

Technical Data for TapcoEnpro DIGITAL VALVE LOOP CONTROLLER (DVLC)

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Standard Specifications (Contact TapcoEnpro for available options)

General Specifications	
Dimensions (Enclosure)	12-inch W x 12-inch T x 6-inch D (305 mm x 305 mm x 152 mm)
Weight	75 lbs (34 kg) <small>including enclosure</small>
Mounting Methods	Wall Mount (Standard) Pole Mount (with Optional Kit) Free Stand (with Optional Stand)
Ambient Temperature Range ¹	-40°F to 158°F (-40°C to 70°C)
Humidity Range	0-95% Non-Condensing
Ingress Protection	IP66
Hazardous Area (UL / CSA)	UL/CSA Approved for Class 1, Groups B, C & D; Class II, Groups E, F & G; Class III, Enclosures Type 3R, 3 & 4.
Hazardous Area (ATEX)	Zone 2, IIC, T4

Input Power Requirements	
Nominal Input Voltage Range ²	100 VAC - 240 VAC (-15% / +10%)
AC Frequency Range	45 Hz - 65 Hz
Nominal Power Consumption	30 Watts
Current Consumption	1.0 A (120 VAC) /- 0.5 A (230 VAC)
Recommended Breaker for Input Protection ³	B Curve, 6 Amp

Performance	
Control loop execution ⁴	1,000 Hz nominal
Analog Resolution	11 Bit + sign
EMC	IEC 61000 - 4 Sec 2, 3, and 4
Data Logging ⁵	Dual Speed – 1 sample per second & 1 sample every 10 seconds

I / O		
AI / AO TOTAL	5 AI / 2 AO	
Analog Inputs	Opening Pressure ⁶	For two-wire transmitters
	Closing Pressure ⁶	For two-wire transmitters
	Setpoint Command ⁶	For two-wire transmitters
	LDT 1 ⁷	Supports two- or four-wire transmitters
	LDT 2 ⁷	Supports two- or four-wire transmitters
Analog Output	Active actuator position as used by the position control routine.	4-20 mA passive. Loop power from receiving end. Isolated. Voltage range: 15 -28 V nominal.
	Analog Servo Valve Driver output	Bi-directional current mode nominal capability to 100 mA. Compliance to 12vdc

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I / O (Continued)		
Discrete Relay Outputs	7 DO	
	Loss of Command	DPDT
	Loss of Feedback	DPDT
	Loss of Tracking	DPDT
	LDT 1 Loop Fault	SPDT
	LDT 2 Loop Fault	SPDT
	Thrust Loop Fault	SPDT
	Thrust Limited	SPDT

- 40°F ambient temperature rating with enclosure heater. All controllers installed in environments with temperatures below 5°F (-15°C) have an enclosure heater to protect the equipment (display) during a cold start-up.
- Two instrument power inputs are provided, one for each of the redundant internal power supplies. 125 VDC available, consult factory.
- For each of the two power inputs. Recommend that at least one is from a UPS source.
- Position Control Loop. Other loops are variable.
- Two speed data logging via SD card. High speed for position loop values (sample every second). Normal speed for alarm signals and other less critical functions (sample every 10 seconds).
- 4-20 mA nominal. 2-wire with loop power supplied by DVLC.
- Configurable for 2-wire or 4-wire for power and position signal (4-20 mA). Transmitter power is protected.



Digital Valve Loop Controller™

- One of the true digital controllers for FCCU and Flexi-Coker (slide, butterfly and plug valves)
- Rugged Compact Design for On-Skid or Field mounting to reduce installation costs
- Millisecond response rate for precise control and valve positioning
- Optional Redundant Power Supplies
- Configurable for 1oo1 or 1oo2 valve position transmitters
- On-board data and event logging
- Configurable for valve specific operation
- Operator Friendly Graphic User Interface
- User interface-based set-up and calibration (no special tools or software required)
- Back-up Calibration/Set-up import and export functions via removable storage device
- Meets and or exceeds all requirements and specifications of licensors, industry standards and best practices

