ENGINEERING TOMORROW

Data Sheet

Solenoid Controlled Pilot Operated Directional Valve

DG5V-7-*-50

The DG5V-7-*50 is a pilot operated direction control valve used primarily for controlling the starting, stopping and direction of fluid flow. The product comes with spool position monitoring switch option (PCA/PCB/PDA/PDB/PCD in model code). All spools have been designed to provide good low shock, fast response characteristics which can be enhanced by optional stroke and/or pilot choke adjustments. Models include spring offset, spring centered and detented versions. DG5V valves can be arranged for internal or external pilot pressure and/or drain connections. The mounting interface is ISO-4401-07 (CETOP-7).

Features

- High pressure and flow capability
- Low-pressure drop-in P-A, P-B, B-T, A-T to minimize power wastage
- Low shock characteristics to maximize machine life.
- Facility to change solenoid coil without disturbing the hydraulics envelop.
- External / Internal, Pilot pressure & Drain Plug accessible from the top face & without removing the end cover.

Applications

- Industrial

Comprehensive technical literature is online at *www.danfoss.com*

Technical data

Parameter	Value
Maximum pressure P,A,B	350 bar [5076 psi]
Maximum pressure T	300 bar [4350 psi]
Maximum pressure X and Y	250 bar [3625 psi]
Max oil flow	300 l/min [80 US gal/min]
Oil temperature	20° to 50°C [68° to 122°F]
Viscosity	16 to 51 cSt
Cleanliness acc. ISO 4406	19/17/14

Note
Pilot pressure must always exceed tank line pressure by at least the requisite minimum pilot pressure. This also applies when combining open center spools (0, 1, 8, 9 and 11) with internal pilot pressure, but they should be used only with externally drained valves. Internally drained valves may be used only when surges in the tank line cannot possibly overcome the minimum pilot pressure differential referred to above. When the possibility of pressure surges in the tank line exist, externally drained valves are recommended.

Determination of MTTFd

Evaluation of Mean Time to Dangerous Failure (MTTFd) for DG5V-7-*-50 & valve assembly is based on part count method and for each component based on “Good Engineering Practice Method” using annexure for assessments as per ISO 13849-2:2012.

Reliability data

Model code	MTTFd acc. ISO 13849:2015
DG5V-7-*-50 (w/o spool monitoring switch)	75 years
DG5V-7-*-PCA/PCB/PCD-*-50 (Power Removed)	75 years
DG5V-7-*-PCA/PCB-*-50	65.9 years
DG5V-7-*-PCD-*-50	58.8 years