

Parker Product Datasheet



Representing cutting-edge technology, Parker's new compact D1FC (NG06) / D3FC (NG10) provide optimized process speed with high dynamics and flow for various applications. Optionally with EtherCAT® interface for high data speed and short cycle times.

PART NUMBER: D1FCE01FC9NS03
FLOW RATE: 10 L/MIN
CONNECTION TYPE: 6 + PE
SEAL MATERIAL: NBR
FUNCTION: 12 to 20 mA = P-A
PORT CONNECTION: NG06 / CETOP 03
SIGNAL INPUT: 4 to 20 mA
SPOOL TYPE: Overlap
SIGNAL OUTPUT: +10...0...-10 V
MARKING: Standard
SPOOL CODE: E01, equal metering, 4-way, 3 position, all ports open
DEFINED SPOOL POSITION AT POWER DOWN: Center position

PRODUCT OVERVIEW

The direct operated proportional DC valves series D1FC (NG06/ CETOP 03) and D3FC (NG10/CETOP 05) with digital onboard electronics and position feedback provides optimized process speed with high dynamics and flow for various applications. The LVDT is completely integrated into the compact housing, therefore it does not require an exposed cable connection. Thus an unintended disconnection is impossible. The digital onboard electronics is situated in a robust metal housing, which allows the usage under rough environmental conditions. The nominal values are factory set. The cable connection to a serial RS232 interface is available as

accessory.

Optionally available with EtherCAT® interface

The D1FC and D3FC with EtherCAT® interface fulfill the requirements of modern communication between valve and main control. Due to high data transmission speed and short cycle times, also demanding control functions can be realized within the fieldbus system.

The valve is actuated and monitored by the EtherCAT® interface. Actual value (spool position), temperature, operating hours and different error messages are available as diagnostic signals. The valve parameters are factory set and can be adapted with the Parker ProPxD software via the parametrizing interface.

In addition to the fieldbus communication, the valves provide the range of functions of the standard version including analogue command signal and diagnostic spare stroke. Thus they can be operated independent of the fieldbus control, particularly during commissioning and maintenance.

Markets:

- Industrial
- Power generation
- Machine tools
- Molding
- Rubber & tire processing

Features/benefits:

- High level of dynamics and flows - optimized process speed
- Very good repeatability - improved process and product accuracy
- Fully integrated position feedback system - protection from mechanical external influences, resulting in lower down times
- Position feedback sensor positioned directly on the spool - very precise measurements, resulting in improved process accuracy
- Digital electronics - can be easily adapted to the application, resulting in flexible use
- Short delivery time - no storage necessary
- Compact dimensions - for use in particularly confined conditions
- With EtherCAT® interface upon request - high data speeds, short cycle times
- Progressive flow characteristics for sensitive adjustment

Applications:

- Machine tool

- General presses
- Tire presses

TECH SPECIFICATIONS

DIVISION	Hydraulic Valve Systems Division Europe
MAXIMUM OPERATING PRESSURE	350 bar
FOR FLUID TYPE	Hydraulic Oil according to DIN 51524 ... 535
BODY MATERIAL	Cast Iron
PRODUCT SERIES	Proportional DC Valve
SEAL MATERIAL	NBR
WEIGHT	3.4 kg
MAXIMUM FLOW RATE	n/a
MOUNTING TYPE	Subplate
FUNCTION	3-way
ACTUATION TYPE	Proportional
ACTUATION TYPE	Solenoid
OPERATION TYPE	Direct
RESPONSE TIME	20 ms
LEAK RATE	< 50 ml/min (overlap spool)
MOUNTING POSITION	Unrestricted
ELECTRONICS TYPE	Onboard
MAXIMUM AMBIENT TEMPERATURE	60 °C
MINIMUM AMBIENT TEMPERATURE	-20 °C
MAXIMUM FLUID TEMPERATURE	60 °C
MINIMUM FLUID TEMPERATURE	-25 °C

MAXIMUM KINEMATIC VISCOSITY	400 cSt
MINIMUM KINEMATIC VISCOSITY	20 cSt
INGRESS PROTECTION RATING	IP65 in accordance with EN 60529
FILTER EFFICIENCY RATING	ISO 4406; 18/16/13
HYSTERESIS	< 0.1 %
MOUNTING STYLE	DIN 24340 / ISO 4401 / CETOP RP121 / NFPA
PRESSURE DIFFERENTIAL	5 bar
POWER SUPPLY VOLTAGE	18 to 30 VDC electric shut-off at < 17, ripple < 5 % eff., surge free
SPOOL DESIGN	Spool/body
VIBRATION RESISTANCE	10 Sinus 5...2000 Hz Acc. IEC 68-2-6
VIBRATION RESISTANCE	15 Shock Acc. IEC 68-2-27
VIBRATION RESISTANCE	10 (RMS) Random Noise 20...2000 Hz Acc. IEC 68-2-36
VARIATION OF OPENING POINT	set to 10 % command signal