to optimize the process of the individual sections of the plant order to obtain:

- Regulation of the outlet pressure value;
- Monitoring of all operating parameters with the possibility of remote pressure diagnostics and records;
- Analysis by remote of the entire system operation;
- Allows the use of a regulator as a flow control valve

Legend:

1. Loading Solenoid Valve
2. Unloading Solenoid Valve
3. Regulator
4. Loading Pressure Transmitter
5. Regulator Pilot
6. Downstream Pressure Transmitter



PRRC

The GASCAT Pressure Regulator Remote Control (PRRC) allows such smart management.

Incorporating a control unit, customizable touch screen interface and smart software, it is highly scalable with the ability to automatically manage individual equipment, a complete pressure reducing station and an entire grid. To facilitate this, it includes an extensive range of communication modes to allow all kinds of local and remote connections. The programmable logic developed by true industry experts offers a variety of features which simplify, optimize and secure the management of any natural gas installation

The PRRC system is essentially composed of:

- An electronic control panel, inside which there is a PLC where the operating logic resides, and collects the signals coming from the field;
- An electro-Pneumatic actuator, acting on the loading pressure of the main pilot pressure regulator, consisting of a loading solenoid valve (pos.1), a unloading solenoid valve (pos.2), a pressure transmitter to measure the loading pressure value (pos.4) and downstream pressure transmitter (pos.6).

The control loop, via the feedback signal of the outlet pressure transmitter, controls the opening of the line to feed or unfeed pilot, depending on the outlet pressure set point compared to the actual value of the outlet pressure.

The other lines are kept in active stand-by (loading pressure equal to outlet pressure, ready to operate in case of issues in the main line.

The variation of the regulator set-point value is obtained through the action of the two solenoid valves operated by the control panel which, when suitably actuated, allow the modification of the loading pressure produced by the pilot in order to:

- Introduce it inside the pilot loading chamber (to increase the set pressure)
- Discharge it in the piping downstream the regulator (to decrease the set pressure)

In the event of abnormal variation of the operating parameters, i.e. lack of power to the control panel, the control panel logic excludes the automatic control and returns the system to standard pneumatic operation (mechanical calibration of the pilots).

BENEFITS

- Real-time diagnostics of the grid and interconnected district station performance.
- Correct balance of the grid pressure level
- Increase service quality and customer satisfaction
- Increase distribution grid safety level
- Parallel working of regulating lines, allowing active safety operational mode, incremented flow capability, reduced noise emission, and increased lifecycle.

FEATURES

CONTROL PANEL	
Cabinet Material	Resin IP65 - IP55
Installation	Wall
Supply	220-240Vac 50 / 60Hz
Power consumption	120w @ 24Vdc
Electromagnetic Interference	Consistent with 89/336 / EC
Operating Temperature	-10 +40 °C
Humidity	10% - 90% non-condensing
Installation area	Secure Area (not classified))
Dimensions	43 x 63 x 25cm (L x H x D)
Weight	20 Kg
Analog input signals (*)	8 analog input 4 - 20 mA
Digital Input Signals (*)	digital input 12 of transistor
Output Signals Analog (*)	2 analogue outputs 4-20 mA
Output Digital Signals (*)	18 digital standard output
Communication Ports	1 RS485 ports with terminals
	1 RS485 port RJ11
	1 RJ11 Ethernet port
Display	Display Touch Screen 7"
	Password Default / set
Operating modes	AUTOMATIC - MANUAL
Remote communication	Through Gateway 3G (optional)
Communication protocols	MODBUS TCP (STD)
	MODBUS RTU (optional)
	MODBUS ASCII (optional)
Remote management software	Integrated web server
Safety	System emergency release button

(*) I/O expandable upon customer request



Gascat Indústria e Comércio Ltda.

Rodovia SP 73, nº 1141 - Distrito Industrial
Indaiatuba - SP - Brasil - CEP 13.347-390
Phone.: +55 (19) 3936-9300
sales@gascat.com.br

