



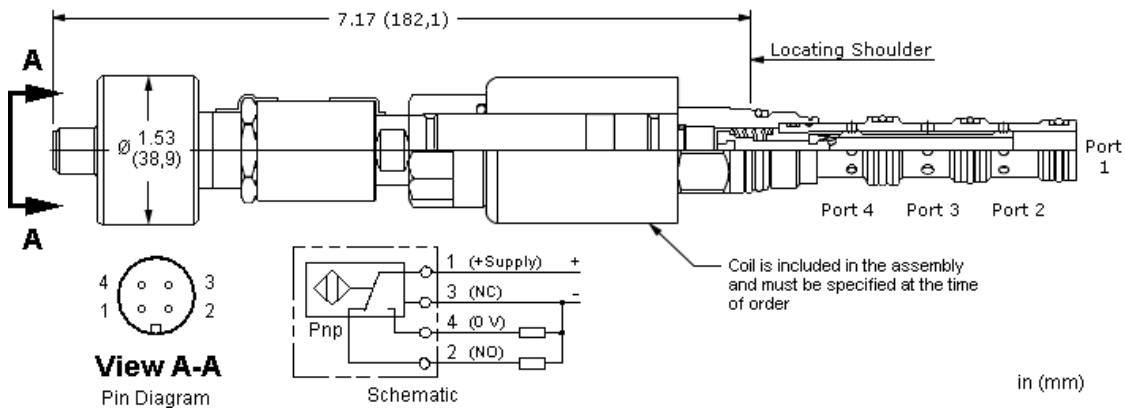
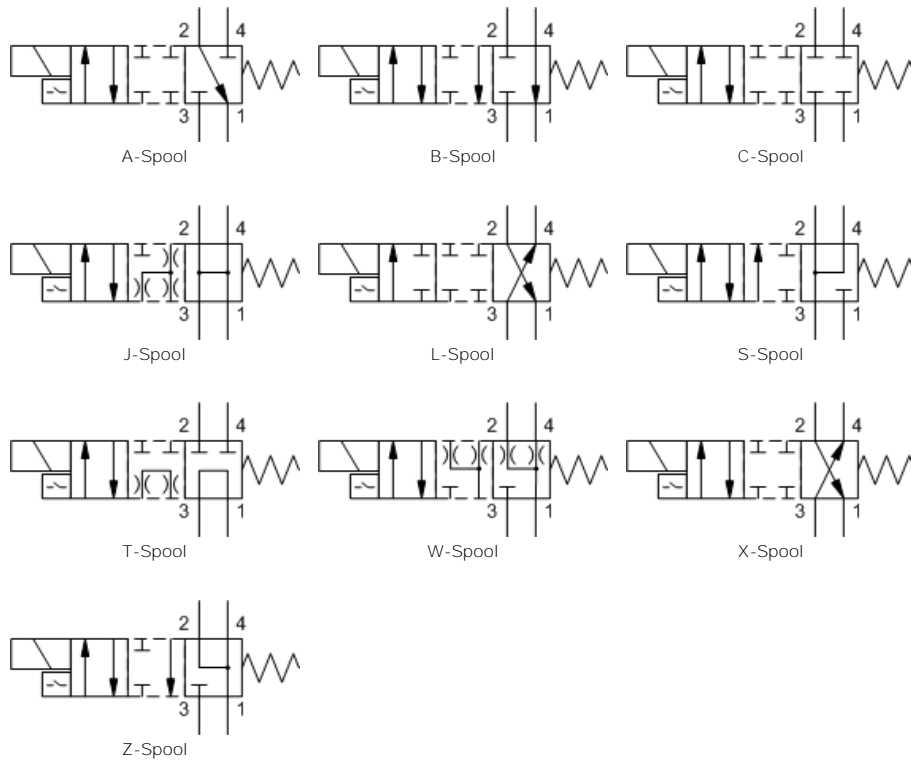
4-way, 2-position, solenoid-operated directional spool valve with closed transition and position switch

Capacity:
8 gpm (30 L/min.)
Model:
DNCAZ

Product Description

This solenoid-operated, 4-way, 2-position cartridge is a direct-acting, balanced spool directional valve. The transition between positions is closed. The closed transition greatly reduces the loss of oil when shifting which can be of particular importance in pilot control circuits.

The position switch provides confirmation that the valve is in the spring biased position.



Technical Features

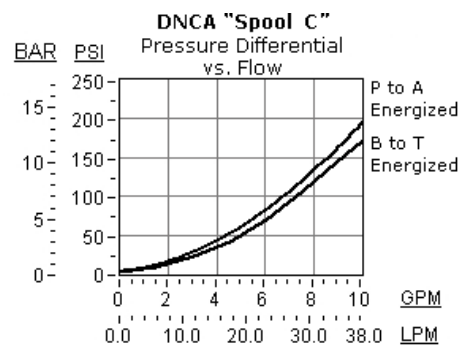
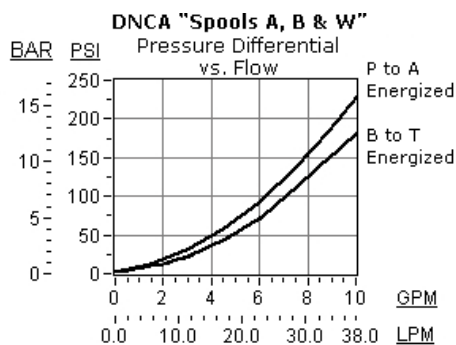
- A coil must be ordered with this cartridge. This cartridge is supplied as a sealed, factory set unit and is not field serviceable. If the assembly requires changes or service it needs to be returned to the factory.
Any tampering will violate the product warranty.
- Position switch is CE approved.
- When torquing this cartridge into its cavity, a crow's foot wrench or similar will be required since the position switch precludes the use of a deep socket wrench.
- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- This valve is direct actuated and requires no minimum hydraulic pressure for operation.
- This valve utilizes a wet armature design. This means that the working fluid surrounds the armature and is exposed to the heat generated by the coil. This can be a factor if the coil is energized for long periods of time. Some fluids, notably water/glycol mixtures, break down at these temperatures over time and form varnishes that will affect the function of the cartridge.
- A wide variety of coil termination and voltage options are available.
- The solenoid's unique magnetic design results in a high efficiency solenoid, yielding high spool actuating force per Watt expended, leading to reliable valve shifting.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

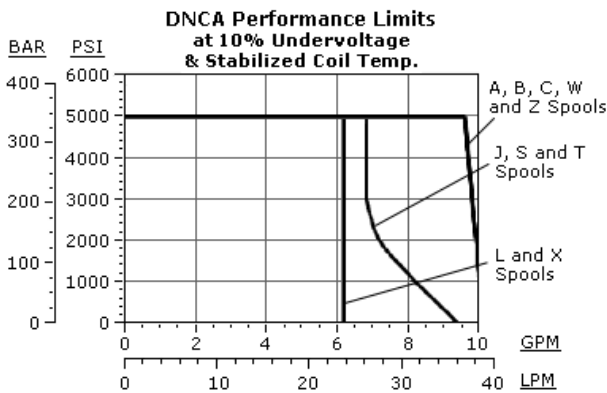
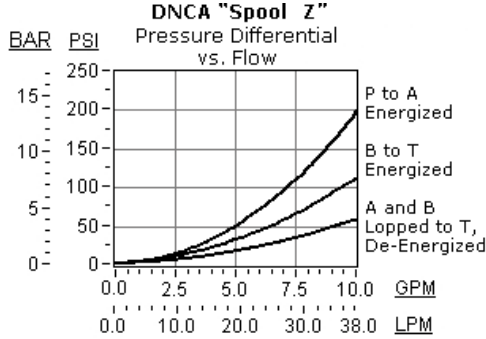
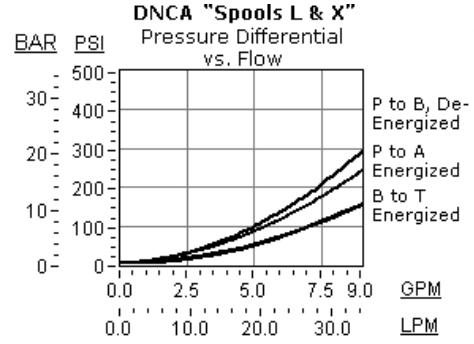
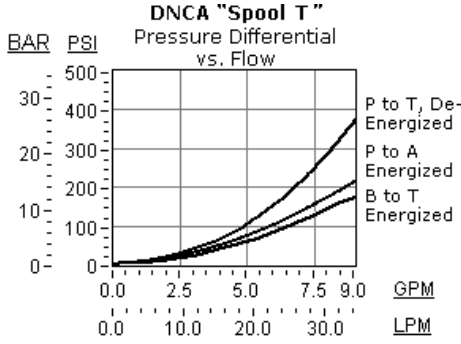
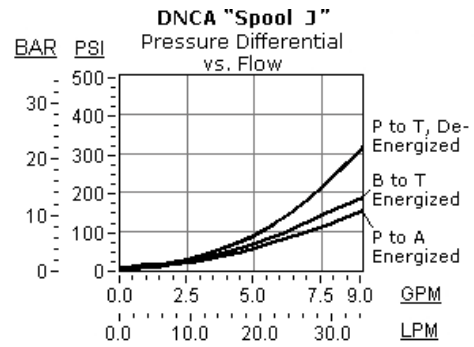
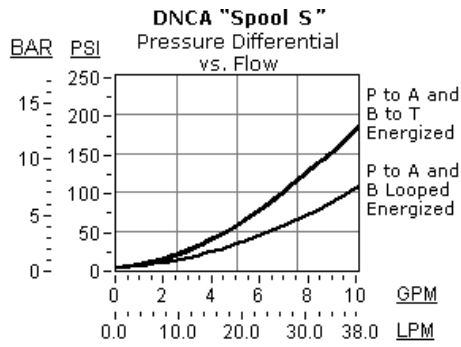
Technical Data

| | U.S. Units | Metric Units |
|---|------------------------------------|----------------------|
| Cavity | | T-31A |
| Capacity | 8 gpm | 30 L/min. |
| Maximum Operating Pressure | 5000 psi | 350 bar |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 10 in ³ /min. @3000 psi | 160 cc/min. @210 bar |
| Response Time - Typical | | 50 ms |
| Series (from Cavity) | | Series 1 |
| Switching Frequency | | 15000 cycles/hr |
| Solenoid Tube Diameter | .75 in. | 19 mm |
| Valve Hex Size | 7/8 in. | 22,2 mm |
| Valve Installation Torque | 30 - 35 lbf ft | 40 - 50 Nm |
| Model Weight | .60 lb | 0,30 kg |
| Seal Kits - Cartridge | | Buna: 990-431-007 |
| Seal Kits - Cartridge | | Viton: 990-431-006 |

Switch Specifications

| | U.S. Units | Metric Units |
|--------------------------------|------------|---------------------------|
| Supply Voltage | | 20-30 VDC |
| Reverse Polarity Protection | | Yes |
| Maximum Output Load | | = 400 mA, Duty Ratio 100% |
| Short Circuit Protection | | Yes, Load Short Unlimited |
| Turn On Time | | = 25 ms |
| Hysteresis | | = .002 in. |
| Operating Temperature Range | | -25 to 80 °C |
| Thermal Shift - 0 to 80 °C = ± | .004 in. | 0,1 mm |
| EMC | | DIN EN 61000-6-1/2/3/4 |
| Connector Environment Rating | | IP65 |
| Vibration | | = 50g, 0-500 impulses/sec |
| Shock | | >50 g, 1ms |
| Connector | | M12 X 1 (4) Pin |





DNCA-ZCN-224

Spool Configuration

Standard Options

- A A to T Center
- B B to T Center
- C Closed, Shift to Through

Seal Material

Standard Options

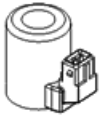
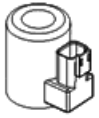
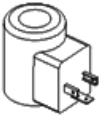
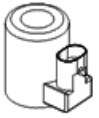
- N Buna-N
- V Viton

Coil

*** See Coil Options Below

- J Open, Shift to Cross
- L Cross, Shift to P to A, B and T Blocked
- S Regen Center
- T Tandem, Shift to Through
- W A and B Bleed to T Center
- X Through, Shift to Cross
- Z Motor, Shift to Cross

Standard Coil Options

| | | | |
|---|---|---|---|
|  |  |  |  |
| AMP Junior Timer | Deutsch DT04-2P | DIN 43650 4 pin (Hirschman) | Metri-Pack |

| | | | | | |
|-----|-------------------------------------|-----|-------------------------|-----|------------------------|
| 211 | DIN 43650 4 pin (Hirschman) 115 VAC | 612 | AMP Junior Timer 12 VDC | 824 | Metri-Pack 24 VDC |
| 212 | DIN 43650 4 pin (Hirschman) 12 VDC | 624 | AMP Junior Timer 24 VDC | 912 | Deutsch DT04-2P 12 VDC |
| 223 | DIN 43650 4 pin (Hirschman) 230 VAC | 812 | Metri-Pack 12 VDC | 924 | Deutsch DT04-2P 24 VDC |
| 224 | DIN 43650 4 pin (Hirschman) 24 VDC | | | | |