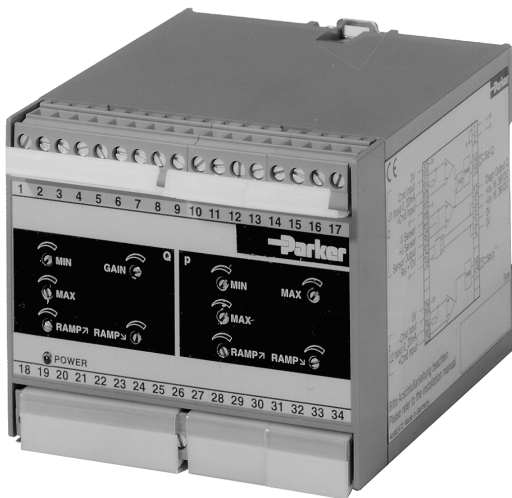


Installation Manual Series PQ-L

Electronic Module



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Note

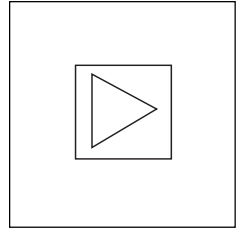
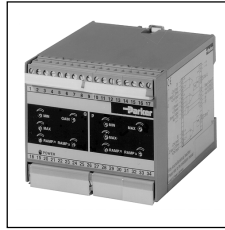
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Installation Manual

Application

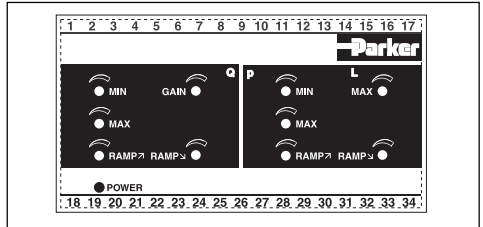
Electronic module for control of a continuous volume flow adjustment with position transducer and a pressure relief valve in axial piston pumps of the PV series.

Flow current, pressure and power limit can be given by externally supplied command signals and internal limitation and ramp potentiometers. In this case, the command signals can be generated for example by a PLC.



Technical features

- Flow current adjustment in closed loop control by feedback of the pivoting angle setting
- Pressure adjustment in closed loop
- Preset of power limit
- Differential input stages for voltage or current signals
- Ramp generators
- Min/max adjustment for maintaining the working range to the full command range
- Dither generator for improving static characteristic data
- Adjustable control gain of the flow regulator
- Diagnosis LED for indicating undervoltage or position transducer cable breakage
- Module housing for support rail as per EN 50022
- Disconnectable terminals



Technical Data

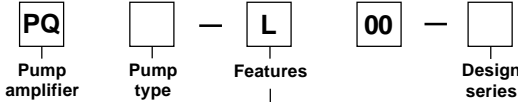
Supply voltage range	22...36VDC	
Supply voltage ripple	max. 5%	
Current consumption	max. 3.5A	
Input signal range		
Input voltage	0...10V / 100KOhm	
Input current	0...20mA / 500Ohm	
Diagnosis output	0...10V / max. 5mA	
Reference output	0...10V ±1% / max. 30mA	
Output current max.	1.3A	
Adjustment range ramp time	0...5sec.	
Ambient temperature range	-20...+60°C	
Connection	Screw-in terminals, plug-in type AWG 24...13	
Installation cross sections min.	Voltage supply + solenoid: AWG16. Other connections: AWG20	
Cable length	max. 50m	
Pre-fuse	6.3A, medium-lag, DIN 41571	

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	

Installation Manual

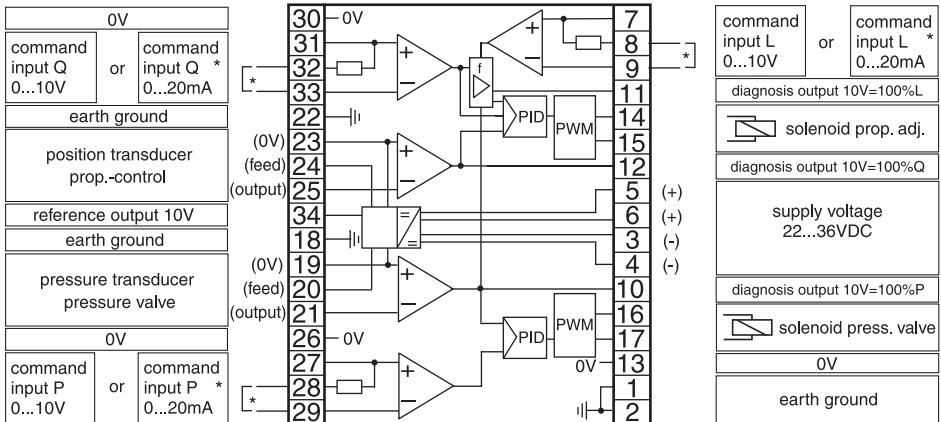
Ordering Code



Code	Pump type
01	PV 016/020/023
02	PV 032/040/046
03	PV 063/080/092
04	PV 140/180
05	PV 270

Code	Features
L	Flow control, pressure control, power limiting

Circuit Diagram



MIN/MAX-Settings Q and p

The minimum setting can be used to adjust the lower working point of a valve.

The maximum setting is used to maintain the input signal range to the required working range of the valve.

Adjustment sequence:

1. Put input to 0V potential.
2. Adjust bounce value with trimmer "min".
3. Feed a signal of +10V (or +20mA) to the input
4. Adjust the required maximum value with trimmer "max".

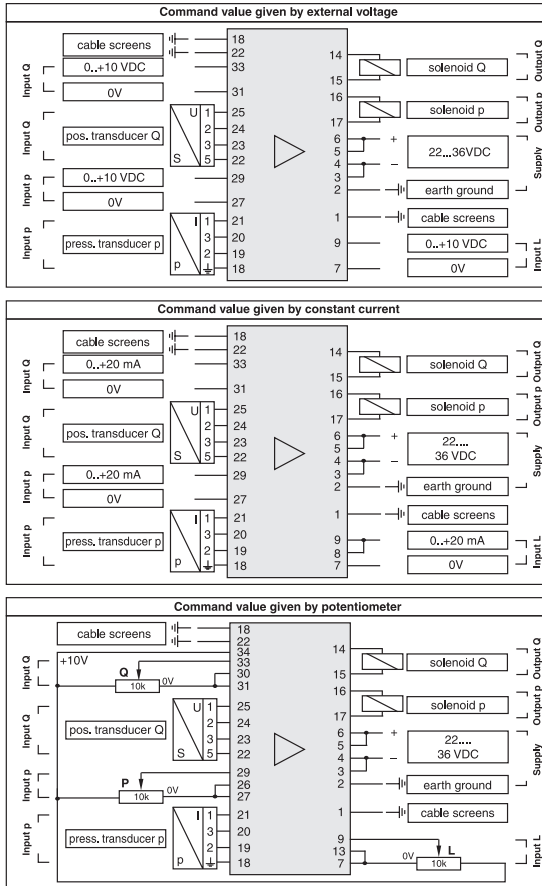
Please note that MIN must always be adjusted before MAX.

MAX-Setting Power Limit L

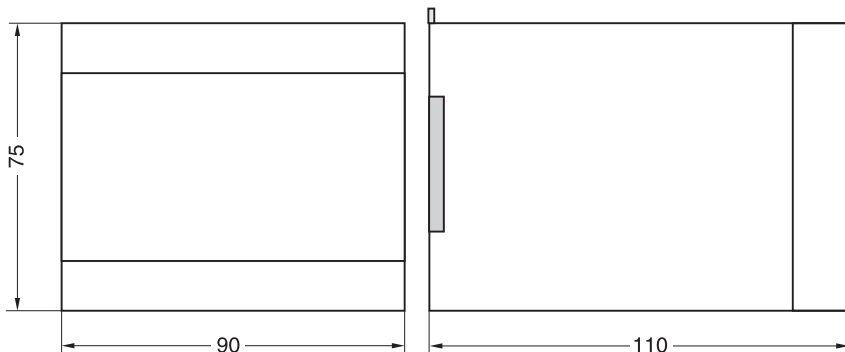
The maximum setting can be used

- to limit the command range if the power limit value is given externally.
- to adjust the power limit value if it is given by the module.

Connection Examples



Dimensions



**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). Parker is offering the following power supplies:

EX00-N01	(2.5 Amp.)
EX00-N04	(5.0 Amp.)
EX00-N08	(10.0 Amp.)

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, position transducer, 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.

Connectors

The connection of the position transducer needs a sensor connector 4pin+E featuring metal case and integrated cable shield coupling. Parker can provide suitable connectors:

5004108 (Connector 4pin+E)

The connectors have to be installed according to the connection diagram, the cable shield has to be tied on the whole periphery to the provided coupling clamp.

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.