Catalogue HY11-3500/UK
Characteristics

Direct and Pilot Operated Prop. DC Valve
Series D*FP and D*1FP with EtherCAT

3

Introduction

DFplus valves with EtherCAT interface fulfill the requirements of modern communication between valve and main control. Due to high data transmission speed and short cycle times, the high dynamics of the DFplus valves can be also utilized 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.

D1FP with EtherCAT

The option with EtherCAT is available for the series:
- D1FP, D3FP
- D30FP
- D31FP, D41FP, D81FP, D91FP, D111FP

as well as for cartridge valves TDP, TEP and TPQ in chapter 8.
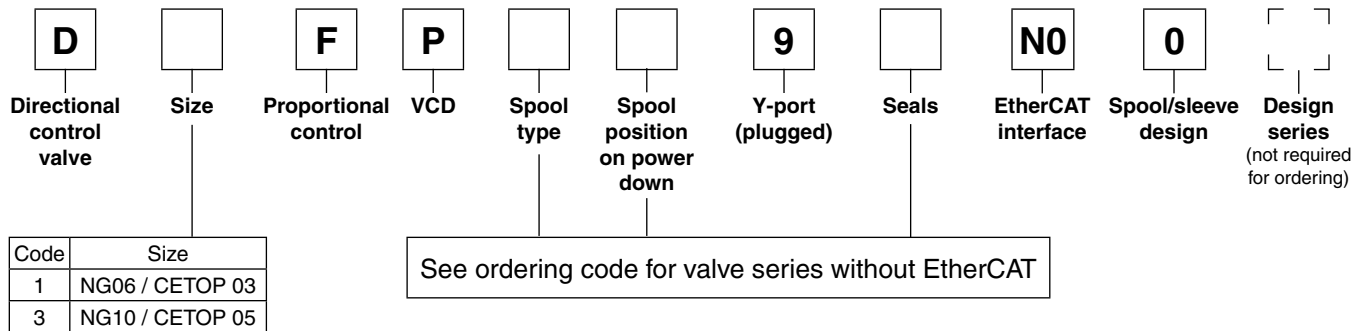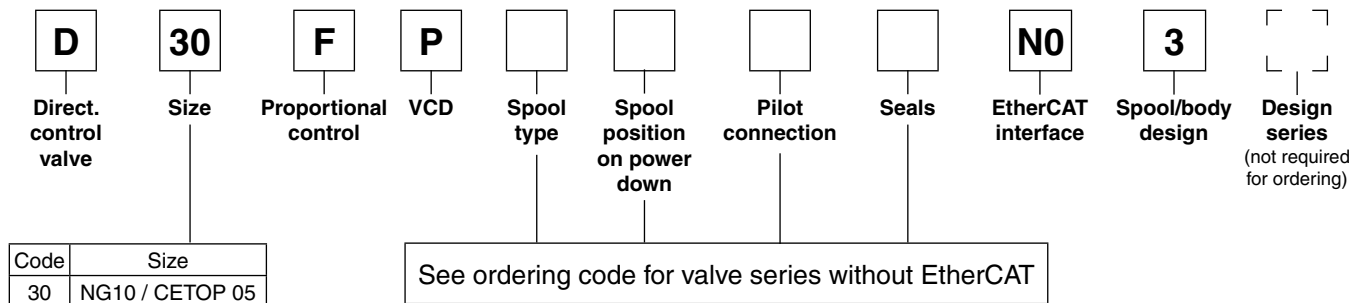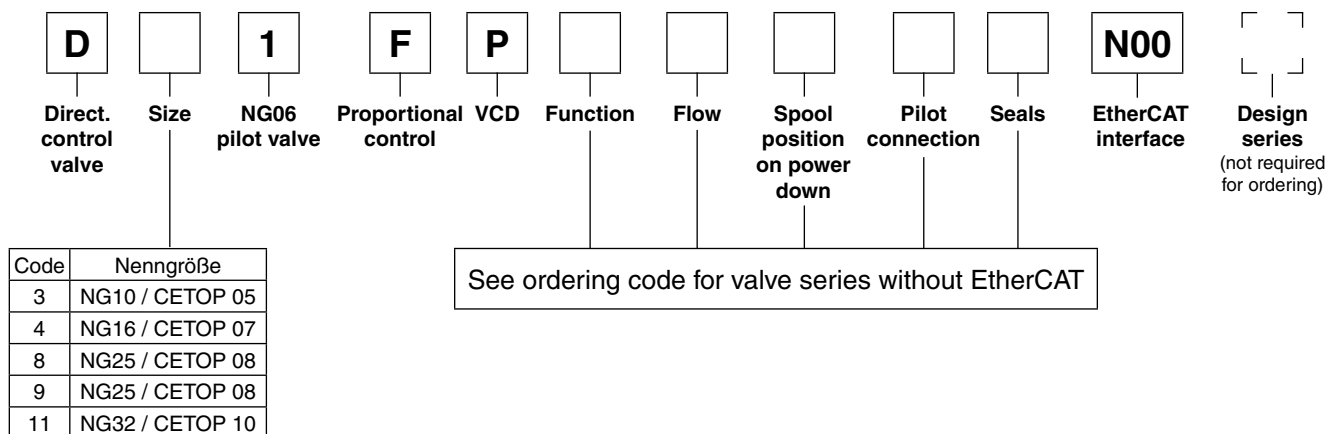
Features EtherCAT interface

- EtherCAT interface, 2x M12x1, connector 4-Pin (EtherCAT In and EtherCAT Out)
- 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]	22 ... 30, electric shut-off at < 19, ripple < 5 % eff., surge free
Current consumption max.	[A]	3.5
Pre fusing	[A]	4.0 medium lag
Differential input	[V]	30 for terminal D and E against PE (terminal G)
Diagnostic signal	[V]	+10...0...-10 / +12.5 error detection, rated max. 5 mA
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.	[mm²]	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

D_FP EtherCAT UK.indd RH 15.06.2018

Parker Hannifin Corporation
Hydraulics Group

Catalogue HY11-3500/UK
Ordering Code

Direct and Pilot Operated Prop. DC Valve
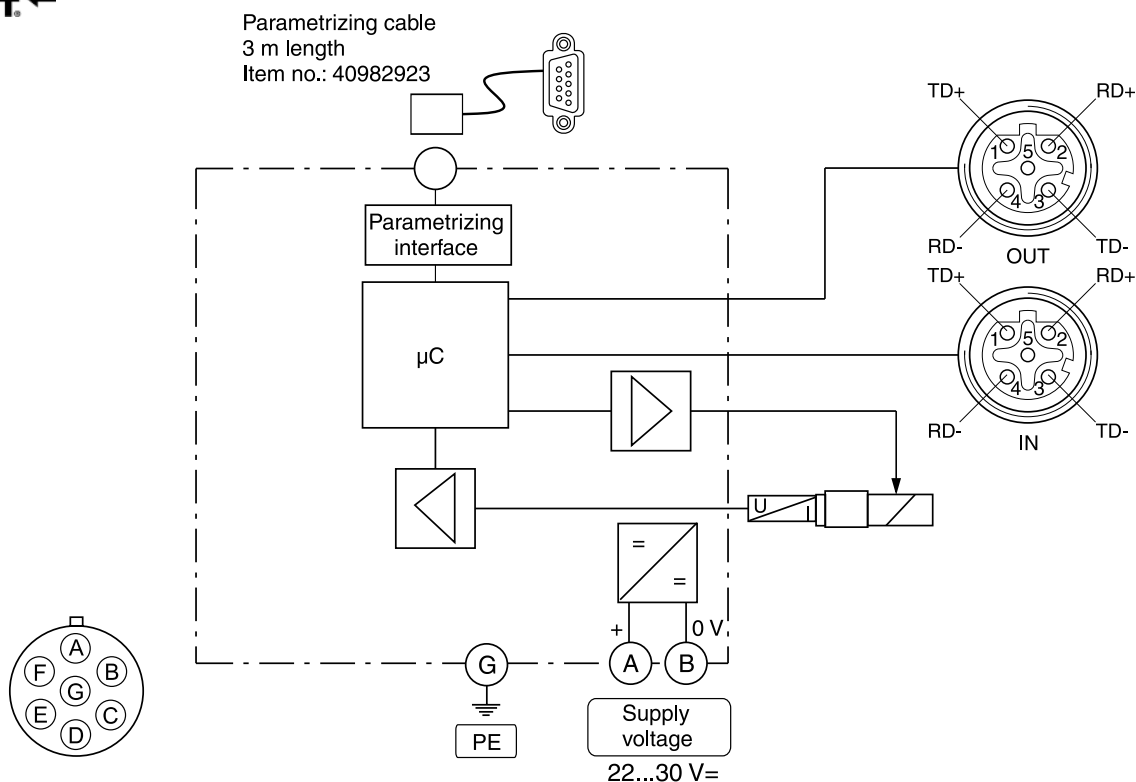**Series D*FP and D*1FP with EtherCAT**

The EtherCAT option is also available for the cartridge valves in chapter 8, series TDP, TEP and TPQ

Direct operated proportional DC valve

D		F	P			9		N0	0	⌐ ¬

Directional control valve · Size · Proportional control · VCD · Spool type · Spool position on power down · Y-port (plugged) · Seals · EtherCAT interface · Spool/sleeve design · Design series (not required for ordering)

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

See ordering code for valve series without EtherCAT

3

Pilot operated proportional DC valve

D	30	F	P					N0	3	⌐ ¬

Direct. control valve · Size · Proportional control · VCD · Spool type · Spool position on power down · Pilot connection · Seals · EtherCAT interface · Spool/body design · Design series (not required for ordering)

Code	Size
30	NG10 / CETOP 05

See ordering code for valve series without EtherCAT

Pilot operated proportional DC valve

D		1	F	P						N00	⌐ ¬

Direct. control valve · Size · NG06 pilot valve · Proportional control · VCD · Function · Flow · Spool position on power down · Pilot connection · Seals · EtherCAT interface · Design series (not required for ordering)

Code	Nenngröße
3	NG10 / CETOP 05
4	NG16 / CETOP 07
8	NG25 / CETOP 08
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

D_FP EtherCAT UK.indd RH 15.06.2018

Catalogue HY11-3500/UK
Block Diagram / Dimensions

Direct and Pilot Operated Prop. DC Valve
Series D*FP and D*1FP with EtherCAT

Block diagram

EtherCAT.

Parametrizing cable
3 m length
Item no.: 40982923

Parametrizing interface

μC

G

PE

A B

Supply voltage
22...30 V=

+ 0 V

TD+ RD+
RD- TD-
OUT

TD+ RD+
RD- TD-
IN

Dimensions D1FP with EtherCAT

Parametrizing connection

EtherCAT.
M12 female Out

EtherCAT.
M12 female In

Supply voltage connection

Ø9.5

147

22

Ø5.5

A B

222

14

22.5

124.5

46

P

A B

T Y

34

188

48