

Characteristics

Introduction

The new proportional valves with position feedback series D*FC (direct operated) and D*1FC (pilot operated) 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.

The option with EtherCAT is available for the series:

- D1FC, D3FC
- D31FC, D41FC, D91FC, D111FC



D1FC with EtherCAT



Features EtherCAT interface

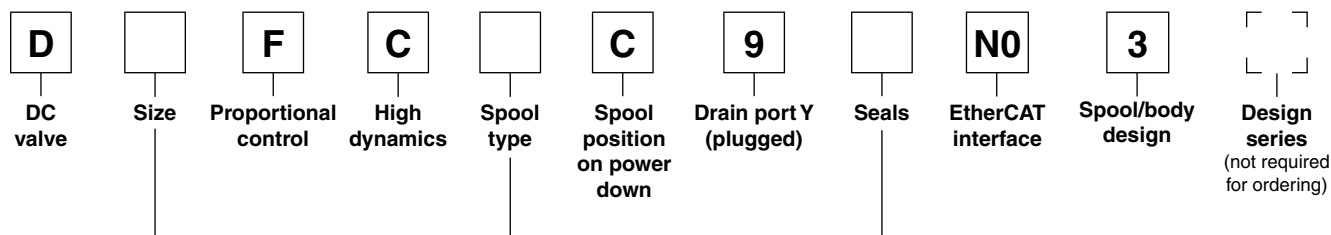
- EtherCAT interface, 2x M12x1 connector 4-Pin (EtherCAT In and EtherCAT Out)
- Progressive flow characteristics for sensitive adjustment
- Low hysteresis
- High dynamics
- High flow capacity
- Onboard electronics

Technical Data

Electrical		
Duty ratio	[%]	100
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)
Supply voltage/ripple	[V]	18...30, electric shut-off at < 17, ripple < 5 % eff., surge free
Current consumption max.	[A]	2.0 (D1FC, D*1FC), 3.5 (D3FC)
Pre fusing medium lag	[A]	2.5 (D1FC, D*1FC), 4.0 (D3FC)
Differential input	[V]	30 for terminal D and E against PE (terminal G)
Diagnostic signal	[V]	+10...0...-10 / +12.5 error detection
EMC		EN 61000-6-2, EN 61000-6-4
Electrical connection		6 + PE acc. to EN 175201-804
EtherCAT interface		2 x socket M12x1: 5p acc. to IEC61076-2-101
Wiring min.	[mm ²]	3 x 1.0 (AWG16) overall braid shield
Wiring length max.	[m]	50
Wiring EtherCAT		acc. to CiA DS-301 Version 4 / Twisted pair cable acc. to ISO11898
EtherCAT profiles		Communication Layer IEC 61158-x-12, 301 Version 4 Device Profile in accordance with CIA DS - 408 Version 1.5.2 CANopen over EtherCAT (object dictionary)
Functionality		One PDO (Receive) One PDO (Transmit) BUS-cycle time down to 0.250 mSec.
Parameterization		
Interface		RS 232, parametrizing cable order code 40982923
Interface program		ProPxD (see www.parker.com/propxd)
Adjustment ranges	Min	[%] 0...50
	Max	[%] 50...100
	Ramp	[%] 0...32.5

Ordering Code

Direct Operated Proportional DC Valve

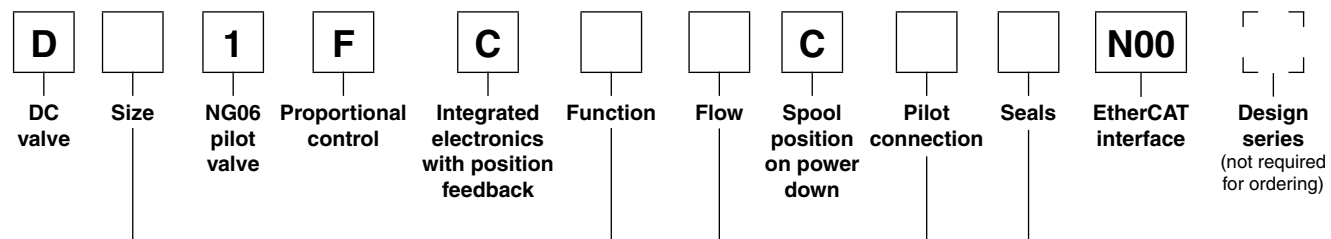


Code	Size
1	NG06 / CETOP 03
3	NG10 / CETOP 05

See ordering code for valve series without EtherCAT

3

Pilot Operated Proportional DC Valve

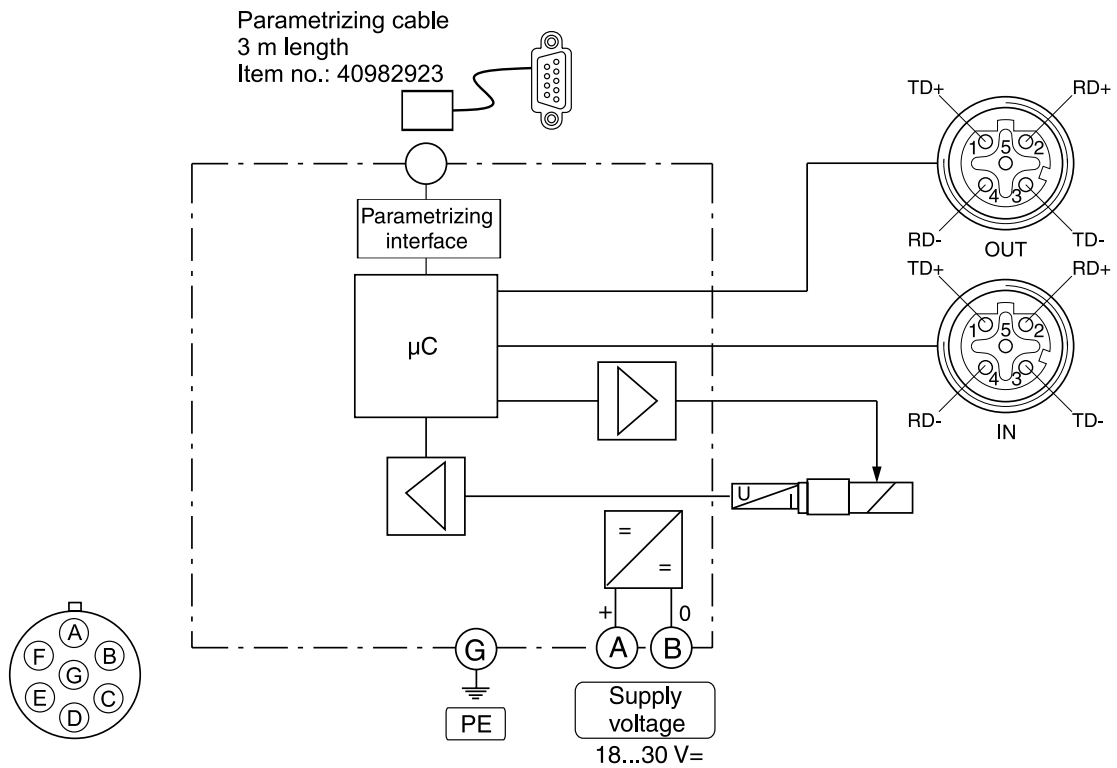


Code	Size
3	NG10 / CETOP 05
4	NG16 / CETOP 07
9	NG25 / CETOP 08
11	NG32 / CETOP 10

See ordering code for valve series without EtherCAT

Please order connector separately, see chapter 3 accessories.
Parametrizing cable OBE → RS232, item no. 40982923

Block diagram



3

Dimensions D1FC with EtherCAT

