

Parker Series PCD00A-400 E-Module for Proportional PressureFlow Control Valves Service Manual

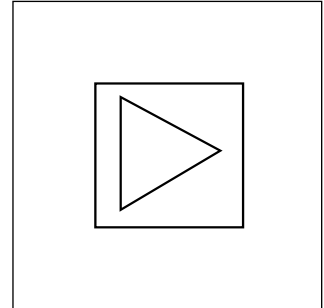
Parker electronic modules series PCD00A-400 for rail mounting are compact, easy to install and provide time-saving wiring by disconnectable terminals. The digital design of the circuit results in good accuracy and optimal adaption for proportional pressure/flow control valves by a comfortable interface program.

Features

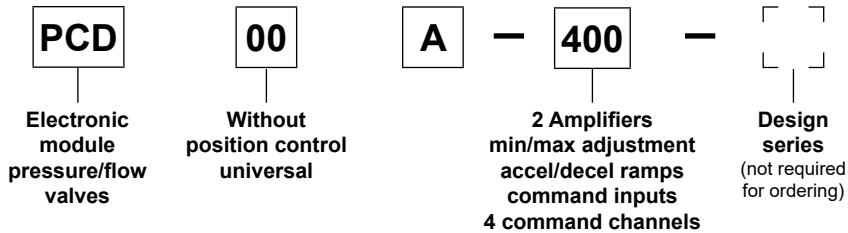
The described electronic unit combines all necessary functions for the optimal operation of two proportional pressure/flow control valves (series R*R, R*V, RE*E*W, RE06M*W, DUR, PRPM, VBY, VMY, TDA, TEA).

The most important features are:

- Digital circuit design
- Two independent operable amplifiers
- Four parameterizable command channels
- Constant current control
- Two input stages 0...10 V
- Status output
- Two up/down ramp functions
- Enable input for solenoid driver
- Status indicator
- Parametering by USB interface
- Connection by disconnectable terminals
- Compatible to the relevant European EMC standards



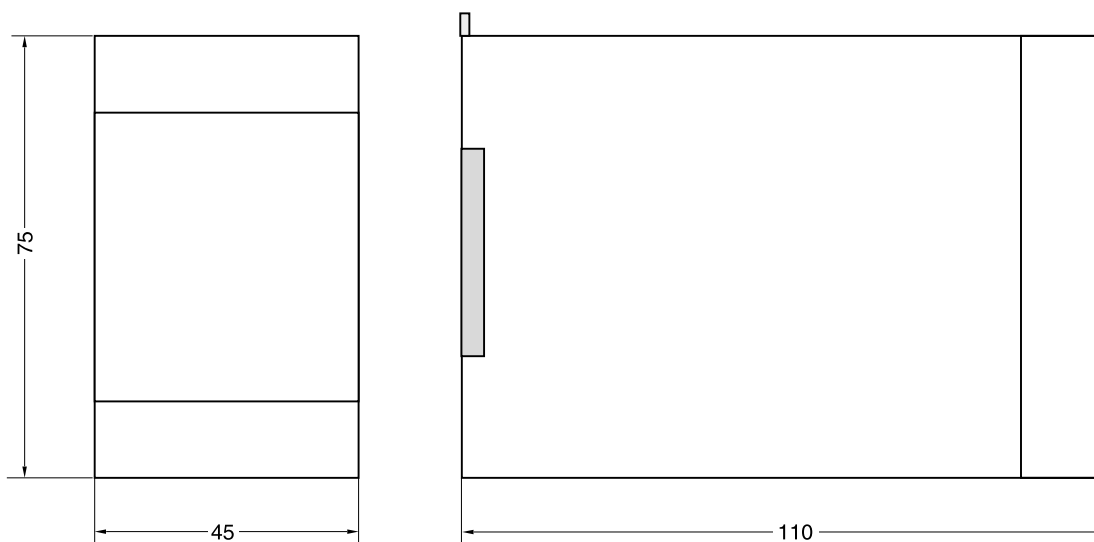
Ordering code



Technical data

General													
Model	Module package for snap-on mounting on EN 50022 rail												
Package material	Polycarbonate												
Inflammability class	V0 acc. UL 94												
Installation position	unrestricted												
Ambient temperature range	[°C] -20...+60												
Protection class	IP 20 acc. EN 60529												
MTTF _D value	[years] 150												
Weight	[g] 160												
Electrical													
Duty ratio	[%] 100												
Supply voltage	[VDC] 18...30, ripple < 5 % eff., surge free ¹⁾												
Current consumption max.	[A] 5.0												
Pre-fusing	[A] 6.3, medium lag												
Command signal	[V] 0...+10, ripple < 0.01 % eff., surge free, Ri = 150 kOhm												
Input signal resolution	[%] 0.025												
Differential input voltage max.	[V] 30 for terminals 5 und 6 against PE (terminal 8)												
Enable signal	[V] 0...4.0: Off / 9.0...30: On / Ri = 30 kOhm												
Command channel signal	[V] 0...4.0: Off / 9.0...30: On / Ri = 30 kOhm												
Status signal	[V] 0...0.5: Off / Us: On / rated max. 15 mA												
Adjustment ranges	<table border="0"> <tr> <td>Min</td> <td>[%]</td> <td>0...50</td> </tr> <tr> <td>Max</td> <td>[%]</td> <td>50...100</td> </tr> <tr> <td>Ramp</td> <td>[s]</td> <td>0...32.5</td> </tr> <tr> <td>Current</td> <td>[A]</td> <td>0.8 / 1.3 / 1.8 / 2.7 / 3.5</td> </tr> </table>	Min	[%]	0...50	Max	[%]	50...100	Ramp	[s]	0...32.5	Current	[A]	0.8 / 1.3 / 1.8 / 2.7 / 3.5
Min	[%]	0...50											
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Ramp	[s]	0...32.5											
Current	[A]	0.8 / 1.3 / 1.8 / 2.7 / 3.5											
Interface	USB type B												
EMC	EN IEC 61000-6-2, EN IEC 61000-6-4												
Connection	Screw terminals 0.2...2.5 mm ² , disconnectable												
Cable specification	[mm ²] 1.5 overall braid shield for supply voltage and solenoids (AWG16)												
	[mm ²] 0.5 overall braid shield for sensor and signal (AWG20)												
Cable length	[m] 50												

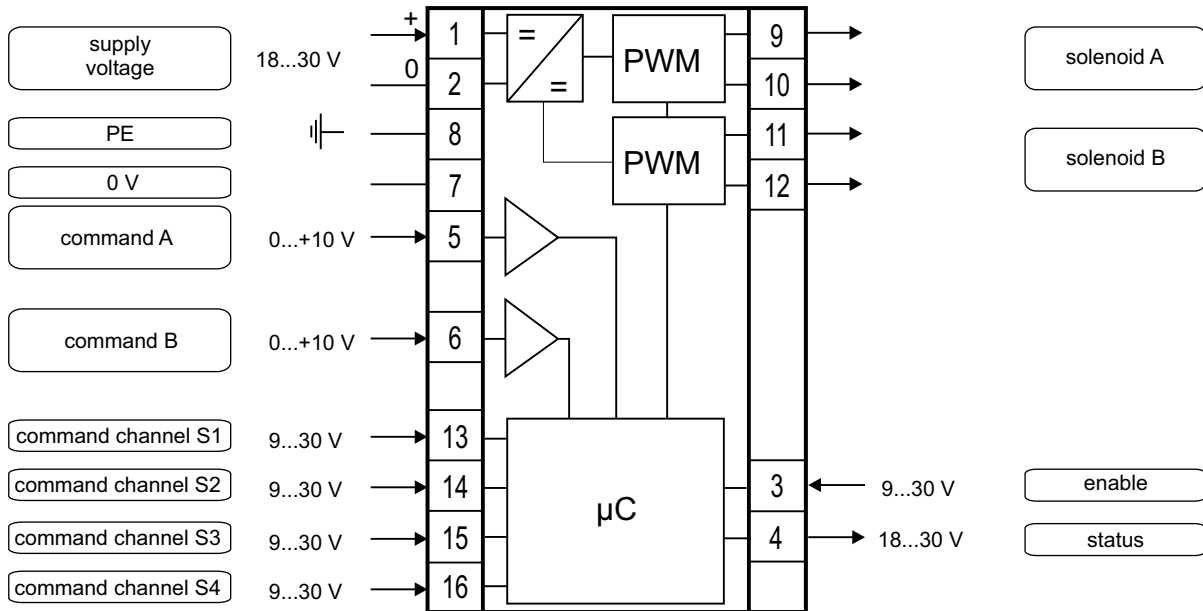
Dimensions



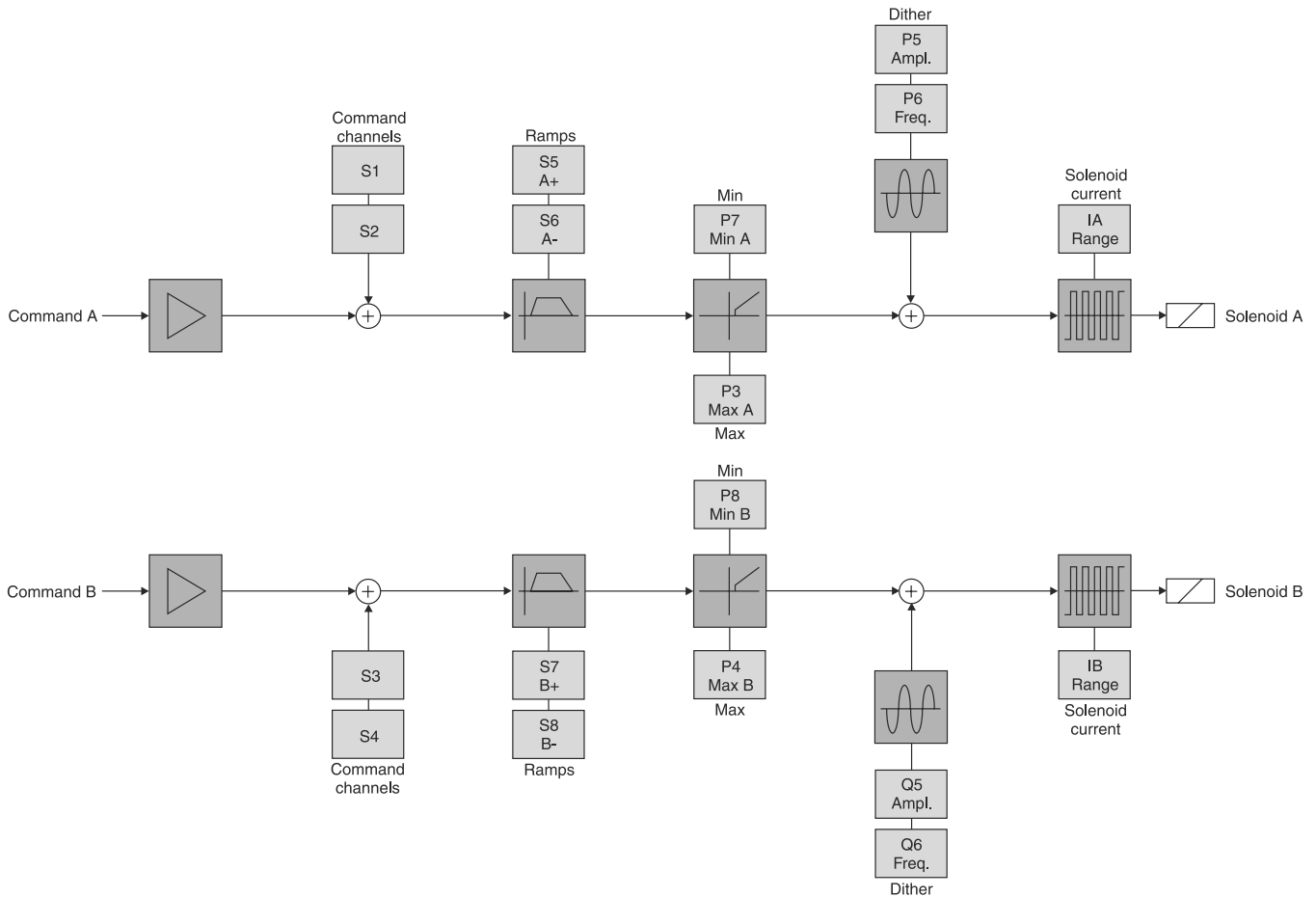
¹⁾ If solenoids with a nominal voltage of 24 V are connected, the supply voltage has to be raised to 29 V.

Construction

Block diagram



Signal flow diagram



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ProPxD interface program

The ProPxD software permits comfortable parameter setting for the module electronics. Via the clearly arranged entry mask the parameters can be monitored and modified. Storage of complete parameter sets 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 other valves. Inside the electronics a nonvolatile memory stores the data with the option for recalling or modification.

The PC software can be downloaded free of charge at www.parker.com/propxd.

Features

- Comfortable editing of all parameters
- Depiction and documentation of parameter sets
- Storage and loading of optimized parameter adjustments
- Executable with all actual Windows® operating systems from Windows® XP upwards
- Plain communication between PC and electronics via USB interface

