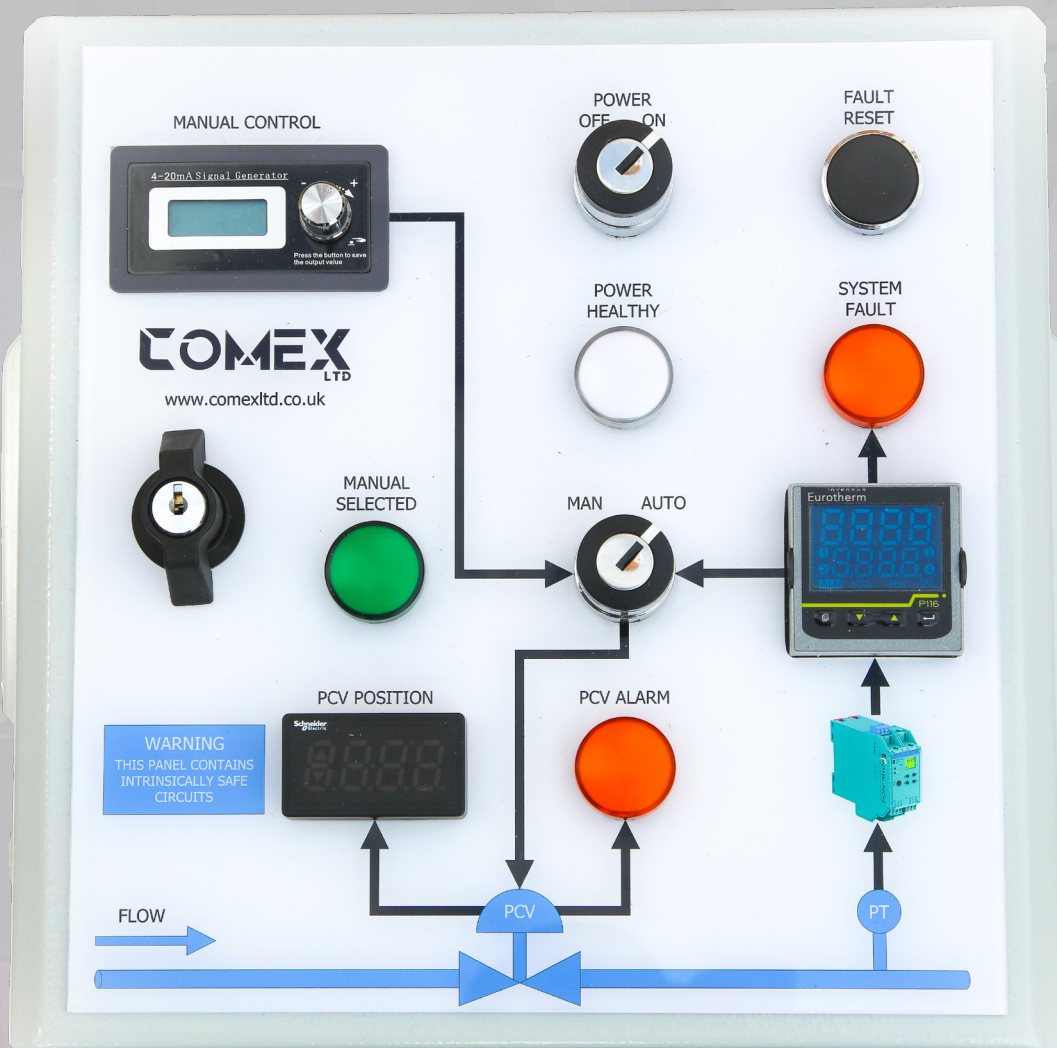


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CYZER-P™

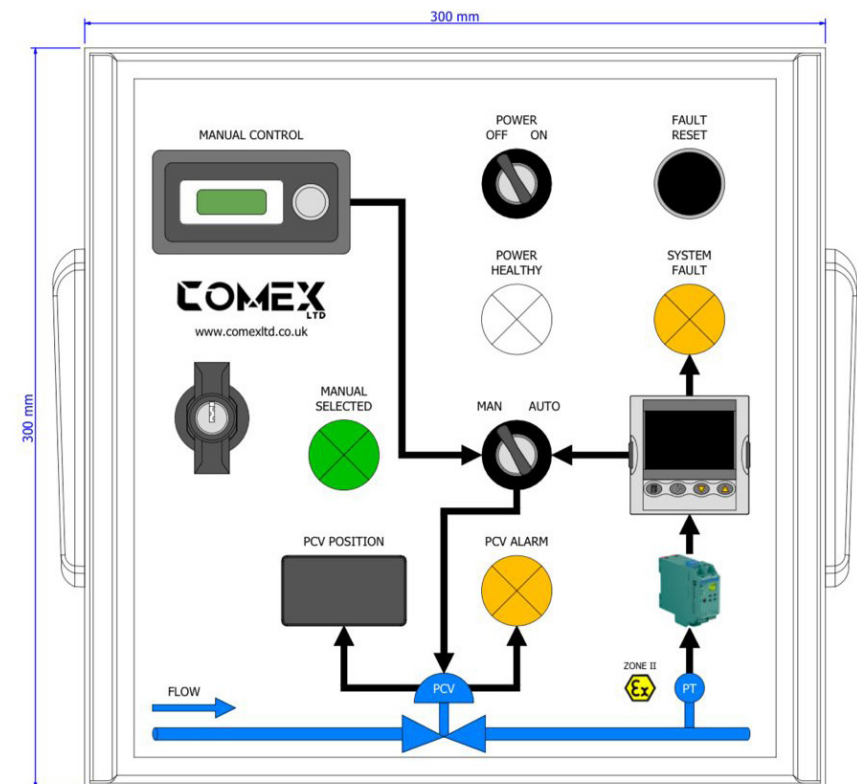
Electronic Pressure Controller

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CYZER-P™

Electronic Pressure Controller

- ▶ This stand-alone PID controller is ideally suited for pressure control systems.
- ▶ An internal (SP) set-point is programmed into the PID controller
- ▶ A remote Pressure Transmitter is connected to the solution as the PV (Process Variable) and a 4-20mA signal is sent to the actuator to perform the corrective action.
- ▶ The controller can be tuned accurately to ensure the appropriate response is achieved to control the process to the set-point value.
- ▶ An actuator fault and system fault can be repeated to a RTU (Remote Terminal Unit) if necessary
- ▶ Local control of the actuator can be achieved via and Auto / Manual key switch.
- ▶ Compatible with Exd/e or IS systems.
- ▶ Built to be robust and dependable as well as cyber compliant.
- ▶ Non-venting nature ensures compliance with the drive to net-zero emissions.
- ▶ Compatible with existing pneumatic or gas/hydraulic systems as well as electronic actuators.



Current Pneumatic Control System

CYZER|P™

- ▶ Excessive pipework
- ▶ Obsolete equipment
- ▶ Large footprint
- ▶ Labour intensive
- ▶ Skills shortage
- ▶ Constant venting
- ▶ Pressure reduction required
- ▶ Process control is achieved via old, obsolete and sometimes unsupported technology.
- ▶ Some programmable devices such as PLC's and controllers are not cyber secure and present a risk to the operability of the site.
- ▶ Accurate process control can't be achieved due to the age and effectiveness of the controllers
- ▶ Manual control is often either not achievable or uses pneumatic systems that vent
- ▶ Existing controllers aren't able to interface with new technologies such as electric actuators

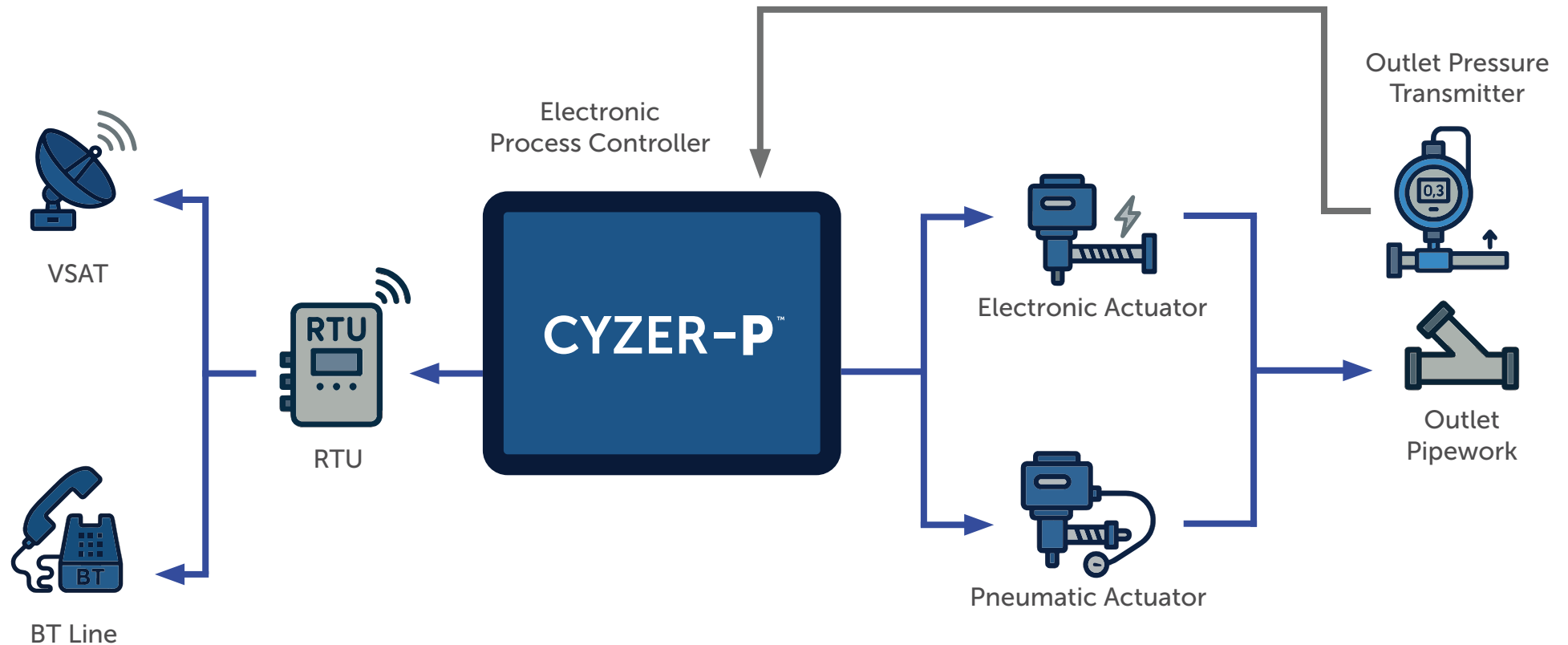


Functional Comparison

CYZER|P™

Functionality	Current Pneumatic	Electronic
Auto/Man Selector	Y	Y
Auto/Man Alarm	N	Y
Auto/ Man Lockable	N	Y
Constant Natural Gas Venting	Y	N
PID Functionality	Crude	Accurate
Non-hazardous area control (within kiosk)	N	Y
Pneumatic Actuator Compatible	Y	Y
Electric Actuator Compatible	N	Y
Cyber Compliant	Y	Y
ATEX Compliant	Y	Y
Equipment/Component Availability and Supported	N	Y
Revealed Failure Mode– Alarms Local and Remotely	N	Y

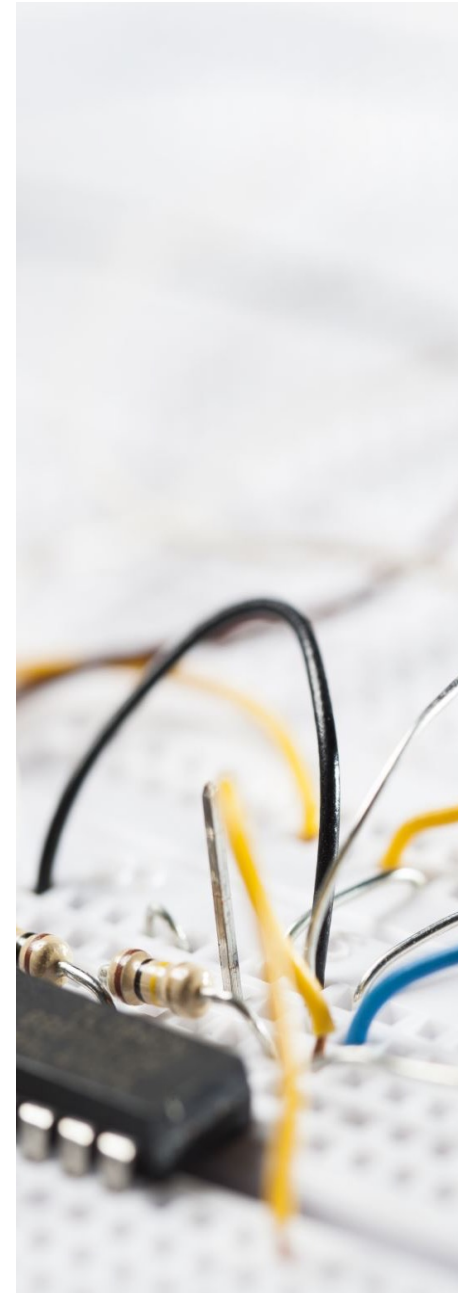
Normal Operation



High Level Overview of Operation

CYZER|P™

- ▶ PID controller maintains the process at a predefined pressure set point value.
- ▶ Fault alarms generated to control room via RTU and is displayed on electronic override panel.
- ▶ Auto/Man feature enables manual control of the downstream system and allows control signal matching when switching from manual control back to auto (bump less transfer).
- ▶ Constant monitoring of system health.
- ▶ Valve position displayed on panel (Electrically actuated valve).



Benefits & Features

Can be used with existing pneumatic PCV or with new electric actuator.	Future proof concept remain installed and functional if pneumatic actuator/valve is replaced with electric.	Simple installation with minimal outage requirements.	Fully compatible/ integrated with existing or new RTU system.
Self Diagnostics. – (control room alarm on malfunction).	Fully independent and stand alone.	Physical panel size approximately 300 x 300 x 300mm	Steady State load requirement - 24v DC, approximately 1amp.
FPSA's completed (HAZOP, HAZID).	Cyber Evaluated at CORE – successful.	Proven in use	Non-venting technology



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Electronic Pressure Controller

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