



Bulletin HY11-5715-546/UK

Installation Manual Series ET154

Power Amplifier for Flow Valves



Parker Hannifin GmbH

Hydraulic Controls Division
Gutenbergstr. 38

41564 Kaarst, Germany

Tel.: +49-181 99 44 43 0

Fax: +49-2131-513-230

E-mail: infohcd@parker.com

Copyright © 2002, Parker Hannifin GmbH

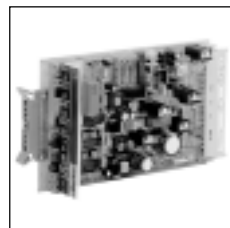
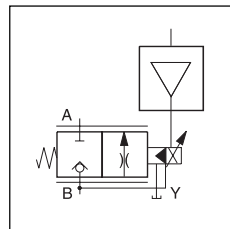
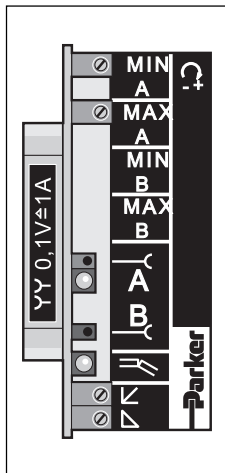
Note

This document and other information from Parker Hannifin GmbH, its subsidiaries, sales offices and authorized distributors provide product or system options for further investigation by users having technical expertise. Before you select or use any product or system it is important that you analyse all aspects of your application and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through his own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance and safety requirements of the application are met. The products are subject to change by Parker Hannifin GmbH at any time without notice.

Electronic module for high dynamic control of proportional throttle valves. The valve opening and its changes are achieved by externally applied commands as well as internal limit and ramp potentiometers. The measured value (Volts) on the module is indirectly proportional with the throttle cross-section or alternatively the resulting volume flow Q (l/min).

Features

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



Characteristics

Power supply	filtered: 24V $\pm 10\%$
Ripple	max. 5%
Current consumption	max. 3.5A
Command voltage	0...+10VDC
Reference output	10VDC / max. 10mA
Solenoid output current max.	2.6A at 10V command
Ramp time	0...5 sec.
Ambient temperature	-20...+60°C
Connection	48pole male connector, DIN 41612f
Shielded cable connection	Supply connection and valve: AWG15; set values: AWG20
Fuse	2A medium lag, DIN 41571

Ordering Code

			ET	—	154	
			Electronic Module Flow Valves	Valve Size	Module Type Highly dynamic amplifier, adjustable MIN./MAX.-limits, Up/Down-ramps	Design Series
Code	Valve	Solenoid				
00	TDA...MAF E16 to E 50	35 mm				
00	TEA...MAF E16 to E 50	35 mm				
99	TDA...MAF E63 to E100	60 mm				
99	TEA...MAF E63 to E100	60 mm				

- IA ET154 UK A5.PM6.5 CM

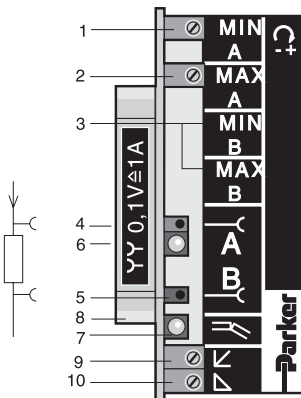
Operating and Diagnostic Elements (Elevation A)

Notes:

Turn off the electrical power to this board whenever the hydraulic supply to the valve is not on.

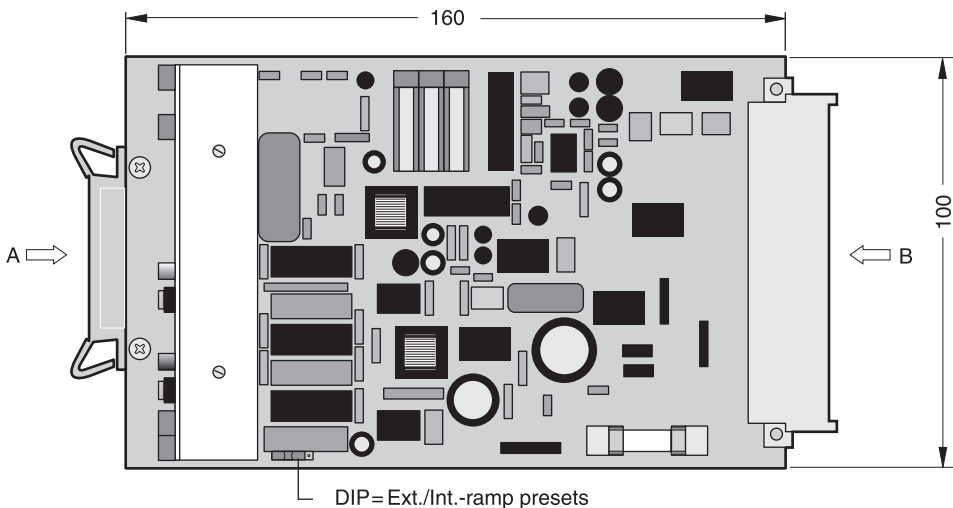
Always turn off the power to this board before removing it from the card holder.

Only potential-free measuring equipment to be used.



- 1 MIN-limiter for matching the smallest throttle aperture
- 2 MAX-limiter for matching the largest throttle aperture
- 3 (B-information are not used here)
- 4 Red socket for current diagnostic
- 5 Black socket for current diagnostic
- 6 Red LED (A) for:
- function indicator control solenoid
- (B not used)
- 7 Yellow LED for:
- correct voltage supply
- 8 Green grip strip with reference information for measured values
- 9 UP ramp potentiometer
- 10 DOWN ramp potentiometer

Dimensions (Eurocard)



Installation guide to electronic modules to provision of electromagnetic compatibility

Power Supply

The utilized power supply has to comply with the EMC-standards.

Relais and solenoids operating from the same supply circuit as the valve electronics have to be fitted by surge protection elements.

Wiring Cable

The wires between the installation site of the module and the peripheral units, as power supply, valve solenoids, command signal source have to be shielded. The following wire sizes must be reached: power supply AWG 16, other connections AWG 20. The capacity should not exceed a value of approx. 130 pF/m (wire/wire). The maximum cable length is 50 m. No power current lines may be placed within the wired shielded cables to the electronic module. The cable shield has to be connected to ground at both ends (see also chapter "Grounding"). Please be aware of ground loops.

Installation

The module has to be mounted within a conductive, shielded enclosure. Usable is i.e. an EMC-approved control cabinet. A perfect grounding of the enclosure is mandatory (see also chapter "Grounding").

Grounding

The mounting plate of the valve has to be connected to the grounded metal machine frame. The cable shields must be tied to ground at the control cabinet. A low-ohmic potential compensation wire has to be provided between the control cabinet and the machine frame (cable wire >AWG 7 cross section) to prevent ground loops.