

# LEDEEN Valve Control Board for Pneumatic Actuators

TECHNOLOGY

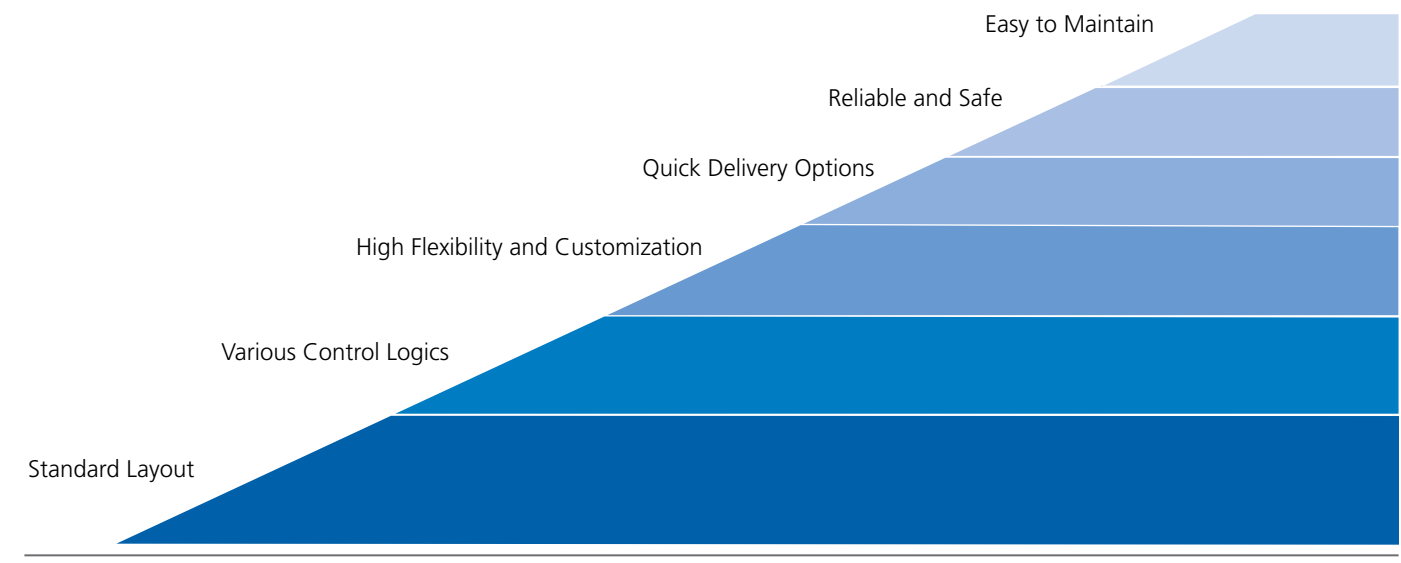


Since 1946, Cameron's LEDEEN® brand has been providing engineering and technical expertise for valve actuators and control systems. Continuing this legacy, Cameron has designed a standard valve control board (VCB) for pneumatic actuators.

Designed using in-field, real world problem solving and keeping serviceability in mind, this VCB offers one of the highest levels of reliability and safety on the market today. The system has been developed to provide a turnkey control panel for the most common logics used for on/off

valves in oil and gas applications. The LEDEEN VCB for pneumatic actuators is capable of a variety of operations, including increasing flow capacities and suite operation requests on stroking time on a wide range of actuators.

This innovative product is highly customizable, allowing for a flexible layout with a variety of options, including stop, check, relief, and flow regulating valves. It offers one of the easiest retrofits in the industry, maintaining brand-neutrality and certification quality.



## TECHNICAL DATA

**Panel:** Control system components are mounted on a SS 316 panel complete with a sunshade

**Dimensions:** Panel has a very compact design – overall dimensions are 18" x 16" x 10" (450 mm x 400 mm x 250 mm) for fail-open and fail-closed schematics for spring return actuators and 22" x 18" x 10" (550 mm x 450 mm x 250 mm) for stay put schematics for double acting actuators.

**Mounting:** Different assembling options are available:

- On board (panel mounted directly to LEDEEN actuator)
- On 2" pole (mounting kit separately delivered on request)
- Wall mounted (mounting kit separately delivered on request)

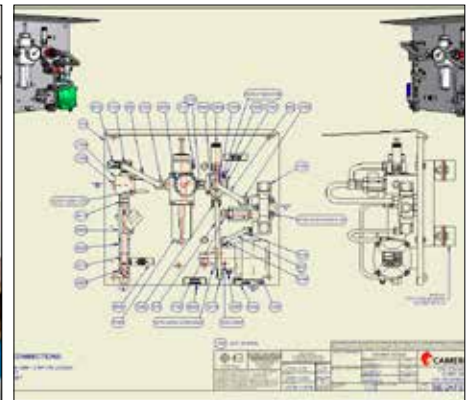
**Tubing and Fittings:**

- Tubing: SS 316L – imperial size (metric available on request)
- Fittings: SS 316 double ferrule type (Swagelok)

**Ambient Temperature Range:**

- -4° F to 122° F (-20° C to 50° C)

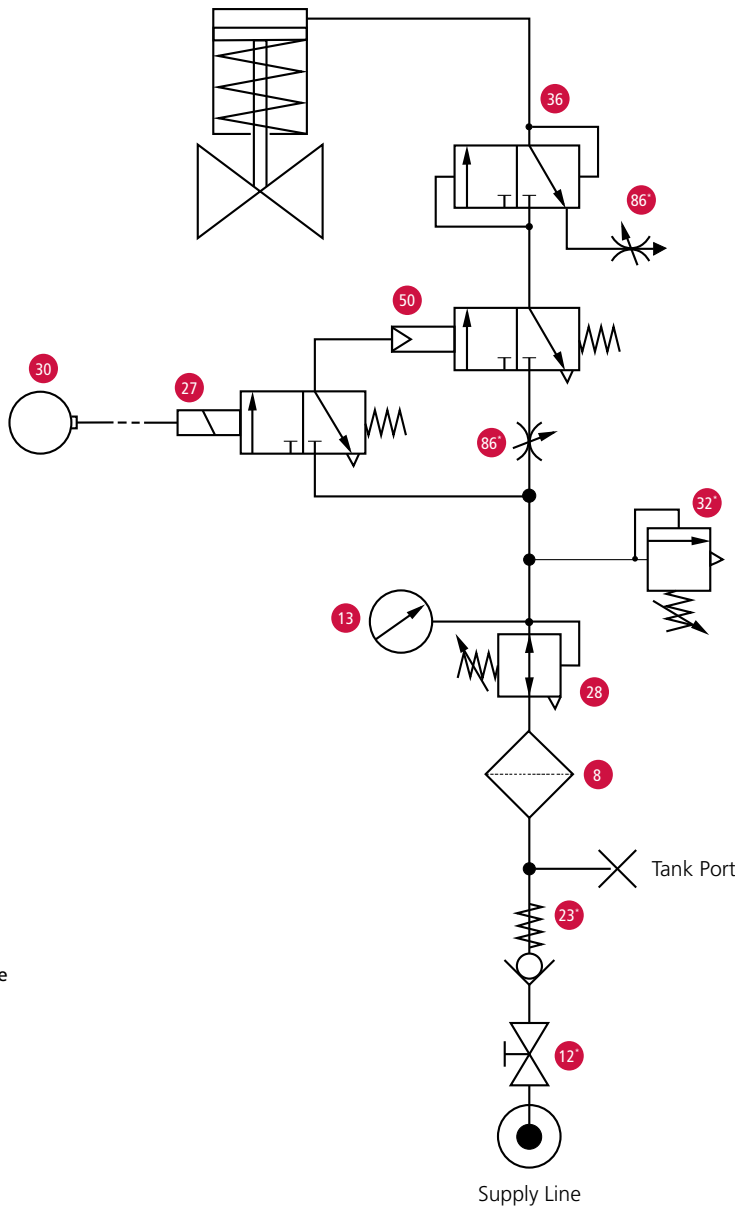
**Schematics:** For detailed description of available schematic logics please refer to pages 4 and 5



## FAIL-OPEN OR FAIL-CLOSED ON SUPPLY FAILURE

### Spring Return Actuator Configurations

The schematic diagram is shown without pneumatic and electric power



- 8 – Filter
- 12 – Stop valve (\*)
- 13 – Pressure gauge
- 23 – Check valve (\*)
- 27 – Solenoid valve
- 28 – Pressure regulator
- 30 – Junction box (built in)
- 32 – Safety valve (\*)
- 36 – Quick exhaust
- 50 – Pneumatic piloted valve (based on schematics)
- 86 – Flow control valve (\*)

\* Optional on request

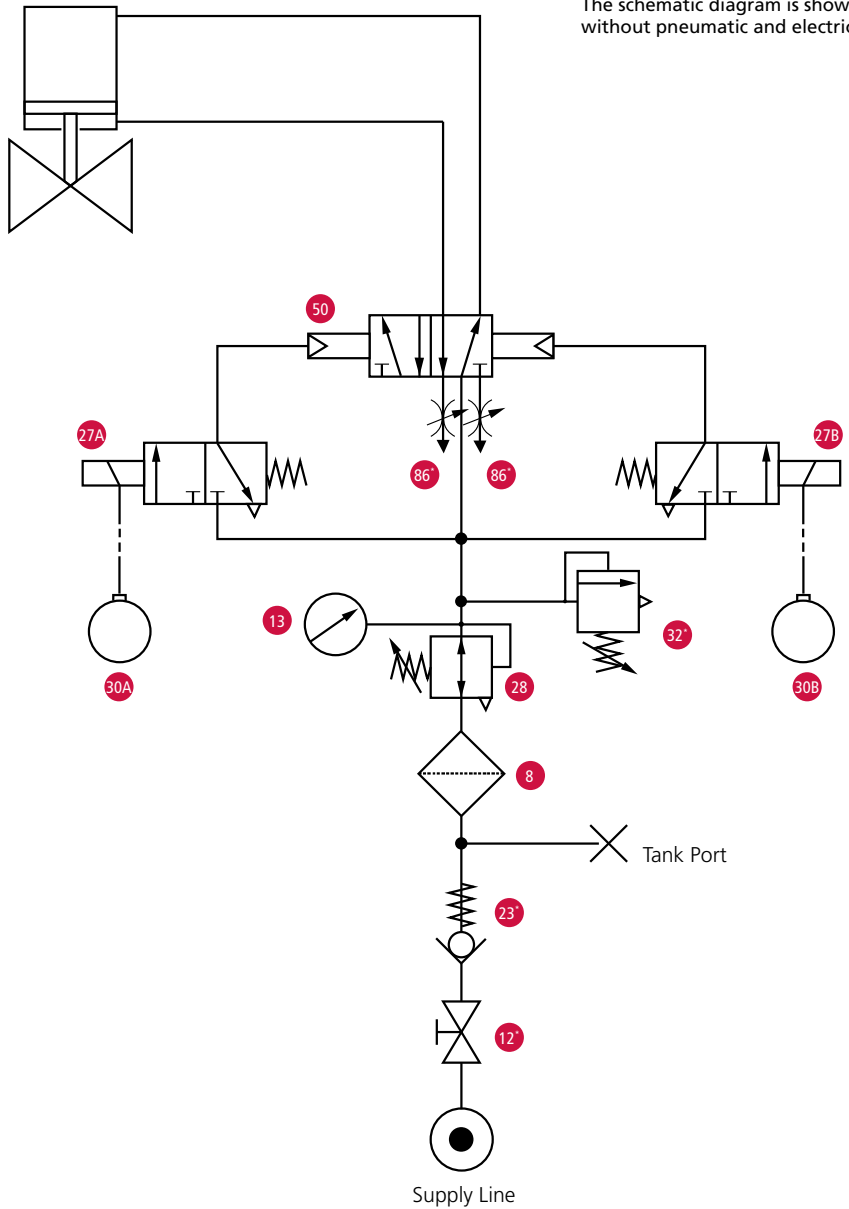
VCB complements a complete range of actuators. Options available in VCB to increase flow performance upon request.

Schematic	Inlet Size	Pilot Valve	Quick Exhaust	Recommended for LEDEEN Series:
Fail (Spring Return)	S1	1/4"	–	VA0, VA1
	S2	1/4"	X	GS2, GS6, SY8
	S3	1/2"	X	SY10, SY13
	S4	1/2"	X	SY16
	S5	1/2"	X	SY20

# STAY PUT ON SUPPLY FAILURE

## Double Acting Actuator Configurations

The schematic diagram is shown without pneumatic and electric power



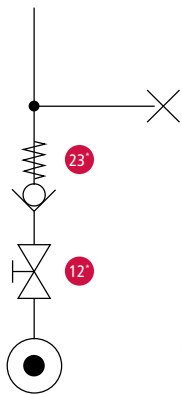
- 8 – Filter
- 12 – Stop valve (\*)
- 13 – Pressure gauge
- 23 – Check valve (\*)
- 27 – Solenoid valve
- 28 – Pressure regulator
- 30 – Junction box (built in)
- 32 – Safety valve (\*)
- 50 – Pneumatic piloted valve (based on schematics)
- 86 – Flow control valve (\*)

\* Optional on request

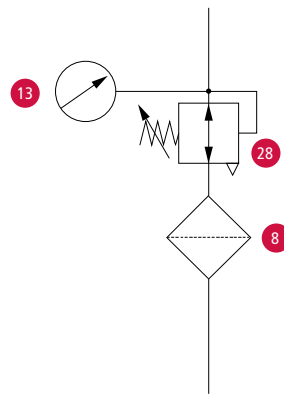
VCB complements a complete range of actuators. Options available in VCB to increase flow performance upon request.

Schematic		Inlet Size	Pilot Valve	Recommended for LEDEEN Series:
Stay Put (Double Acting)	D1	1/4"	–	GS2, GS6, SY8, SY10
	D2	1/4"	X	SY13, SY16, SY20

## FUNCTIONAL ELEMENTS DESCRIPTION



12 – Stop valve (\*)  
23 – Check valve (\*)  
\* Optional on request



8 – Filter  
13 – Pressure gauge  
28 – Pressure regulator

### Air Supply:

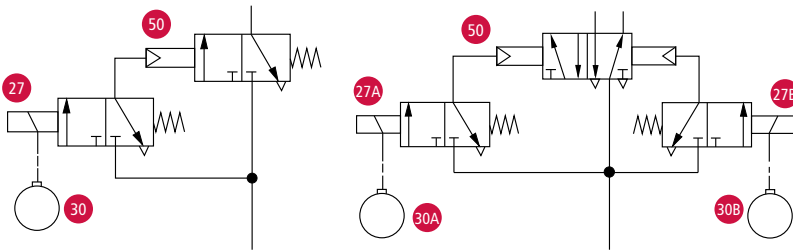
**STD** – straight inlet port for supply line (1/2" NPT)

**Options** – stop valve – check valve and additional tank port (1/2" NPT)

### Air Treatment:

**STD** – filter regulator: aluminum body/ $\leq 25 \mu\text{m}$  mesh – pressure gauge:  $\varnothing 50 \text{ mm}$ /dual scale bar/psi

**Options** – filter regulator: stainless steel body/alternative brands



27 – Solenoid valve  
30 – Junction box (built in)  
50 – Pneumatic piloted valve (based on schematics)

### Air Power Logic:

**STD** – solenoid valve: SS316 body/aluminium enclosure coil/24VDC/Atex-IECEx Ex-d certified – pilot valve (based on stroking time requirement)

**Options** – solenoid valve: SS316 enclosure coil/110VAC/manual reset/alternative brands

## Optional Accessories

### Flow Regulation Valve

Inlet/exhaust flow modulation to set stroking times

### Safety Valve

Over-pressure relief to prevent either valve or actuator damage

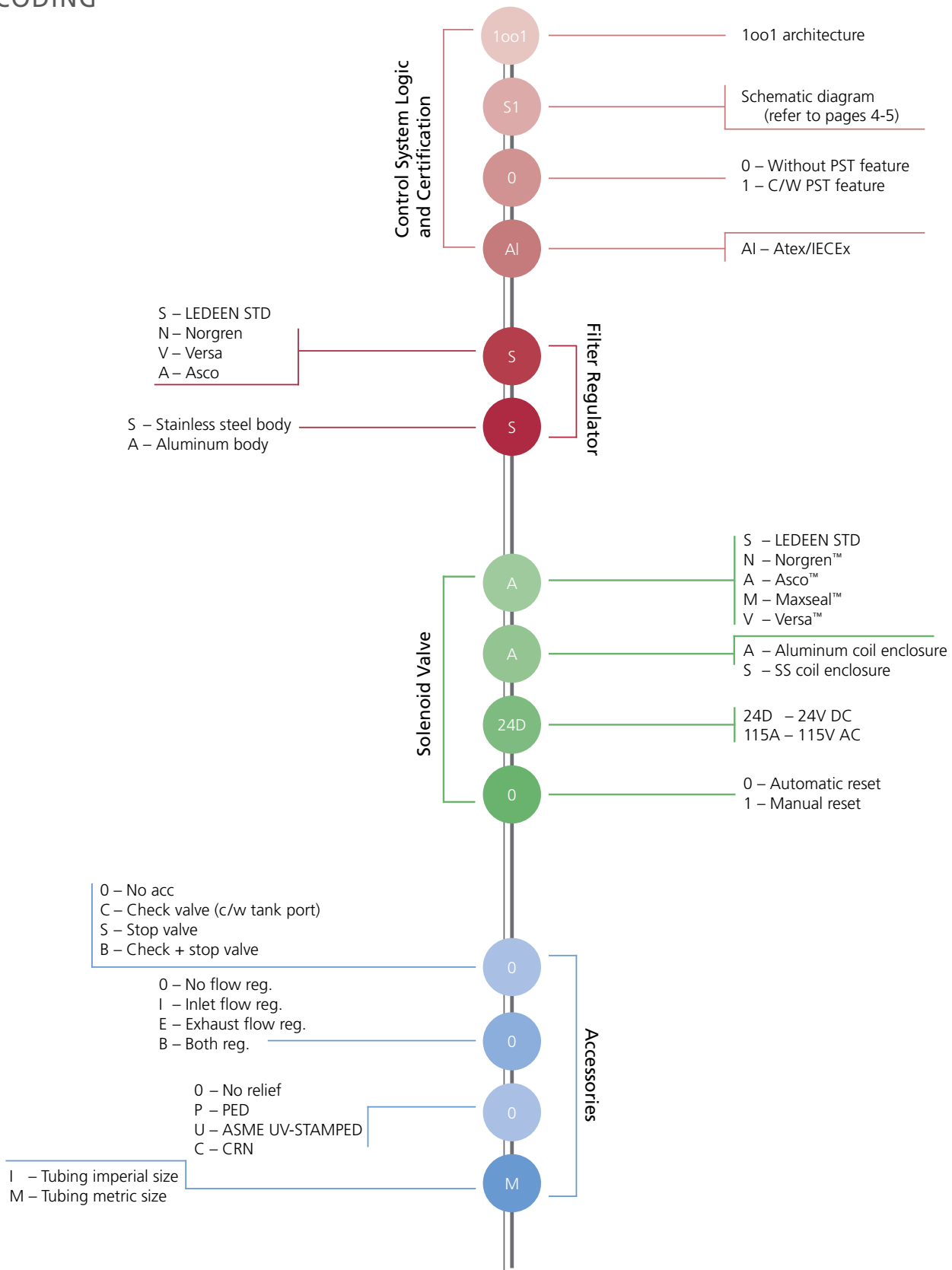
### Quick Exhaust

Exhaust flow enhancement to match stroking time requirement

### Electric Positioner

Valve position monitoring and partial-stroke test (PST) functionality

# CODING



Although checked for accuracy at the time of printing, Cameron's commitment of continuous improvement and innovation may have resulted in product enhancements or modifications not currently shown.

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