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# Throttling butterfly valve, EtherCAT controller

HV throttling butterfly valve, DN 160 ISO-F, QPM controller, 24 VDC, SS

Part number: TBVQPMNN-L103

Nor-Cal Products

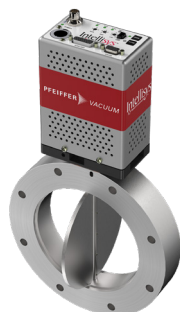


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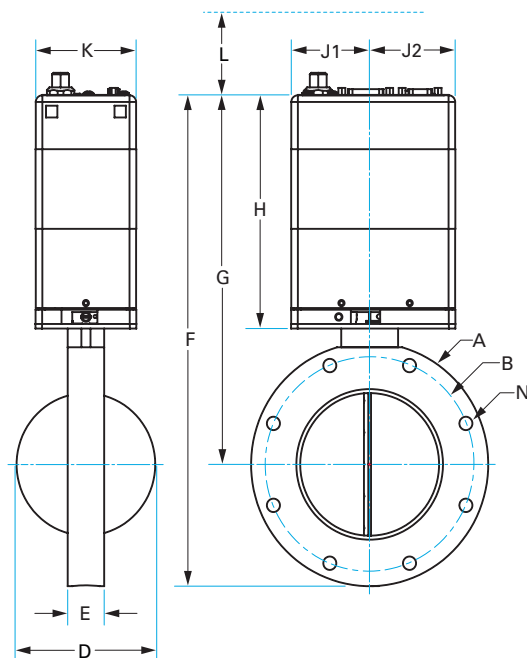
## Throttling butterfly valve, EtherCAT controller

### HV throttling butterfly valve, DN 160 ISO-F, QPM controller, 24 VDC, SS

- Adaptive algorithm for improved stability and faster transitions
- Space saving, low cost design
- High reliability, low particle generation
- Can be operated in any orientation
- Body can be heated up to 200°C with optional heaters
- CE marked/fully REACH and RoHS compliant



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#### Dimensions (in inches)

Dim A	8.90"
Dim B	7.87"
Dim C	0.433"
Dim D	5.87"
Dim E	1.62"
Dim F	15.4"
Dim G	11.0"
Dim H	6.22"
Dim J-1	2.17"
Dim J-2	2.36"
Dim K	2.76"
Dim L	2.36"
Bolt Hole Dia.	0.438"
# Bolt Holes	8

#### TBVQPMNN-L103

Parameters	Specifications
Valve / Flange Size	DN 160 ISO-F
Communications Interface	EtherCAT
Additional Controller Features	none
Flange Size / Type	DN 160 ISO-F
Controller Communications	EtherCAT system interface; RS232 service port
Supply Voltage	24 V DC ( $\pm 5\%$ )
Power Connector	XLR, 5-pin, Female
Gauge Power Supply	not included
Pressure Range	$1 \cdot 10^{-8}$ mbar to 1.1 bar
Max Differential at Opening	1100 mbar
Max Temp (body)	150 °C

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**TBVQPMNN-L103**

Parameters <i>(Continued)</i>	Specifications <i>(Continued)</i>
Temp. Limits (actuator)	5 °C (minimum), 45 °C (maximum)
Open / Close Time	250 ms/250 ms
Open Conductance	3800 l/s
Min. Control Conductance	1.7 l/s
Material (valve body)	316L Stainless Steel
Material (valve mechanism)	316L Stainless Steel
Plate Seal	none
Shaft Seal	FKM
Leak Rate (body)	$1 \cdot 10^{-9}$ mbar l/s
Service Life	5 million cycles
Weight	21.78 lbs

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RoHS2/REACH compliant  
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