General Description

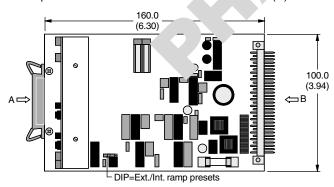
Series ED104 electronic module is used to control DSA/DWE/DWU pressure control valves. The module accepts a 0 to 10 volt command signal, and produces a proportionally linear output current used to drive the valve's proportional solenoid. Two ramp adjustments provide smooth transition between selected pressures. Note that the linearity of the valve itself determines the linearity of the system. Refer to the specific valve data for actual linearity performance.

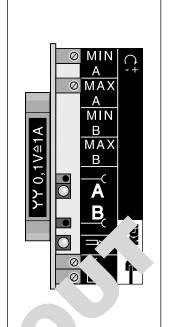
Features

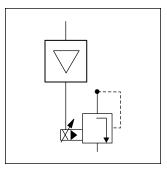
- Processing and amplification of the externally supplied positive set-values into output signals for the control
- Can be combined with EZ150 or external programmable
- DIP switch from internal ramp generation to external ramp
- MIN/MAX limiters for matching the working range to the full set value range.
- Pulsed low-loss amplifier power stage with supporting constant current control for consistent, temperatureindependent, solenoid forces.
- Dither generator with applied frequency to improve static characteristics.
- Diagnosis by means of diagnostic sockets as well as LEDs for indicating working conditions.

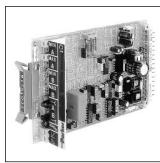
Dimensions

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









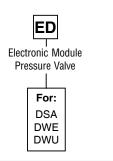
Specifications

Connection	31 Pole Male Connector, DIN 41617
Power Supply	Regulated: 18-26V Unregulated: 22-38V
Command Signal	0 to +10 VDC and 0 to -10 VDC
Input Select Voltage	5 to 30 VDC
Power Required	40 VA
Reference Outputs	+10 VDC 10 mA
Max. Solenoid Output Current	1.3A with set value 10V
Ambient Temp. Range	0°C to +70°C (+32°F to +158°F), Standard Range
Ramps	0 to 5 seconds adjustable
Shielded Cable Connection	Supply connections + valve: 1.5 sq. mm (16 AWG) Command Signals: 0.5 sq. mm (20 AWG)
Fuse	2A medium lag, DIN 41571/5x20 mm

For new applications:

ED104: Refer to PCD00A-400

Ordering Information



00 Module Type Description Amplifier, adjustable MIN/MAX-limits. Up/Down Ramps

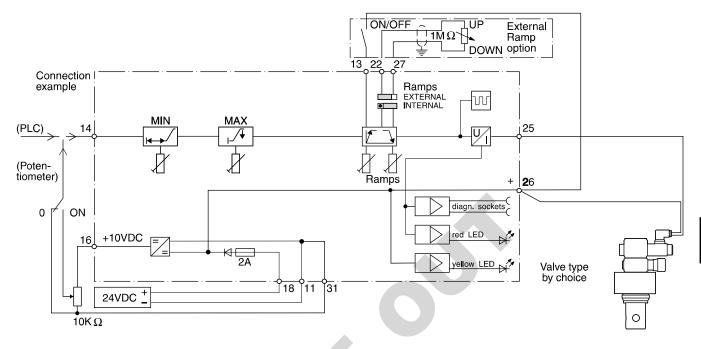
г \vdash \vdash \vdash Design Series NOTE: Not required

when ordering.

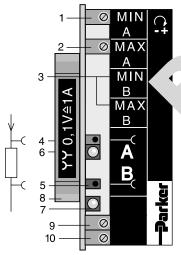


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Block Diagram



Operating and Diagnostic Elements (Elevation A)



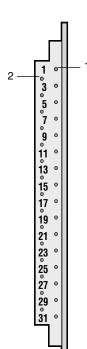
- 1 MIN-limiting for matching the lowest pressure
- MAX-limiting for matching the highest pressure
- 3 Not used
- Red socket for current diagnostic
- Black socket for current diagnostic
- Red LED (A) for:
 - function indicator control solenoid
- (B unused here)
- 7 Yellow LED for:
 - correct voltage supply
- Red grip strip with reference information for measured values on the diagnostic sockets
- 9 UP ramp potentiometer
- 10 Down ramp potentiometer

Notes:

- to this board whenever the hydraulic supply to the valve is not on.
- this board before removing it from the card holder.

Only potentialfree measuring equipment to be used

Connector (Elevation B)



- 11 Reference potential 0V supply
- Input ramp disable
- Input command voltage 0 to +10 VDC
- 16 Output +10V reference
- Input 24 VDC supply
- 22 Input external ramp option
- 25 Output control solenoid
- 26 Output control solenoid
- 27 Input external ramp option
- 31 Reference potential 0V set value

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- Turn off the electrical power
- Always turn off the power to