If you are interested in fast delivery, please follow this hint in our ordering codes when choosing your individual product:

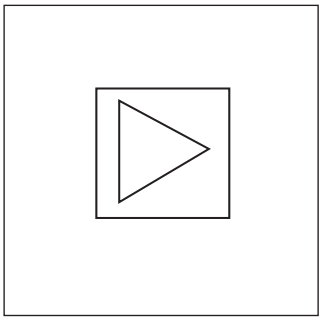
Bold letters =
Short-term availability

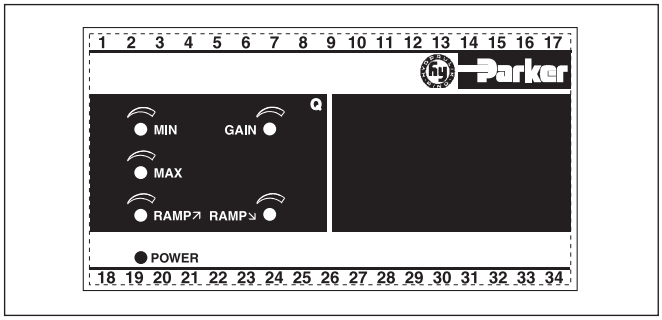
Electronic module for control of a continuous volume flow adjustment with position transducer in axial piston pumps of the PV series.

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

Features

- Flow current adjustment in closed loop control by feedback of the pivoting angle setting.
- Differential input stages for voltage or current signals.
- Ramp generators.
- Min/max adjustment for maintaining the working range to the command value range.
- Adjustable control gain.
- Diagnosis LED for indicating undervoltage or position transducer cable breakage.
- Module housing for support rail as per EN 50022.
- Disconnectable terminals.





EMC

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

Characteristics

Supply voltage range	22...30VDC
Supply voltage ripple	max. 5%
Current consumption	max. 1.8A
Input signal range	
Input voltage	0...10V / 100KOhm
Input current	0...20mA / 500Ohm
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	4.0A, medium-lag, DIN 41571

Ordering Code

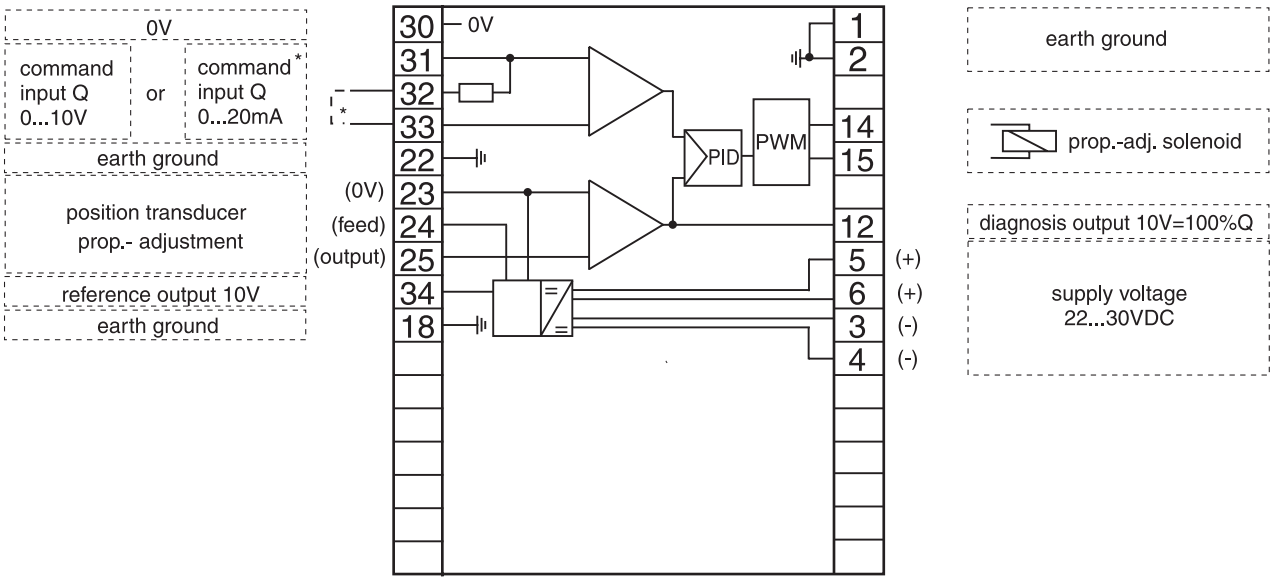
10

PQ	☐	–	F	00	–	☐
Pump amplifier	Pump design		Flow Control			Design series

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

Bold letters =
Short-term availability

Circuit Diagram



MIN/MAX Setting

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

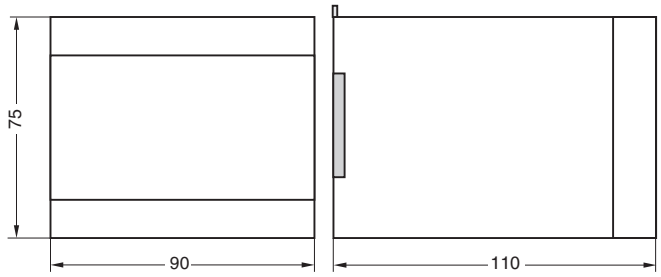
The maximum setting is used to maintain the input signal range to the required working range of the valve.

Adjustment sequence:

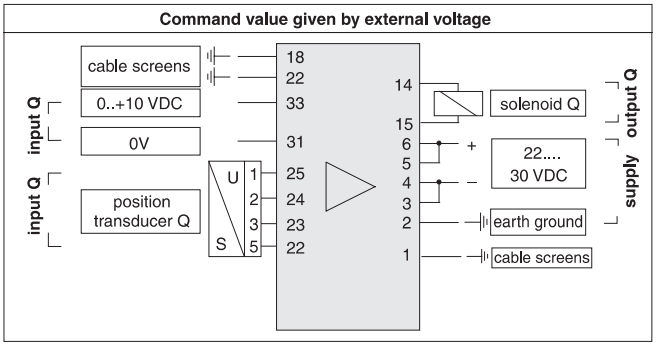
1. Put input to 0V potential.
2. Adjust bounce value with trimmer “min”.
3. Feed a signal of +10V (or +20mA) to the input.
4. Adjust the required maximum value with trimmer “max”.

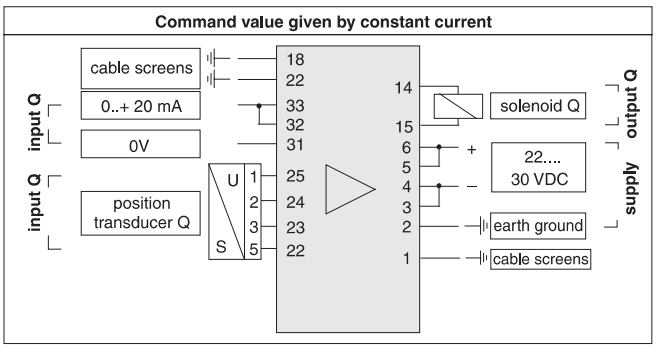
Please note that MIN must always be adjusted before MAX.

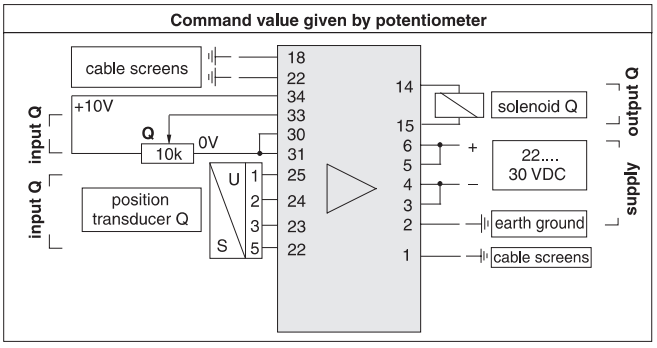
Dimensions



Connection Examples







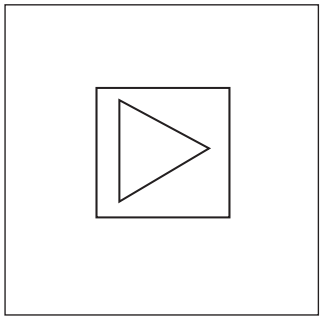
10

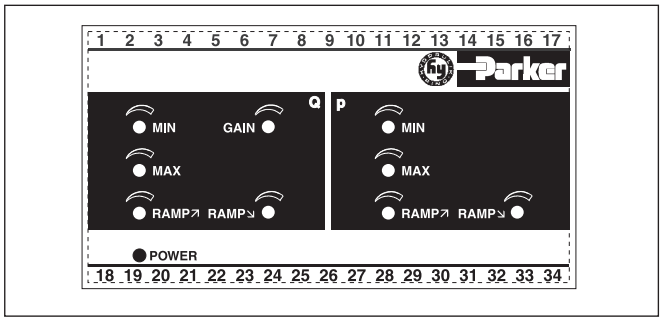
Electronic module for control of a continuous volume flow adjustment with position transducer and a pressure relief valve in axial piston pumps of the PV series.

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

Features

- Flow current adjustment in closed control loop by feedback of the pivoting angle setting.
- Pressure adjustment with constant-current regulated solenoid control with linearised characteristic curve.
- Differential input stages for voltage or current signals.
- Ramp generators.
- Min/max adjustment for maintaining the working range to the full command range.
- 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.





EMC

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

Characteristics

Supply voltage range	22...30VDC
Supply voltage ripple	max. 5%
Current consumption	max. 3.5A
Input signal range	
Input voltage	0...10V / 100KOhm
Input current	0...20mA / 500Ohm
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

Ordering Code

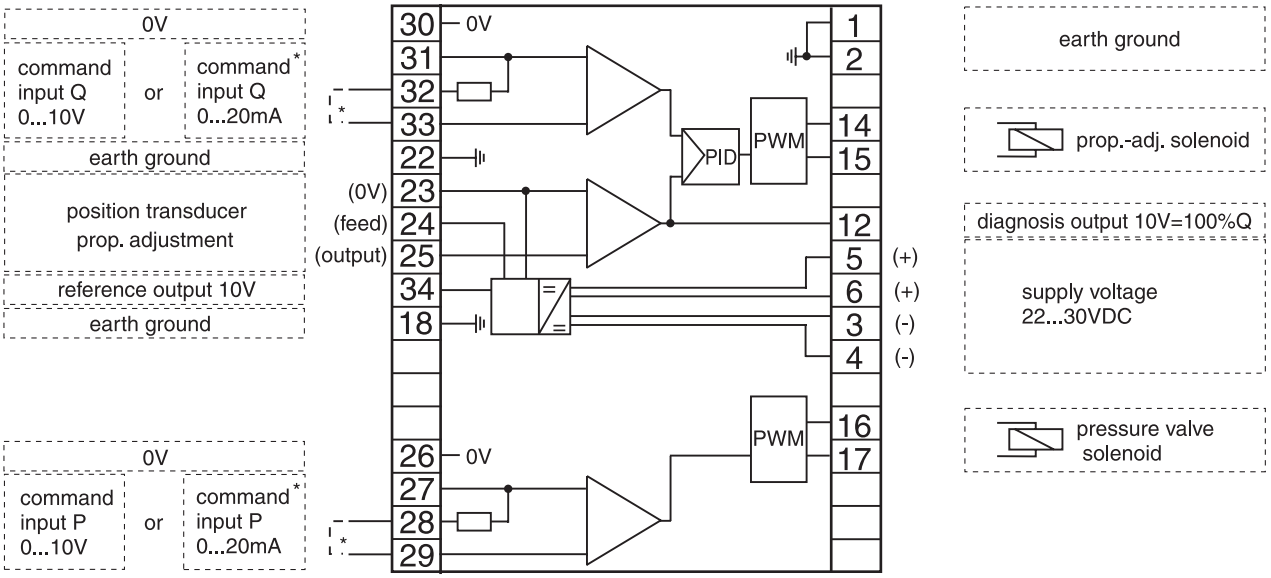
PQ	☐	–	P	00	–	☐
Pump amplifier	Pump design		Flow control, pressure adjustment			Design series

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

Bold letters =
Short-term availability

PQ-P.PM6.5 RH

Circuit Diagram



MIN/MAX Setting

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

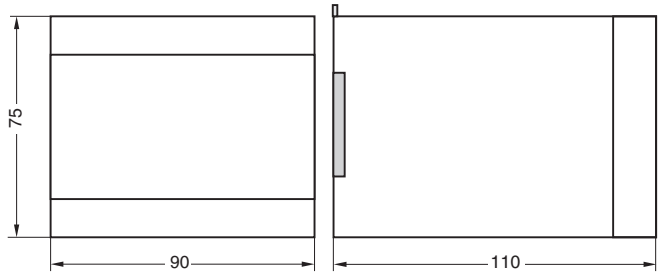
The maximum setting is used to maintain the input signal range to the required working range of the valve.

Adjustment sequence:

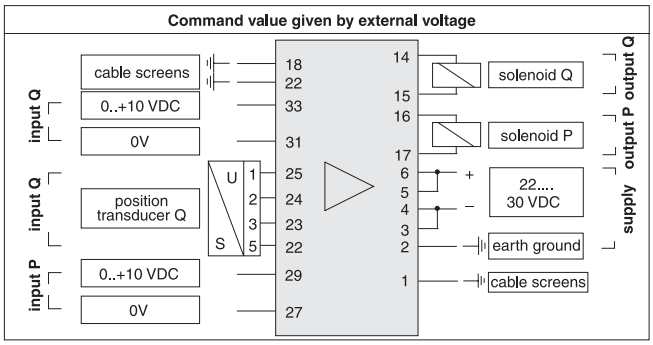
1. Put input to 0V potential.
2. Adjust bounce value with trimmer “min”.
3. Feed a signal of +10V (or +20mA) to the input.
4. Adjust the required maximum value with trimmer “max”.

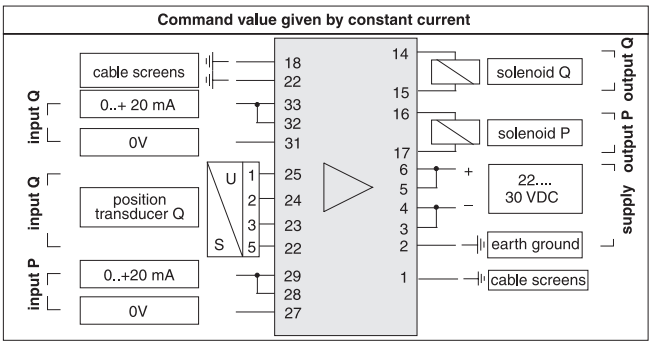
Please note that MIN must always be adjusted before MAX.

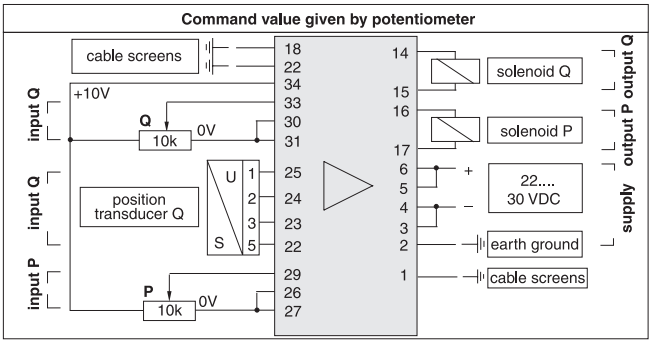
Dimensions



Connection Examples



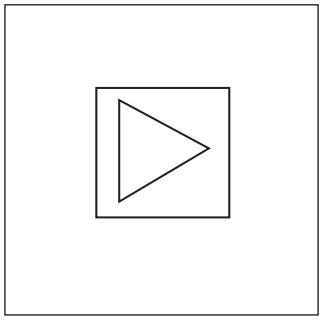


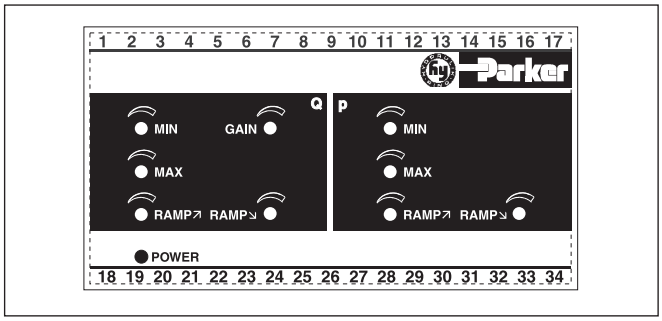


10

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

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





Features

- Flow current adjustment in closed loop control by feedback of the pivoting angle setting.
- Pressure adjustment in closed loop control by feedback of the system pressure.
- Differential input stages for voltage or current signals.
- Ramp generators.
- Min/max adjustment for maintaining the working range to the full command range.
- 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.

CE

EMC

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

Characteristics

Supply voltage range	22...30VDC
Supply voltage ripple	max. 5%
Current consumption	max. 3.5A
Input signal range	
Input voltage	0...10V / 100KOhm
Input current	0...20mA / 500Ohm
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
Pressure transducer type	SCP 8181 CE

10

Ordering Code

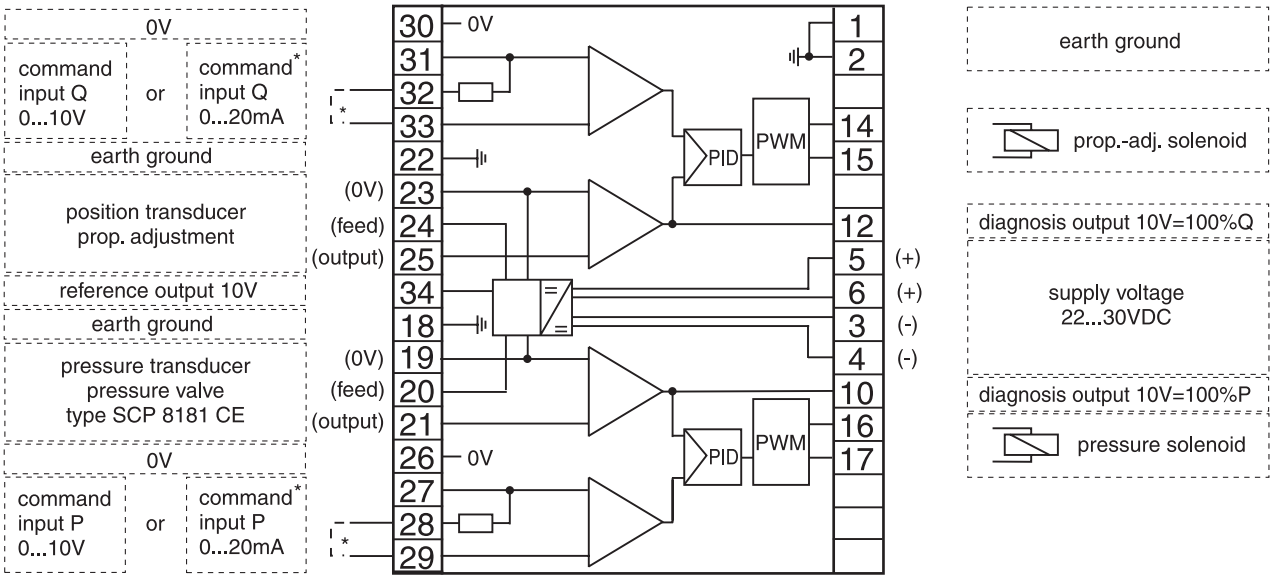
PQ	☐	–	Q	00	–	☐
Pump amplifier	Pump design		Flow control, pressure control			Design series

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

Bold letters =
Short-term availability

PQ-Q.PM6.5 RH

Circuit Diagram



MIN/MAX Setting

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

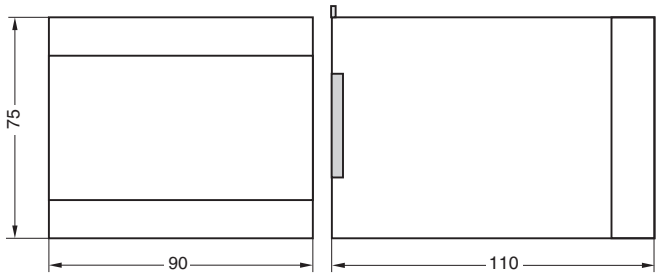
The maximum setting is used to maintain the input signal range to the required working range of the valve.

Adjustment sequence:

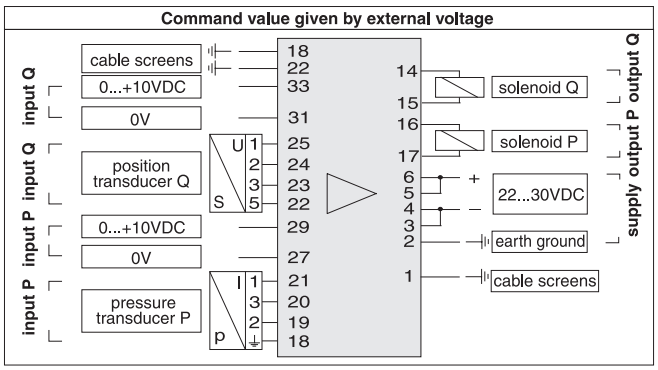
1. Put input to 0V potential.
2. Adjust bounce value with trimmer “min”.
3. Feed a signal of +10C (or +20mA) to the input.
4. Adjust the required maximum value with trimmer “max”.

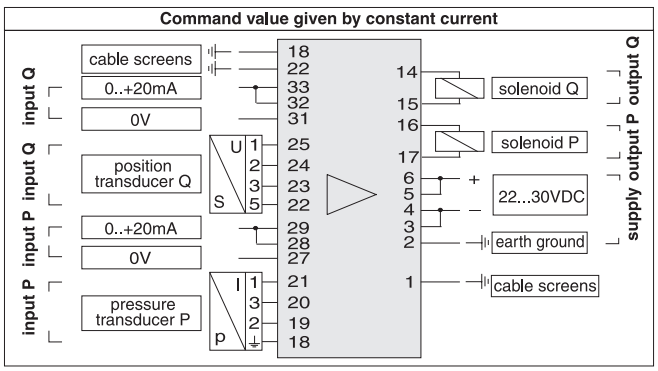
Please note that MIN must always be adjusted before MAX.

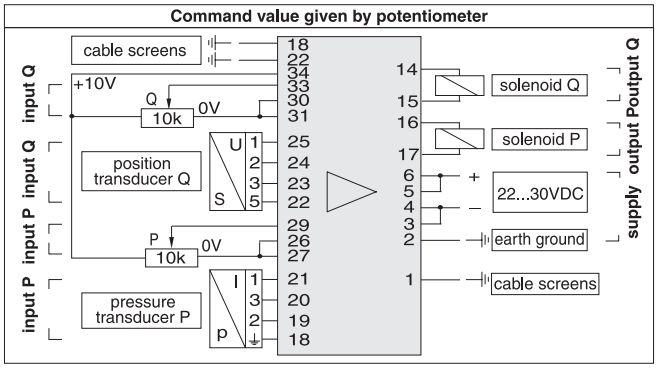
Dimensions



Connection Examples



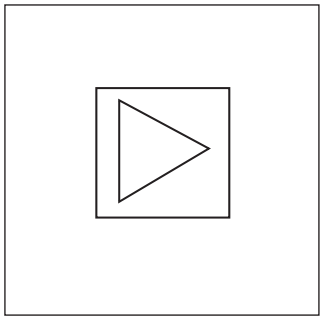


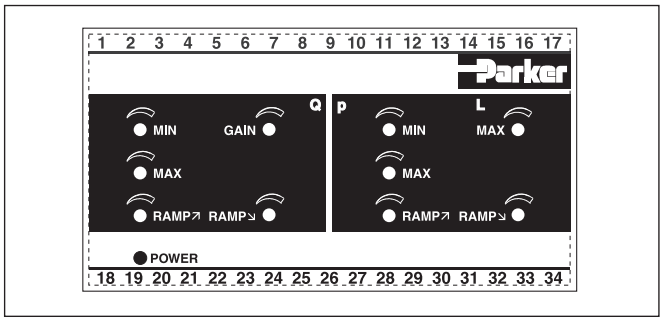


10

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.





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.

CE

EMC

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

Characteristics

Supply voltage range	22...30VDC
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
Pressure transducer type	SCP 8181 CE

10

Ordering Code

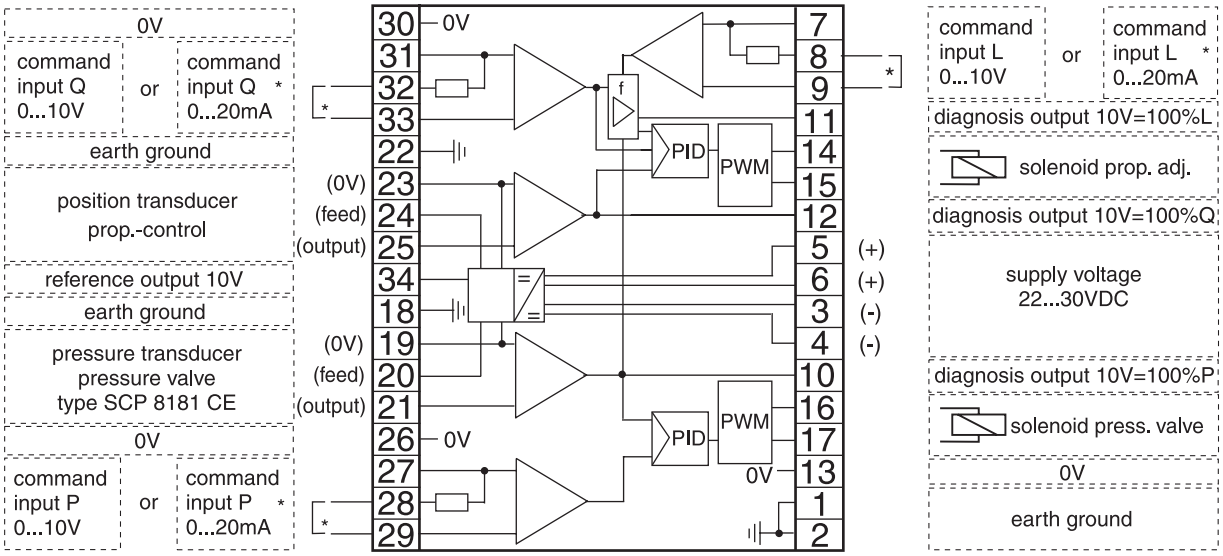
PQ	☐	–	L	00	–	☐
Pump amplifier	Pump design		Flow control, pressure control, power limiting			Design series

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

Bold letters =
Short-term availability

PQ-L.PM6.5 RH

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”.

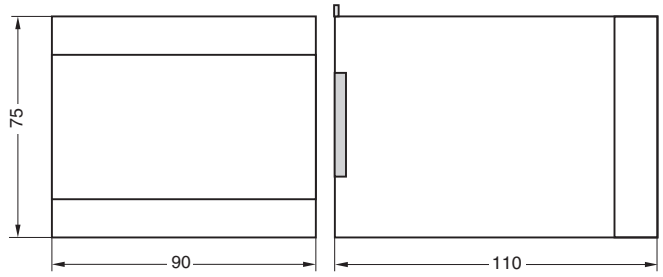
Please note that MIN must always be adjusted before MAX.

MAX-Setting Power Limit L

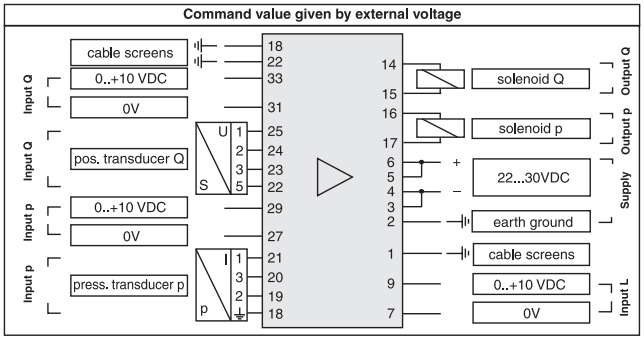
The maximum setting can be used

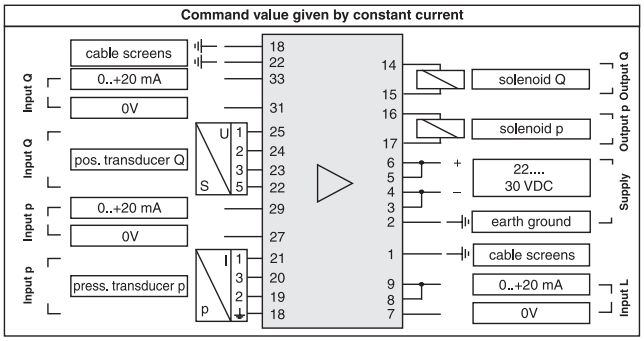
- to limit the command range if the power limit value is given externaly.
- to adjust the power limit value if it is given by the module.

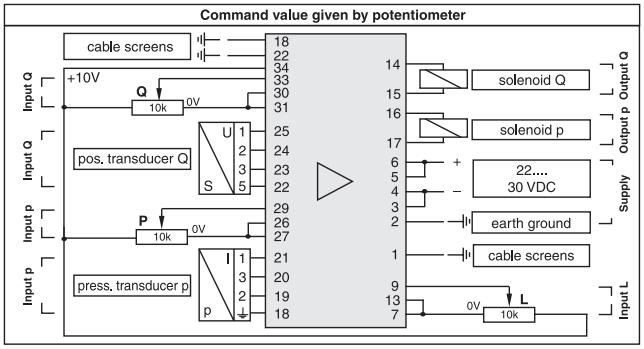
Dimensions



Connection Examples





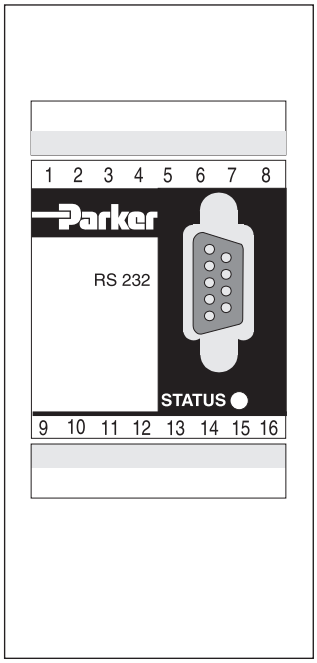


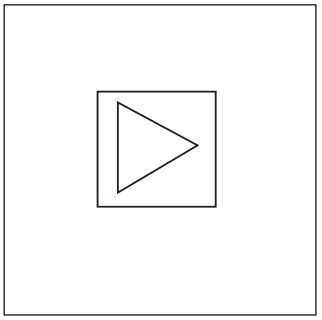
10

Digital electronic module to drive proportional directional control valves without position feedback.

Features

- Digital power amplifier.
- Differential command input.
- Voltage input.
- Programmable via serial interface (RS232).
- Status output.
- Four-quadrant ramp-function.
- Four internal programmable command values.
- Software for parameterization.
- Also programmable by scientific calculator (HP48G)
  Ordering code: HP-P*D-GERMAN
  or HP-P*D-ENGLISH

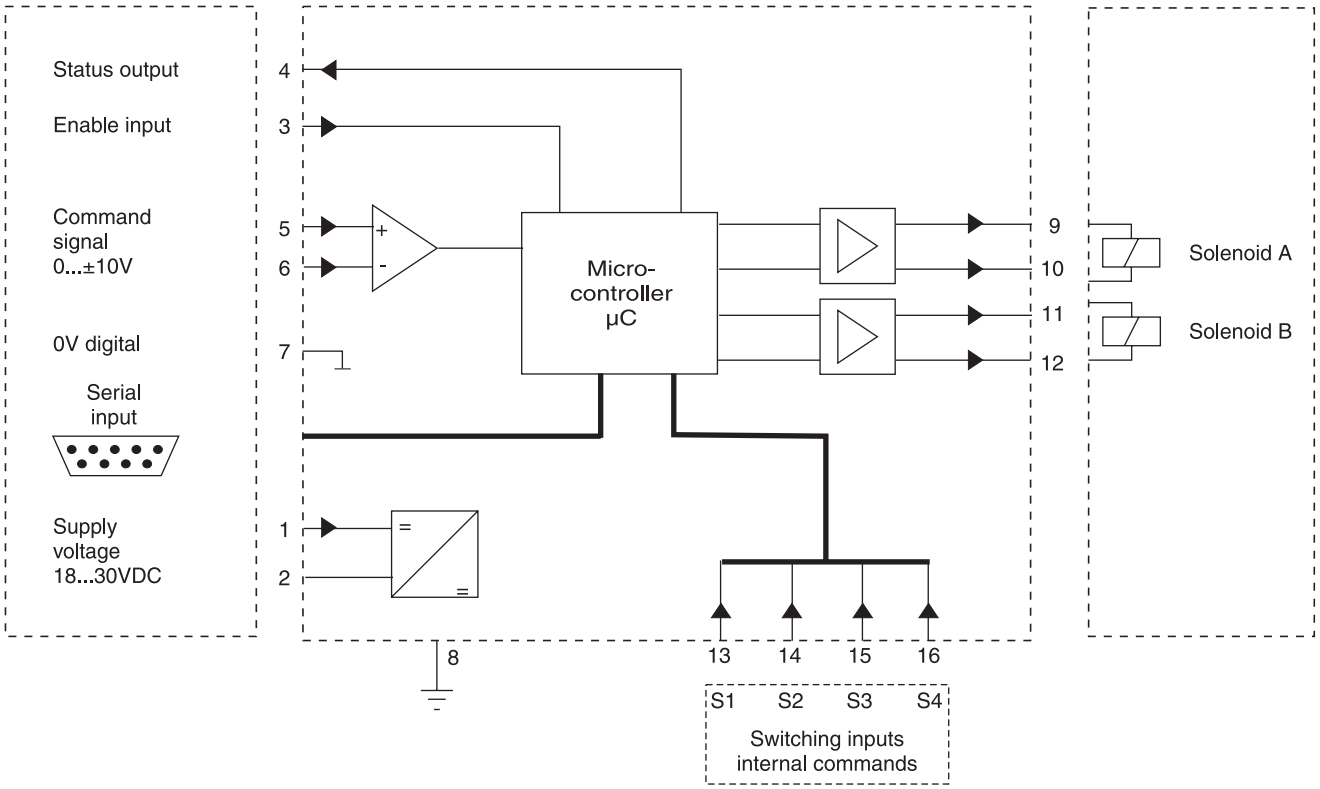




Note

The user software ProPXD is available for download on the PARKER homepage www.parker.com/euro_hcd or may be ordered under the ordering code 5715543.

Circuit Diagram



10

Technical Data

General		
Construction		Module box for snap-on assembly (EN 50022)
Electrical		
Supply voltage	[V]	18...30
Current consumption max.	[A]	2
Power consumption max. (at 24V)	[VA]	36
Pre fuse	[A]	2.5 medium lag
Inputs		
Analogue	[V]	0...±10, 150kOhm
Digital 0	[V]	0...5
1	[V]	8.5...30
Outputs		
Digital 0	[V]	0...0.5
1	[V]	Supply voltage; 15mA load
Solenoids	[A]	0.8; 1.3; 1.8; 2.7; 3.5
Interfaces		
Serial		RS 232C, null modem
Adjustment ranges		
MIN	[‰]	0...1000 (= 0...50% current)
MAX	[‰]	0...1000 (= 50...100% current)
Ramps	[s]	0...32.5
Dither Amplitude	[%]	0...100 (= 0...16% current)
Frequency	[Hz]	0...800
Zero position	[‰]	-1000...+1000 (= -75...+75% current)
Protection		
Industrial protection class		IP20
Environment		
Temperature	[°C]	-40...+70
Connection		
Wire connection		Screwable AWG24...13
EMV		
Conform to standards		EN 50081-2 EN 50082-2

Ordering Code

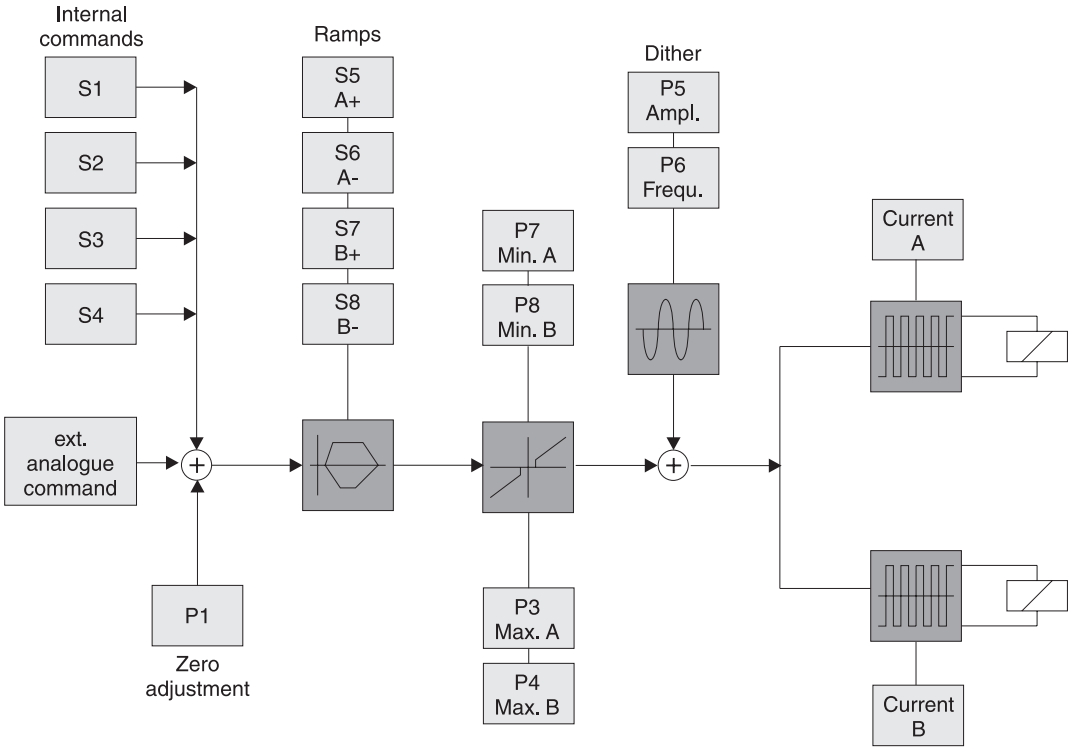
PWD	00	A	–	400	–	
Electronic module directional valves	Variable solenoid current			Module type		Design series

Code	Module type
400	**Amplifier, adjustable Min./Max.-limits accel.-/decel.-ramp for each solenoid, 4 internal programmable commands**

Bold letters =
Short-term availability

10

Signal Flow Diagram



Commands

Optionally to the external analogue command input (Pin 5 and 6), the PWD00A-400-Electronic includes four internal programmable command values S1 to S4, which can be activated by the switching inputs (Pins 13, 14, 15, 16). S1 at pin 13 has the highest priority, S4 at pin 16 the lowest.

Nominal current adjustment

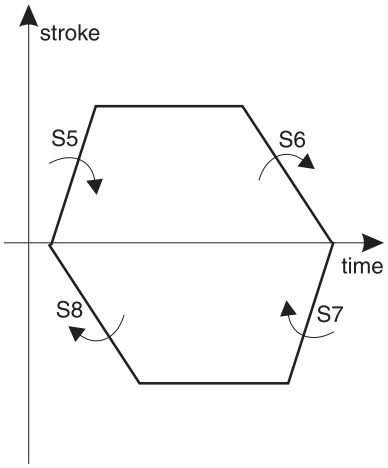
The nominal current can be adjusted by one parameter separately for each solenoid (Pin 9, 10, and 11, 12). The default nominal current is 800mA.

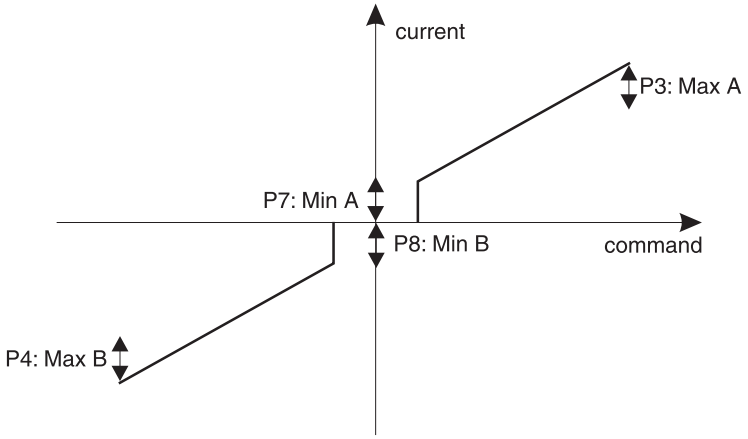
10

Ramp-function / Min-Max-function

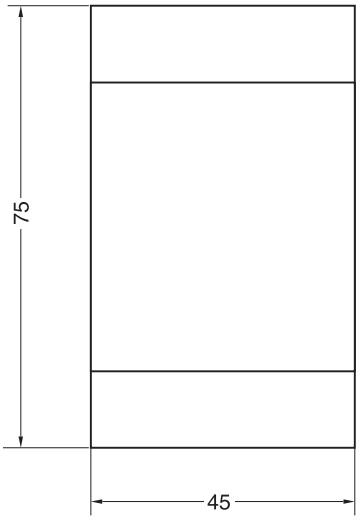
The PWD00A-400-Electronic includes four internal programable ramps. Acceleration and/or deceleration are adjustable for each solenoid separately.

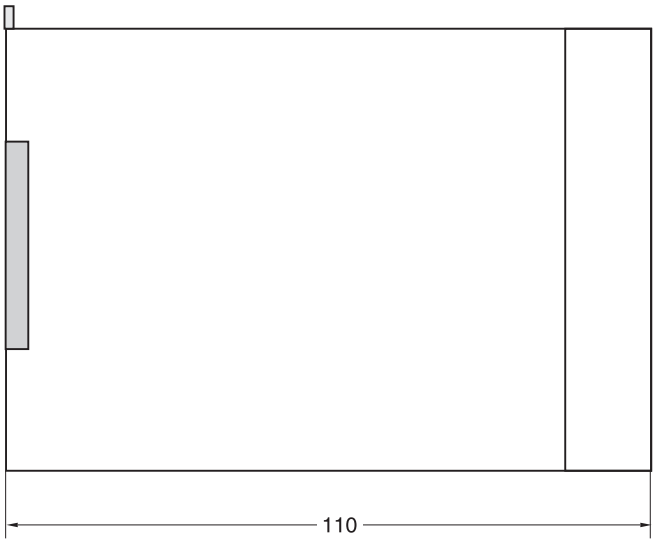
Additionally a current step may be programmed for each solenoid (Min), and the current may be limited for each solenoid (Max).





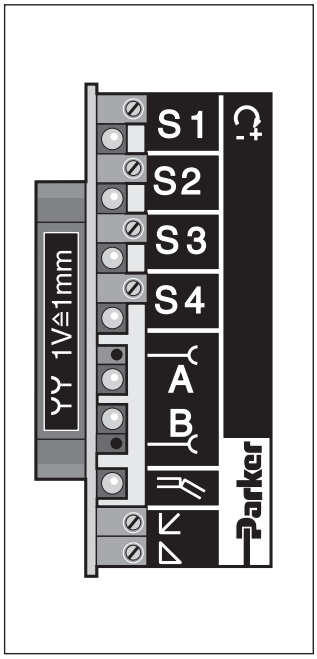
Dimensions

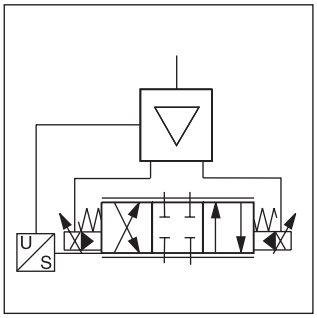


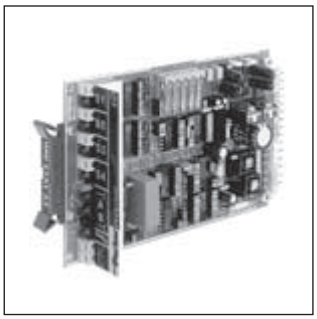


10

Electronic module for the control of pilot operated proportional directional valves with transducer. The flow direction at the valve spool is set by the sign of the set-value voltage. The spool stroke and its rate of change is set by means of potentiometers. The movement profile of the valve spool is controlled by a closed loop feedback circuit in the module.



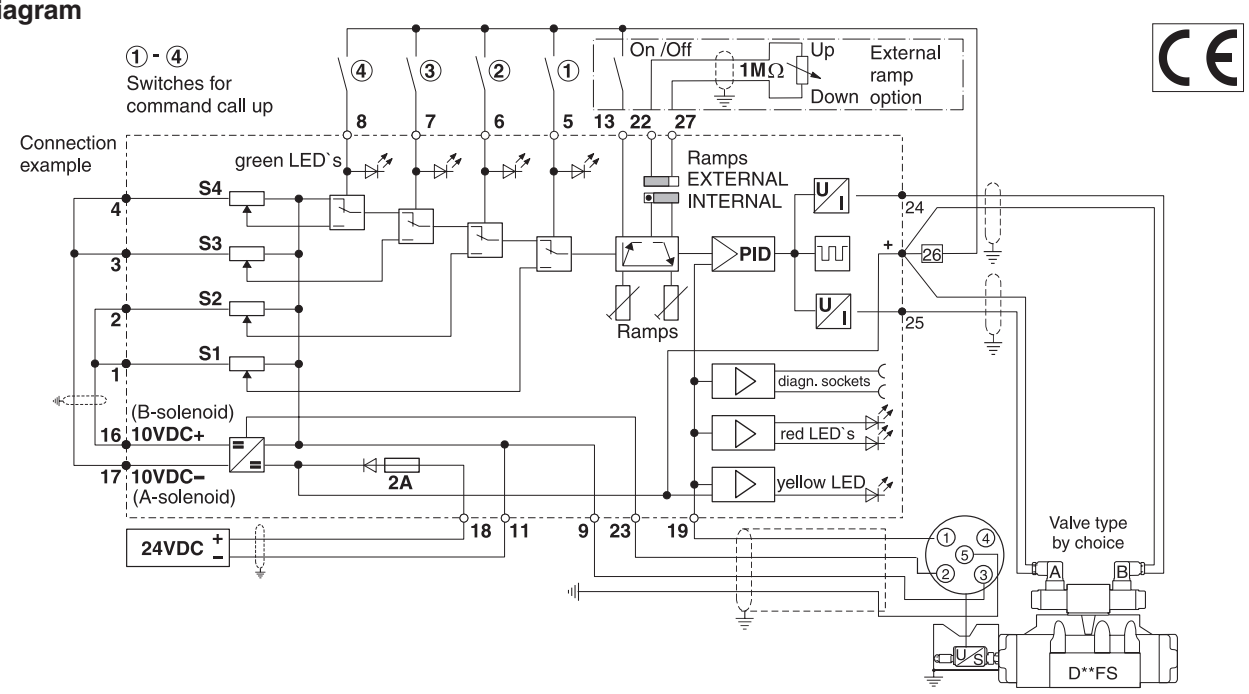




Characteristics

Connection	31pole male connector, DIN 41617
Power supply	filtered: 22-38V, unfiltered: 18-26V
Set value voltage	0 to +10 DC and 0 to -10VDC
Input select voltage	5 to 30 VDC
Power required	40VA
Reference outputs	+10V/-10VDC 10mA
Max. Sol. output current	1.3A
Ambient temperature	0 to 70 °C
Ramps	adjustable from 0 to 5 sec.
Shield. Cable connect.	Supply connections + valve: AWG15 Transducer + set values: AWG20
Fuse	2A medium lag, DIN 41571/5x20 mm

Block Diagram



Features

- Modulated valve-spool control by 4 selectable set values, adjustable from 0 to 100% and UP/DOWN ramp potentiometers.
- DIP-switch from internal ramp generation to external ramp setting.
- Pulsed low loss amplifier power stage with supporting constant current control for consistant temperature-independent solenoid forces.
- Dither generator with applied frequency to improve static characteristics.
- Diagnosis of spool stroke by means of diagnostic sockets as well as LEDs for indicating working conditions.

Ordering Code

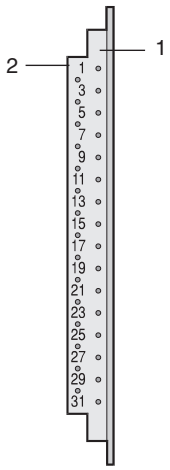
EW	☐	—	101	☐
Electronic module directional valve	Valve size		Module type	Design series

Code	Valve size	Mounting pattern	Valve spool stroke
10	**D31FS**	**NG 10**	**±5mm**
16	**D41FS**	**NG 16**	**±6mm**
25	D81FS	NG 25	±9.3mm
26	D91FS	NG 25	±6.5mm
32	D111FS	NG 32	±15.0mm

Amplifier, 4 command channels, Up/Down ramps

Bold letters = Short-term availability

Connector (Elevation B)



2 Input preselect direction, channel 2
4 Input preselect direction, channel 4
6 Input set value lock on, channel 2
8 Input set value lock on, channel 4

16 Output +10V reference
18 Input 24VDC supply

22 Input external ramp option
24 Output control solenoid B
26 Output common solenoid A+B with possibility for external switch connection

1 Input preselect direction, channel 1
3 Input preselect direction, channel 3
5 Input set value lock on, channel 1
7 Input set value lock on, channel 3
9 Reference potential 0V transducer
11 Reference potential 0V supply
13 Input ramp disable

17 Output -10V reference
19 Input transducer signal

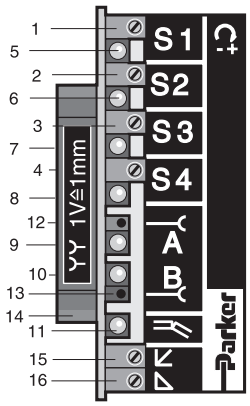
23 Output, transducer supply
25 Output control solenoid A
27 Input external ramp option

Operating and Diagnostic Elements (Elevation A)

Note

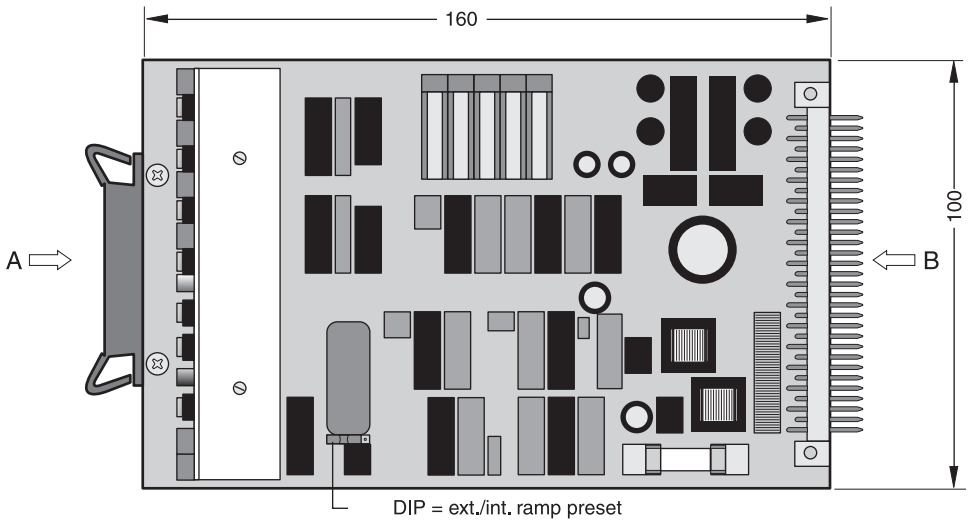
Turn off the electrical power to this board whenever the hydraulic supply to the valve is not on.

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



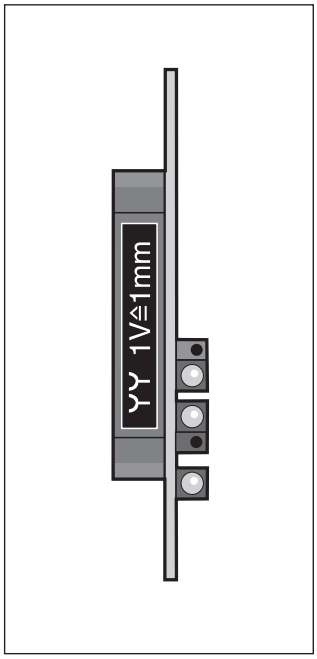
1–4 Set value potentiometer S1–S4
5–8 Green LED`s for:
channel activity of the set value
9–10 Red LED`s for:
-Stroke direction indication
11 Yellow LED for:
-correct voltage supply
-correct transducer connection
12 Red socket for spool diagnostic
13 Black socket for spool diagnostic
(0V potential)
14 Blue grip strip with reference information for measured values on the measuring sockets
15 UP ramp potentiometer
16 DOWN ramp potentiometer

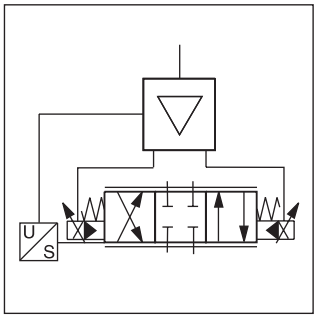
Dimensions

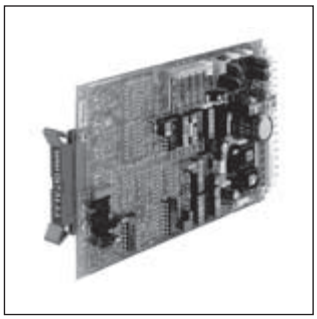


10

Electronic module for the control of pilot operated proportional directional valves with transducer. The movement profile of the valve spool in direction, size and movement changes is determined by externally supplied command signals and is controlled in a closed circuit feedback loop in the module. The command signals can, e.g., be prepared using a programmable controller or by using an EZ150 module.



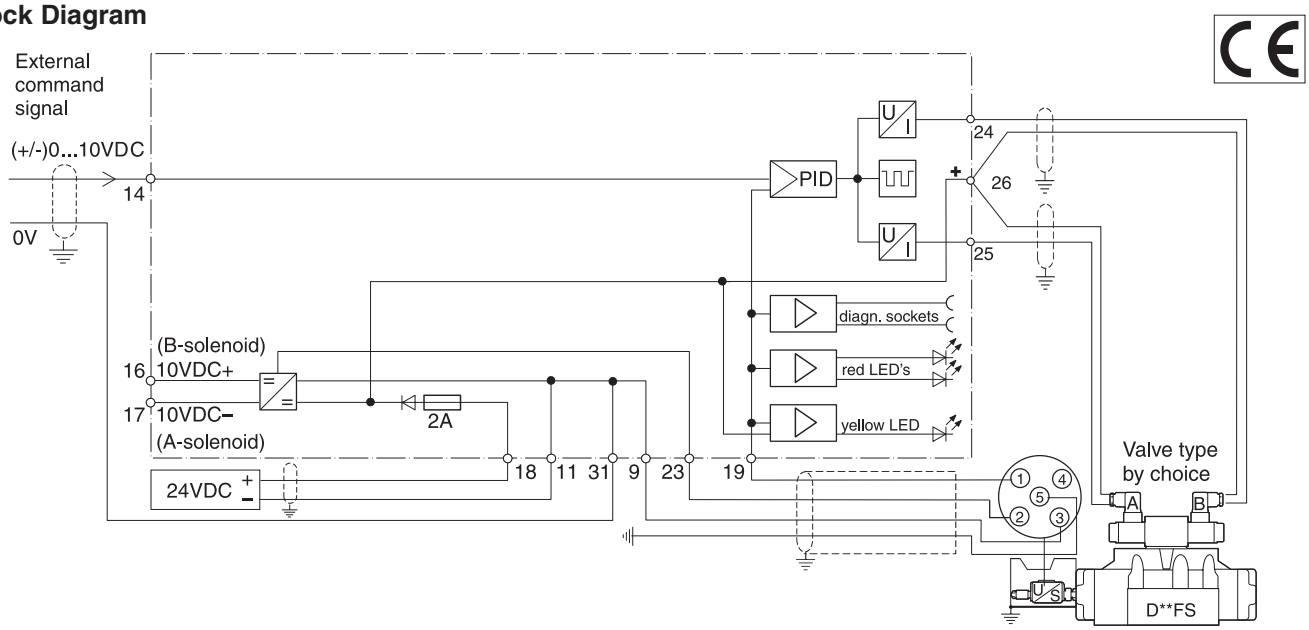




Characteristics

Connection	31pole male connector, DIN 41617
Power supply	filtered: 22-38V, unfiltered: 18-26V
Command signal voltage	0 to +10 DC and 0 to -10VDC
Power required	40VA
Reference outputs	+10V/-10VDC 10mA
Max. Sol. output current	1.3A
Ambient temperature	0 to 70 °C
Ramps	not available
Shield. Cable connect.	Supply connections + valve: AWG15 Transducer + set values:AWG20
Fuse	2A medium lag, DIN 41571/5x20 mm

Block Diagram



Features

- Conversion of externally supplied (+/-) command signals into appropriate valve spool strokes.
- Can be combined with EZ150 or external control program for signal processing.
- Pulsed low-loss amplifier power stage with supporting constant current control for consistant, temperature-independent, solenoid forces.
- Dither generator with applied frequency to improve static characteristics.
- Diagnosis of spool stroke by means of diagnostic sockets as well as LEDs for indicating working conditions.

Ordering Code

EW [ ] — **102** [ ]

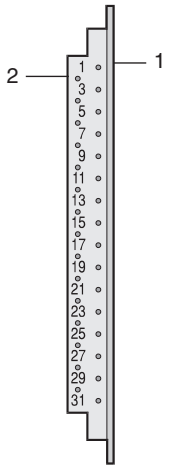
Electronic module directional valve | **Valve size** | **Module type** | **Design series**

Code	Valve size	Mounting pattern	Valve spool stroke
10	**D31FS**	**NG 10**	**±5mm**
16	**D41FS**	**NG 16**	**±6mm**
25	**D81FS**	**NG 25**	**±9.3mm**
26	D91FS	NG 25	±6.5mm
32	D111FS	NG 32	±15.0mm

Amplifier for command signal input

Bold letters = Short-term availability

Connector (Elevation B)



14 Input command voltage 0...+/-10 VDC
16 Output +10 V reference
18 Input 24 VDC supply

24 Output control solenoid B
26 Output common solenoid A+B

9 Reference potential 0 V transducer
11 Reference potential 0 V supply

17 Output -10 V reference
19 Input transducer signal

23 Output transducer supply
25 Output control solenoid A

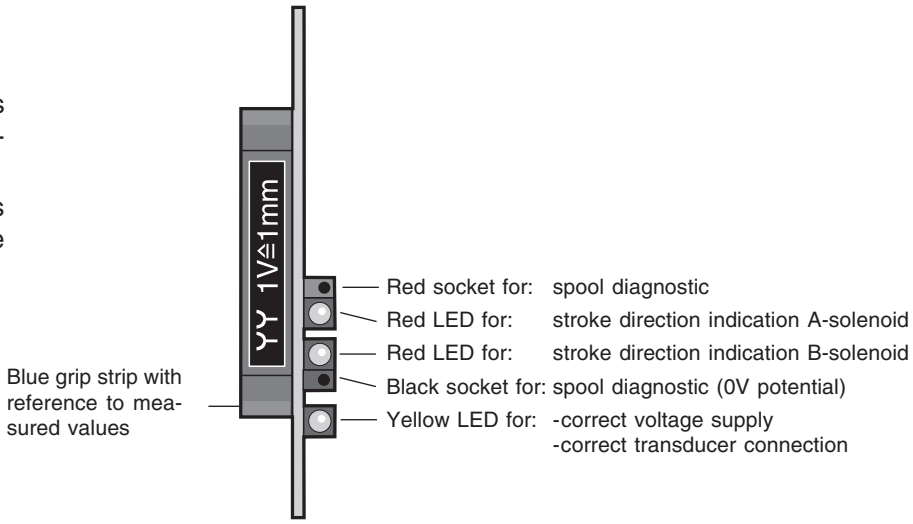
31 Reference potential 0V command

Operating and Diagnostic Elements (Elevation A)

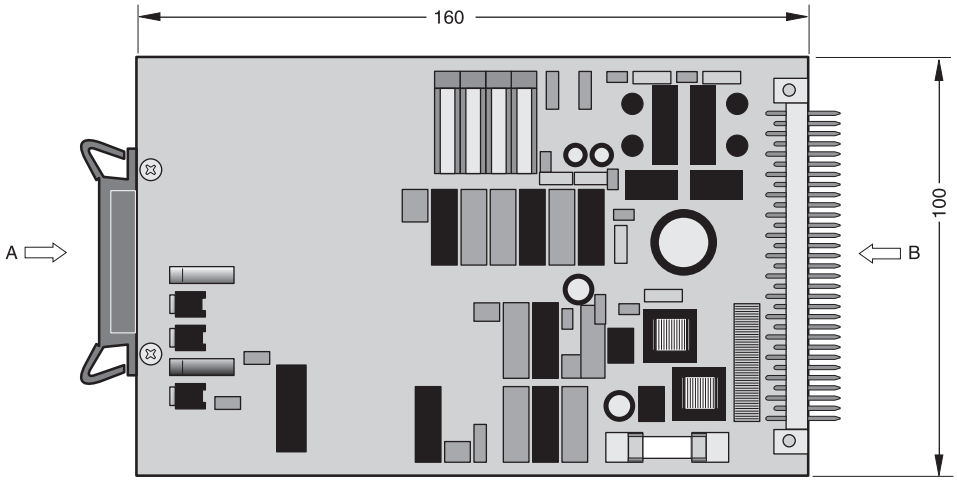
Note

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.

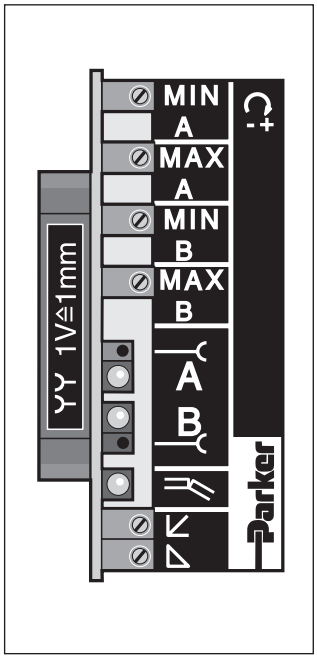


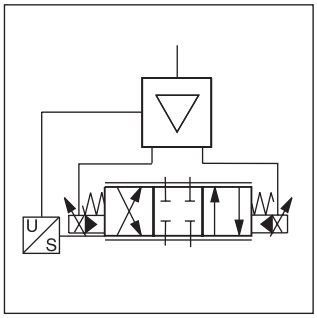
Dimensions

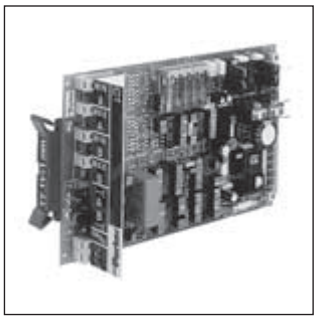


10

Electronic module for the control of pilot operated proportional directional valves with transducer. The movement profile of the valve spool is given by externally supplied command signals and internal limiting and ramp potentiometers and is controlled in a closed circuit feedback loop in the module. The command signals can, e.g., be processed using a pro-grammable controller or an EZ150 module.



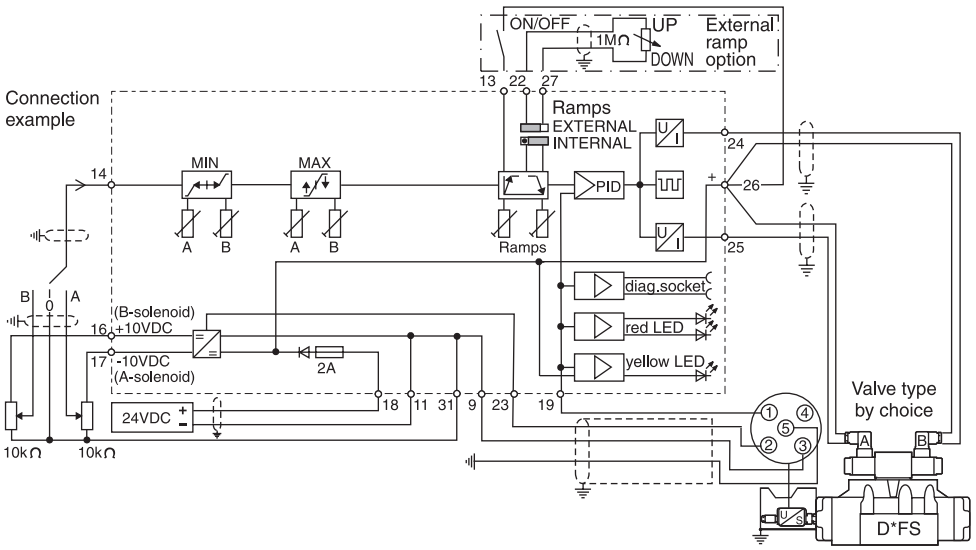




Characteristics

Connection	31pole male connector, DIN 41617
Power supply	filtered: 22–38V, unfiltered: 18–26V
Command signal voltage	0 to +10VDC and 0 to -10VDC
Input select voltage	5 to 30 VDC
Power required	40VA
Reference outputs	+10V/-10VDC 10mA
Max. Sol. output current	1.3A
Ambient temperature	0 to 70 °C
Ramps	0-5 seconds adjustable
Shield. Cable connect.	Supply connections + valve: AWG15 set values: AWG20
Fuse	2A medium lag, DIN 41571

Block Diagram



Features

- Spool overlap range can be manipulated with MIN potentiometer, adjustable by feeding a constant command of 0.2V.
- MAX limiting of spool stroke with full command range. Can be set up after MIN has been set and feeding a constant command of 10V.
- DIP-switch from internal ramp generation to external ramp supply.
- Pulsed low-loss amplifier power stage with supporting constant current control for constant, temperature-independent solenoid forces.
- Dither generator with applied frequency to improve static characteristics.
- Diagnosis of spool stroke by means of measuring sockets as well as LEDs for indicating working conditions.

Ordering Code

EW □ — **104** □

Electronic module directional valve | **Valve size** | **Module type** | **Design series**

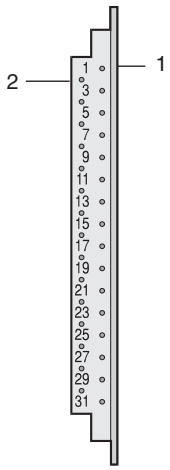
Code	Valve size	Mounting pattern	Valve spool stroke
10	**D31FS**	**NG 10**	**±5mm**
16	**D41FS**	**NG 16**	**±6mm**
25	**D81FS**	**NG 25**	**±9.3mm**
26	**D91FS**	**NG 25**	**±6.5mm**
32	**D111FS**	**NG 32**	**±15.0mm**

Amplifier adjustable MIN/MAX-limiting Up/Down ramps

Bold letters = Short-term availability

EW104.PM6.5 RH

Connector (Elevation B)



14 Input command voltage 0...+/-10 VDC
16 Output +10 V reference
18 Input 24 VDC supply

22 Input external ramp option
24 Output control solenoid B
26 Output control solenoid A+B with possibility for external switch connection

9 Reference potential 0V transducer
11 Reference potential 0V supply
13 Input ramp disable

17 Output -10V reference
19 Input transducer signal

23 Output transducer supply
25 Output control solenoid A
27 Input external ramp option

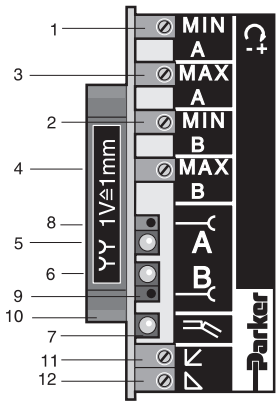
31 Reference potential 0V command

Operating and Diagnostic Elements (Elevation A)

Note

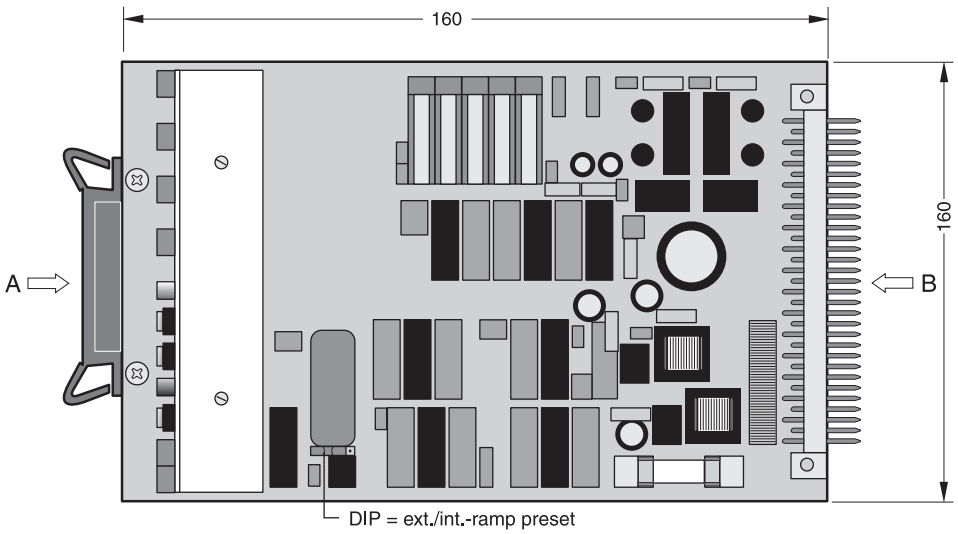
Turn off the electrical power to this board whenever the hydraulic supply to the valve is not on.

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



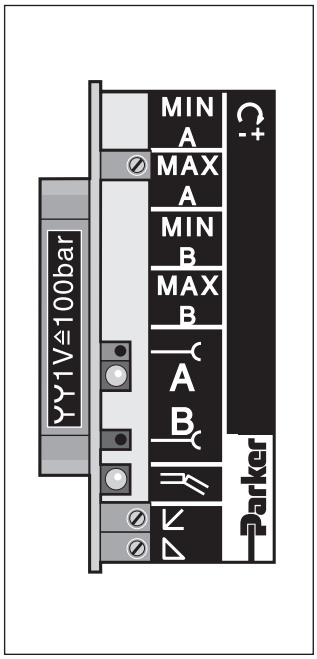
1–2 MIN limiting potentiometers for A and B sides
3–4 MAX limiting potentiometers for A and B sides
5–6 Red LEDs for: stroke direction indication
7 Yellow LED for:
-correct voltage supply,
-correct connection of transducer
8 Red socket for spool diagnostic
9 Black socket for spool diagnostic (0V potential)
10 Blue grip strip with reference information for measured values on the measuring sockets.
11 UP ramp potentiometer
12 DOWN ramp potentiometer

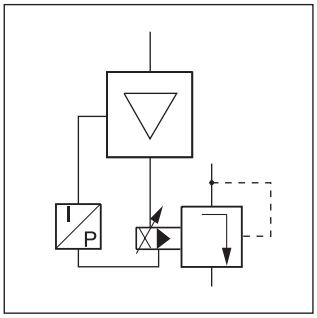
Dimensions

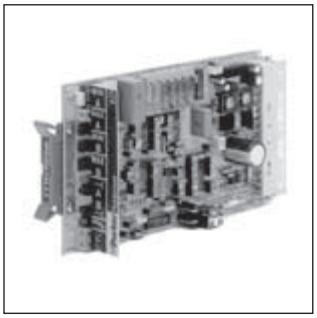


10

Electronic module for the control of proportional pressure relief valves. The pressure values and the changing sequence are determined by externally applied command signals as well as internal limit and ramp potentiometers. The pressure is measured by a pressure sensor and controlled by a closed loop circuit.



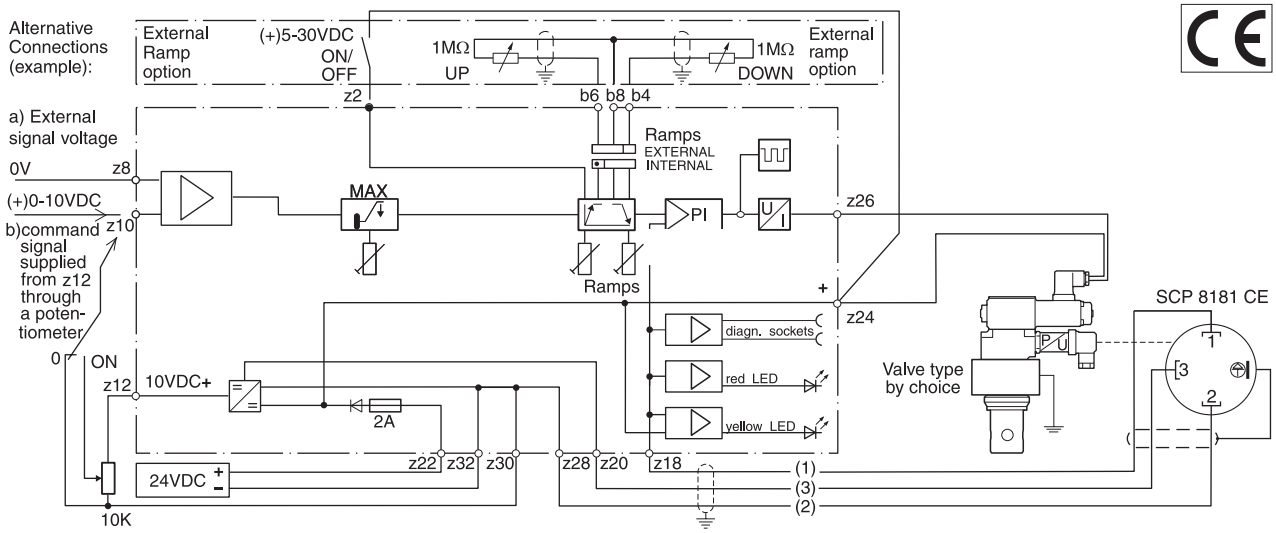




Characteristics

Connection	48-pole male conn., DIN 41612F
Power supply	regulated 22-38V
Command signal voltage	0 to +10V DC
Ramp disable voltage	5 to 30V DC
Power required	40VA
Reference output	+10V DC; 10mA
Max. Solenoid output current	1.3A
Ambient temperature	0 bis 70°C
Ramp time	0-5 seconds adjustable
Shielded	Supply connection + valve: AWG15
Cable connections	Transducer + set values:AWG20
Fuse	2A medium lag, DIN 41571/5x20mm
Pressure transducer type	SCP 8181 CE

Block Diagram



Features

- Processing and amplification of the externally supplied positive commands into output signals for the required pressure values.
- Can be combined with EZ150 or external programmable control.
- DIP switch from internal ramp generation to external ramp settings.
- MAX limiter for matching the working range to the full command range.
- Pulsed low loss amplifier power stage with supporting constant current control for constant, temperature-independent, 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.

Ordering Code

ED			—	124	10
Electronic module pressure relief valve	Operating pressure	Valve size		Module type	Design series

Code	bar
2	**210**
3	350

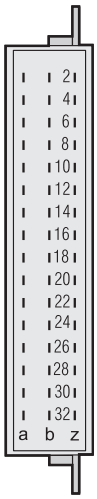
for DSAEB "P" and DSAEB "R" use only Code 2

Code	Valve Size
0	DSAEB NG06
1	DSAEB NG16
2*	**DSAEB NG25**
3	DSAEB NG32
4	DSAEB NG40
5	DSAEB NG50
6	DSAEB NG63

Amplifier for use with pressure sensor, adjustable MAX.-limit, Up/Down ramps

Bold letters = Short-term availability

Connector (Elevation B)



z 8 Diff.-Input 0V
z10 Diff.-Input (+) 0...10 V
z12 Output (+) 10 V reference
b14 Diagnosis output 1 V ≙ 100 bar

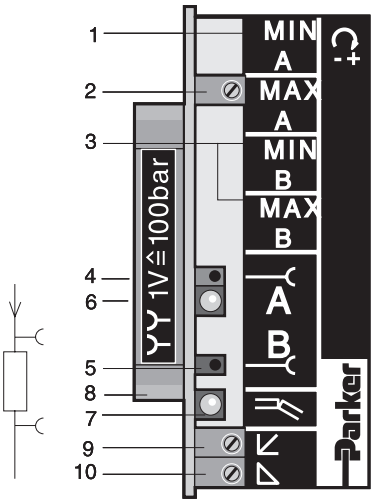
z18 Output sensor signal (4-20mA)
z20 Input sensor supply
z22 Input 24 V DC supply
z24 Output Control Solenoid
z26 Output Control Solenoid
z28 Reference potential 0 V sensor
z30 Reference potential 0 V command
z32 Reference potential 0 V Supply

Operating and Diagnostic Elements (Elevation A)

Note

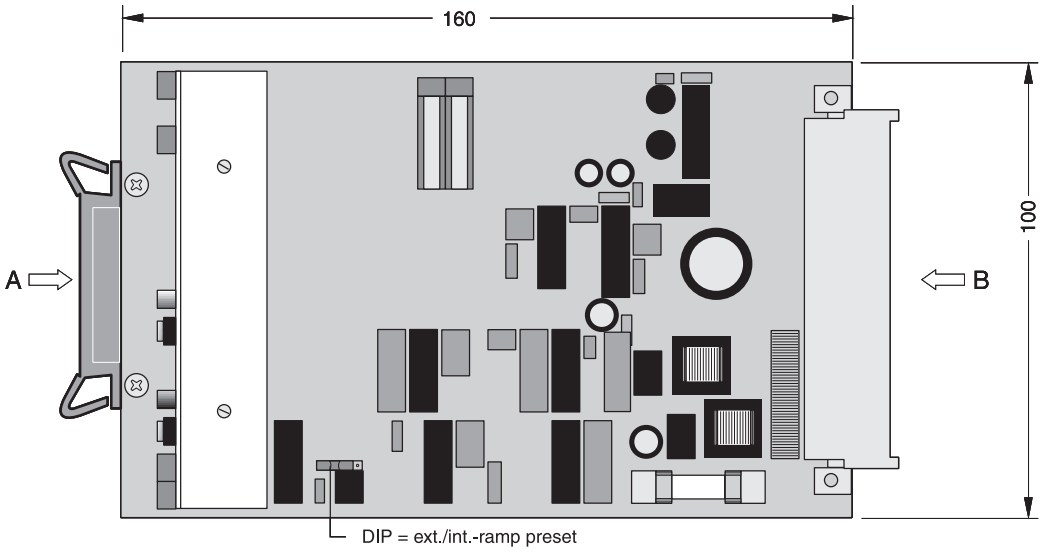
Turn off the electrical power to this board whenever the hydraulic supply to the valve is not on.

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

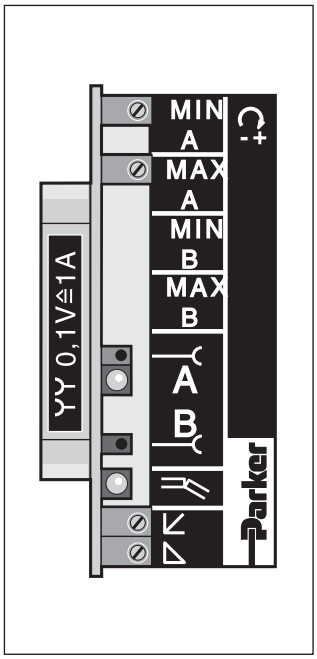


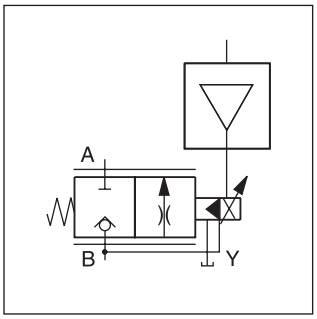
1 (MIN.-limiting is not used here)
2 MAX.-limiting for matching the max. pressure
3 (B-values are not used here)
4 Red socket for current diagnostic
5 Black socket for current diagnostic (0V potential)
6 Red LED (A) for:
– function indicator pressure
– (B not used)
7 Yellow LED for:
– correct transducer installation
– correct voltage supply
8 Red grip strip with reference information for measured values on the diagnostic sockets
9 UP ramp-potentiometer
10 DOWN ramp potentiometer

Dimensions



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).

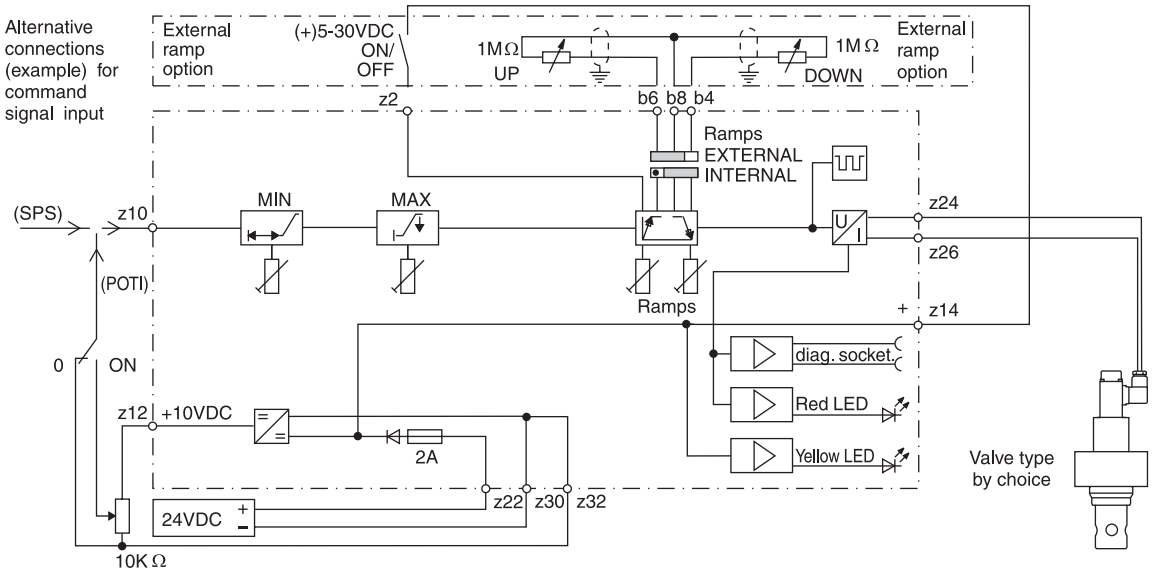




Characteristics

Connection	48 pole male connector, DIN 41612F
Power supply	filtered: 24V+/-10%, ripple max. 5%
Command voltage	0 to +10V DC
Max. Sol. output current	2.6A at 10V command
Reference output	+10V DC 10mA
Current consumption	3.5A Max
Ambient temperature	0 to 70°C
Ramp time	0-5 seconds adjustable
Shield. Cable connect.	Supply connections+valve: AWG15 Set values: AWG20
Fuse	2A medium lag, DIN 41571/5x20mm

Block Diagram



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.

Ordering Code

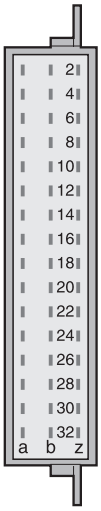
ET	□	—	154	□
Electronic module pressure valve	Valve size		Module type	Design series

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**

Highly dynamic amplifier, adjustable MIN/MAX limits, UP/DOWN ramps

Bold letters = Short-term availability

Connector (Elevation B)



z 2 Ramp disable

z10 Input (+) 0...10V
z12 Output (+) 10V reference
z14 Output 24VDC ramp disable

z22 Input 24VDC supply
z24 Output control solenoid
z26 Output control solenoid

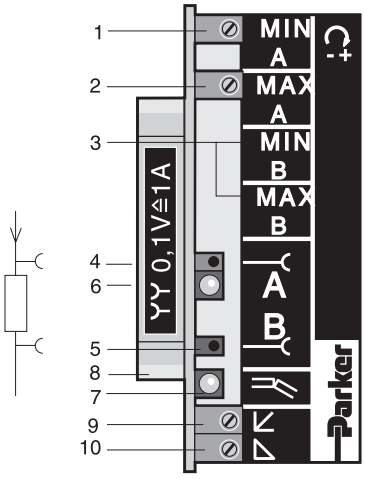
z30 Reference potential 0V command
z32 Reference potential 0V supply

Operating and Diagnostic Elements (Elevation A)

Note

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

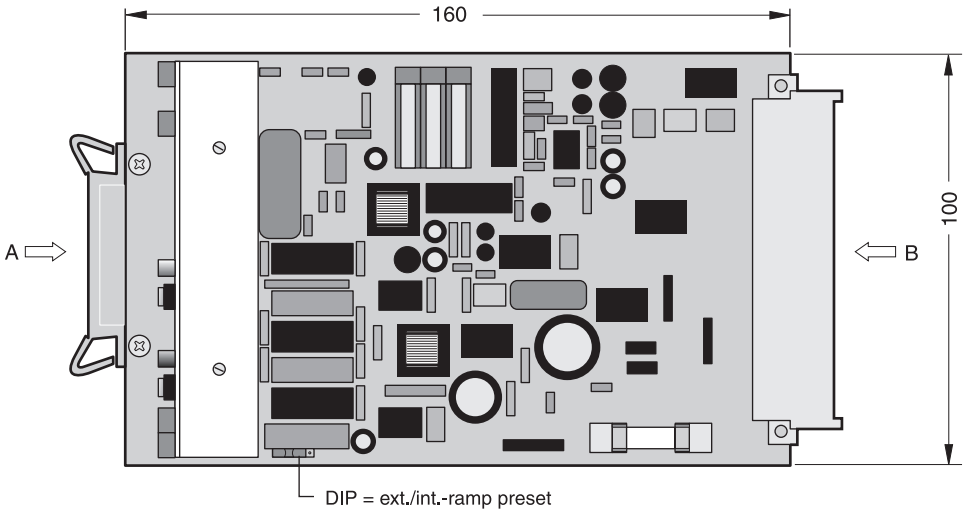
Always turn off the power to this board before removing it from the card holder.



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



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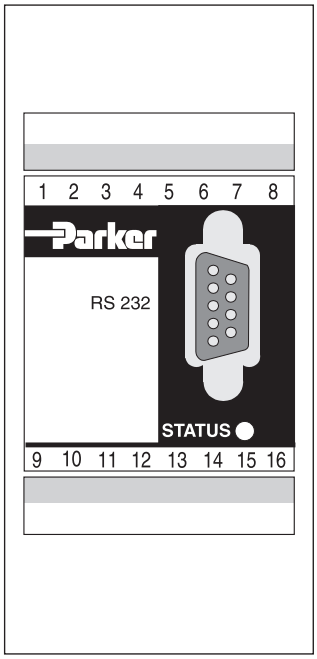
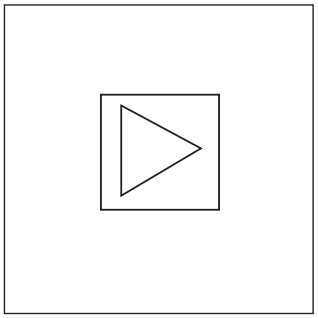
Digital electronic module to drive proportional pressure/ throttle valves without position feedback.





Features

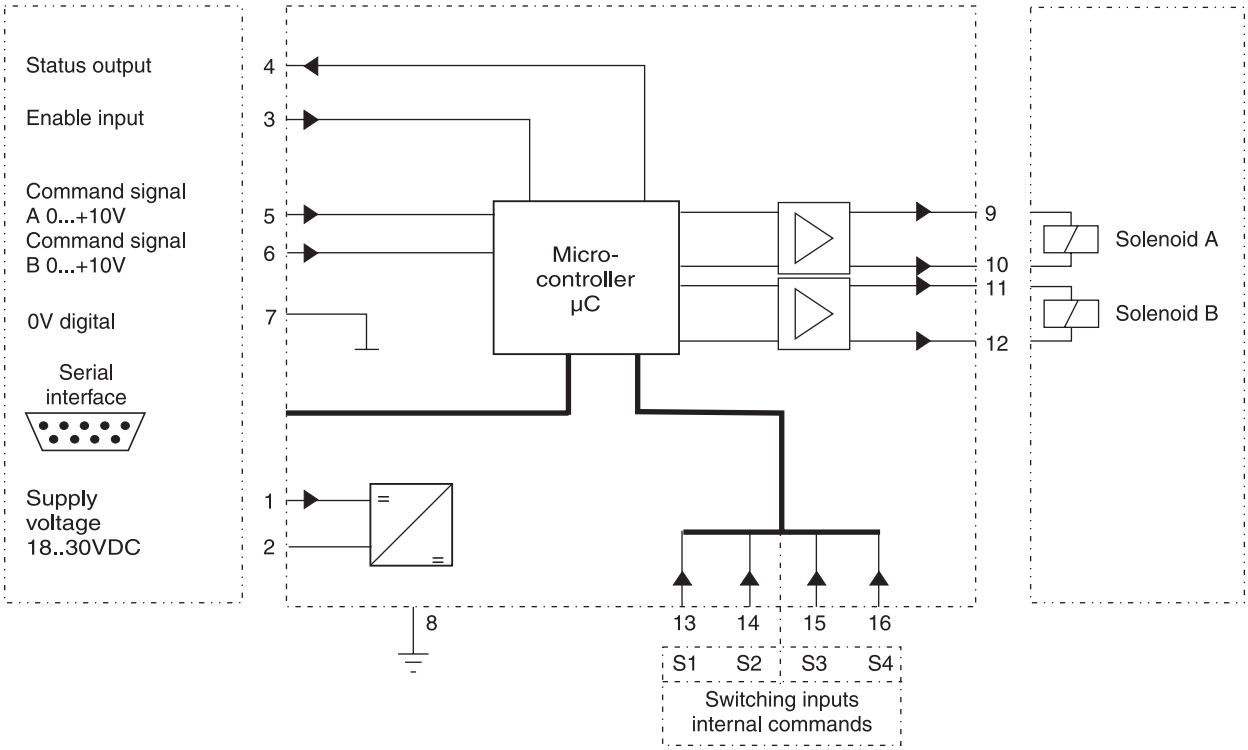
- Digital power amplifier.
- Two independent power stages (two channels).
- Two voltage inputs.
- Programmable via serial interface (RS232).
- Status output.
- One acceleration and one deceleration ramp for each channel.
- Two internal programmable command values for each channel.
- Software for parameterization.
- Also programmable by scientific calculator (HP48G)
  Ordering code: HP-P*D-GERMAN
  or HP-P*D-ENGLISH

CE

Note

The user software ProPXD is available for download on the PARKER homepage www.parker.com/euro_hcd or may be ordered under the ordering code 5715543.

Block Diagram



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Technical Data

General				
Construction			Module box for snap-on assembly (EN50022)	
Electrical				
Supply voltage		[V]	18...30	
Current consumption max.		[A]	5	
Power consumption (at 24V) max.		[VA]	90	
Pre fuse		[A]	6.3 medium lag	
Inputs				
Analogue		[V]	0...+10V, 150kOhm	each channel
		[mA]	-	
Digital	0	[V]	0...5	
	1	[V]	8.5...30	
Outputs				
Digital	0	[V]	0...0.5	
	1	[V]	supply voltage, 15mA load	
Solenoids		[A]	0.8 / 1.3 / 1.8 / 2.7 / 3.5	each channel
Interfaces				
Serial			RS232C, null modem	
Adjustment ranges				
Min.		[‰]	0...1000 (= 0...50% current)	each channel
Max.		[‰]	0...1000 (= 50...100% current)	each channel
Ramps		[s]	0...32.5	
Dither	Amplitude	[%]	0...100 (= 0...16% current)	each channel
	Frequency	[Hz]	0...800	each channel
Protection				
Industrial protection class				IP20
Environment				
Temperature		[°C]	-40...+70	
Connection				
Wire-connection			screwable; AWG 24...13	
EMV				
conform to standards			EN 50081-2 EN 50082-2	

If high-resistance-solenoids with nominal current of 1.3A or 0.8A are used, the supply voltage has to be raised to 24VDC or 29VDC.

Ordering Code

PCD	**00**	**A**	–	**400**	–	
Electronic module prop. valve with one solenoid	**Variable solenoid current**			**Module type**		**Design series**

Code	Module type
400	**Amplifier, adjustable min./max.-limits accel.-/decel.-ramp 2 x 2 internal programmable commands**

Bold letters =
Short-term availability

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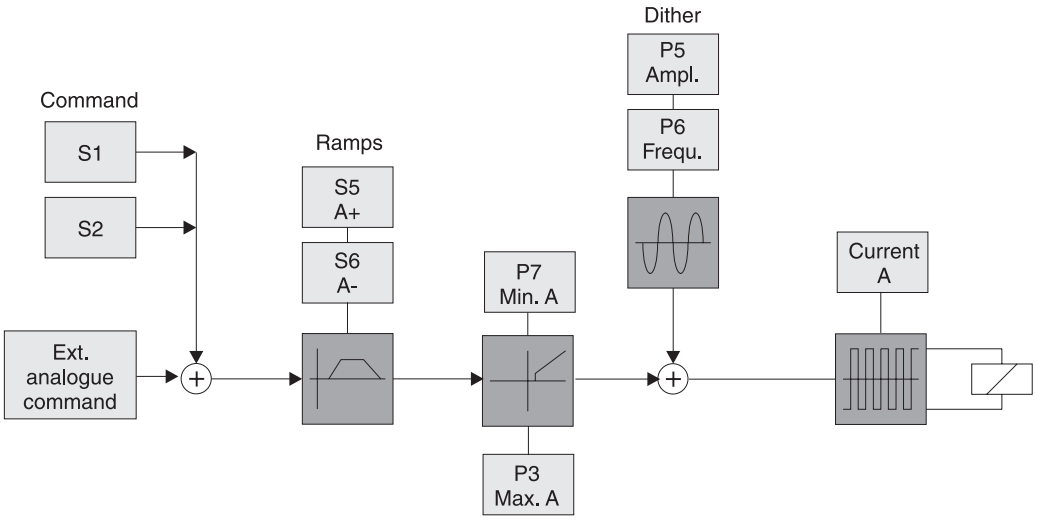
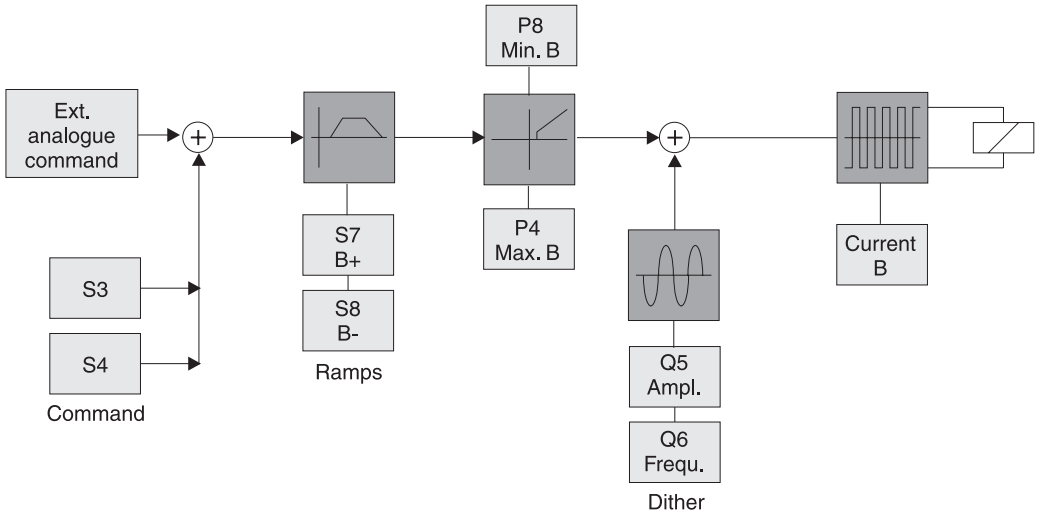
Signal Flow Diagram A



Signal Flow Diagram B



Command signals

In addition to the external analogue command inputs, the PCD00A-400 Electronic includes two internal programmable command signals per channel, which can be activated by the switching inputs. S1 has higher priority than S2, and S3 has higher priority than S4. All four internal command signals can be assigned to one channel.

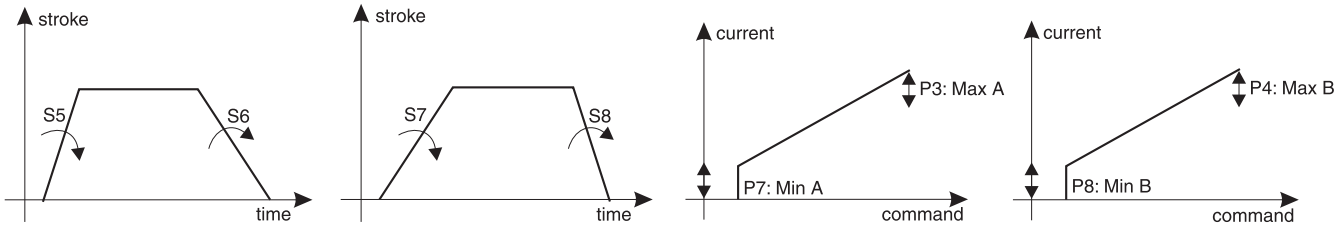
Maximum current adjustment

The maximum current can be adjusted by one parameter separately for each channel. The current may be limited for each channel, and the default maximum current is 800mA.

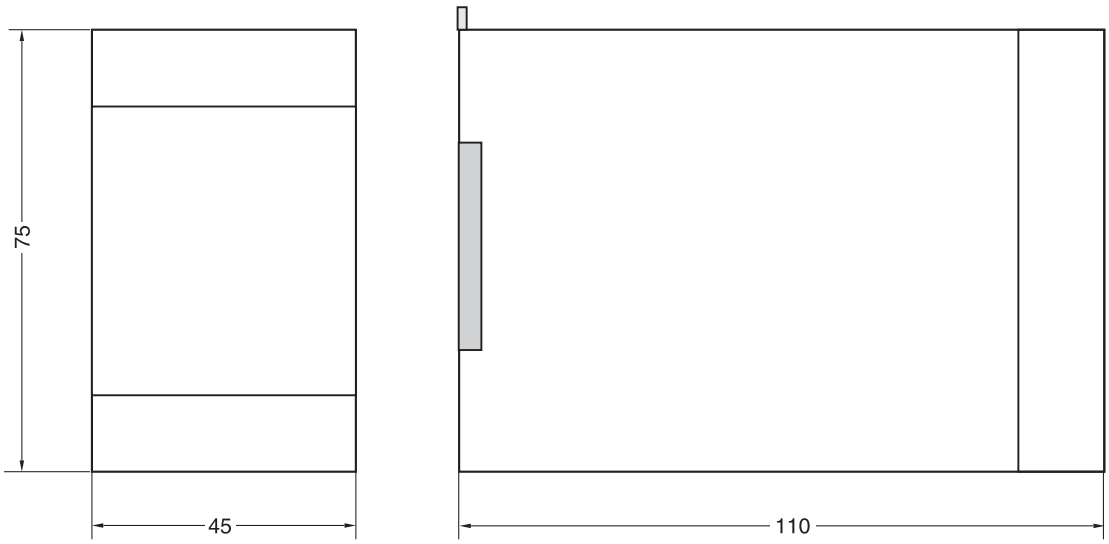
10

Ramp-function / Min-Max-function

The PCD00A-400-electronic includes two internal programmable ramps for each channel. Additionally a current step may be programmed (Min) and / or the current may be limited (Max) for each channel separately.



Dimensions



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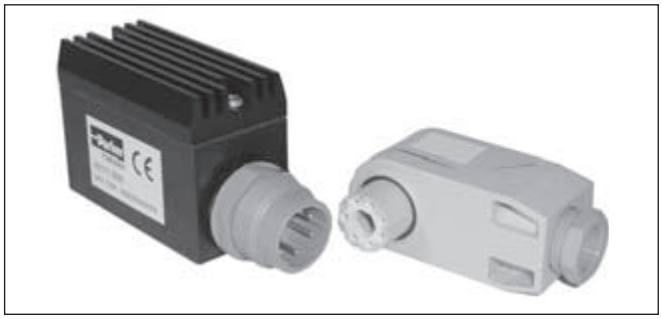
The electronic plug amplifier VS 111 provides control for proportional pressure, directional, and throttle valves. The plug amplifier may be mounted on directly to the proportional solenoids and secured with a screw.

The output of the amplifier supplies DC current for controlling one proportional solenoid.
This current is proportional to the command signal at the input of the amplifier. Through this, together with a proportional valve, an infinitely variable adjustment can be made to the pressure or flow.



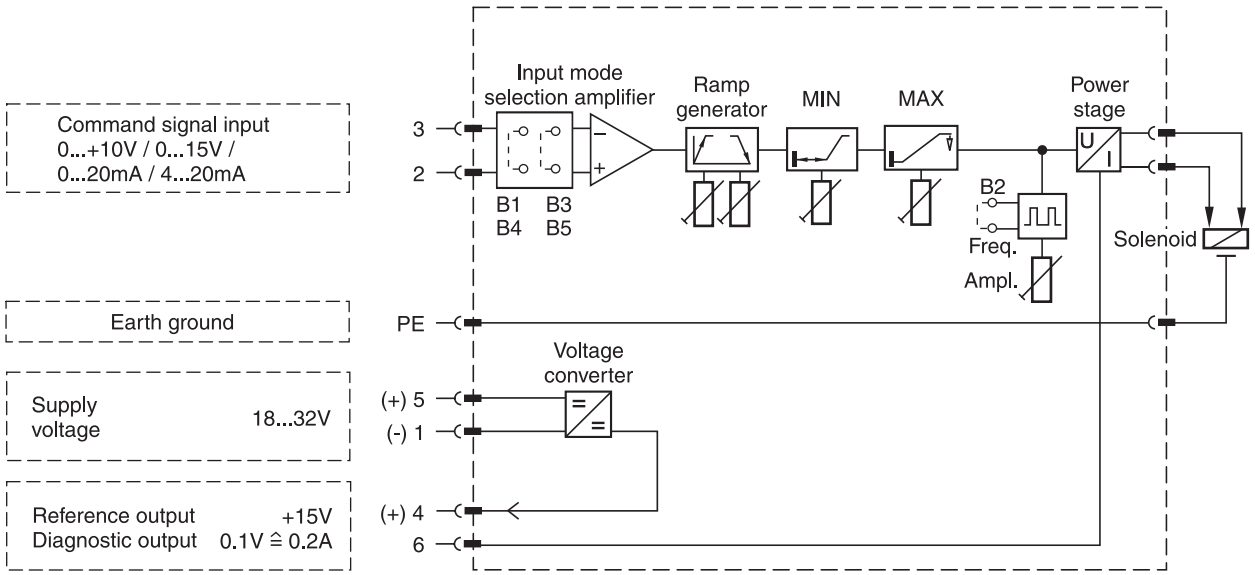
Features

- Solenoid control.
- Simple installation, direct on valve.
- Standard voltage or current signals for command signal inputs.
- Capable of PLC control.
- Temperature-independent solenoid current.
- Solenoid connection 2+PE as per EN 175301-803.
- Control connection 6+PE as per DIN 43651.

EMC

EN 50081-2 EN 50082-2	EN 55011 EN 61000-4-2 EN 61000-4-3	 EN 61000-4-4 EN 61000-4-5

Circuit Diagram



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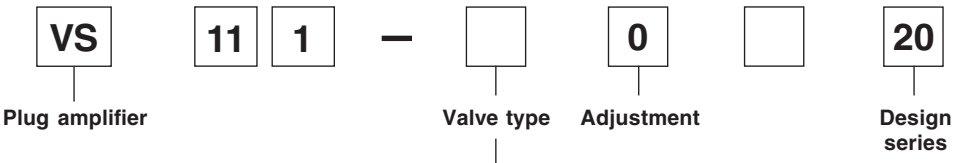
Technical Data

General		
Design		Cable plug
Electrical		
Supply voltage	[V]	18...32, ripple < 5%
Current consumption	[A]	0.8
Power consumption (at 24V)	[VA]	20
Pre fuse	[A]	2.0 medium lag
Inputs		
Analogue command signal	[V]	0...10 / 0...15, 100kOhm
command signal	[mA]	0...20 / 4...20, 500Ohm
Outputs		
Reference	[V]	15 ±5% / max. 5mA
Solenoids	[A]	0.8
Temp. drift of solenoid output current	[%]	< ±2%
Adjustment ranges		
Min	[%]	0...50
Max		0...100
Ramp time	[s]	0.1...8
Dither Amplitude	[%]	0...90
Frequency	[Hz]	40 / 80
Protection		
Industrial protection class		IP65, plugged and mounted
Environment		
Temperature	[°C]	-20...60
Connection		
Supply connector		6pole + PE, DIN 43 651
Solenoid		2pole + PE, EN 175301-803

Ordering Code



Code	Valve type
0	**no assignment ***
1	**Proportional flow valve**
2	**Proportional DC valve**
8	**Proportional pressure valve**

*The versions acc. codes 1...8 will be shipped factory set.
The version Code 0 needs to be set to the connected valve's characteristics.

Bold letters =
Short-term availability

Note:

Please order control connector separately (order number HR 2150 2072).

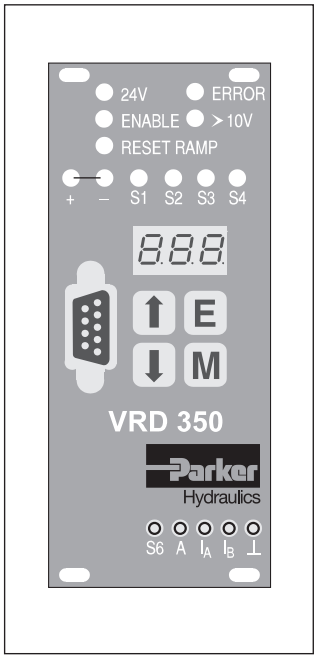
General

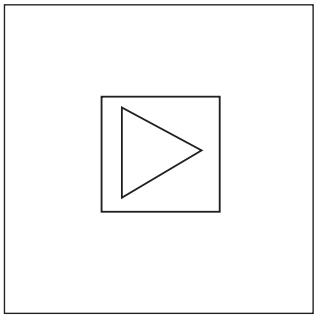
The power amplifier of the series VRD350/355 provides the control of proportional directional valves, pressure valves, and throttle valves and are suitable for solenoid systems of up to 3.5 A. Valves with feedback as well as external closed loops (e.g., pressure control circuits) can be achieved with the controlled designs.

The cost-effective design of the digital amplifier card without front display and operating elements is parameterised via the series interface or the snap-on operator control unit ABG35S.
The operator control unit ABG35S must be ordered separately (order number HR 23.501.546).

Features

- Digital amplifier card with double PWM output stage.
- Digital, reproducible input of command signals, ramps, and parameters.
- Integrated measuring device funtions.
- Resolution of the command and actual values ≤0.5‰.
- RS232 interface available on the front plate.
- Integrated feedback value adjustment for closed loop.
- No drift due to temperature influences or component aging.
- Simple operation using 4 buttons (VRD355 only with ABG35S).



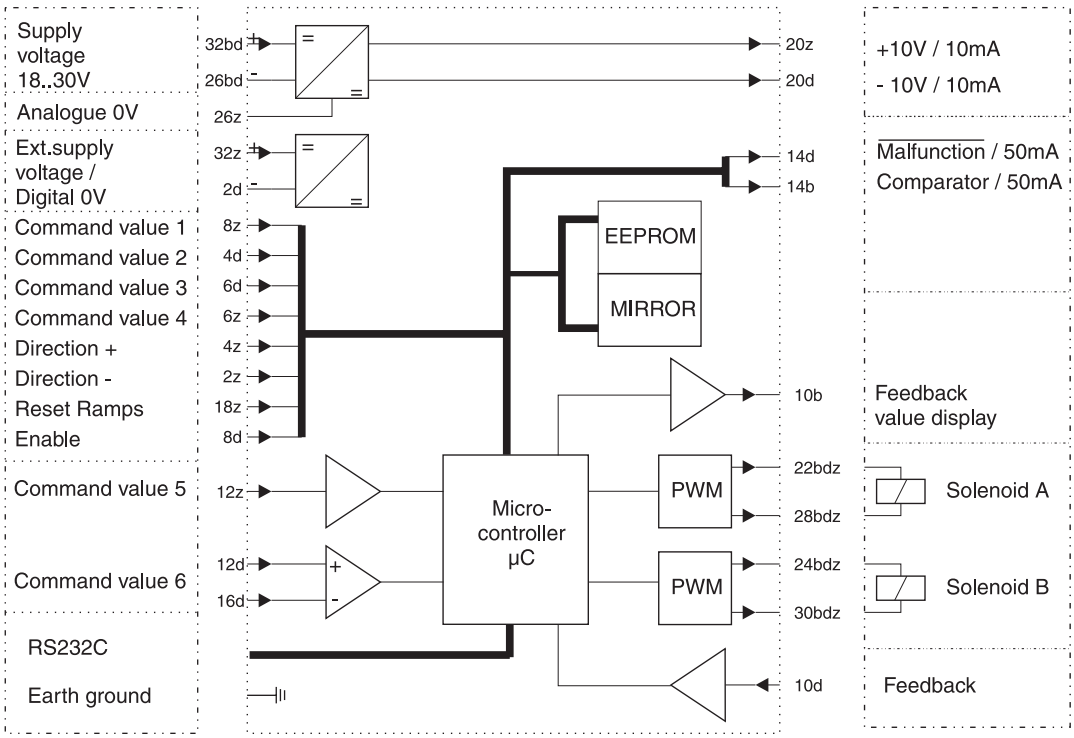


The features are available thanks to microprocessor technology. The microprocessor assumes the regulation as well as the control functions. The system features are essentially determined by the software.

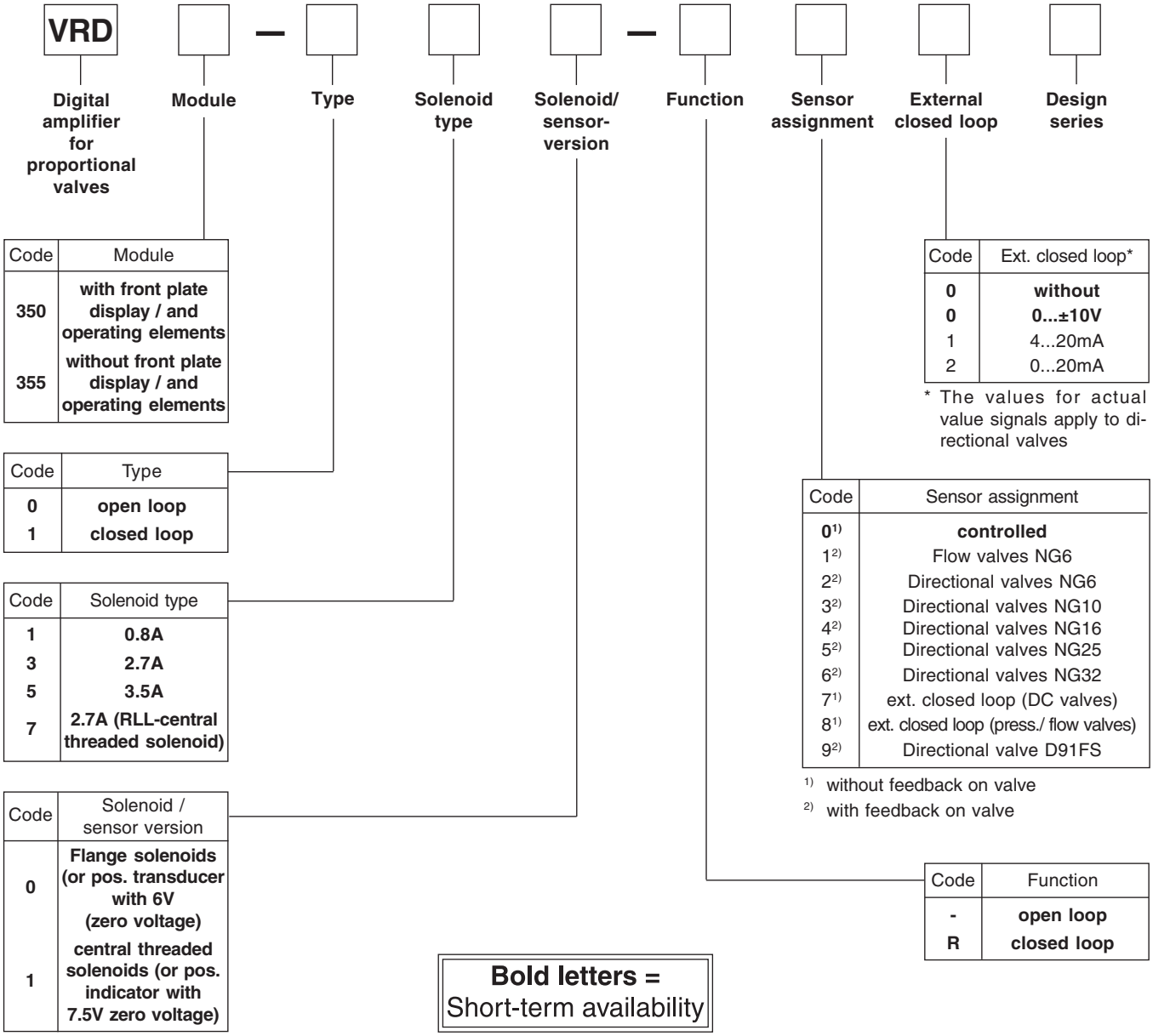
Note

The DOS user software PROVRD350/355 is available for free download on our internet page www.parker.com/euro_hcd or may be ordered under ordering code HR 59500010.

Block Diagram



Ordering Code



Code	Module
350	**with front plate display / and operating elements**
355	**without front plate display / and operating elements**

Code	Type
0	**open loop**
1	**closed loop**

Code	Solenoid type
1	**0.8A**
3	**2.7A**
5	**3.5A**
7	**2.7A (RLL-central threaded solenoid)**

Code	Solenoid / sensor version
0	**Flange solenoids (or pos. transducer with 6V (zero voltage)**
1	**central threaded solenoids (or pos. indicator with 7.5V zero voltage)**

Code	Ext. closed loop*
0	**without**
0	**0...±10V**
1	4...20mA
2	0...20mA

* The values for actual value signals apply to directional valves

Code	Sensor assignment
0[1)]	**controlled**
1[2)]	Flow valves NG6
2[2)]	Directional valves NG6
3[2)]	Directional valves NG10
4[2)]	Directional valves NG16
5[2)]	Directional valves NG25
6[2)]	Directional valves NG32
7[1)]	ext. closed loop (DC valves)
8[1)]	ext. closed loop (press./ flow valves)
9[2)]	Directional valve D91FS

[1)] without feedback on valve
[2)] with feedback on valve

Code	Function
-	**open loop**
R	**closed loop**

Bold letters =
Short-term availability

Assignment Table

Proportional DC valves				Amplifier card for valves		
Type	**Description**	**Solenoid**	**Size**	**without position transducer**	**with position transducer**	**without pos. transducer, with ext. closed loop**
DC Valves	D*1FW	L	10...32	VRD35*-030-00	-	VRD35*-130-R7*
	D*1FS	L	10...32	-	VRD35*-130-R*0	-
	RLL	G09	6	VRD35*-071-00	VRD35*-171-R20	VRD35*-171-R7*
	WLL	G09	6	VRD35*-031-00	VRD35*-131-R20	VRD35*-131-R7*
	WLL	-	10	VRD35*-050-00	VRD35*-150-R30	VRD35*-150-R7*
Pressure Valves	VB	-	6	VRD35*-010-00	-	VRD35*-110-R8*
	VBY	-	6...10	VRD35*-010-00	-	VRD35*-110-R8*
	VMY	-	6...10	VRD35*-010-00	-	VRD35*-110-R8*
Flow Valves	DUR	-	6	VRD35*-010-00	VRD35*-110-R10	VRD35*-110-R8*

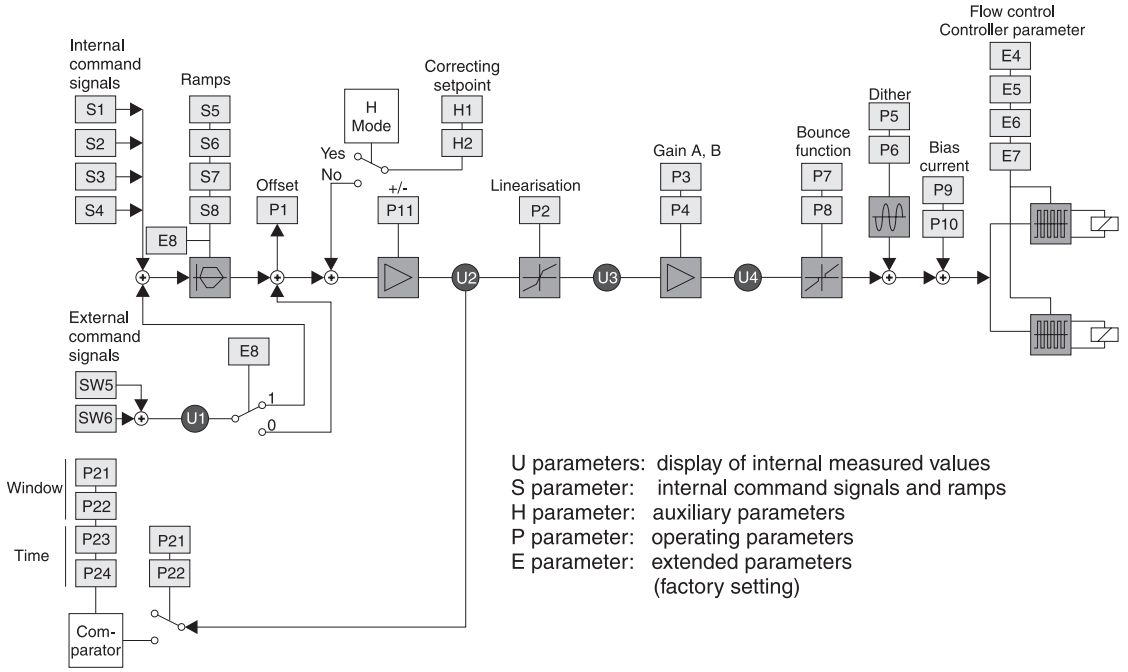
Technical Data

General		
Design		European format
Electrical		
Supply voltage	[V]	18...30, ripple < 5%
Current consumption	[A]	3
Power consumption (24V)	[VA]	50
Pre-fuse	[A]	3.15, quick acting
Inputs		
Analogue Feedback value	[V]	6 ±2, 600 KOhm
Feedback value	[V]	7,5 ±2, 600 KOhm
Feedback value	[V]	0...10, > 10 KOhm
Feedback value	[V]	0...±10, > 10 KOhm
Feedback value	[mA]	0...20, 100 KOhm
Feedback value	[mA]	4...20, 100 KOhm
Command value 5/6	[V]	0...±10, > 150 KOhm
Digital 0	[V]	0...1
1	[V]	3...30
Outputs		
Ext. supply voltage	[V]	24 ±10%, ripple <5%
Reference	[V]	+10, -10, 10mA
Analogue	[V]	0...10, 5 mA
Digital	[mA]	50
Solenoids	[A]	0.8 / 2.7 / 3.5
Interfaces		
Serial		RS 232C
Adjustment range		
Min	[%]	0...100
Max	[%]	0...100
Ramp time	[s]	0...39.5
Dither Amplitude	[%]	0...30
Frequency	[Hz]	0...647, in steps
Zero point	[%]	-30...+30
Protection		
Industrial protection class		IP00
Environment		
Temperature	[°C]	0...50
Connection		
Plug connector		DIN 41612, 48 pin design type F
Dimensions		
Front plate	[mm]	50.5 x 128.4, 10TE/3HE
Printed circuit board	[mm]	100 x 160

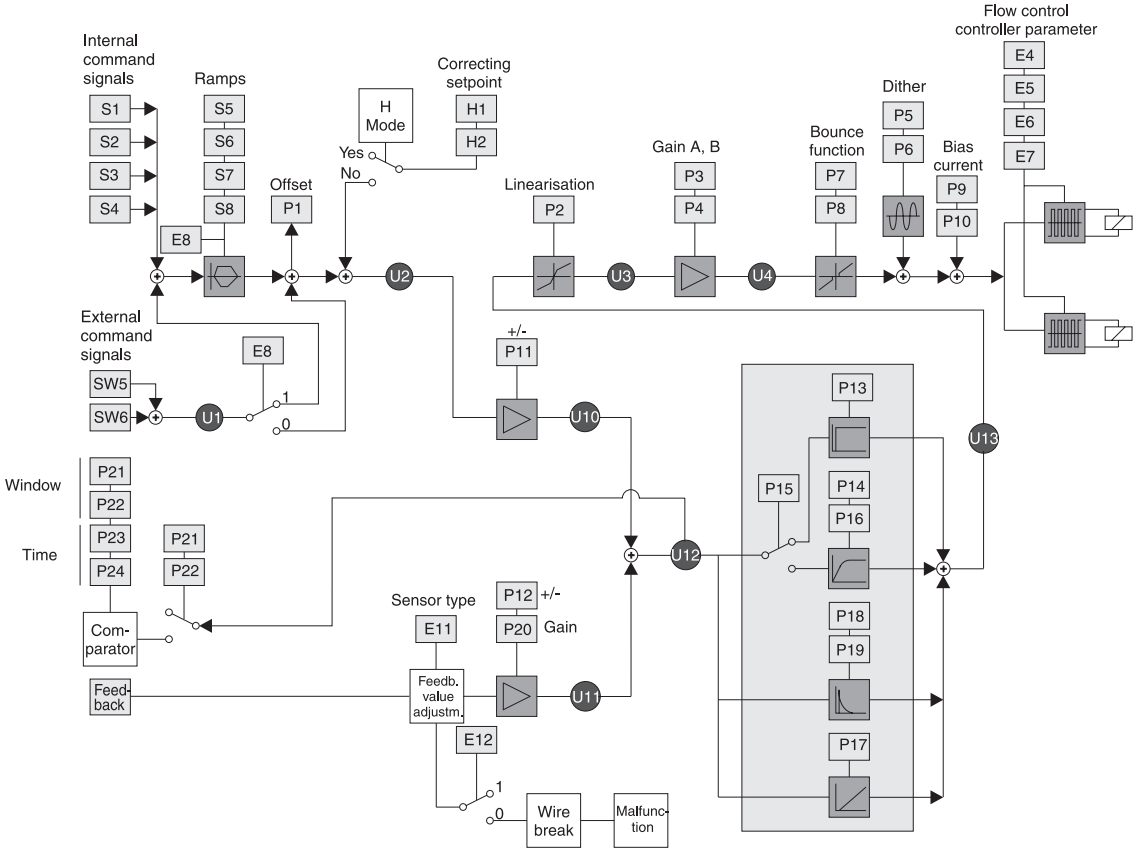
10

Signal Flow Diagram

Open Loop Operation



External Closed Loop Control



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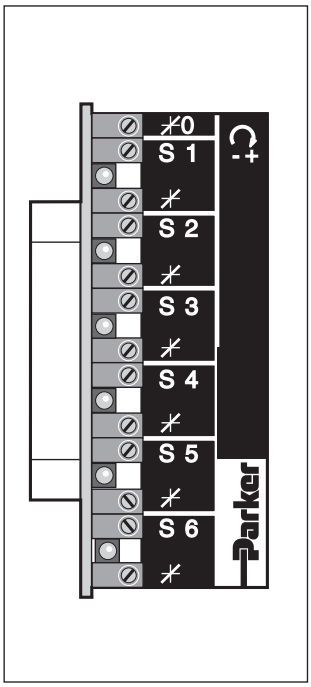
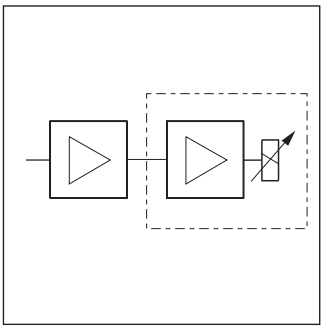
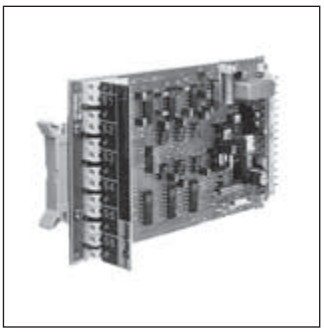
Electronic module with command potentiometers, suitable as an add-on card to other main cards or directly for the control of proportional valves.



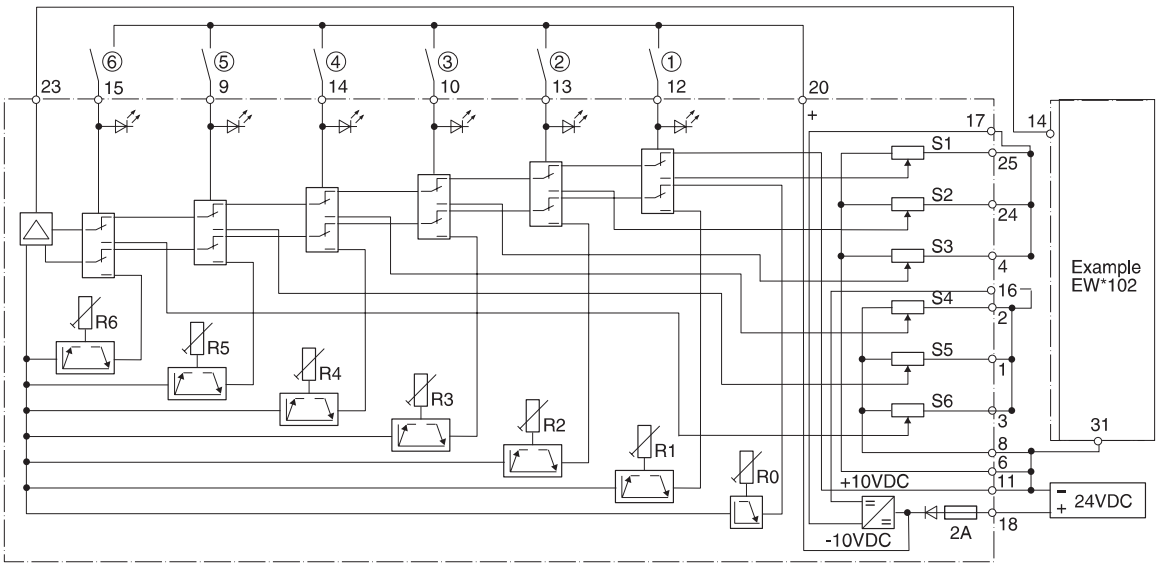




Characteristics

Connection	31 pole male connector, DIN 41617
Power supply	filtered: 22–38V, unfiltered: 18–26V
Command voltage	0 to +10VDC, and 0 to -10VDC
Input signal voltage	5 to 30VDC
Power consumption	4VA
Reference outputs	+10V/-10VDC/10mA
Output	0 to +10V, and 0 to -10V/10mA
Ambient temperature	0 to 70°C
Ramp time	0–5 seconds adjustable
Shield. Cable connect.	AWG20
Fuse	2A medium lag, DIN 41571/5x20 mm

Block Diagram



Features

- Outputs to the main card can be “modulated” with up to six call-up commands and six ramp potentiometers, adjustable from 0 to 100%.
- Adjustable default ramp 0 to 100%.
- Reference outputs +10V/-10V
- LEDs for indicating operating conditions.

Ordering Code

EZ **00** — **150** **10**

Electronic module auxiliary card — **Module type** — **Design series**

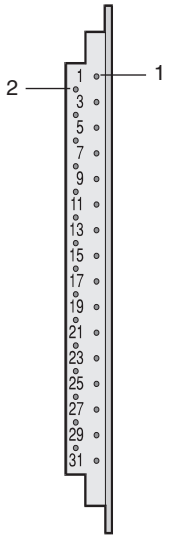
Main card	Valves
E_102	D_FT*
E_104	D_FH*
E_105	RE_*
ET_154	D_FX*

*with voltage input

6 command channels
6 command ramps
1 default ramp

Bold letters =
Short-term availability

Connector (Elevation B)



2 Input preselected channel 4
4 Input preselected channel 3
6 Reference potential channel 1..3
8 Reference potential channel 4..6
10 Input set value lock-on chan 3
12 Input set value lock-on chan 1
14 Input set value lock-on chan 4
16 Output +10V reference
18 Input 24VDC supply
20 Output 24VDC set value lock-on

24 Input preselected channel 2

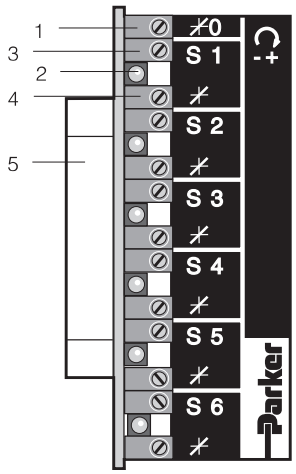
1 Input preselect channel 5
3 Input preselect channel 6

9 Input set value lock-on Chan 5
11 Reference potential 0V supply/output set value
13 Input set value lock-on Chan 2
15 Input set value lock-up Chan 6
17 Output -10V reference

23 Output command
25 Input preselected channel 1

Operating and Diagnostic Elements (Elevation A)

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



1 Default ramp, is active when all set-values have been switched-off.

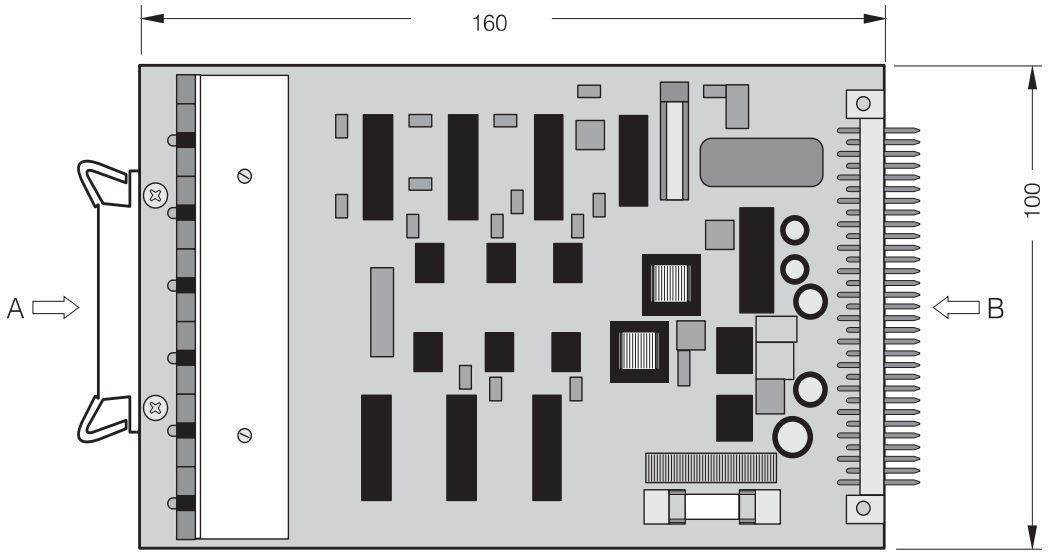
2 6 Green LEDs as operating indicators for set value channels

3 6 set value potentiometers S1–S6

4 6 Set value ramp potentiometers, which are activated, when switching set values.
The ramp is activated, when its associated set value is newly switched in. The ramp time is added to any ramp time of the main card.

5 Yellow grip strip (auxiliary card)

Dimensions



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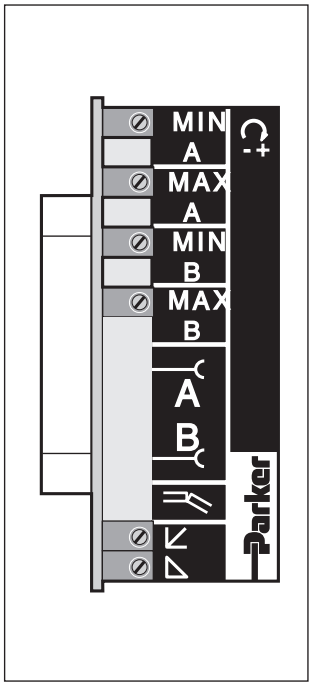
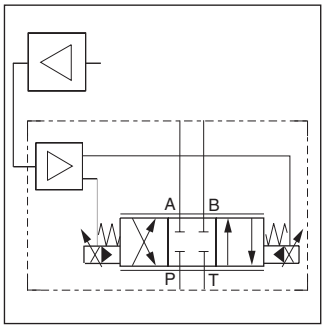
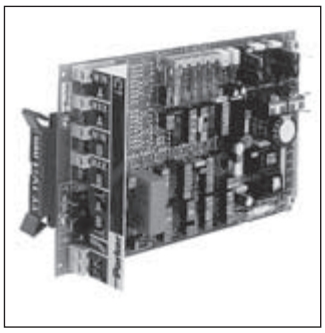
Electronic module, suitable as an add-on card to proportional directional valves with integrated or On-Board electronics. The externally supplied command signals can be modulated with regard to specific applications by internal limiting and ramp potentiometers.



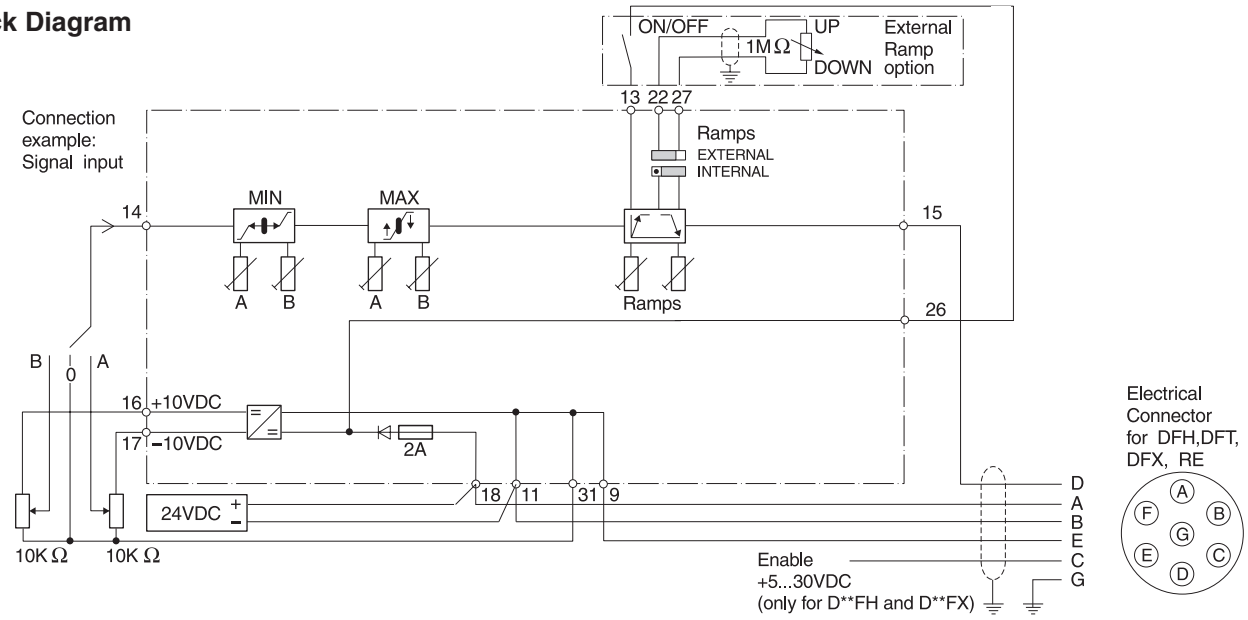




Characteristics

Connection	31 pole male connector, DIN 41617
Power supply	filtered: 22–38V, unfiltered: 18–26V
Command voltage	0 to +10V DC and 0 to -10V DC
Ramp disable voltage	5 to 30V DC
Power consumption	4VA
Reference outputs	+10V -10V DC 10mA
Output voltage	0...+/-10V
Ambient temperature	0 to 70°C
Ramp time	0–5 seconds adjustable
Shield. Cable connect.	AWG20
Fuse	2A medium lag, DIN 41571/5x20 mm

Block Diagram



Features

- Spool overlap range of the connected proportional valve can be manipulated with MIN potentiometer, adjustable by feeding a constant command of appr. 0.2V.
- MAX-limiting of spool stroke with full command range. Adjustable after MIN has been set and feeding a constant command of 10V.
- DIP-switch from internal ramp generation to external ramp setting.

Ordering Code

EZ	00	—	154	
Electronic module auxiliary card			**Module type**	**Design series**

For valves:
DFT*
DFH*
RE*
DFX*

*with voltage input

adjustable MIN/MAX-limiters, UP/DOWN ramps

Bold letters =
Short-term availability

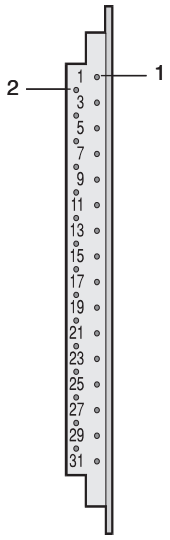
Connector (Elevation B)

14 Input control signal 0...+/-10VDC

16 Output +10V reference

18 Input 24VDC supply
22 Input external ramp option

26 Output voltage to supply external switches



9 Reference potential 0V output

11 Reference potential 0V supply

13 Input ramps switch off

15 Output 0...±10V

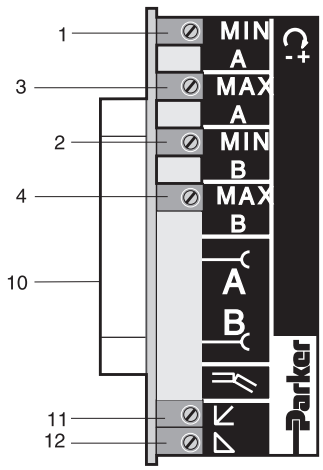
17 Output -10V reference

27 Input external ramp option

31 Reference potential 0V command

Operating and Diagnostic Elements (Elevation A)

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

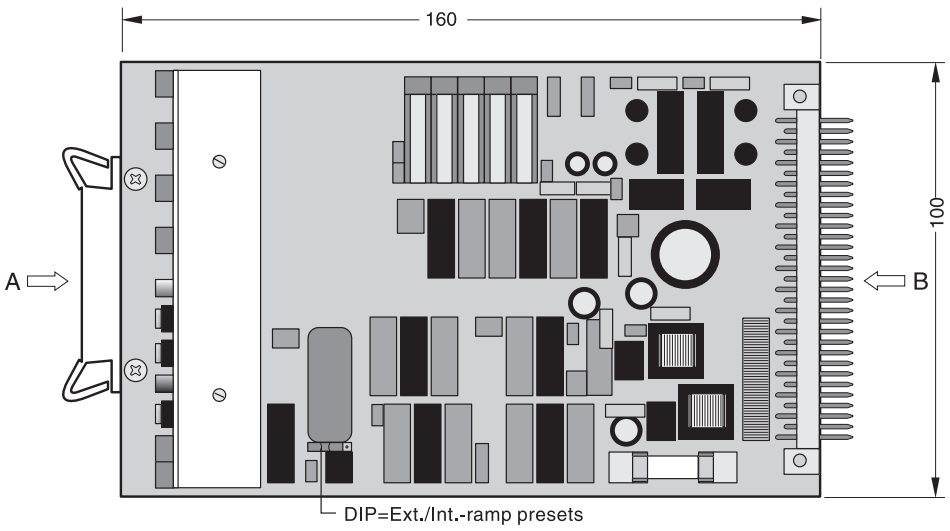


1–2 MIN-limiting potentiometers for A- and B-sides
3–4 MAX-limiting potentiometers for A- and B-sides

10 Yellow grip strip (auxiliary Card)

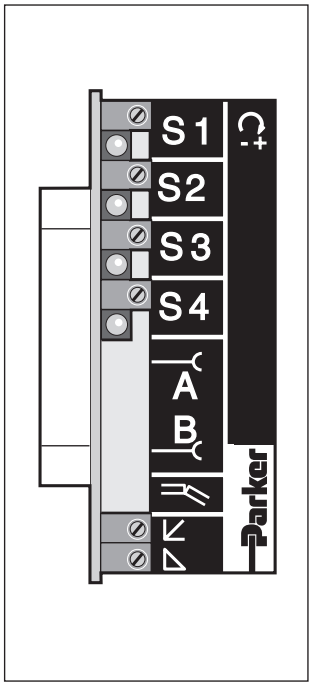
11 UP ramp potentiometer
12 DOWN ramp potentiometer

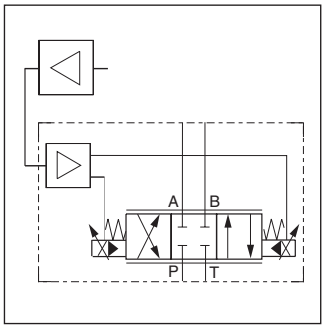
Dimensions

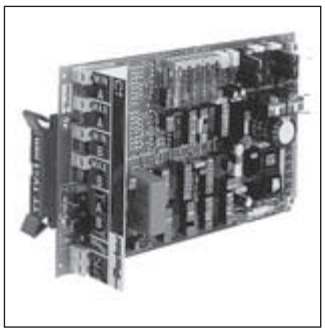


10

Electronic module, suitable as an add-on card to proportional diretional valves with integrated or On-Board electronics.
4 selectable feed set values can be retrieved and modulated by ramp potentiometers.



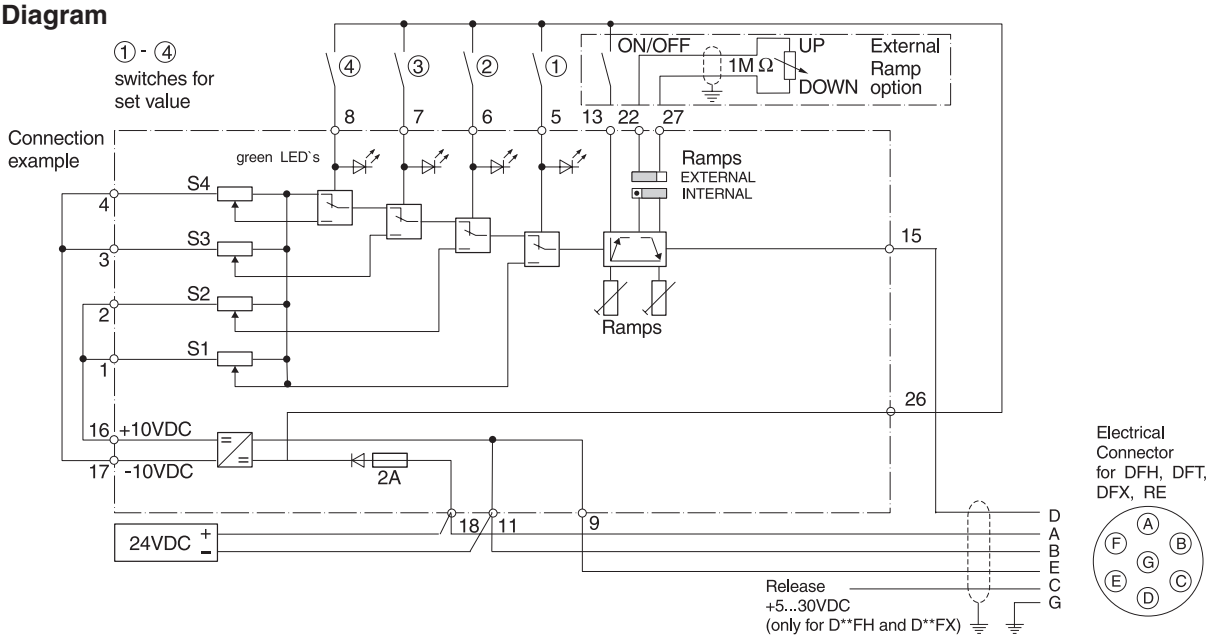




Characteristics

Connection	31 pole male connector, DIN41617
Power supply	filtered: 22–38V, unfiltered: 18–26V
Command voltage	0 to +10V DC and 0 to -10V DC
Ramp disable voltage	5 to 30V DC
Power consumption	4VA
Reference outputs	+10V -10V DC 10mA
Output voltage	0...+/-10V
Ambient temperature	0 to 70°C
Ramp time	0–5 seconds adjustable
Shield. Cable connect.	AWG20
Fuse	2A medium lag, DIN41571/5x20mm

Block Diagram



10

Features

- Modulated output voltage by four selectable input values, adjustable from 0 to 100% and UP/DOWN ramp potentiometers
- DIP-switch from internal ramp generation to external ramp setting.

Ordering Code

EZ	00	—	155	
Electronic module auxiliary card			Module type	Design series

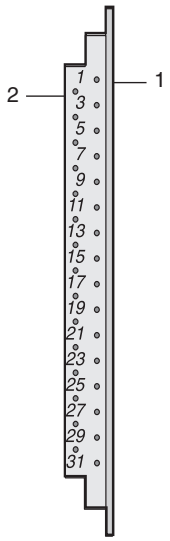
For valves:
DFT*
DFH*
RE*
DFX*

*with voltage input

4 set value channels UP/DOWN ramps

Bold letters = Short-term availability

Connector (Elevation B)



2 Input preselect direction, channel 2
4 Input preselect direction, channel 4
6 Input set value lock on, channel 2
8 Input set value lock on, channel 4

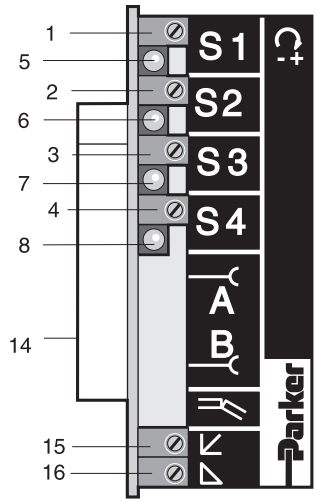
16 Output +10 V reference
18 Input 24 V DC supply

22 Input external ramp option
26 Output source to supply external switches

1 Input preselect direction, channel 1
3 Input preselect direction, channel 3
5 Input set value lock on, channel 1
7 Input set value lock on, channel 3
9 Reference potential 0 V transducer
11 Reference potential 0 V supply
13 Input ramp disable
15 Output 0...+/-10 V
17 Output -10 V reference

27 Input external ramp option

Operating and Diagnostic Elements (Elevation A)



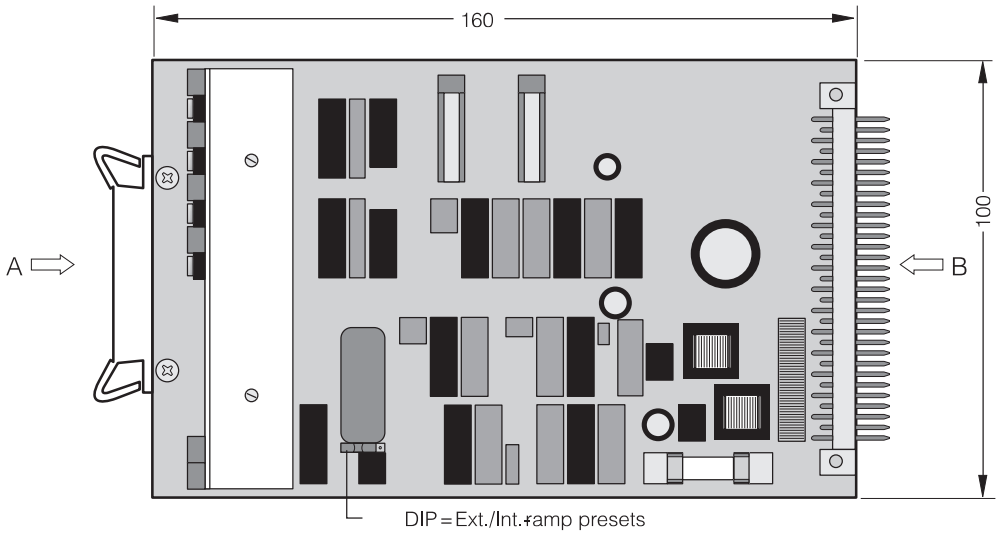
1–4 Set value potentiometer S1–S4

5–8 Green LED's for: channel activity of the set value

14 Yellow grip strip (auxiliary card)

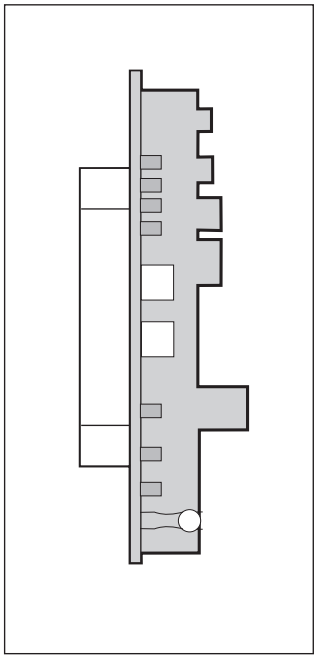
15 UP ramp potentiometer
16 DOWN ramp potentiometer

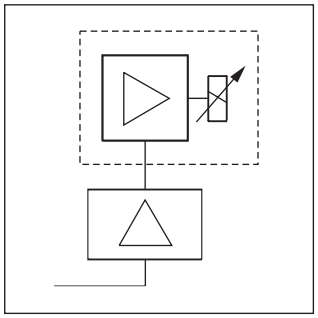
Dimensions

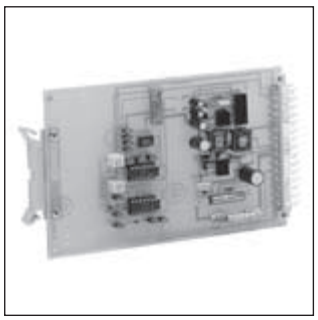


10

Electronic module for voltage controlled modulation of the ramp time as an additional card used with other main cards. With the command range of 0...10VDC the individual time range of the ramp on main card is linear controlled from 0...Max seconds.



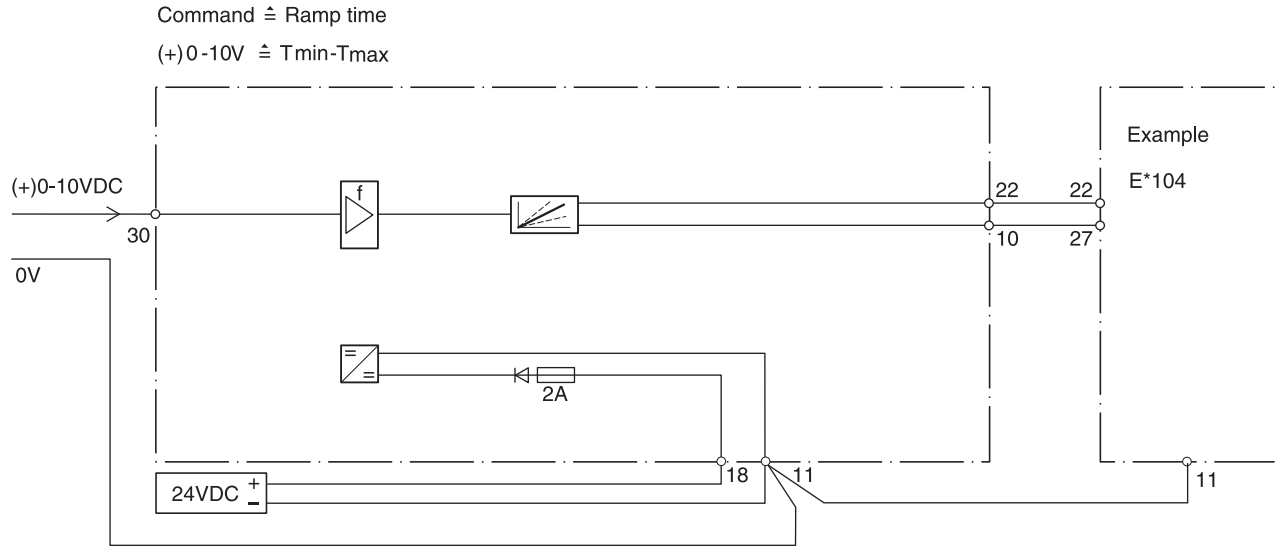




Characteristics

Connection	31 pole male connector, DIN 41617
Power supply	filtered: 24V (+/-10%), ripple max. 5%
Command voltage	0 to +10VDC
Power consumption	4VA
Ambient temperature	0 to 70°C, Standard range
Ramp time of ext. ramp	voltage controlled
Shield. Cable connect.	AWG20
Fuse	2A medium lag, DIN 41571/5x20mm

Block Diagram



Features

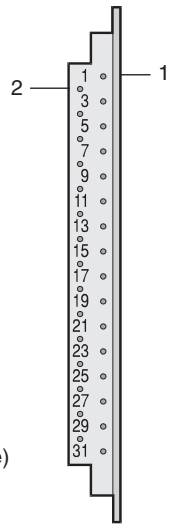
- The ramps on the valve main card can be voltage controlled and their time range changed.
- The command voltage for the ramp times are translated by means of an analogical-function unit into control signals.
- The EZ 305 can e.g. be switched between the machine control and the main control card and thereby allow the ramp times to be set by remote control.

Ordering Code

EZ	00	—	305	
Electronic module auxiliary card Suitable for main card: E*101 E*104 ET*154 ED*124			**Module type** → **Voltage controlled ramp time setting**	**Design series**

Bold letters = Short-term availability

Connector (Elevation B)



10 Output to main module E-101/104/124/154

11 Reference potential 0V

18 Input 24VDC supply

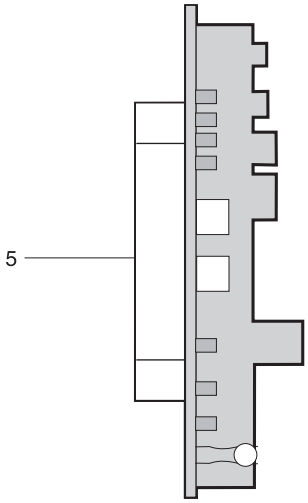
22 Output to main module E*101/104/124/154

30 Input control signal (command ramp time)

Operating and Diagnostic Elements (Elevation A)

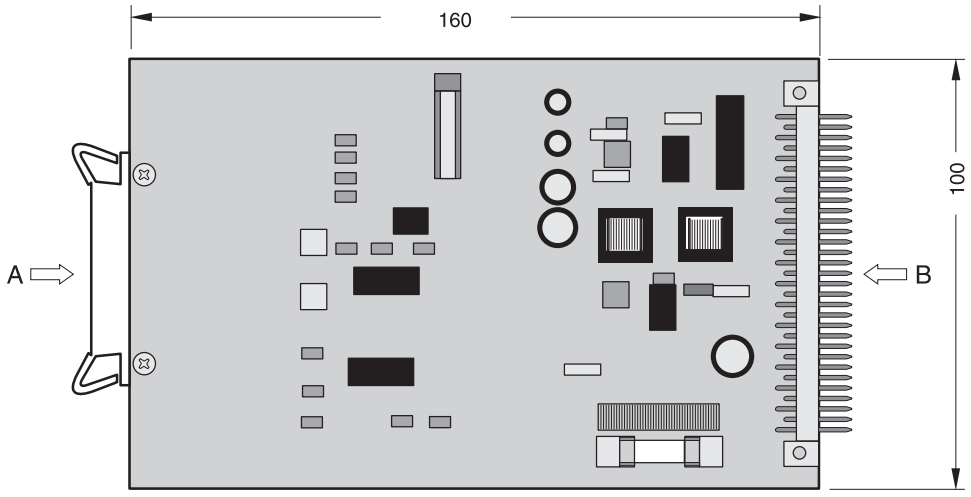
Note

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

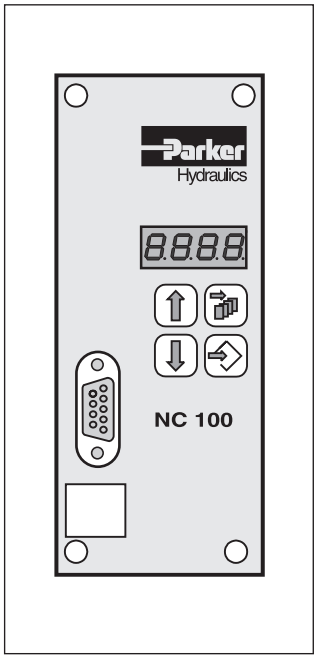


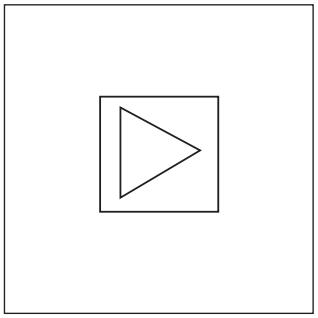
5 Yellow grip strip (auxiliary card)

Dimensions



The NC 100 series offers economical solutions for multiple positioning tasks. The compact positioning module is mostly used for stand-alone applications, as well as together with upper-level automation equipment. The short cycle time of 1ms guarantees the best dynamic characteristics, positions can be reached within the shortest time periods, and functions are carried out with controlled speed. Examples of application are tooling machines, and handling and assembling systems. 31 selectable program sets for positions, speed, dwell time, and machine function ensure the necessary flexibility for modern industrial use.





All setting parameters are programmed with 4 function buttons on the front plate. A plain-text display for user help and fault messages offers time-saving user convenience. A RS232 data interface enable remote parameterisation, programming, and control of the NC100.

CE

Note

The user software ProNC is available for free download on our internet page www.parker.com/euro_hcd or may be ordered under ordering code ProNC.

Features

- 99 positions, speeds, dwell times can be freely programmed.
- External position selection.
- External operation mode selection.
- Alpha-numeric display.
- Fault message in plain text.
- Digital parameter adjustment.
- Absolute / incremental dimensions.
- Following error display / monitoring
- Cycle time < 1ms.
- Position transducers:
  - incremental
  - absolute with SSI interface
  - absolute transsonar
  - analogue
- Synchronous running with up to 4 axes.
- Synchronous monitoring / regulation.
- Supports English, German, French
- Analogue position command (only NC100-A/B/D*-SY).

10

Ordering Code

NC	100	–	□	1	□	–	SY
Digital axis controller			Position feedback	Storage type	Design series		Module type

Code	Position feedback
A	incremental
B	absolute SSI
C	analogue
D	abs. trans-sonar

Bold letters =
Short-term availability

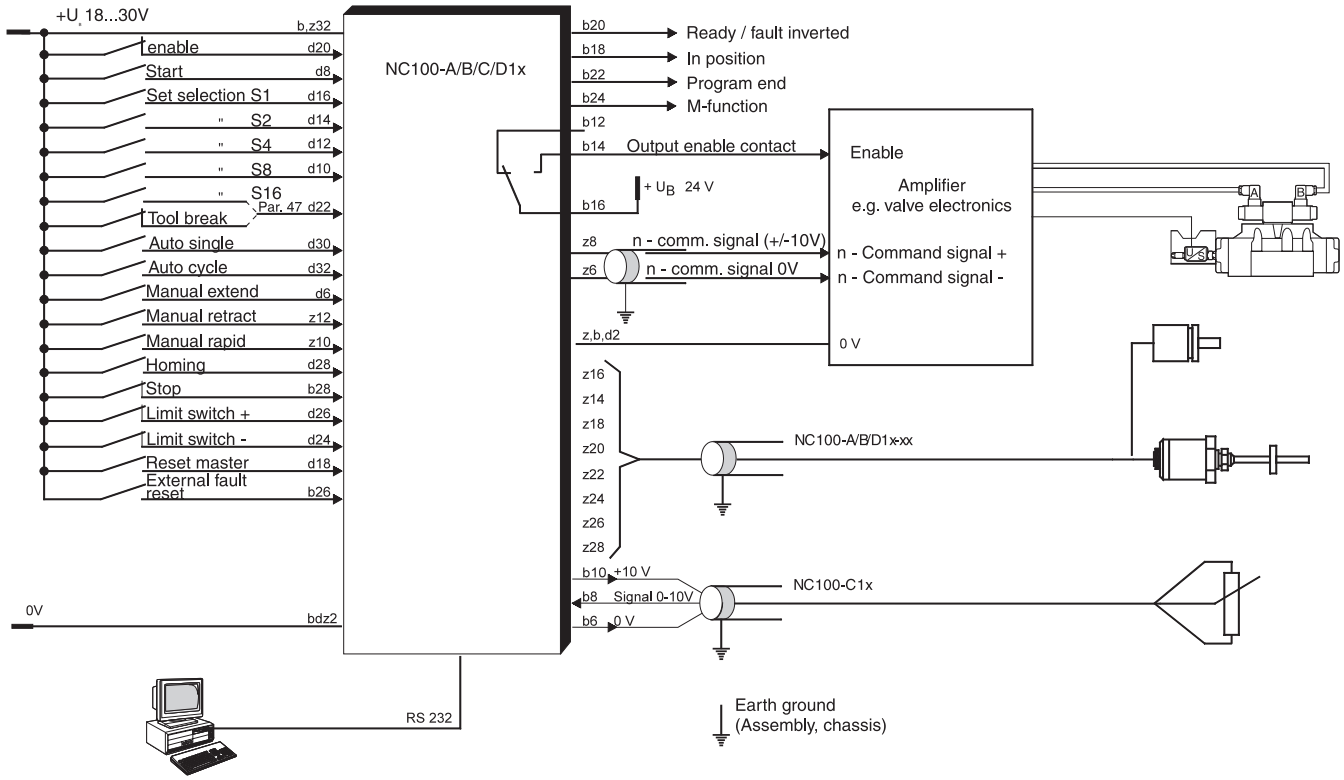
Code	Module type
—	Single axis module
SY*	Master / Slave axis module

* Type NC100-C1*-SY is not available

Note

Please select the necessary card holder under "Electronic accessories".

Connection Diagram

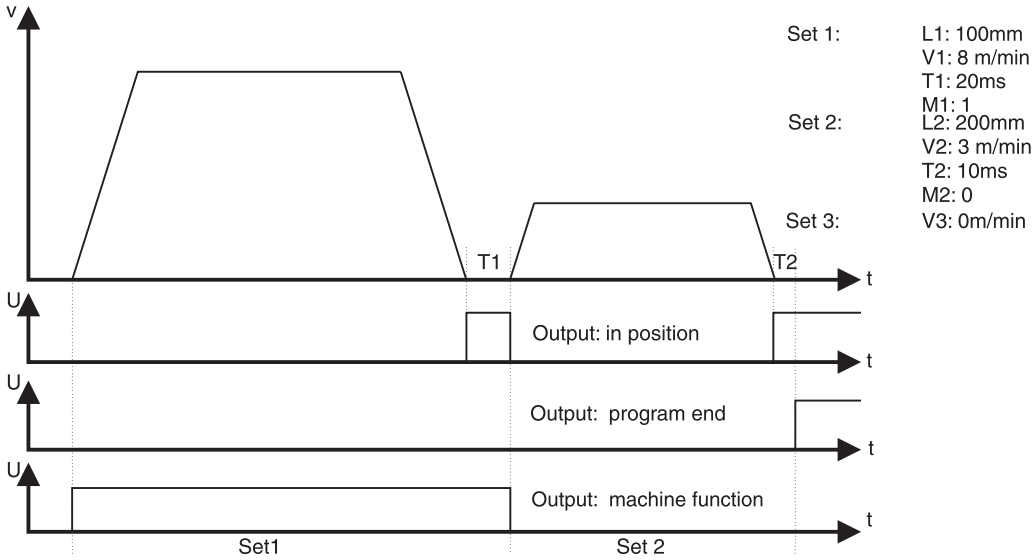


Characteristics

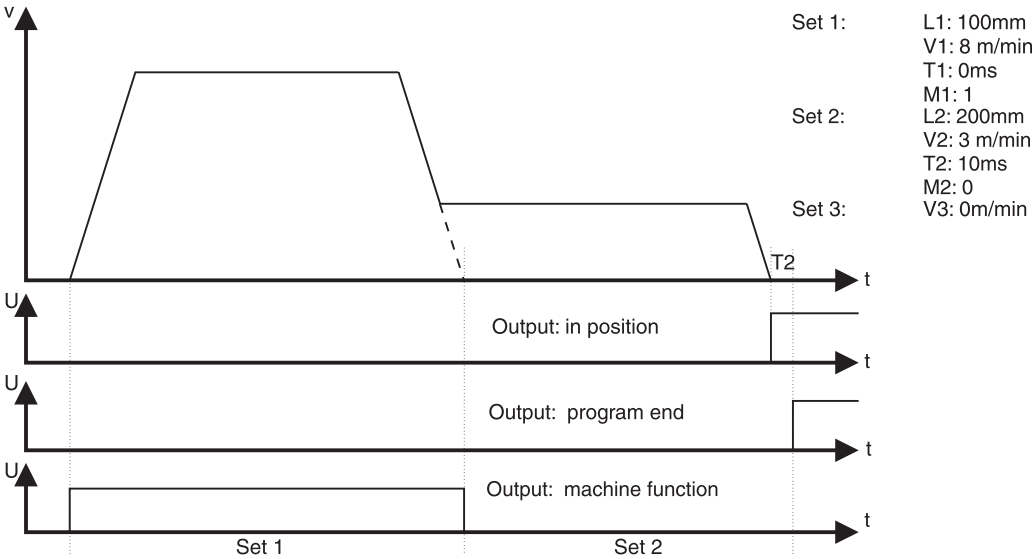
General		
Design		Europe format
Eletrical		
Supply voltage	[V]	18...30, ripple < 5%
Current consumption max.	[A]	0.4
Power consumption max. (24V)	[VA]	10
Pre-fuse	[A]	4 max., medium time lag
Inputs		
Analogue Feedback	[V]	0...10, 2...20KOhm
Command signal	[V]	0...±10, 27KOhm
Digital 0	[V]	0...3
1	[V]	12...30
Outputs		
Analogue Valve signal	[V]	0...± 10, max. ± 5mA, 12Bit
Digital Nom. current per output	[A]	1
max. current	[A]	3
Position feedback		
NC100-A1*-*		Incremental Differential signals as DIN 66259 section 3, EIA standard RS422, 250KHz (internal quadruplication), endless positioning range
NC100-B1*-*		Absolute SSI 8...31Bit, Gray or binary, ca. 230KHz
NC100-C1*		Analogue 14Bit resolution, 2...20KOhm
NC100-D1*-*		Absolute trans-sonar Balluff-P interface, MTS-Start-Stop interface, max. length 3m
Interfaces		
Serial		RS 232C, up to 19200 Baud
Adjustment range		
Program sets		99
Position	[mm]	-9999.999...9999.999
Speed	[m/min]	0.01...320
Dwell time	[s]	0...9999
Protection		
Industrial protection class		IP00
Environment		
Ambient temperature	[°C]	0...50
Connection		
Plug connector		DIN 41612, 48pin design type F
Dimensions		
Front plate	[mm]	50.5 x 128.4, 10TE/3HE
Printed circuit board	[mm]	100 x 160

10

Speed change with intermediate stop

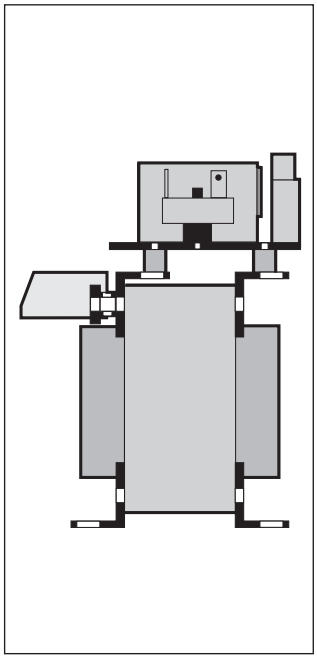


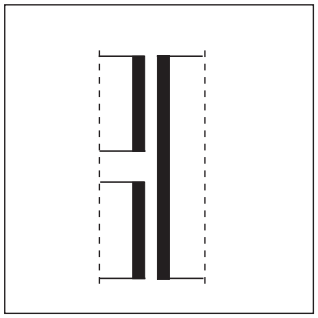
Speed change without intermediate stop



10

Single phase power units providing direct current are preferable and suitable for the power supply to electronic modules and proportional valves. The windings of these transformers are separated for safety and provided with isolated screened windings with earthing.





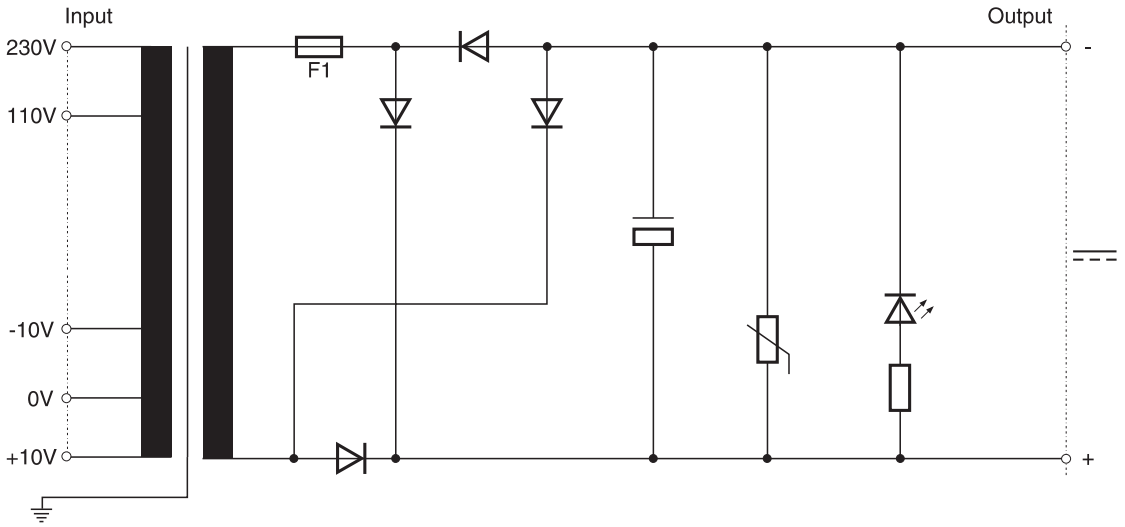
Characteristics

Nominal input voltage	110/230VAC
Regulation/Tappings at	+/-10V
Frequency	50/60Hz
Operating temperature	-20°C to +60°C
Nominal output voltage	24VDC
Output voltage at zero load	30.5VDC
Output voltage at full load	22.4VDC
Ripple	below 5%
Protection	IP 00
Construction	VBG 4
Regulations / Test voltages	EN 60742

Features

- Safety transformer to EN 60742 with integrated fuse.
- Primary and secondary windings are fitted with shielded windings with earth connection.
- Optimal voltage accommodation with ±10V tappings.
- Low ripple of 5% at full load.
- Integrated LED operational indicator of output voltage.

Block Diagram



10

Ordering Code

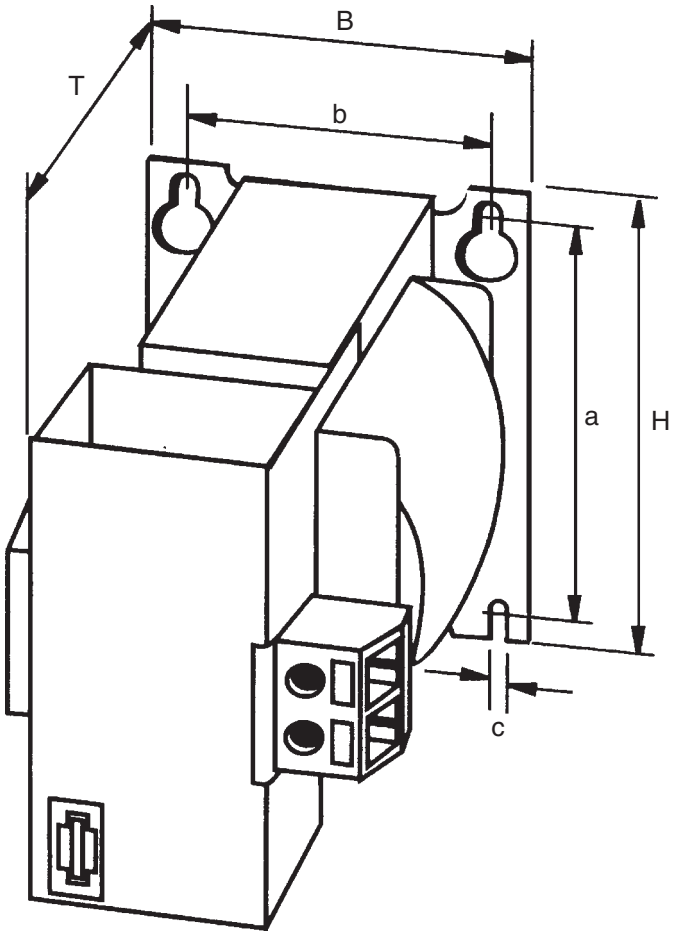
EX	00	—	☐	10
Electronic module			Module type	Design series

Code	Power (VA)	Nominal current/ In (A) AC*	Nominal current/ Out (A) DC
N08	**240VA**	**3.4/1.6**	**10.0**

* at 110/230V AC

Bold letters =
Short-term availability

Dimensions

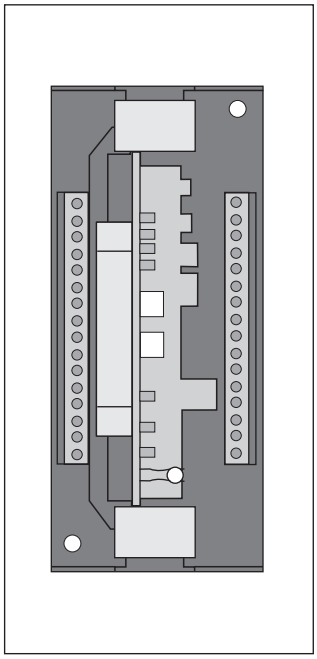


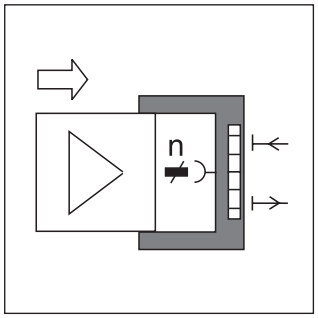
Code	H	B	T	a	b	c	kg
EX00-N08	120	113	173	90	94.5	5.8	6.3

Note

To guarantee air convection the module has to be mounted in a hanging position.

Card holders allow easy assembly and wiring of individual electronic modules in Euroformat.

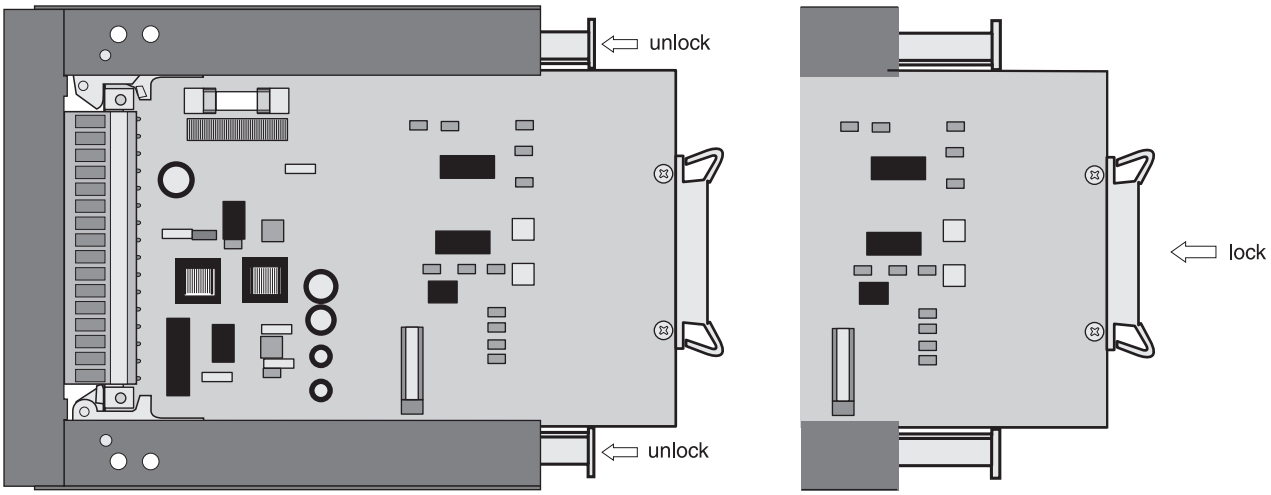




Characteristics

Base-unit	Fixed with screws or DIN rails 35mm
Printed circuit board	Carries the female connector and connection component for the terminal strip
Terminals	Screw terminals with wire prot. nominal cross-section AWG11, 5mm pitch
Female connector (as per order code)	31pole to DIN 41617, double row contacts. 48-pole to DIN 41612, 3 rows of contacts

Function Display (Random Layout)



Features

- Stable base, fixed with screws or mounted on DIN rails.
- With additional adapter can be snapped on vertically on DIN rails.
- Plugged in cards are securely held (locked) and, by applying pressure to both clamps, can be released.
- Clearly visible connection strip simplifies secure wiring.
- The use of a standard (normalized) dimensioned unit among with individual female socket layouts offers a universal application.

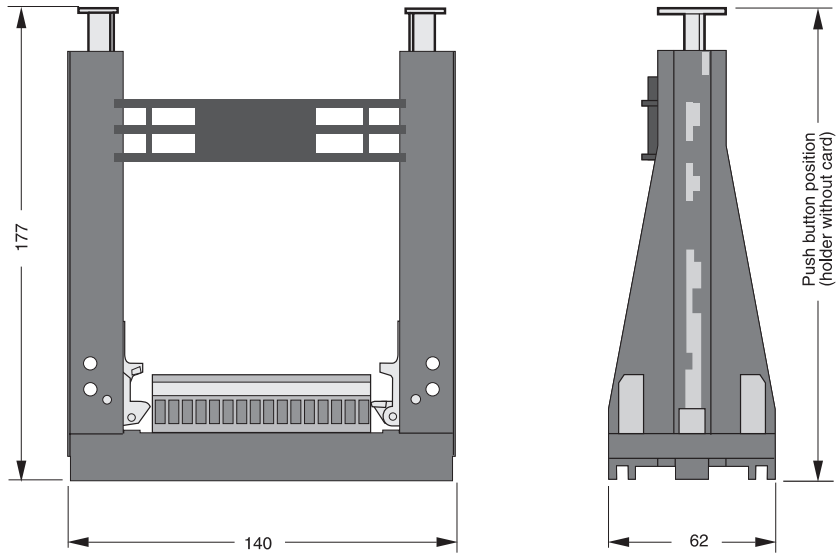
Ordering Code

EX	00	—		
Card holder			Module type	Design series

Code	Connection number(s)	DIN
S 03	**31**	**41617**
S 05	**48**	**41612 F**

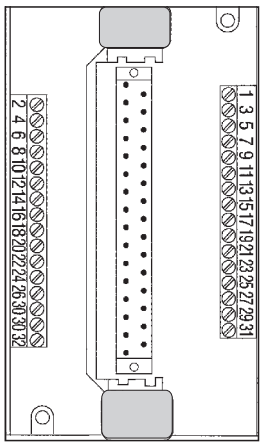
Bold letters = Short-term availability

Dimensions and Connection Configuration

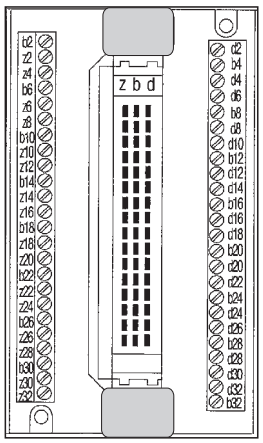


Top View

31 pole, DIN41617



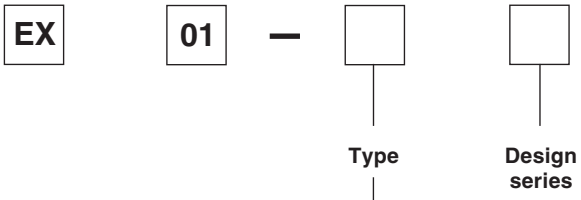
48 pole, DIN41612 F



10

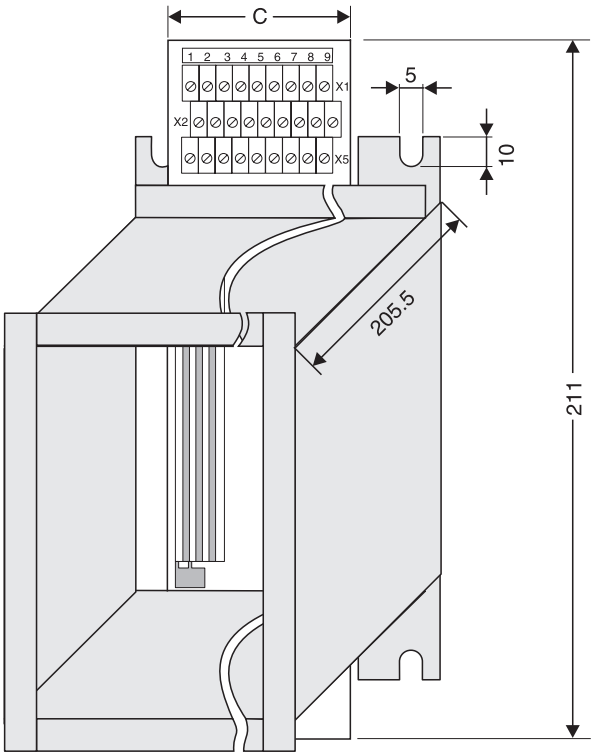
The card holder allows simple assembly and wiring of the NC-100 module. The card holder must be used to comply with the EMC conformity.

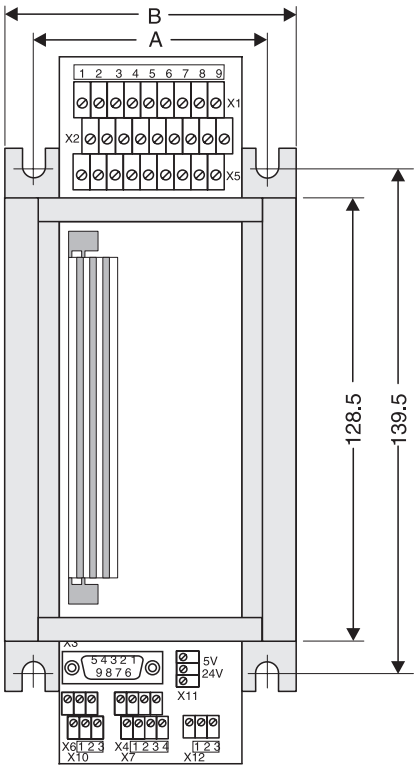
Ordering Code



Code	Description	No. of pins(n)	DIN
S17	Card holder	48	41612 F

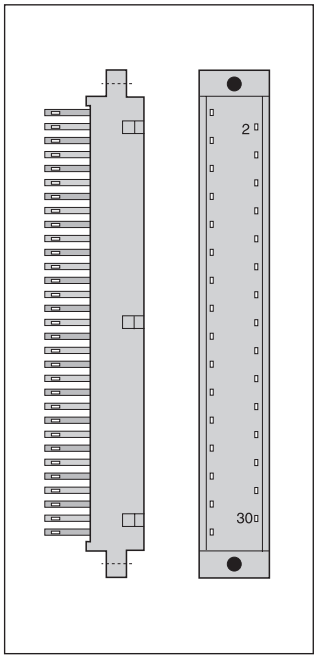
Dimensions

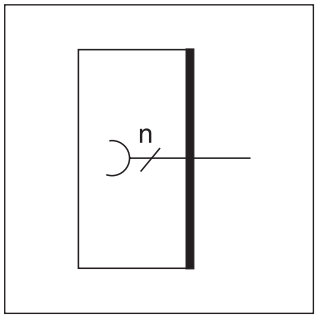




A	B	C
65	80	49.5

Female connectors serve the purpose of accepting electronic modules in Eurocard form.The installing of the connector is normally done on the rear wall of the predetermined 19" building block rack. The wiring connections are made with solder tags.





Characteristics

DIN Standard	41617	41612
Structural shape	—	F
Number of contacts	31.00	48.00
Pitch (mm)	5.00	5.08
Pins (mm)	1.00	—
Insert blade	—	1x0.6
Operating voltage	to VDE 0110	
Operating temperature range	-55°C to +125°C	
Material	Poly-plastic	
Life time (plug in cycle)	As for DIN 41612, requirements 1 to 3	
Contact resistance	below 15 mOhm	

Features

- Open entry female contact, thus low insertion force and small low wear in contact zone.
- Wear resistant surfaces of the female contacts guarantee small contact resistance.
- With precise parallelism and good centering damage when plugging in is avoided.

Ordering Code

EX **00** — ☐ ☐

Construction type

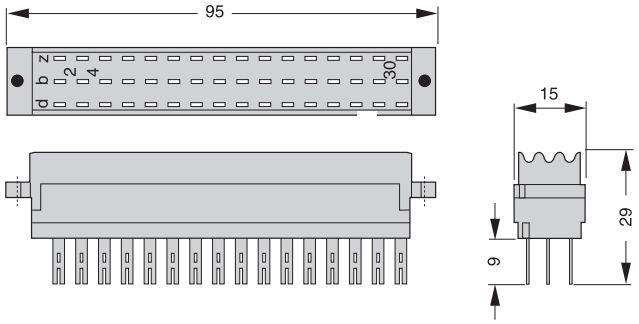
Code	Designation	Connection number (n)	DIN
S 01	Female connector	31	41617
S 04	**Female connector**	**48**	**41612 F**

Bold letters =
Short-term availability

Ordering Code: EX00-S04

48 pole female connector to DIN41612,TypeF
for: ED124, ET154, VRD 350/355

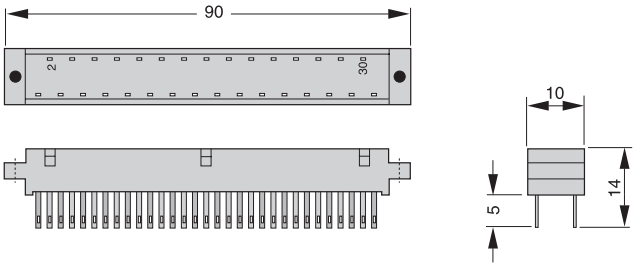
Matrix: 5.08mm
Insert blade: 1.0x0.6mm



Ordering Code: EX00-S01

31 pole female connector to DIN41617
for: EW/ED/ET/EQ/EE -101, 102, 104, 105, EZ

Matrix: 2.54mm
Insert blade: 0.7x0.6mm



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The test unit EX00-M03 is usable for the control of proportional valves incorporating integrated electronics. It provides commissioning and function test independently from the machine control system. The test unit is provided with all necessary signal and measurement taps, making it possible to proceed initial operation and diagnosis.

Features

- Control of valves incorporating integrated electronics and central plug acc. DIN 43563 (6p.+PE)
- Mains connection selectable 230/115VAC
- Build-in fuses
- Cordset included
- Integrated digital voltmeter with test point selector switch
- Test jacks
- Rugged metal enclosure with handles

EMC

EN 50081-1
EN 50082-2

CE

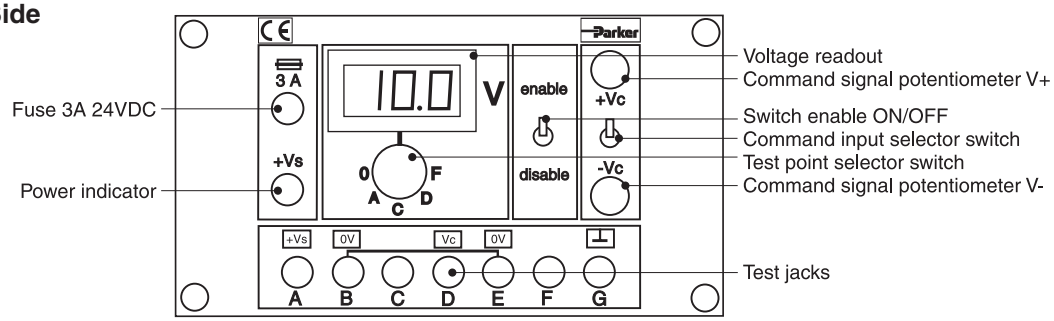
Technical Data

Design		Aluminium die cast enclosure
Supply voltage	[V]	115/230, 50...60Hz
Power consumption	[VA]	max. 80
Current consumption max.	[A]	0.7 / 0.35
Mains input fuse	[A]	2 time lag
Valve output fuse	[A]	3 time lag
Required mains supply fuse	[A]	16
Protection class		IP40
Valve central connection		
valve supply	[V]	24 (±20%)
command voltage	[V]	0...±10 (±1%)
diagnostic output	[V]	0...±10
enable signal	[V]	7.5 (±10%)
Measurement terminals		for multimeter with Ri min = 10kOhm
Display		
display digits		3
resolution	[mV]	100
Mains cord		
unit site		Cold inlet connector IEC320
mains site		CEE 7/7 plug
cord length	[m]	2
Valve cord		
unit site		cable mount inlet DIN 40 040 Amphenol SV70
valve site		cable mount outlet DIN 43 563
cord length	[m]	3
Ambient temperature	[°C]	0...40
Weight	[kg]	3.2
Dimensions	[mm]	L 220 x B 120 x H 90 (without handles)

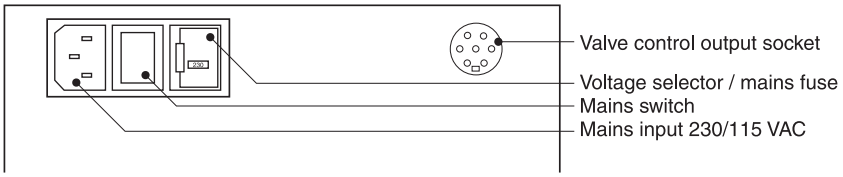
Ordering Code

EX	00	—	M03	—	
Test unit					Series

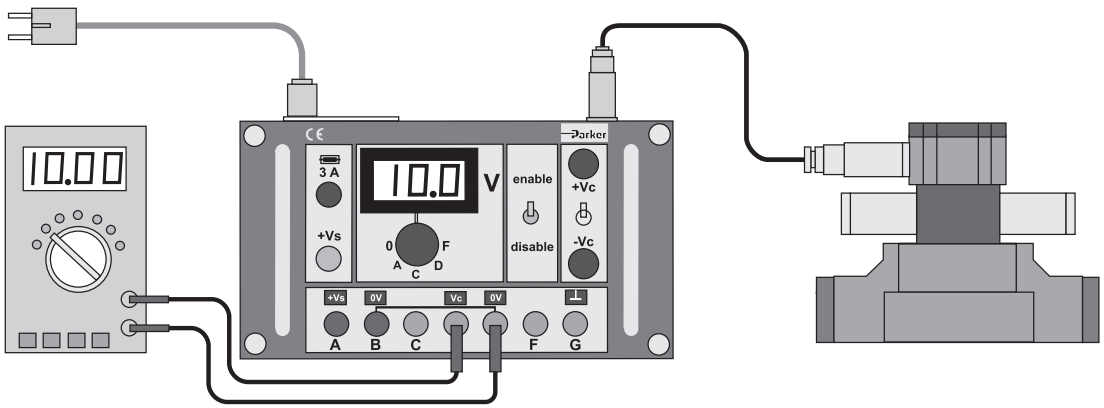
Operator Panel
Front Side



Rear Side



Wiring Configuration



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Notes