Aerial Refueling Boom Bypass

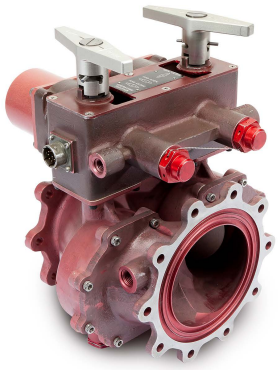
77585

AIRCRAFT

The Aerial Refueling Boom Bypass Valve is a parallel redundant fuel shutoff valve in a common hous-ing. Each butterfly type valve is spring-loaded closed and actuated open with applied hydraulic fluid.

Each hydraulic actuator has series-redundant piston seals with a drain between leading to a single hydraulic drain port. Each end interface fuel port and each fuel valve section also has series redundant static seals with a drain between all redundant seals leading to a single fuel drain port.

Each hydraulic actuator includes integral hand valves to manually override and close hydraulically actuated open valves.



Features

- Dual (parallel) valves in a single compact assembly
- Position indication switches for each valve coupled to a single electrical connector
- Single hydraulic and fuel drain ports for redundant seals
- Manual override to close hydraulically open valves
- Positive locking to ensure closed valves cannot be manually overridden open

Operating Parameters

Fuel Operating Pressure	≤120 psig
Fuel Proof Pressure	240 psig
Fuel Burst Pressure	360 psig
Fuel Temperature	-65° to 225°
Hydraulic Operating Pressure	≤3000 psig
Hydraulic Proof Pressure	4500 psig
Hydraulic Burst Pressure	7500 psig
Hydraulic Temperature	-65° to 225°

Ambient Temperature	-65°F to +165°F
Fuel Flow Rating	≤0.5 psid @ 330 GPM
Switch Rating	5 amp @ 28 VDC per contact set
Actuator Opening Valve Response	≤50 mSec
Actuator Closing Valve Response	≤100 mSec
Internal Leakage	≤3 cm^3/min
External Leakage	no visual
Weight	≤11 lb (≤5kg)

Performance characteristics are based on customer requirements. As such, they are not representative of component capabilities or limitations.

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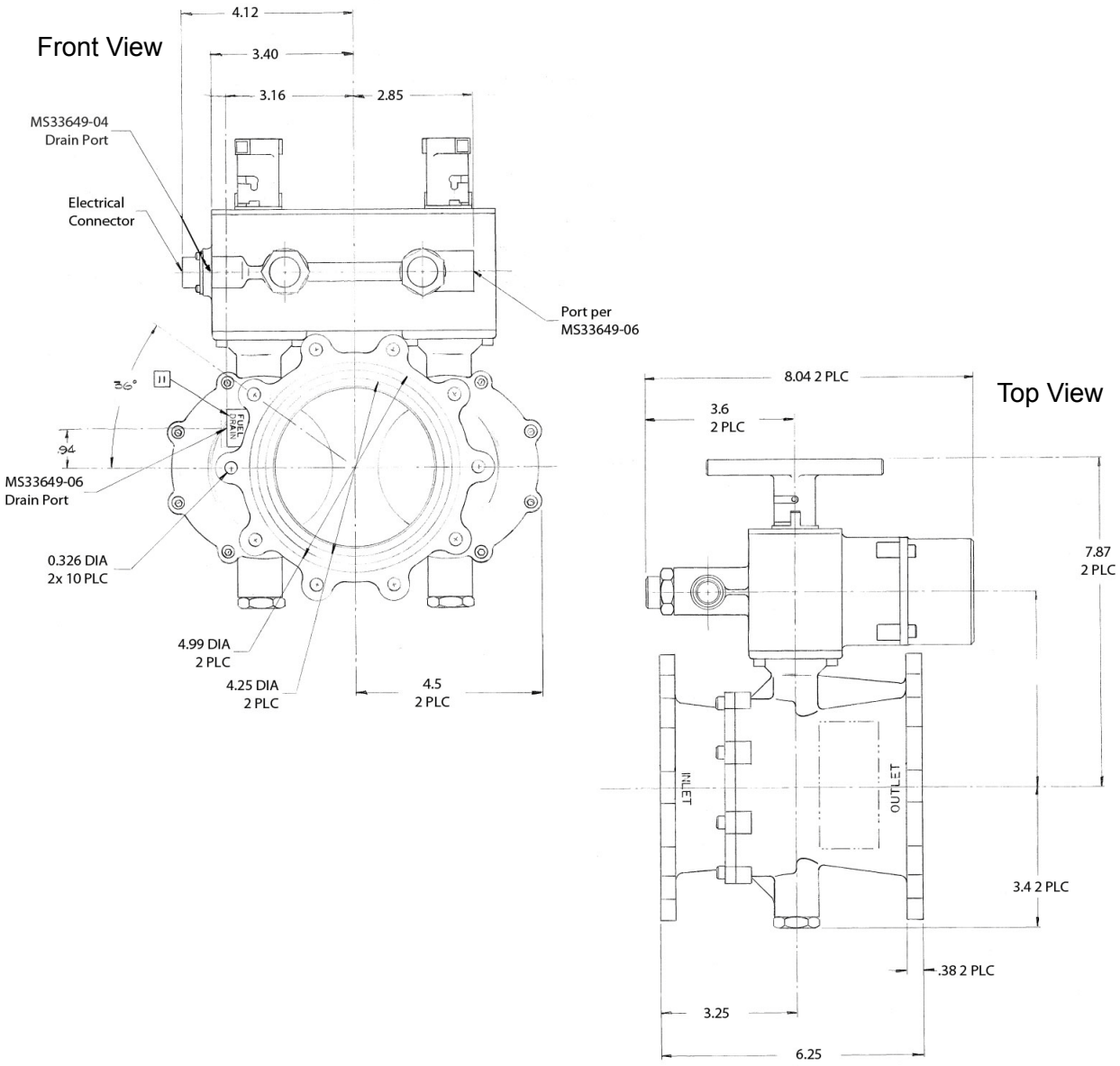
Envelope Drawings



Electrical Schematic