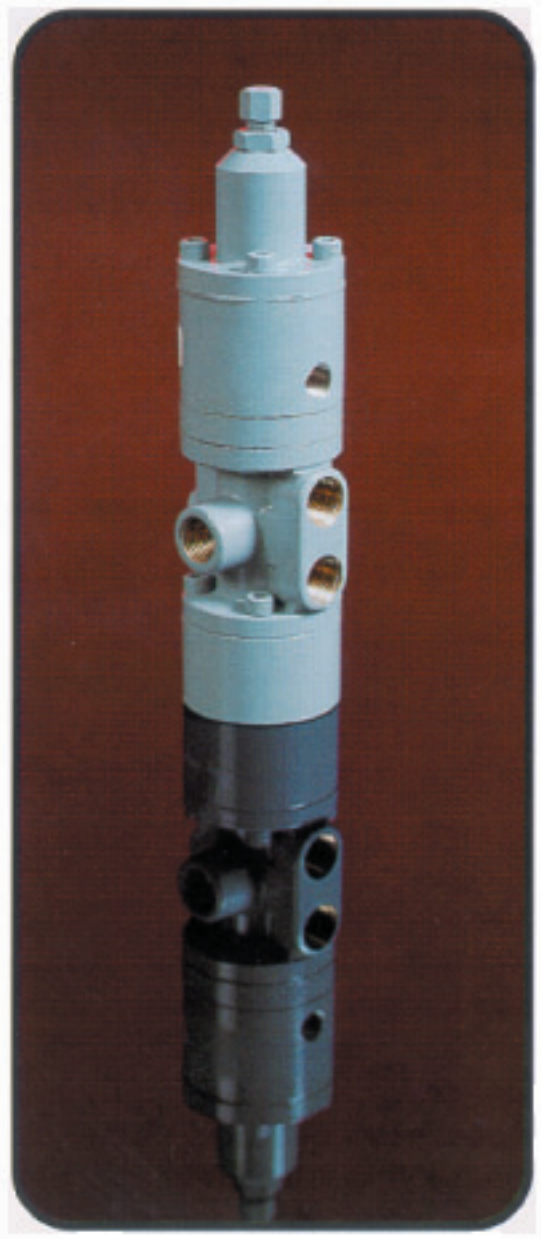
SNAP-ACTING RELAYS

GVB/GVB12 Series



Designed for pneumatic systems, Conoflow Series GVB Snap-Acting Relays change ports to switch or lock in secondary air source when the main supply pressure fails below a predetermined set point. In the event of supply or pilot pressure failure, the positive action relay with one common and two inlet or outlet ports will automatically:

- Switch from main to auxiliary supply pressure
- Lock an actuator in its last position
- Extend or retract an actuator stem
- Divert flow or pressure from one device to another

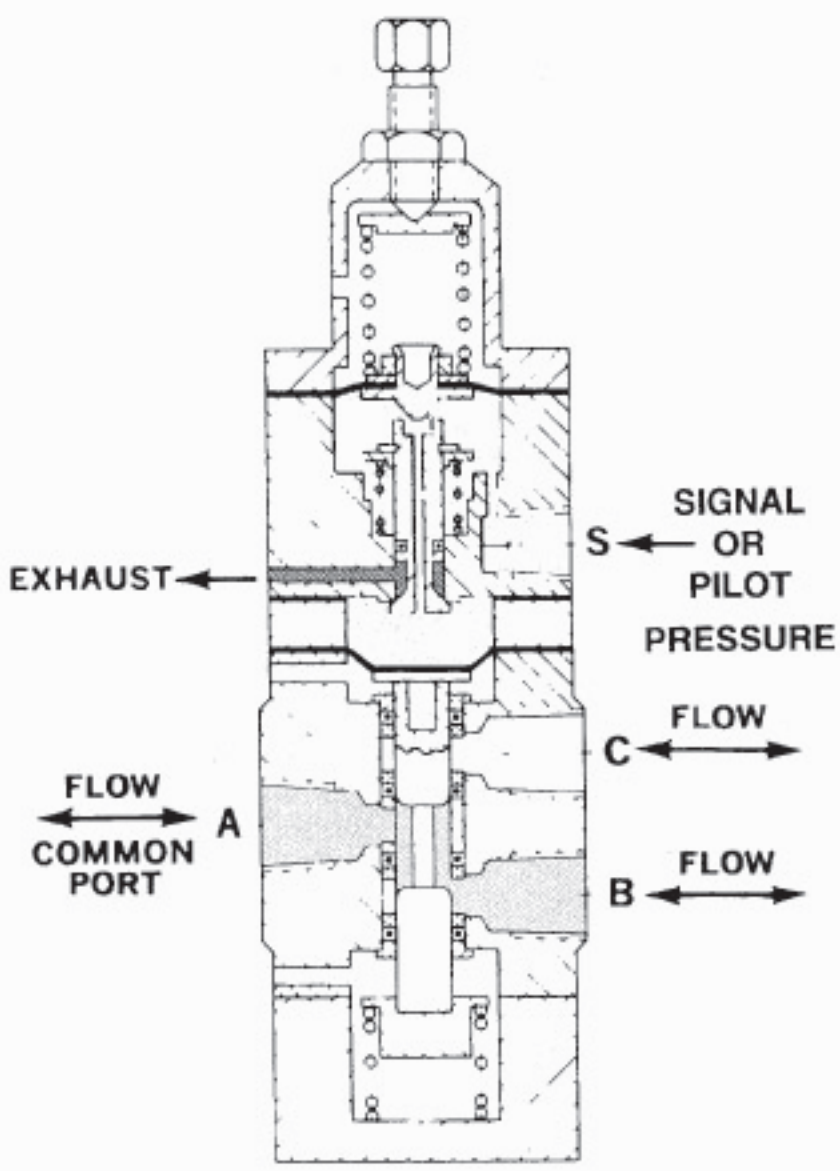
The Series GVB Snap-Acting Relays have an integral pilot which eliminates the extra piping and connections required with other lock-up valves. Compact and lightweight, the relays are easily piped and mounted.

PRINCIPLE OF OPERATION (GVB11)

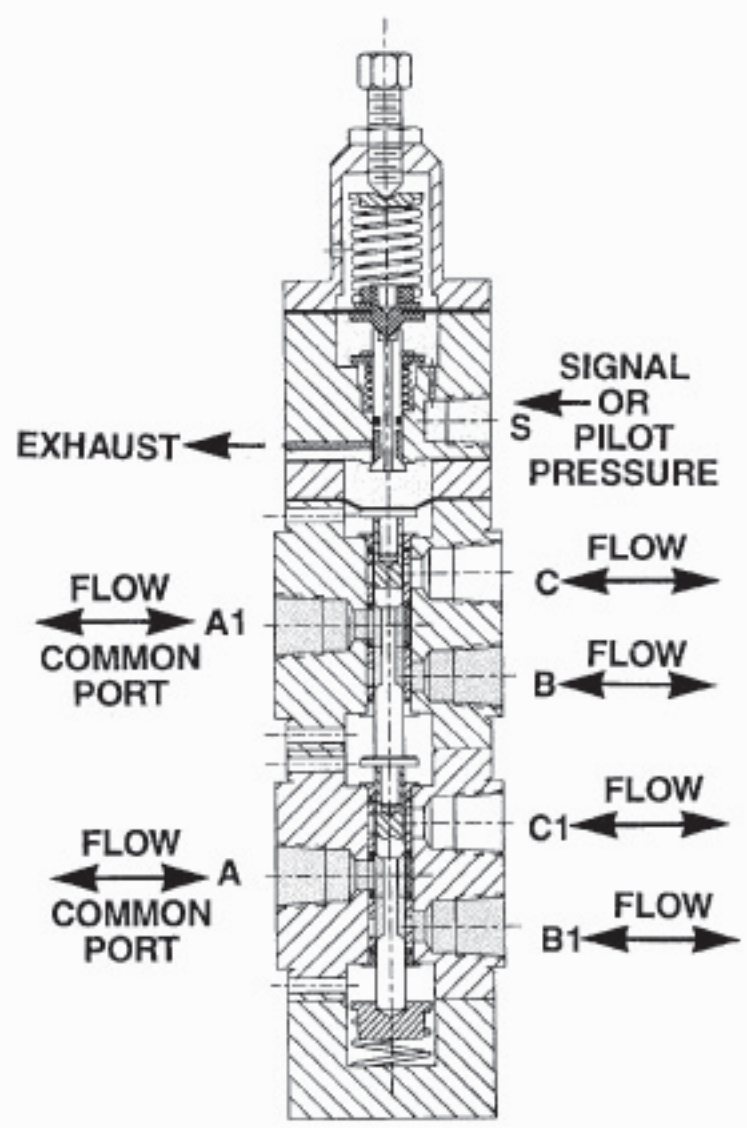
The pressure at which the relays will actuate can be adjusted to any point between 25 PSI (172 kPa) and 85 PSI (586 kPa). Signal or pilot pressure acting in the upper diaphragm overcomes the force of the spring in the bonnet and permits air to flow into the lower chamber. This pressure buildup forces the spring-loaded spool valve to open common Port "A" to "B". When the pressure drops below the preset point, the exhaust port opens and common Port "A" is switched from "B" to "C" by releasing the spring loaded spool valve.

The spool valve will return to its original position ("A" to "B" when the pressure to the pilot is less than or equal to 20% greater than the set point. For example, if the set pressure is 50 PSI (345 kPa), the unit will return to its original position when the pressure to the pilot builds up to approximately 60 PSI (414 kPa).

Model GVB12 Relay has two spool sections mounted in tandem with the lower ports designated as "A1", "B1" and "C1".



GVB11



GVB12

Supply Pressure

Controlled Air

Exhaust

SPECIFICATIONS

Set Pressure: 25 PSI to 85 PSI (172 to 586 kPa)
Maximum Supply Pressure (1): 150 PSI (1034 kPa)
Maximum Operating Pressure: 150 PSI (1034 kPa)
Port Diameter: 3/16" (C_V 0.38)
Max. Pilot Air Consumption: 3.1 SCFH (0.060 m^3/min)
Ambient Temperature Range: 0°F to +150°F (-18°C to +66°C)
Connections:
Sensing Port: 1/8" NPT
All Others: 1/4" NPT
Weight:
GVB11: 1-3/4 lbs. (0.79 Kg)
GVB12: 2-3/4 lbs. (1.25 Kg)
NOTE: 1. Supply (Pilot) pressure must be at least 20% greater than set pressure.

MATERIALS OF CONSTRUCTION

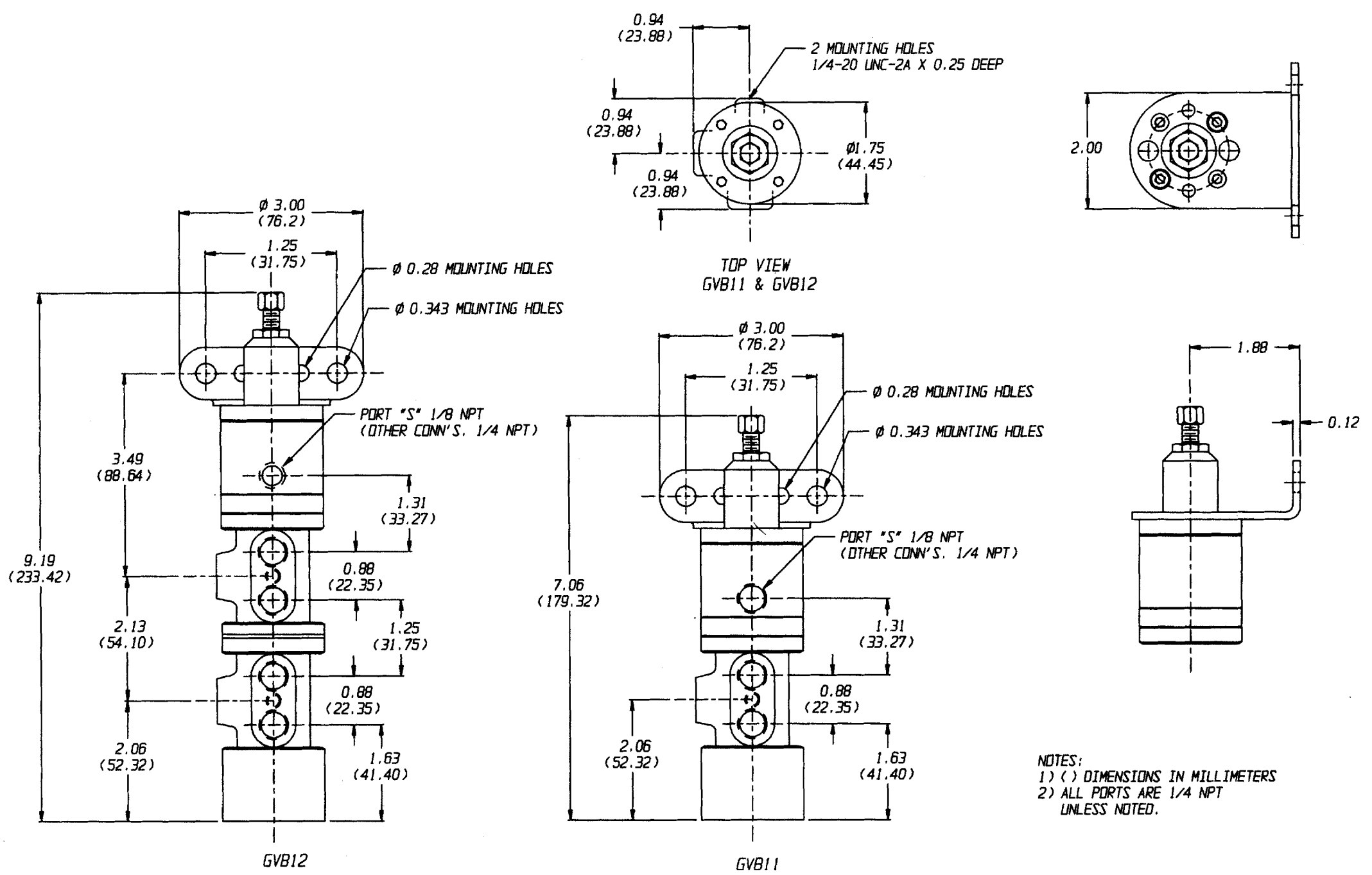
PILOT */**
Body and Bonnet: Aluminum
Inner Valve: Brass
Range Spring: Steel
Diaphragm: Buna "N"

VALVE */**
Body: Brass
Spool: 303 Stainless Steel
Diaphragm: Buna "N"
Bottom Cap: Aluminum

*Stainless Steel Construction available, consult the factory.
**Viton and Silicone Elastomers available, consult the factory.

CANADIAN REGISTRATION NUMBERS

The GVB11 and GVB12 have received the following Canadian Registration Numbers:
Alberta / OHO266-92
British Columbia / OHO266-91
Manitoba / OHO266.94
New Brunswick / OHO266.97
New Foundland / OHO266.90
Northwest Territory / OHO266.9T
Nova Scotia / OHO266.98
Prince Edward Island / OHO266.99
Saskatchewan / OHO266.93
Yukon / OHO266.9Y



For Certified Dimensional Drawing, refer to A29-1