Parker Series PZD00A-40 E-Module for Command Signal Processing Service Manual
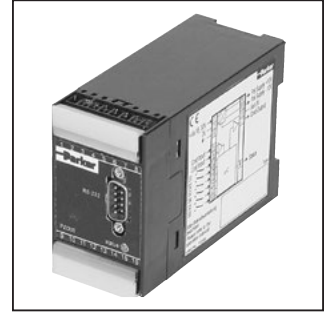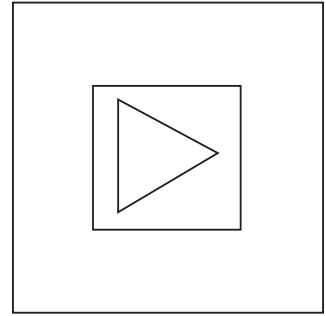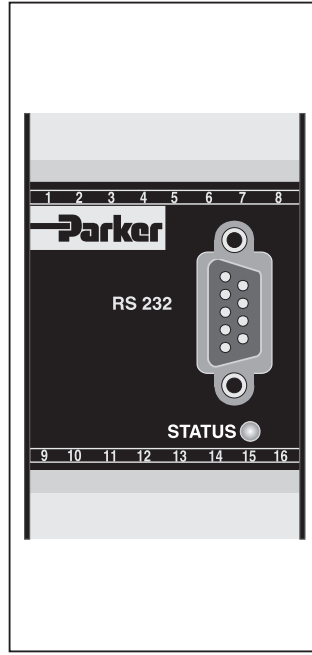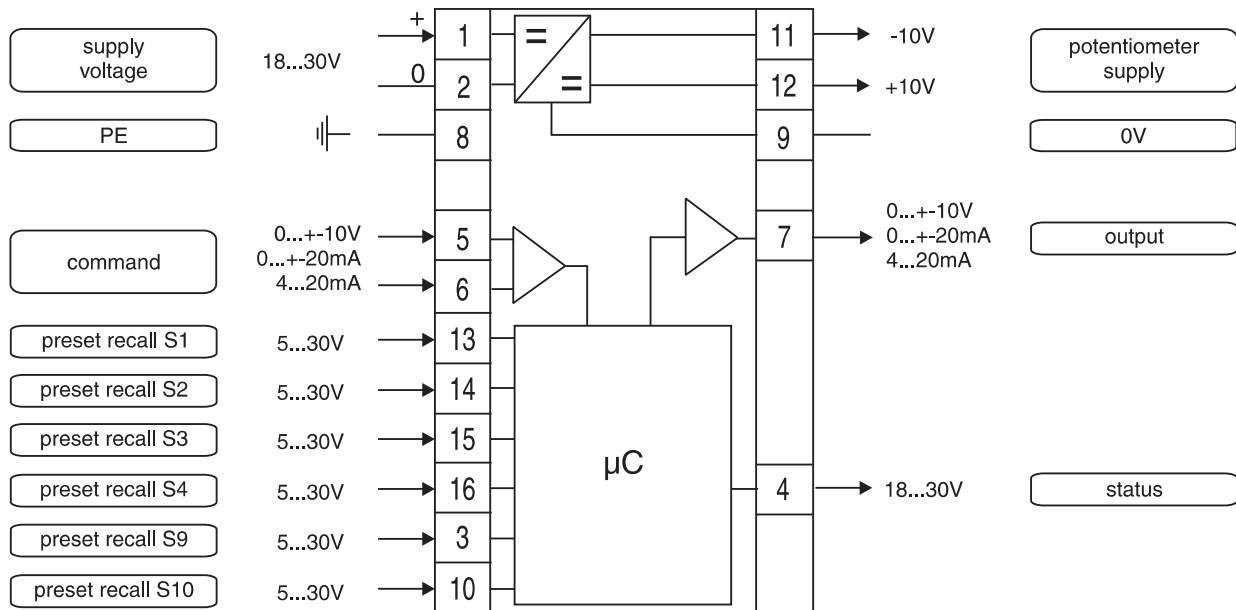
General Description

Series PZD00A-40* electronic modules provide options to enhance PWD, PCD driver modules and valves with onboard electronics. The modules are compact and easy to install with DIN rail mounting and plug-in terminals. The digital design allows for programmable parameters such as input signal conditioning, setpoints, ramps, mins, maxs, and command output options. The modules provide flexibility for different applications and repeatability from unit to unit. The module parameters are programmed with an RS-232 interface and user friendly software (ProPxD) with default values for the standard valves.

The PZD00A-40* module contains the functions required by typical proportional valve applications (series D*FP, D**FH valves, PWD, PCD modules).

Features

- Setpoints, ramp options, mins, maxs.
- Command output options.
- Programmable parameters.
- Reference voltages.
- RS-232 Interface.
- User friendly programming software.
- Plug-in terminals.
- Compliant with European EMC Standards.
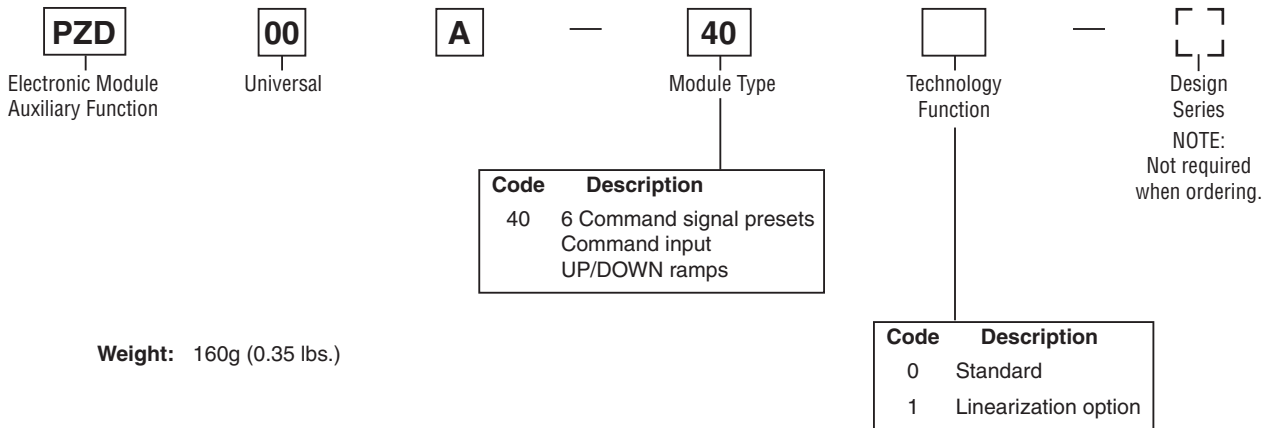
Block Diagram — Wiring

D01_Cat2550.indd, ddp, 04/19

Ordering Information

PZD	00	A	—	40	☐	—	⌐ ⌐

Electronic Module
Auxiliary Function   Universal   Module Type   Technology Function   Design Series

NOTE:
Not required
when ordering.

Code	Description
40	6 Command signal presets Command input UP/DOWN ramps

Code	Description
0	Standard
1	Linearization option

Weight: 160g (0.35 lbs.)

D

Specifications
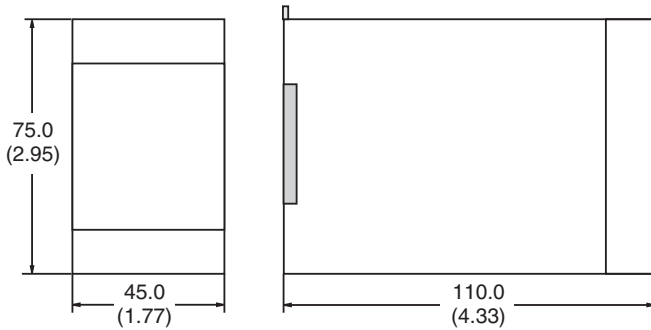
General			
Model	Module package for snap-on mounting on EN 50022 rail	**Mounting Position**	Any
Package Material	Polycarbonate	**Ambient Temperature Range**	-20°C to +60°C (-4°F to +140°F)
Inflammability Class	V2 to V0 acc. UL 94	**Protection Class**	IP 20 acc. DIN 40050

Electrical			
Duty Ratio	100%	**Status Signal**	Off – 0 to 0.5 VDC; On – Supply Voltage; rated max. 15 mA
Supply Voltage	18 VDC to 30 VDC, ripple < 5% eff., surge free	**Output Signal**	+10 to 0 to -10 VDC, rated max. 15 mA
Current Consumption Max.	100 mA		+20 to 0 to -20 mA, Ro < 500 ohm
Pre-fusing	500 mA medium lag		4 to 12 to 20 mA, Ro < 500 ohm
Command Signal	+10 to 0 to -10 VDC, ripple < 0.01 % eff., surge free, Ri = 100K ohm	**Output Signal Resolution**	0.025%
	+20 to 0 to -20 mA, ripple < 0.01 % eff., surge free, Ri = 200 Ohm	**Reference output**	+10 / -10, 2%, rated max. 15 mA
	4 to 12 to 20 mA, ripple < 0.01 % eff., surge free, Ri = 200 Ohm	**Adjustment Ranges** Minimum Maximum Cmd Channels Ramp Time Zero Offset	0 to 50% 50 to 100% +100 to -100% 0 to 32.5 s +100 to -100%
	< 3.6 mA = output signal 0 V / 0 mA / 12 mA acc. to output option		
	> 3.8 mA = output signal on (acc. NAMUR NE43)	**Interface**	RS 232C, DSub 9p. male for null modem cable
Input Signal Resolution	0.025%	**EMC**	EN 50081-2, EN 50082-2
Differential Input Voltage Max.	30 VDC for terminals 5 and 6 against PE (terminal 8)	**Connection**	Screw terminals 0.2 to 2.5 mm², disconnectable
		Cable Specification	20 AWG overall braid shield
Channel Recall Signal	Off – 0 to 2.5 VDC On – 5 to 30 VDC Ri = 100K ohm	**Cable Length**	50m (164 ft.)

Options	
Technology Function	Code 1: Software adjustable transfer function with 10 compensation points for linearization of valve behavior.

Signal Flow Diagram

Channel related ramps

Internal commands

S11

S1   S12

S2   S13

S3   S14

S4   S15

Command

E17 Option   S9   S16

P11 Polarity   S10   S17 Def. ramp

Min

E19 Break   E21 Conjunct.   E22 Function   P7 Min A

P8 Min B

Command output

E20 Option

Input signal

Output signal

P1 Offset

Zero

S5 A+   P3 Max A

S6 A-   P4 Max B

Max

Linearization

S7 B+

S8 B-

Quadrant related ramps

Basic mode

Expert mode

Technology function

Dimensions

Inch equivalents for millimeter dimensions are shown in (**)

75.0
(2.95)

45.0
(1.77)

110.0
(4.33)

D

ProPxD Interface Program

The new ProPxD software permits comfortable parameter setting for the electronic module series PCD, PWD, PZD and PID.

Via the clearly arranged entry mask the parameters can be noticed and modified. Storage of complete parameter sets to floppy or hard disk is possible as well as printout or record as a text file for further documentation. Stored parameter sets may be loaded anytime and transmitted to the electronic module in the same manner as the basic parameters which are available for all usable valve series. Inside the electronic a nonvolatile memory stores the data with the option for recalling or modification.

Features

● User-friendly editing of all parameters.

● Storage and loading of optimized parameter adjustments.

● Executable with all Windows® operating systems from Windows® 95 upwards.

● Communication between PC and electronic via serial interface RS-232 and null modem cable.

● Simple to use interface program. Download free of charge **www.parker.com/euro_hcd** → **Services** → **downloads**

No.	Value	Description	Module
P1	0.0	Zero Adjust [%]	
P3	100.0	Max [%] A-channel	
P4	100.0	Max [%] B-channel	
P7	0.0	Min Current [%] A-channel	
P8	0.0	Min Current [%] B-channel	
P11	0	command signal 0=not invertied; 1=invertied	
S1	0.0	internal command 1 [%]	
S2	0.0	internal command 2 [%]	
S3	0.0	internal command 3 [%]	
S4	0.0	internal command 4 [%]	
S9	0.0	internal command 5 [%]	
S10	0.0	internal command 6 [%]	
S5	0	ramp up [ms] A	
S6	0	ramp down [ms] A	
S7	0	ramp up [ms] B	
S8	0	ramp down [ms] B	
E22	0	rampfunction 0=S5-S8; 1=S11-S17	
S11	0	Ramp for internal comand Signal 1	
S12	0	Ramp for internal comand Signal 2	
S13	0	Ramp for internal comand Signal 3	
S14	0	Ramp for internal comand Signal 4	
S15	0	Ramp for internal comand Signal 5	
S16	0	Ramp for internal comand Signal 6	
S17	0	switchoff ramp	
E17	1	Command Input 1=±10V; 2=±20mA; 3=4..20mA	
E19	0	cable break detection cmd in 1= active(4...20mA)	

PC settings — Type: PZD00A-400- | Design series: 11 und höher

Input — upper limit 100.0 | lower limit -100.0 | P1 = 0.0 | update list

module settings — Type: no modul | Design series: ???? | Version: ???? | Valve Channel "A" ???? | Channel "B" ????

receive all modul >> PC | send all PC >> modul | send parameter | Default