



Bulletin HY11-5715-484/UK

Installation Manual Series ET102

Power Amplifier for Flow Valves



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Note

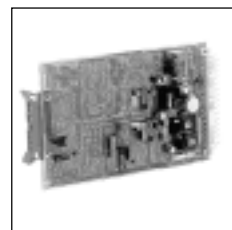
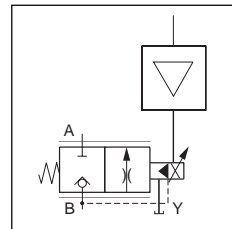
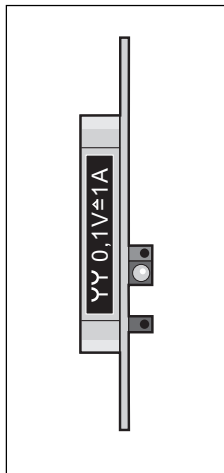
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Installation Manual

Electronic module for the control of proportional throttle valves. The valve opening and its changes are determined by externally applied command signals. The measured value (Volts) on the module is indirectly proportional with the throttle opening or alternatively the resulting volume flow Q (l/min).

Features

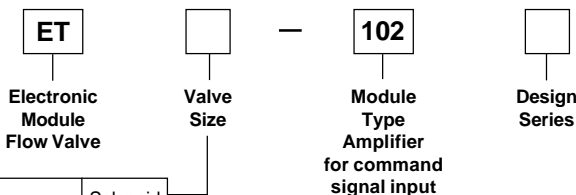
- Processing and amplification of the externally supplied positive commands into output signals for the control solenoid.
- Can be combined with EZ150 or external programmable control.
- Pulsed amplifier power stage with constant current control.
- Dither generator with applied frequency to improve static characteristics.
- Diagnosis by means of diagnostic sockets as well as light diodes for indicating working conditions.



Characteristics

Connection	31 pole male connector, DIN 41617
Power supply	filtered: 22–38V, unfiltered: 18–26V
Command voltage	0 to +10 DC
Input select voltage	5 to 30VDC
Power required	40VA
Reference outputs	+10VDC 10mA
Max. solenoid output current	1.3A with 10V command
Ambient temperature	0 to 70°C
Ramps	not available
Shield. cable connection	Supply connections+valve: AWG15 Commands: AWG20
Fuse	2A medium lag, DIN 41571/5x20mm

Ordering Code



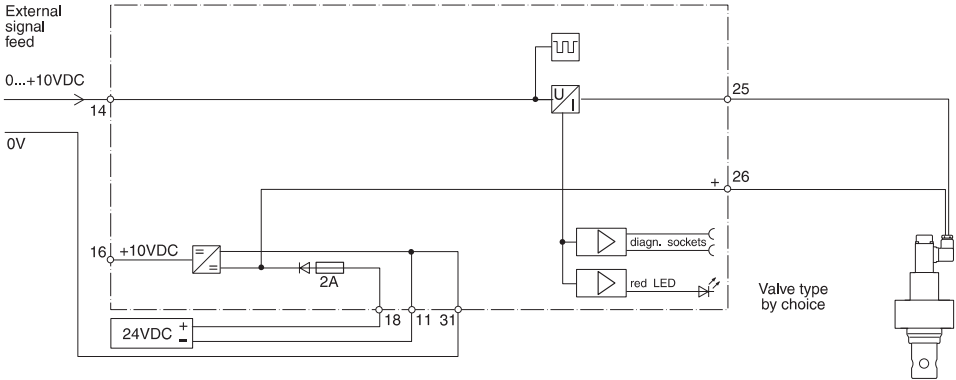
Code	Valve	Solenoid
00	TDA...LAF E16 to E 50	35mm
00	TEA...LAF E16 to E 50	35mm
99	TDA...LAF E63 to E100	60mm
99	TEA...LAF E63 to E100	60mm

Installation Manual

EMC

EN 50081-2 EN 55011
EN 50082-2 ENV 50140 EN 61000-4-4 ENV 50204 EN 61000-4-5 EN 61000-4-2 EN 61000-4-6

Block Diagram



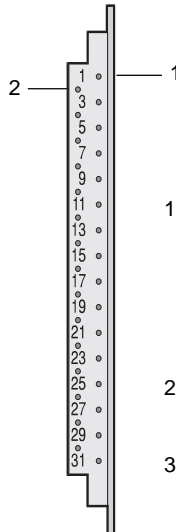
Connector
(Elevation B)

14 Input command voltage 0...+10VDC

16 Output +10V reference

18 Input 24VDC supply

26 Output control solenoid



11 Reference potential 0V supply

25 Output control solenoid

31 Reference potential 0V set value

Operating and Diagnostic Elements
(Elevation A)

Notes:

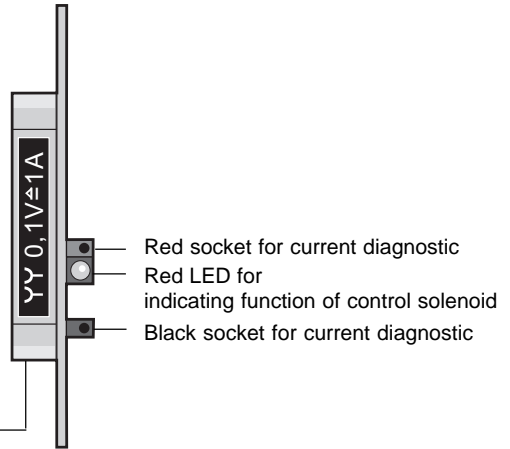
Turn off the electrical power to this board whenever the hydraulic supply to the valve is not on.

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

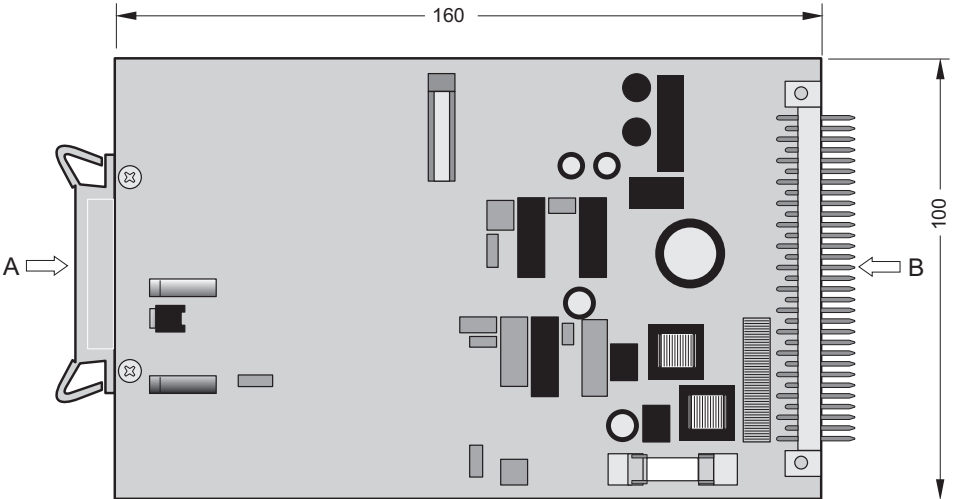
Only potential-free measuring equipment to be used



Green grip strip with reference information for measured values



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 (CE-sign, certificate of conformity).

Relays 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.