

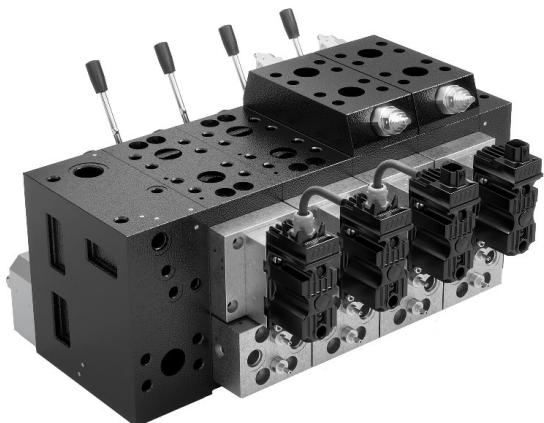
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Алматы (7273)495-231**Ангарск** (3955)60-70-56**Архангельск** (8182)63-90-72**Астрахань** (8512)99-46-04**Барнаул** (3852)73-04-60**Белгород** (4722)40-23-64**Благовещенск** (4162)22-76-07**Брянск** (4832)59-03-52**Владивосток** (423)249-28-31**Владикавказ** (8672)28-90-48**Владимир** (4922)49-43-18**Волгоград** (844)278-03-48**Вологда** (8172)26-41-59**Воронеж** (473)204-51-73**Екатеринбург** (343)384-55-89**Иваново** (4932)77-34-06**Ижевск** (3412)26-03-58**Иркутск** (395)279-98-46**Казань** (843)201-01-48**Калининград** (4012)72-03-81**Калуга** (4842)92-23-67**Кемерово** (3842)65-04-62**Киров** (8332)68-02-04**Коломна** (4966)23-41-49**Кострома** (4942)77-07-48**Краснодар** (861)203-40-90**Красноярск** (391)204-63-61**Курск** (4712)77-13-04**Курган** (3522)50-90-47**Липецк** (4742)52-20-81**Магнитогорск** (3519)55-03-13**Москва** (495)268-04-70**Мурманск** (8152)59-64-93**Набережные Челны** (8552)20-53-41**Нижний Новгород** (831)429-08-12**Новокузнецк** (3843)20-46-81**Ноябрьск** (3496)41-32-12**Новосибирск** (383)227-86-73**Омск** (3812)21-46-40**Орел** (4862)44-53-42**Оренбург** (3532)37-68-04**Пенза** (8412)22-31-16**Петрозаводск** (8142)55-98-37**Псков** (8112)59-10-37**Пермь** (342)205-81-47**Ростов-на-Дону** (863)308-18-15**Рязань** (4912)46-61-64**Самара** (846)206-03-16**Санкт-Петербург** (812)309-46-40**Саратов** (845)249-38-78**Севастополь** (8692)22-31-93**Саранск** (8342)22-96-24**Симферополь** (3652)67-13-56**Смоленск** (4812)29-41-54**Сочи** (862)225-72-31**Ставрополь** (8652)20-65-13**Сургут** (3462)77-98-35**Сыктывкар** (8212)25-95-17**Тамбов** (4752)50-40-97**Тверь** (4822)63-31-35**Тольятти** (8482)63-91-07**Томск** (3822)98-41-53**Тула** (4872)33-79-87**Тюмень** (3452)66-21-18**Ульяновск** (8422)24-23-59**Улан-Удэ** (3012)59-97-51**Уфа** (347)229-48-12**Хабаровск** (4212)92-98-04**Чебоксары** (8352)28-53-07**Челябинск** (351)202-03-61**Череповец** (8202)49-02-64**Чита** (3022)38-34-83**Якутск** (4112)23-90-97**Ярославль** (4852)69-52-93

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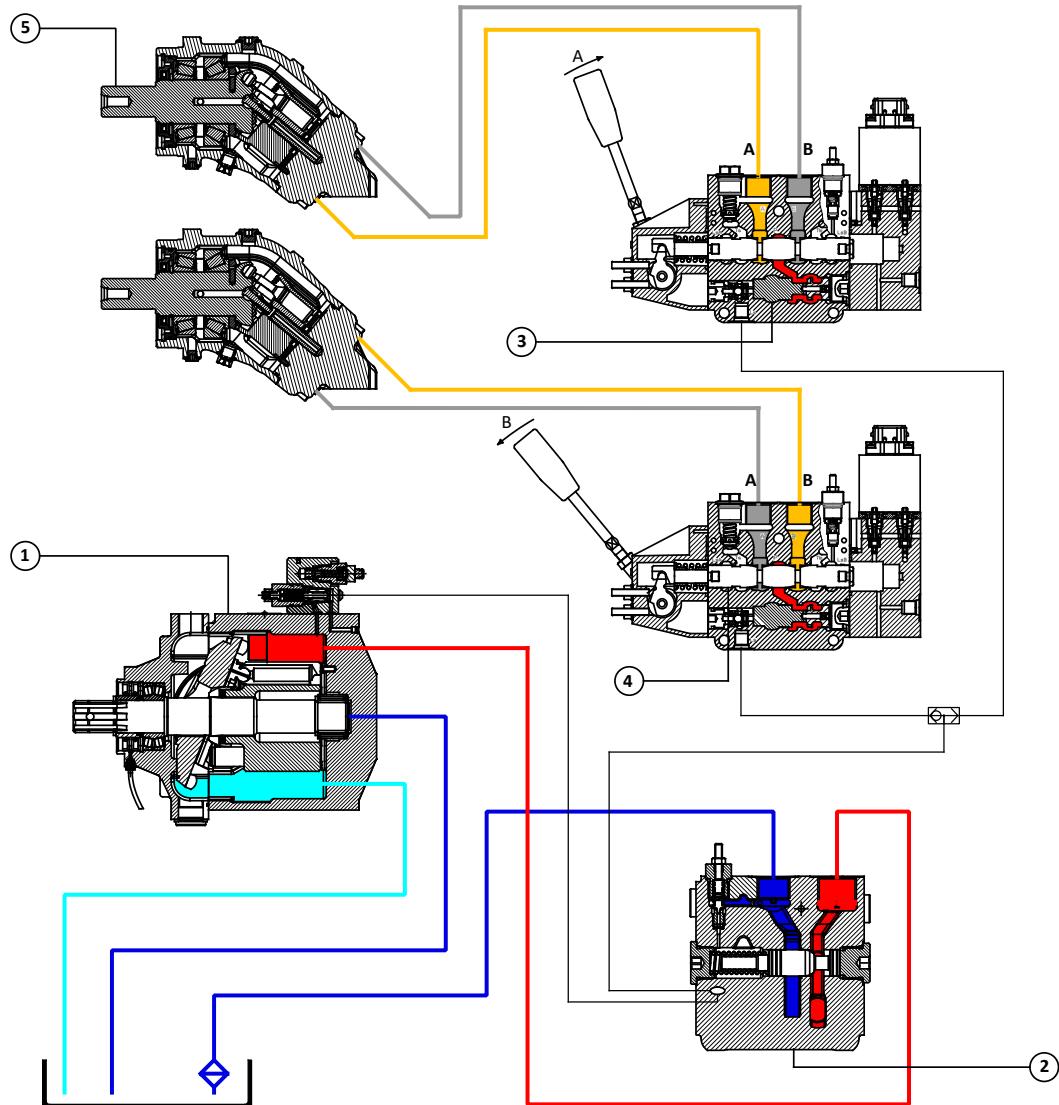
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Киргизия +996(312)96-26-47



PDV315 main features:

- Load sensing up-stream pressure compensation
- High flow/low pressure drop capability
- Integrated pump unloading system
- Integrated cut-off pump system
- Open/closed centre shifting system
- Precise metering capabilities
- LSA-LSB electrical unloading
- LSA-LSB electrical working pressure remote control
- Constant flow regardless of pressure
- Working sections symmetrical flow
- Optional priority inlet for steering or different priority functions
- Optional dual hydraulic pilot and electrohydraulic control
- ATEX and IECEx configuration
- CAN-Bus communication
- EMC immunity ensures high safety with regard to electro-magnetic compatibility



High pressure port of **PPV** piston pump **①** supply the closed centre inlet section of **PDV315** proportional valve **②** which in turn feeds the down-stream working sections.

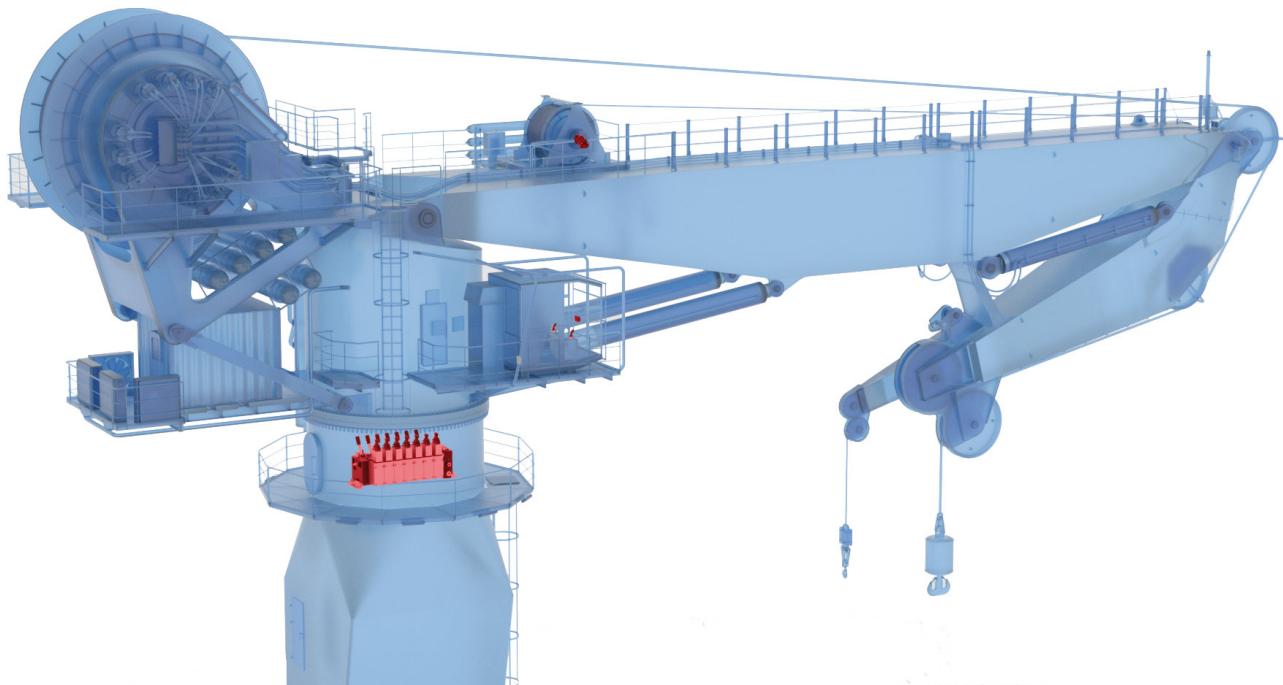
The **PDS** spool neutral position **④** unload the LS pump signal to tank, so that the swashplate angle is towards the minimum displacement and pressure in stand-by setting.

The spool position determines the flow demands (speed rotation) of the two **HPM** motors **⑤**.

The PDS main spool compares the pressure drop before and after the spool notches (differential pressure Δp), and therefore, the pump flow remain constant.

If the differential pressure increase, the pump swashplate is swivelled back towards the minimum displacement, and if the differential pressure decrease, the swashplate angle increase towards the max flow displacement until balance is restored within the valve.

Actuators load determines the working pressure, and the built-in pressure compensator **③** enable simultaneously function regardless of different working pressure.



- 1.** PPV90 load sensing piston pump
- 2.** Pump slitter gear box
- 3.** I/O controller PHSI7101008
- 4.** PDV74/6 closed centre inlet
- 5.** Electronic double axis joystick PEJD
- 6.** Graphic display PDHI703000
- 7.** PPM40 piston motors

**PDV315 Proportional Valve
Technical data**

The hydraulic features listed in this chart, are typical measured data obtained by using mineral based hydraulic oil according to DIN 51524 with a viscosity of 21 mm²/sec [102 SUS] and a temperature of 50 °C [122 °F]

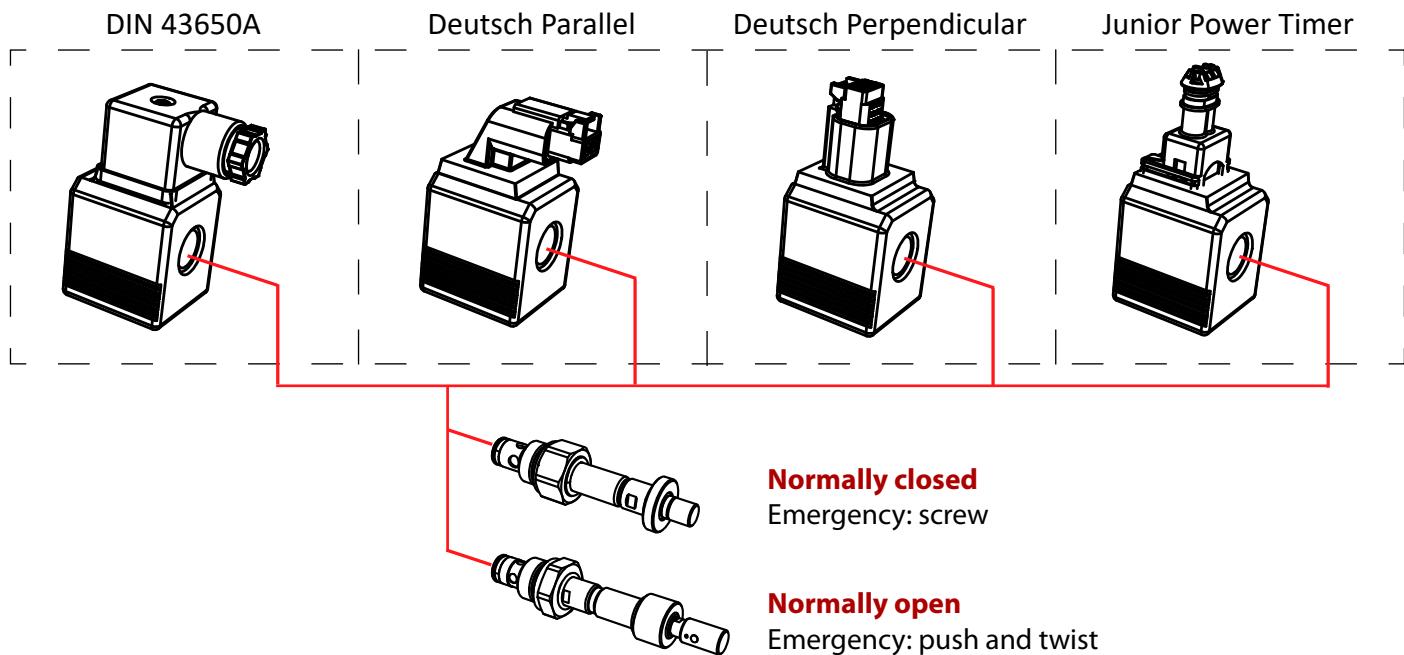
Oil flow rate	PDI inlet section, P port	600 l/min (max)	158 US gal/min
	PDIM - Mid inlet section, P port	600 l/min	158 US gal/min
	A, B port with pressure compensator	500 l/min	132 US gal/min
Max. pressure	P port	Pressure relief valve setting	400 bar
		Working pressure	370 bar
	A, B port	370 bar	5370 psi
	Ty port, directly to tank		
	T port	Static	25 bar
		Dynamic	35 bar
	Max. pilot pressure oil supply	30 bar	435 psi
Oil temperature	Recommended	30 ÷ 65 °C	86 °F ÷ 149 °F
	Min	-30 °C	-22 °F
	Max	90 °C	194 °F
	Ambient temperature	-30 ÷ 60 °C	-22 ÷ 140 °F
Oil viscosity	Operating range	12 ÷ 75 mm ² /sec	65 ÷ 347 SUS
	Min	4 mm ² /sec	39 SUS
	Max	460 mm ² /sec	2128 SUS
Spool stroke	Standard	9 mm	0,35 in
	Flow control proportional range	7,5 mm	0,3 in
	Pressure control proportional range	7,5 mm	0,3 in
Daed band spool	Flow control	1,5 mm	0,06 in
	Pressure control	1,5 mm	0,06 in
Max internal leakage A/B port at 100 bar [1450 psi] and 21 mm ² /sec	A/B T without shock valves	100 cm ³ /min	6,1 in ³ /min
	A/B T with shock valves	115 cm ³ /min	7 in ³ /min
Filtration	Max. contamination: class 9 according to NAS 1638 (20/18/15 according to ISO 4406)		

PDH module - hydraulic control

Pilot pressure	Spool start movement	4 bar / 58 psi
	Spool end stroke	15 bar / 218 psi
	Max. pilot pressure	30 bar / 436 psi

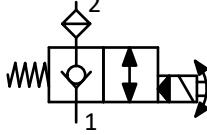
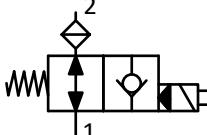
PDV74 internal filters, mesh 100 µm

Mineral oil hydraulic fluid: according to DIN 51524 and 51525 or ISO 6743/4 PDV74 can also be used with phosphate esters (HFDR), water-glycol (HFC) or water oil (HFB) mixes, subject to our Technical Dept. approval

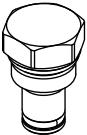


Code numbers

PIU solenoid LS unloading valve codes

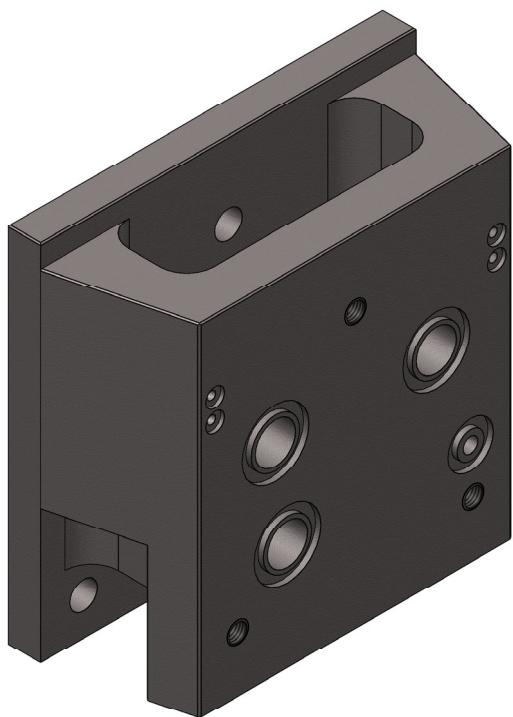
Cartridge valve type	Connector type	12 Vdc	24 Vdc
Normally closed Emergency: screw 	DIN 43650A	PIUOC023200	PIUOC013200
	Deutsch Parallel	PIUOC021200	PIUOC011200
	Deutsch Perpendicular	PIUOC022200	PIUOC012200
	Junior Power Timer	PIUOC024200	PIUOC014200
Normally open Emergency: push and twist 	DIN 43650A	PIUOA023100	PIUOA013100
	Deutsch Parallel	PIUOA021100	PIUOA011100
	Deutsch Perpendicular	PIUOA022100	PIUOA012100
	Junior Power Timer	PIUOA024100	PIUOA014100

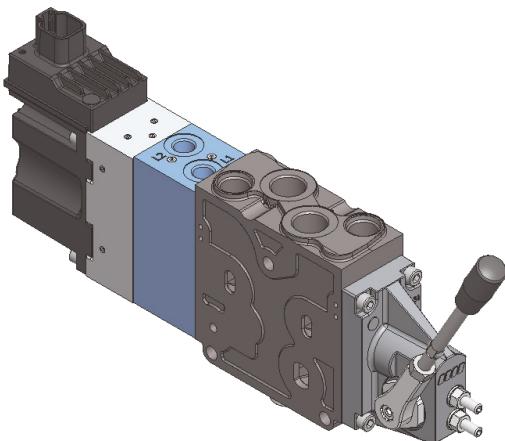
Plug for LS unloading cavity

Plug cavity	Hydraulic scheme	Code numbers
		PIP10000000

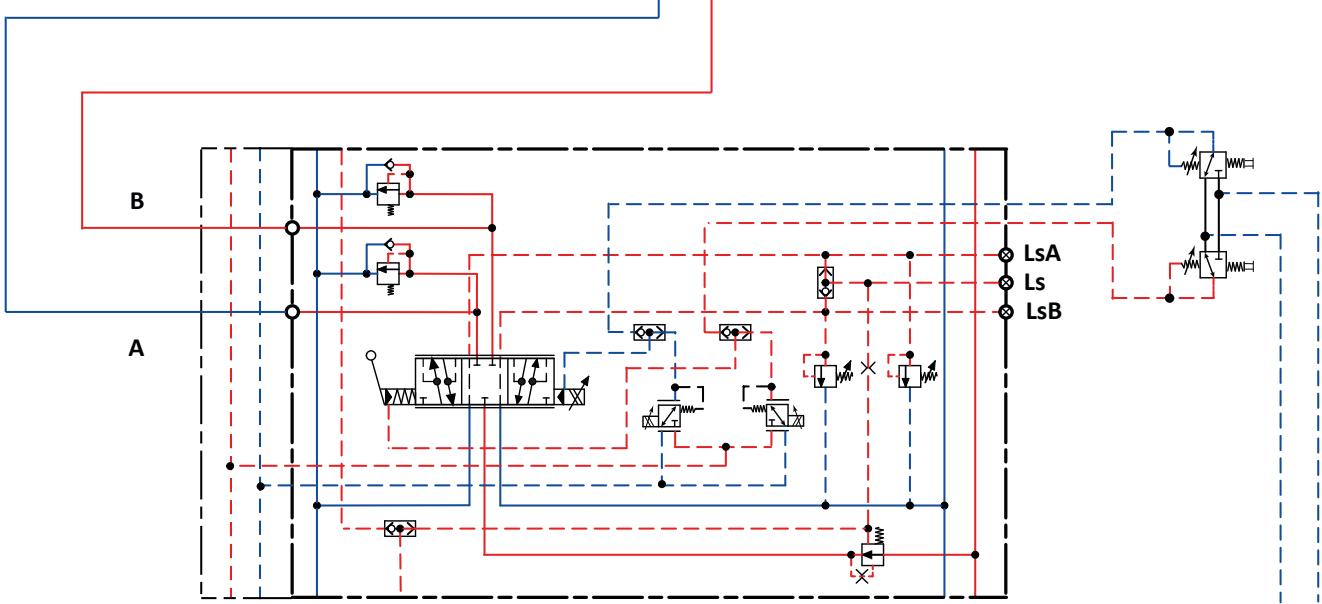
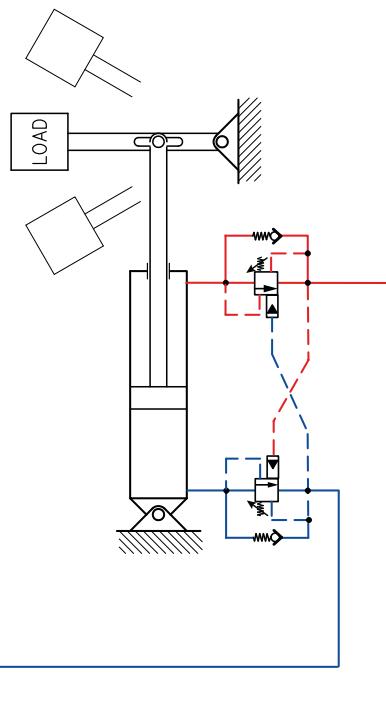
Max. operating pressure	350 bar	
Max. internal leakage	350 bar, 46 mm ² /sec 1 cm ³ /min	
max pressure drop	< 1,5 bar	
Expected life - 350 bar, 0,5 Hz (1s on / 1s off)	10.000.000 cycles	
Response time for LS pressure relief	< 280ms	
Oil temperature	Recommended	30 ÷ 60 °C
	Min.	-30 °C
	Max.	90 °C
Ambient temperature	-30 ÷ 60 °C	
Max. coil surface temperature	160 °C	
Oil viscosity	Operating range	10 ÷ 90 cSt
	Min.	4 mm ² /sec
	Max.	460 mm ² /sec
Degree of enclosure	Connector DIN 43650	IP65
	Connector Deutsch DT04-2p	IP67
		IP69K integrated to coil
Rated voltage	12 Vdc	24 Vdc
Supply voltage	10,6 ÷ 14,6 Vdc	20,4 ÷ 28,6 Vdc
Working temperature	-30 ÷ 80 °C	
Maximum coil surface temperature	175 °C	
Heat insulation	Class H (180 °C)	
Resistance	7,5 Ω	29,9 Ω
Current consumption	1,6 A	0,8 A
Power consumption	19 W	

Description
PDEI4000000

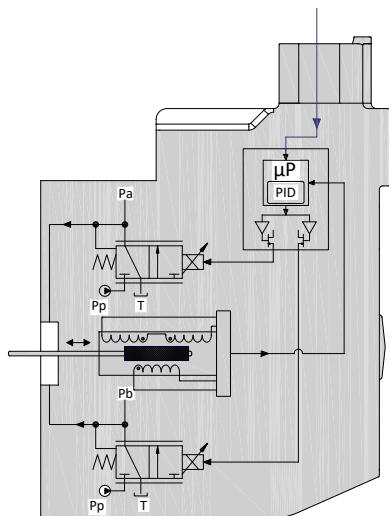
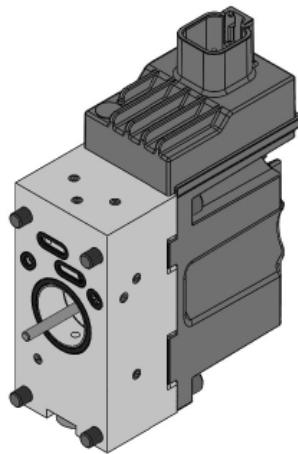


**PDV315 Proportional Valve
PDZ module - Dual spool control**

PDZ is a small HIC body that can be matched with any kind of PDV74 working section PDW, to get hydraulic and electro-hydraulic spool control



PDZ overall dimensions	For open loop spool control	For closed loop spool control
	PDZ70000000 1/4" BSPP - 12 mm deep	PDZ 1/4" BSPP - 12 mm deep
	PDZ [7/16 in-20 UNF-2B - 0,47 in deep]	PDZ [7/16 in-20 UNF-2B - 0,47 in deep]



PEAC131 is a proportional high performance PDV spool actuation with integrated electronics and inductive transducer (LVDT) that operates safely and precisely the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the PCB and the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

The spool position is detected in the LVDT transducer which generates an electric feed-back signal registered by the electronics.

The variation between the input signal and the feed-back signal, actuates the solenoid valves accordingly, so that, the hydraulic pilot pressure will drive the main spool in the right position.

All PEAC131 modules comes with integrated fault monitoring system, available in two version:

- Active version
- Passive version

Active fault monitoring

When an error state is detected, the two proportional solenoid valves will be automatically deactivated, a red lamp will light-up and drive the spool in neutral position (if it's not seized up).

The system will only react to failures of more than 500 ms (in other words there is delay of half a second before anything happens). An alarm signal is sent out through the connector, and minus is opened.

This error state is memorized, and continues until the system is being reset by switching off the supply voltage.

Shortly, when the active fault monitoring system is connected and an error state is detected, the system ensures a fast and operator free reaction, that will put the complete hydraulic circuit into venting conditions, thus preventing uncontrollable machine movements.

Passive fault monitoring

When an error state is detected, the two proportional solenoid valves will not be deactivated, a red lamp will light-up, but still control the main spool.

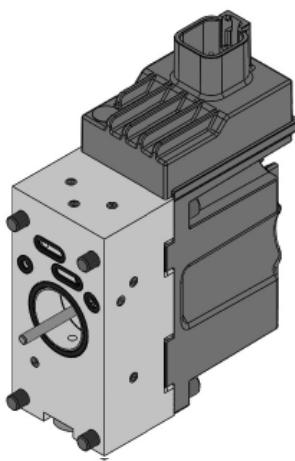
When a fault condition occurs, after a delay of 250 ms an alarm signal is sent out through a devoted pin

This state is not memorized, and when the faulty state disappears, the alarm signal will turn to passive again.

In order to prevent the electronic from going into an undefined state, any time the system is being triggered or reset, a general check of power supply and the internal clock frequency is made.

The use of PEAC131 module both passive or active version, allows the machines hydraulic system to be made with different level of safety degree that for the choice of which it is essential to know the exactly required functions.

When the PEAC131 module active version is connected with the pump unloading system, the level of safety degree protection for the complete hydraulic system becomes very high, operator free, and helps OEM to meet the PL (Performance Level) required to be comply with the safety demands of Machinery Directive 2006/42/EC.



PEAC131 is defined by:

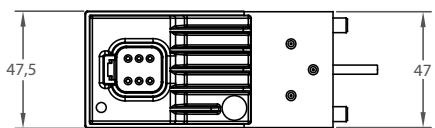
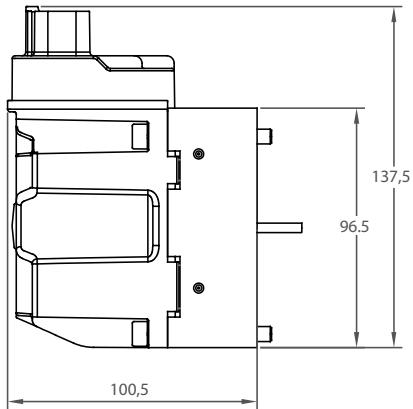
- Inductive transducer with resolution < 12 µm
- Integrated diagnosis and error memory
- Fault monitoring transistor output for signal source
- Higher spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Low hysteresis
- Quicker reaction time
- Spool direction movement output
- Integrated PWM/Pulse Width Modulation
- Low electrical power

PEAC131 Technical data

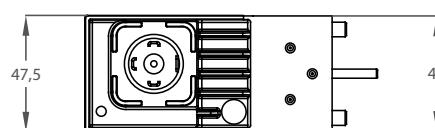
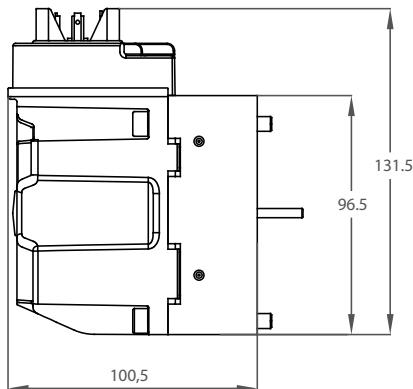
Rated supply voltage	10 ÷ 30 Vdc
Max ripple	5%
Signal control	0,5 Udc
Range control signal	0,25 Udc to 0,75 Udc
Neutral spool position	0,5 Udc
Max threshold signal, A port	1 V
Max threshold signal, B port	1 V
Max current signal @ rated voltage	48 mA
Input capacitor	100 nF
Signal control impedance	25 kΩ
Power consumption	8,7 W
Heat insulation	Class H (180°C)
Duty cycle	ED 100%
Max current consumption	650 mA
Current consumption in neutral position	80 mA
Coil impedance @ 20°C	8,9 Ω
Dither frequency	50-200 Hz
Recommended frequency	100 Hz
Enclosure degree	(Electrical wiring excepted)
Weight cast iron body	1,8 kg
Weight aluminium body	1,3 kg

Bootloader function, debugging parameters and set-up function available only with Deutsch connector DT06-6S

Fault monitoring system	Max current on safety output (pin 5)	50 mA
	Reaction time a fault	500 ms
Max current output signal for spool direction movement		50 mA
Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms

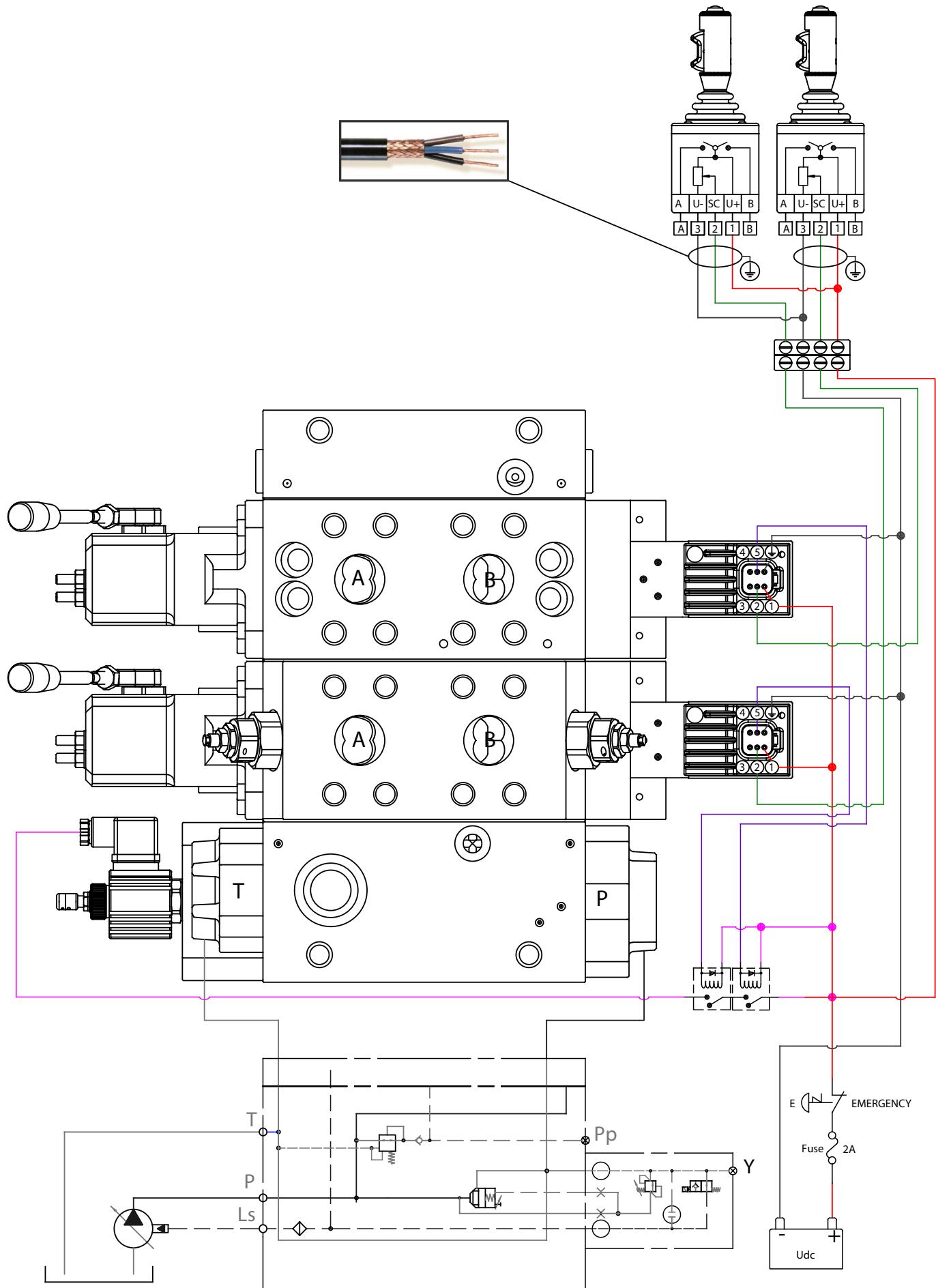


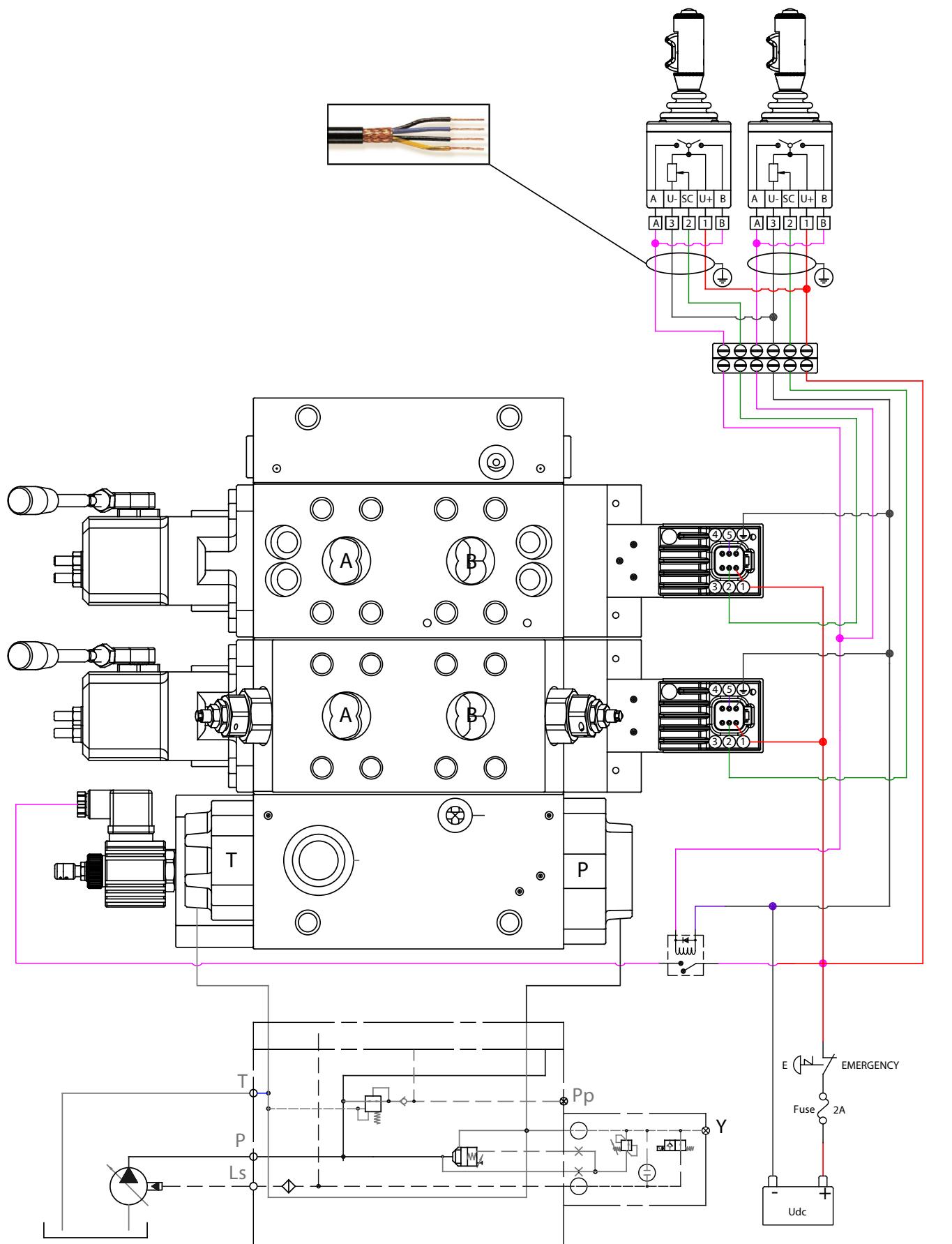
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment		
1	Power supply	
2	Input signal control	
3	CAN-high	A port-spool movement signal
4	CAN-low	B port-spool movement signal
5	Fault monitoring signal	
6	Ground	

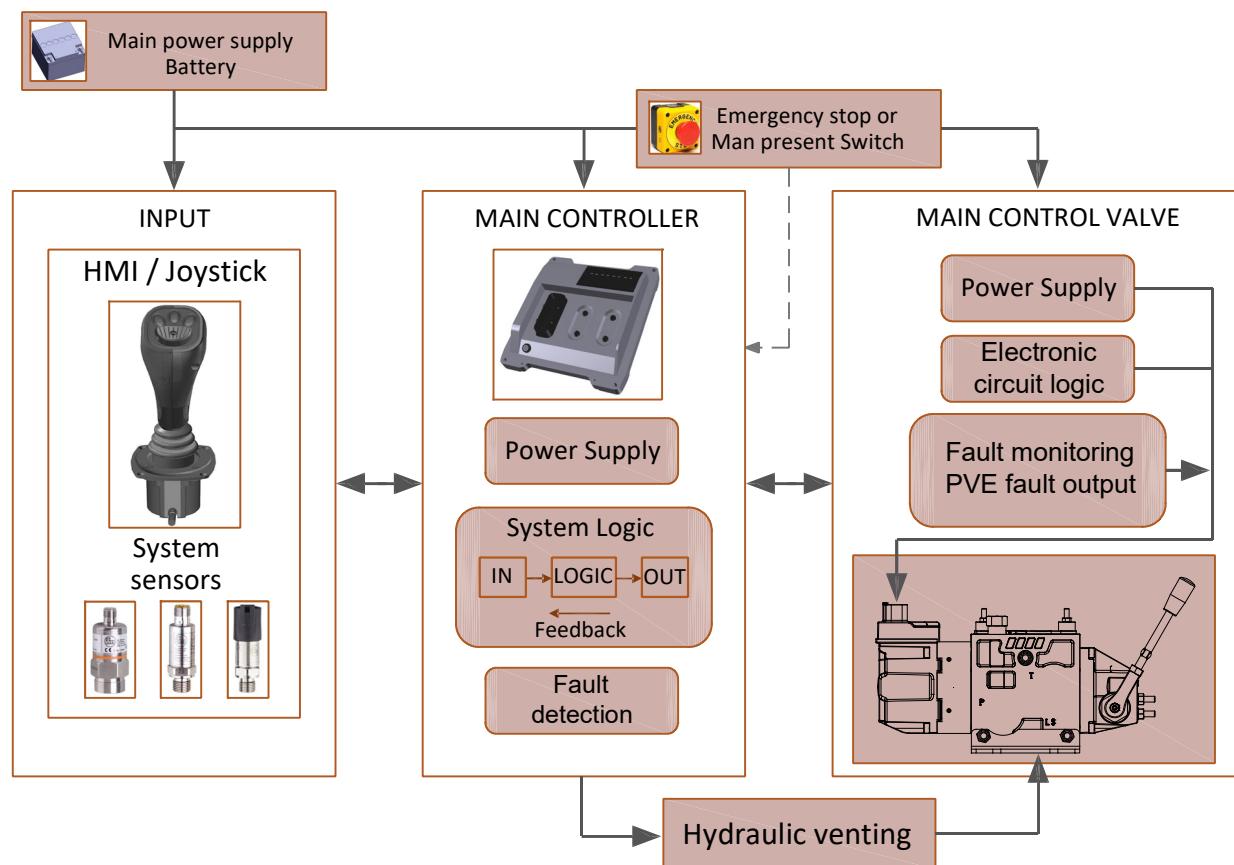


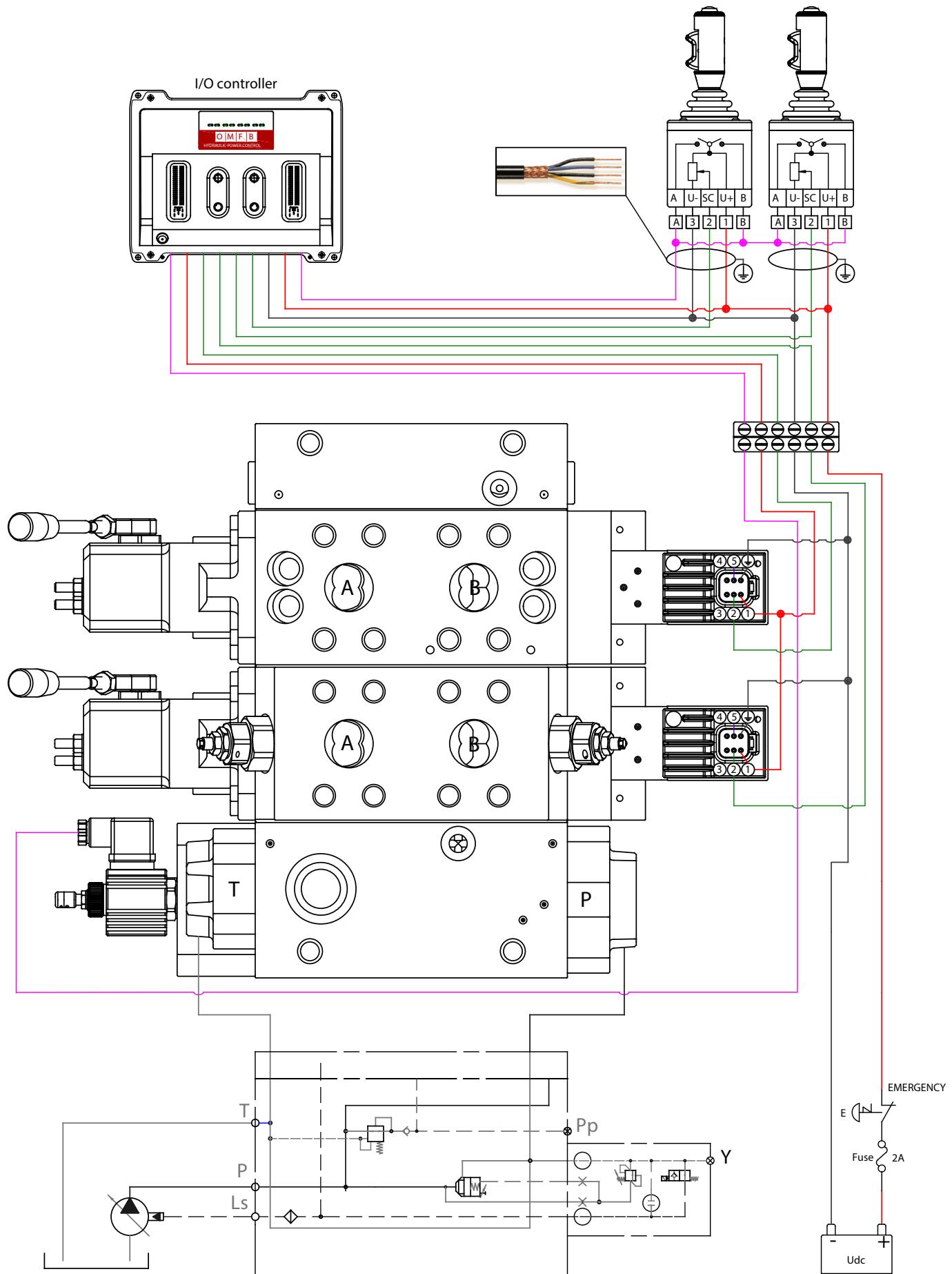
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment		
1	Power supply	
2	Input signal control	
3	Fault monitoring signal	
4	Ground	

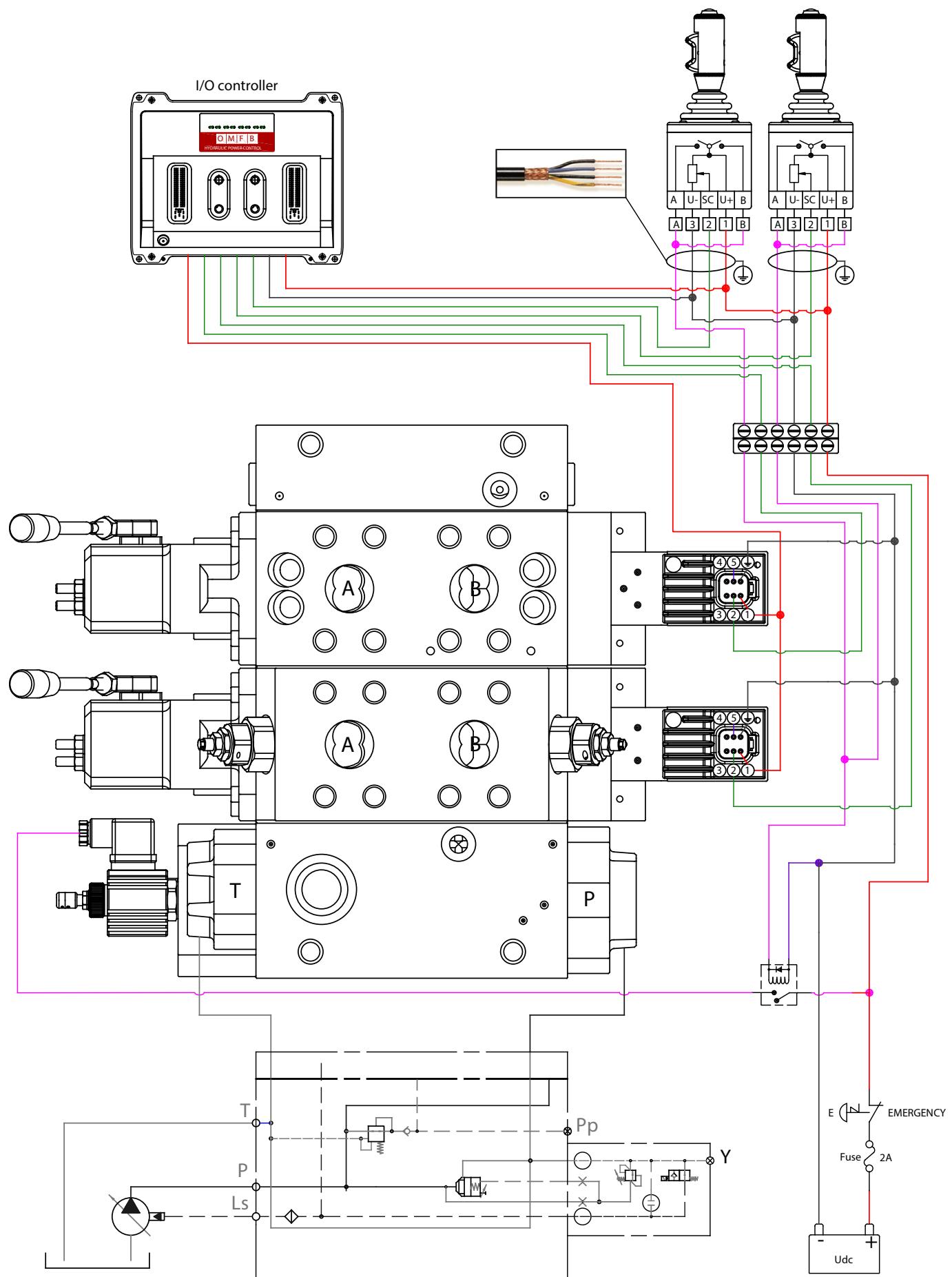
Connector version	Code numbers			
	Active version		Passive version	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAC0181000	PEAC1181000	PEAC0171000	PEAC1171000
DIN 43650	PEAC0181200	PEAC1181200	PEAC0171200	PEAC1171200

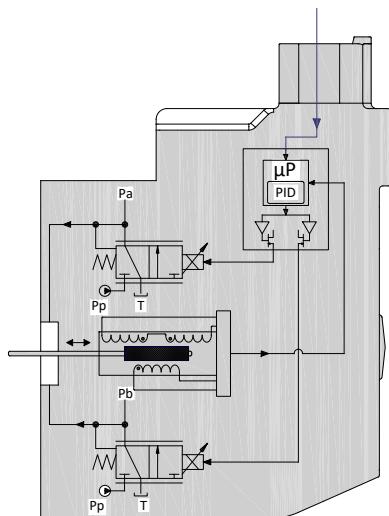
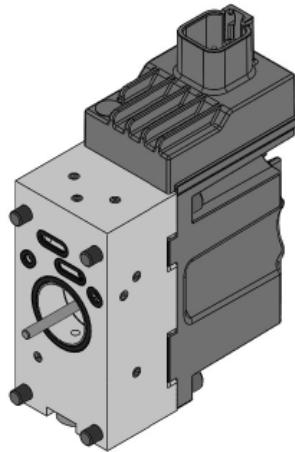












PEAC132 is a proportional high performance PDV spool actuation with integrated electronics and inductive transducer (LVDT) that operates safely and precisely the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the PCB and the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

The spool position is detected in the LVDT transducer which generates an electric feed-back signal registered by the electronics. The variation between the input signal and the feed-back signal, actuates the solenoid valves accordingly, so that, the hydraulic pilot pressure will drive the main spool in the right position.

All PEAC132 modules comes with integrated fault monitoring system, available in two version:

- Active version**
- Passive version**

Active fault monitoring

When an error state is detected, the two proportional solenoid valves will be automatically deactivated, a red lamp will light-up and drive the spool in neutral position (if it's not seized up).

The system will only react to failures of more than 500 ms (in other words there is delay of half a second before anything happens). An alarm signal is sent out through the connector, and minus is opened.

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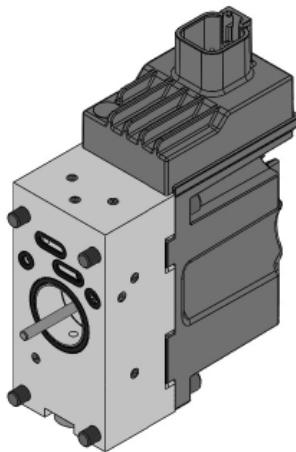
When a fault condition occurs, after a delay of 250 ms an alarm signal is sent out through a devoted pin

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When the PEAC132 module active version is connected with the pump unloading system, the level of safety degree protection for the complete hydraulic system becomes very high, operator free, and helps OEM to meet the PL (Performance Level) required to be comply with the safety demands of Machinery Directive 2006/42/EC.



PEAC132 is defined by:

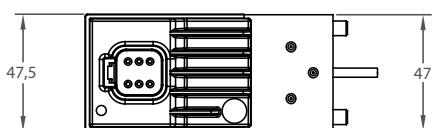
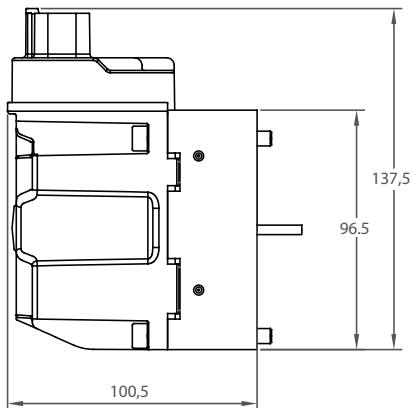
- Inductive transducer with resolution < 12 µm
- Integrated diagnosis and error memory
- Fault monitoring transistor output for signal source
- Higher spool control accuracy
- EMC performance to
- Low hysteresis
- Quicker reaction time
- Spool direction movement output
- Integrated PWM/Pulse Width Modulation
- Low electrical power

PEAC132 Technical data

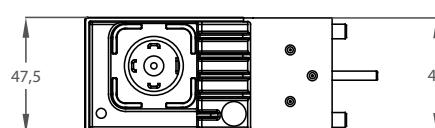
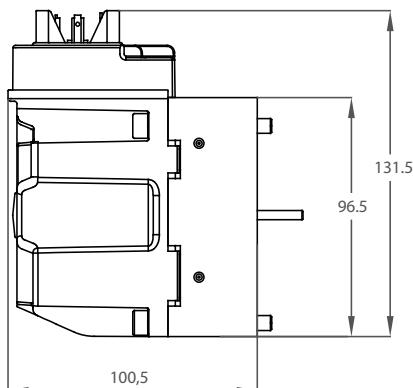
Rated supply voltage	10-30 Vdc
Max ripple	5%
Signal control	0-10 V
Range control signal	2,5 V to 7,5 V
Neutral spool position	5 V
Max threshold signal, A port	1 V
Max threshold signal, B port	1 V
Max current signal @ rated voltage	48 mA
Input capacitor	100 nF
Signal control impedance	25 kΩ
Power consumption	8,7 W
Heat insulation	Class H (180°C)
Duty cycle	ED 100%
Max current consumption	650 mA
Current consumption in neutral position	80 mA
Coil impedance @ 20°C	8,9 Ω
Dither frequency	50-200 Hz
Recommended frequency	100 Hz
Enclosure degree	(Electrical wiring excepted)
Weight cast iron body	1,8 kg
Weight aluminium body	1,3 kg

Bootloader function, debugging parameters and set-up function available only with Deutsch connector DT06-6S

Fault monitoring system	Max current on safety output (pin 5)	50 mA
	Reaction time a fault	500 ms
Max current output signal for spool direction movement		50 mA
Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms

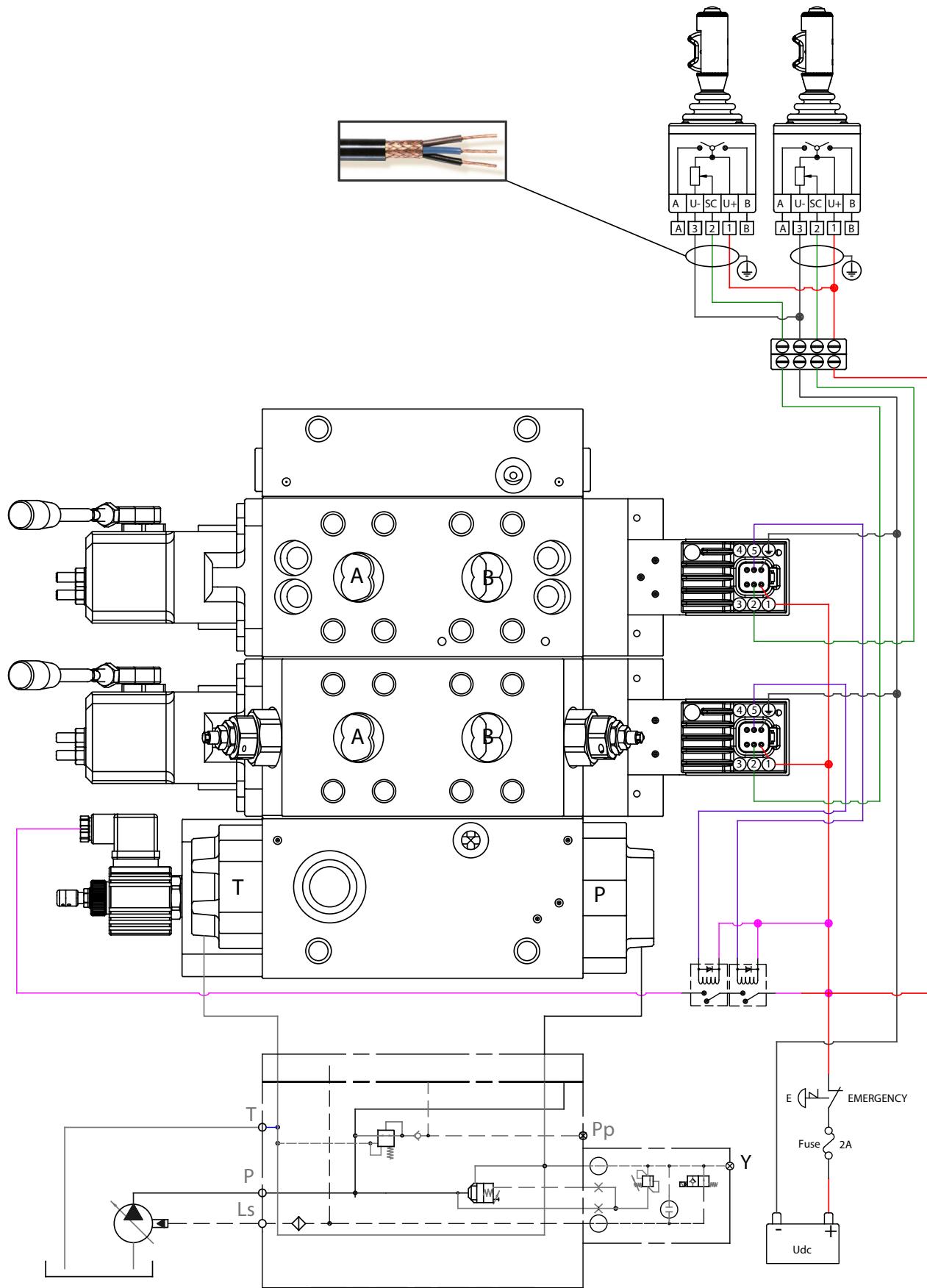


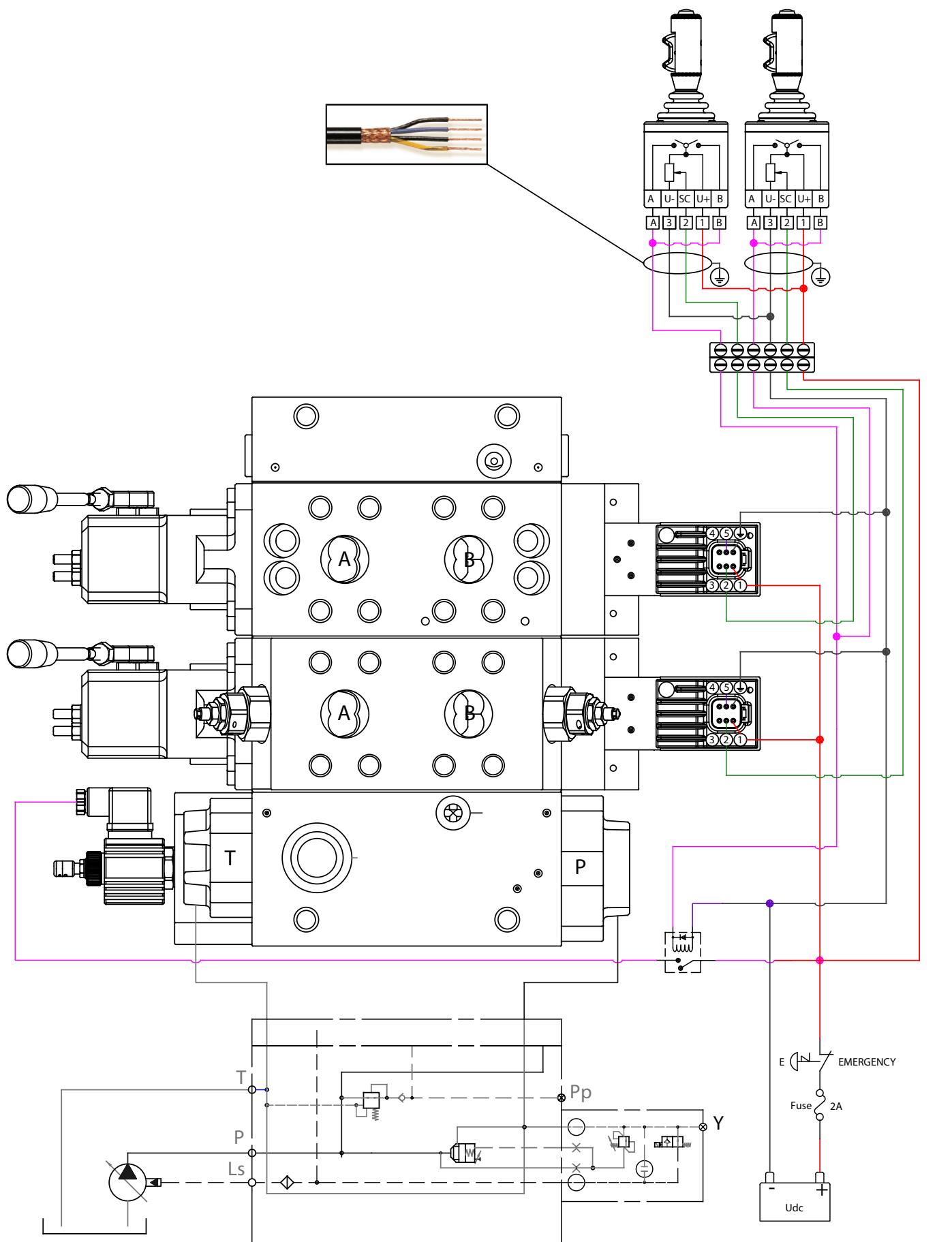
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment		
1	Power supply	
2	Input signal control	
3	CAN-high	A port-spool movement signal
4	CAN-low	B port-spool movement signal
5	Fault monitoring signal	
6	Ground	

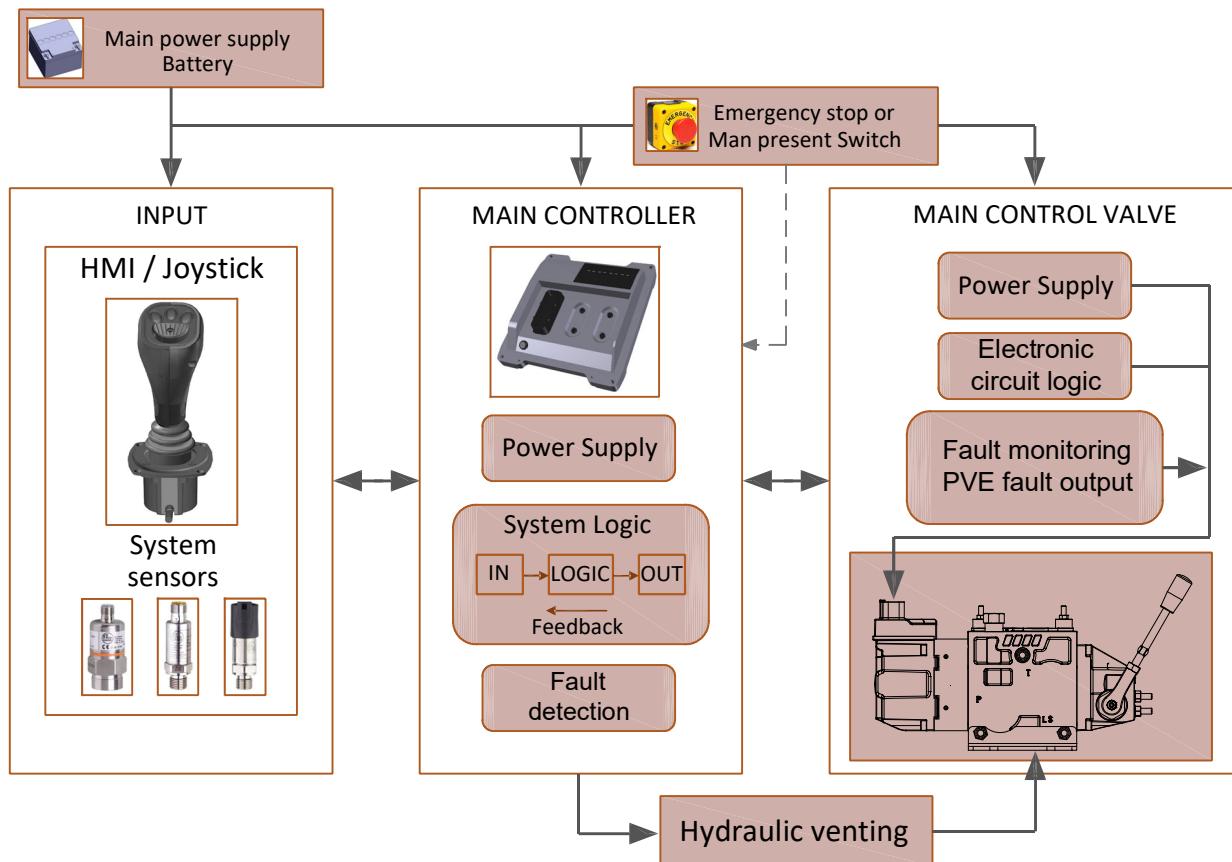


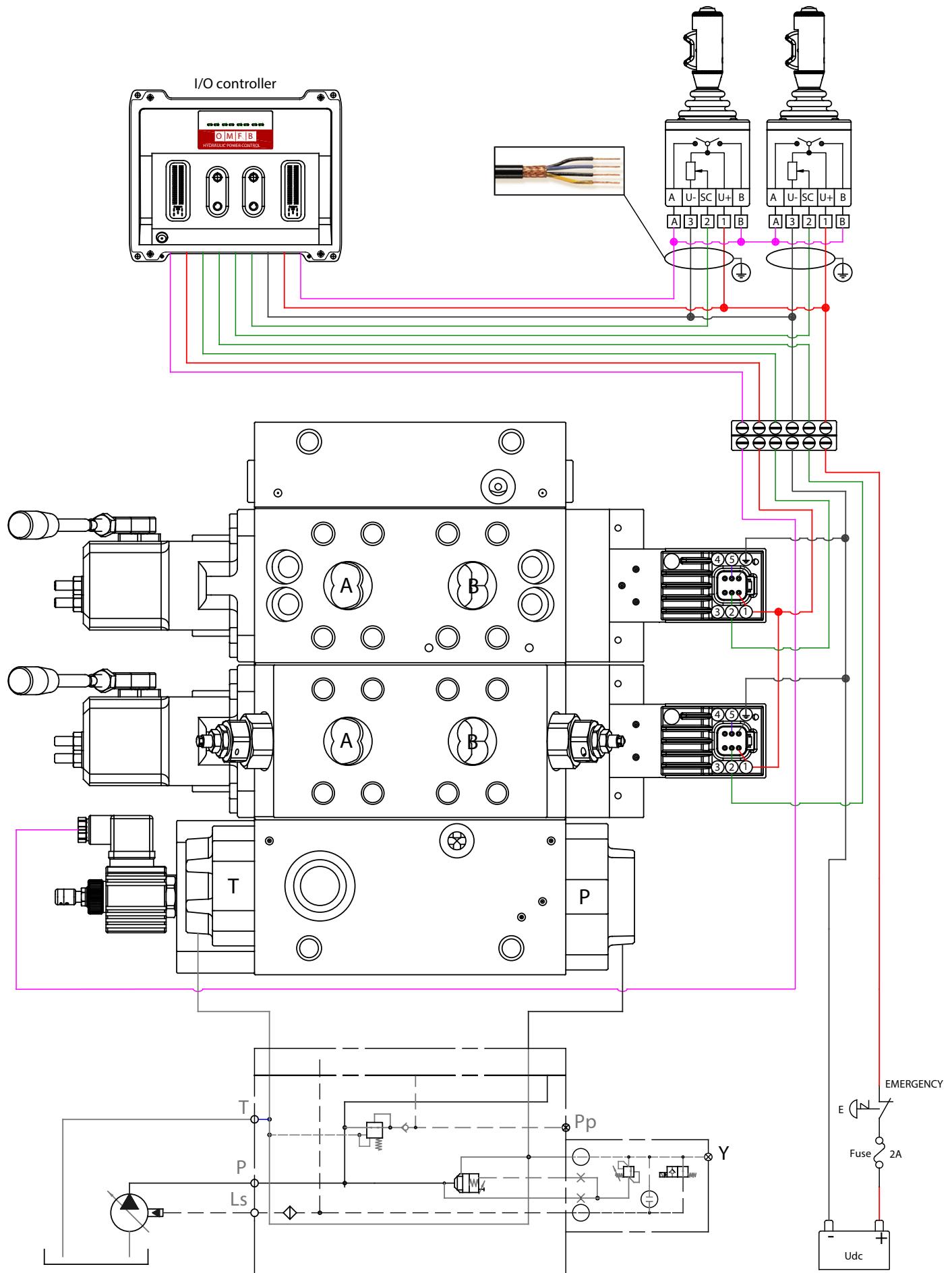
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment		
1	Power supply	
2	Input signal control	
3	Fault monitoring signal	
4	Ground	

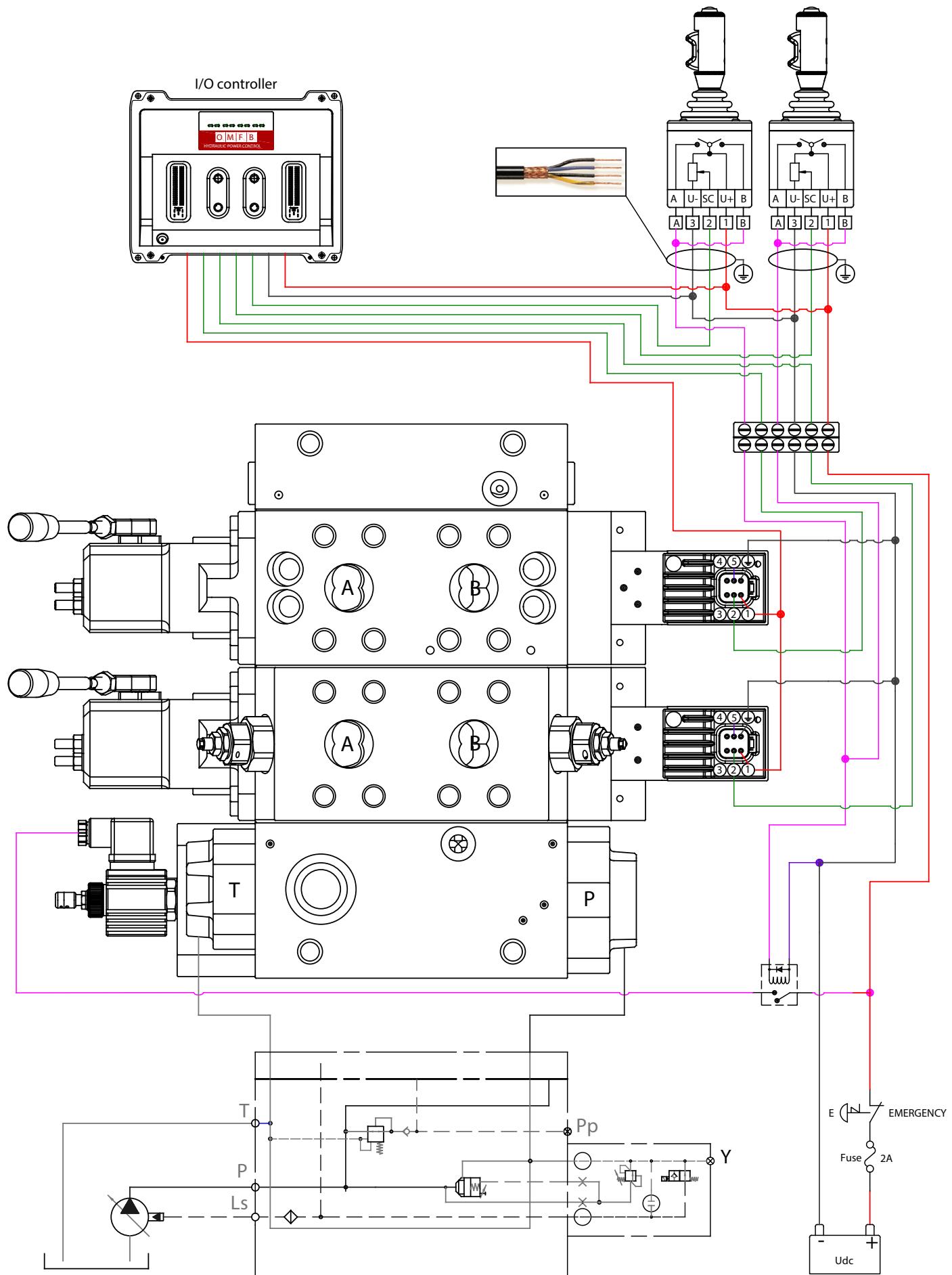
Connector version	Code numbers			
	Active version		Passive version	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAC0182000	PEAC1182000	PEAC0172000	PEAC1172000
DIN 43650	PEAC0182200	PEAC1182200	PEAC0172200	PEAC1172200

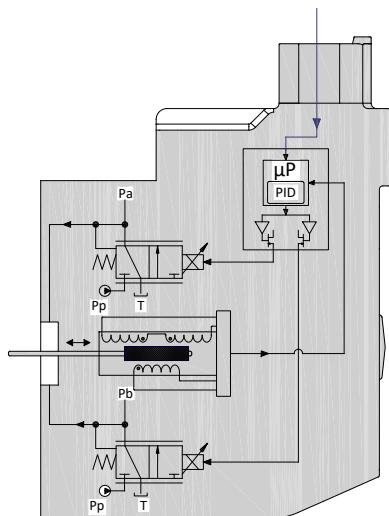
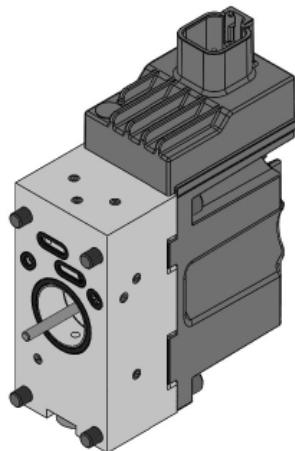












PEAC136 is a proportional high performance PDV spool actuation with integrated electronics and inductive transducer (LVDT) that operates safely and precisely the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the PCB and the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

The spool position is detected in the LVDT transducer which generates an electric feed-back signal registered by the electronics.

The variation between the input signal and the feed-back signal, actuates the solenoid valves accordingly, so that, the hydraulic pilot pressure will drive the main spool in the right position.

All PEAC136 modules comes with integrated fault monitoring system, available in two version:

- Active version**
- Passive version**

Active fault monitoring

When an error state is detected, the two proportional solenoid valves will be automatically deactivated, a red lamp will light-up and drive the spool in neutral position (if it's not seized up).

The system will only react to failures of more than 500 ms (in other words there is delay of half a second before anything happens). An alarm signal is sent out through the connector, and minus is opened.

This error state is memorized, and continues until the system is being reset by switching off the supply voltage.

Shortly, when the active fault monitoring system is connected and an error state is detected, the system ensures a fast and operator free reaction, that will put the complete hydraulic circuit into venting conditions, thus preventing uncontrollable machine movements.

Passive fault monitoring

When an error state is detected, the two proportional solenoid valves will not be deactivated, a red lamp will light-up, but still control the main spool.

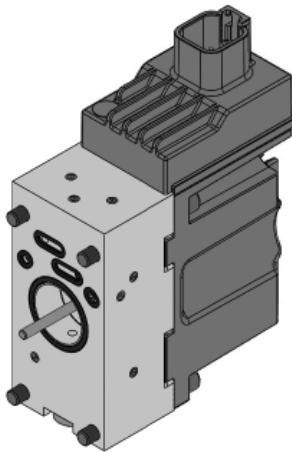
When a fault condition occurs, after a delay of 250 ms an alarm signal is sent out through a devoted pin

This state is not memorized, and when the faulty state disappears, the alarm signal will turn to passive again.

In order to prevent the electronic from going into an undefined state, any time the system is being triggered or reset, a general check of power supply and the internal clock frequency is made.

The use of PEAC136 module both passive or active version, allows the machines hydraulic system to be made with different level of safety degree that for the choice of which it is essential to know the exactly required functions.

When the PEAC136 module active version is connected with the pump unloading system, the level of safety degree protection for the complete hydraulic system becomes very high, operator free, and helps OEM to meet the PL (Performance Level) required to be comply with the safety demands of Machinery Directive 2006/42/EC.



PEAC136 is defined by:

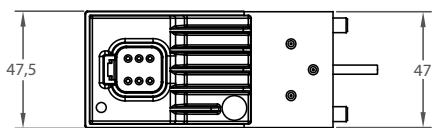
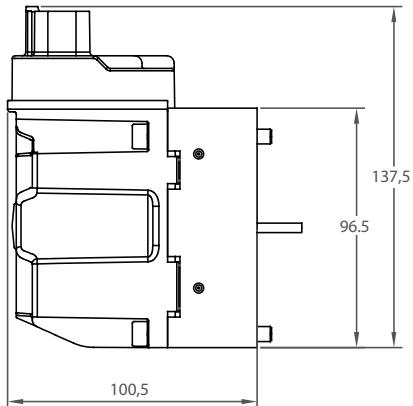
- Inductive transducer with resolution < 12 µm
- Integrated diagnosis and error memory
- Fault monitoring transistor output for signal source
- Higher spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Low hysteresis
- Quicker reaction time
- Spool direction movement output
- Integrated PWM/Pulse Width Modulation
- Low electrical power
- Robust and reliable design

PEAC136 Technical data

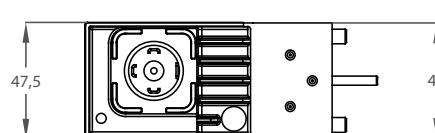
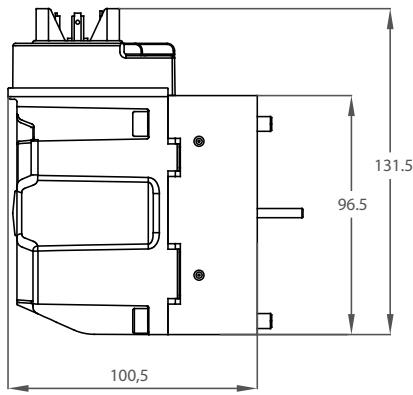
Rated supply voltage	10 ÷ 30 Vdc
Max ripple	5%
Signal control	4 ÷ 20 mA
Range control signal	4 mA to 20 mA
Neutral spool position	12 mA
Max threshold signal, A port	1,5 mA
Max threshold signal, B port	1,5 mA
Max current signal @ rated voltage	48 mA
Input capacitor	100 nF
Signal control impedance	220 Ω
Power consumption	8,7 W
Heat insulation	Class H (180°C)
Duty cycle	ED 100%
Max current consumption	650 mA
Current consumption in neutral position	80 mA
Coil impedance @ 20°C	8,9 Ω
Dither frequency	50 ÷ 200 Hz
Recommended frequency	100 Hz
Enclosure degree	(Electrical wiring excepted)
Weight cast iron body	1,8 kg
Weight aluminium body	1,3 kg

**Bootloader function, debugging parameters and set-up function available
with Deutsch connector DT06-6S, only**

Fault monitoring system	Max current on safety output (pin 5)	50 mA
	Reaction time a fault	500 ms
Max current output signal for spool direction movement		50 mA
Reaction time (constant voltage)	From neutral position to max spool travel	110 ÷ 140 ms
	From max spool travel to neutral	70 ÷ 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 ÷ 170 ms
	From max spool travel to neutral	70 ÷ 90 ms

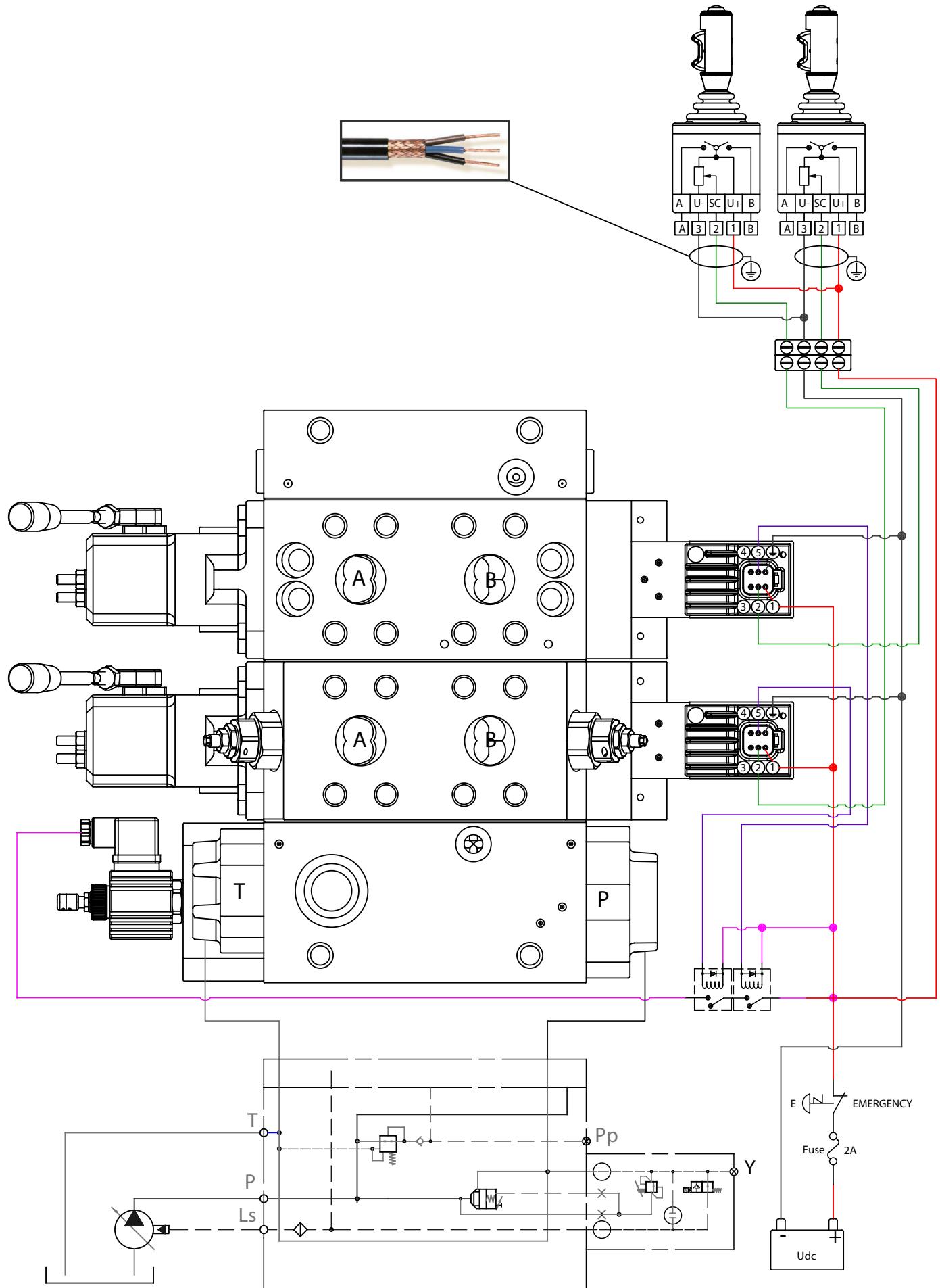


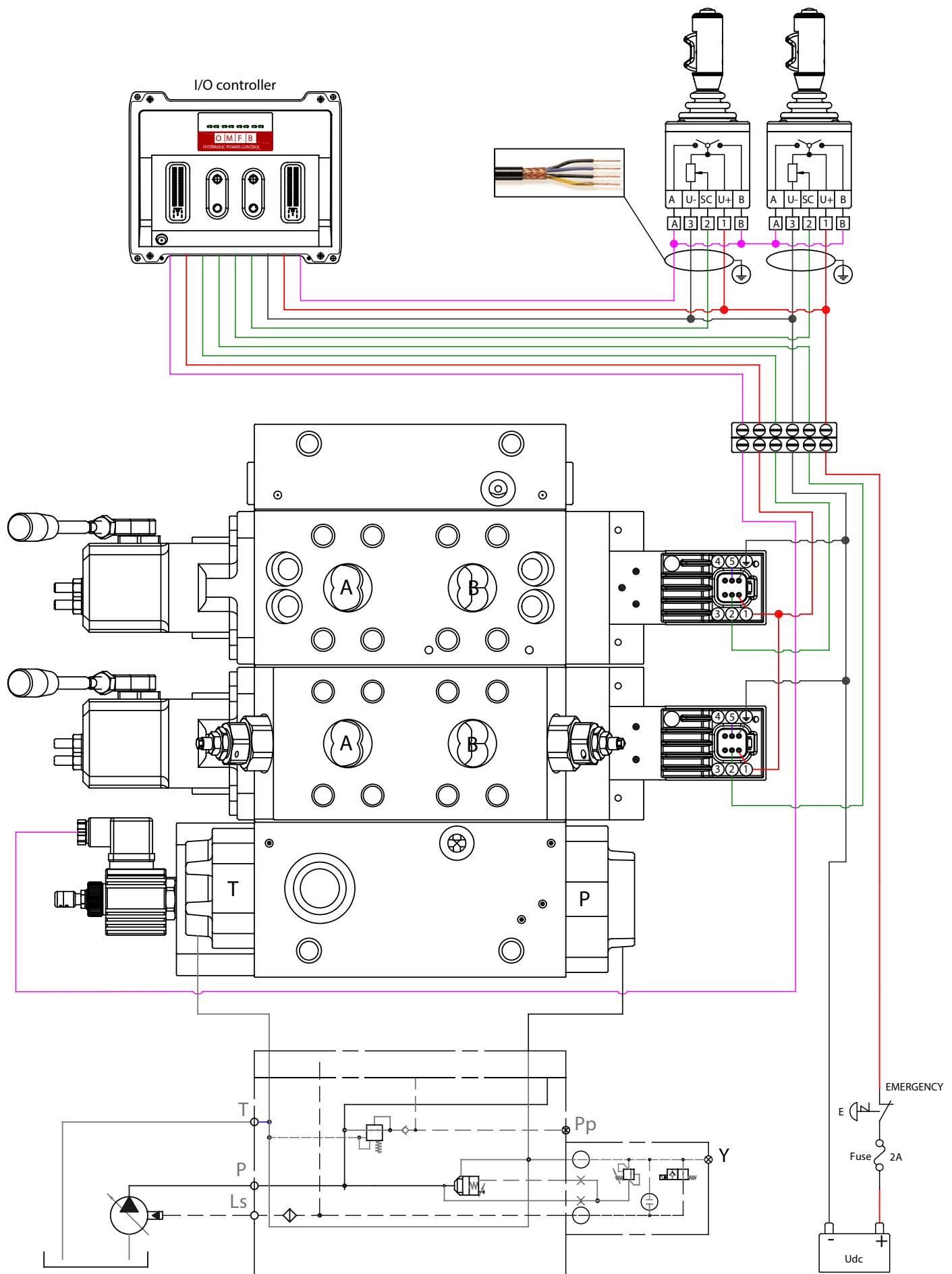
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment		
1	Power supply	
2	Input signal control	
3	CAN-high	A port-spool movement signal
4	CAN-low	B port-spool movement signal
5	Fault monitoring signal	
6	Ground	

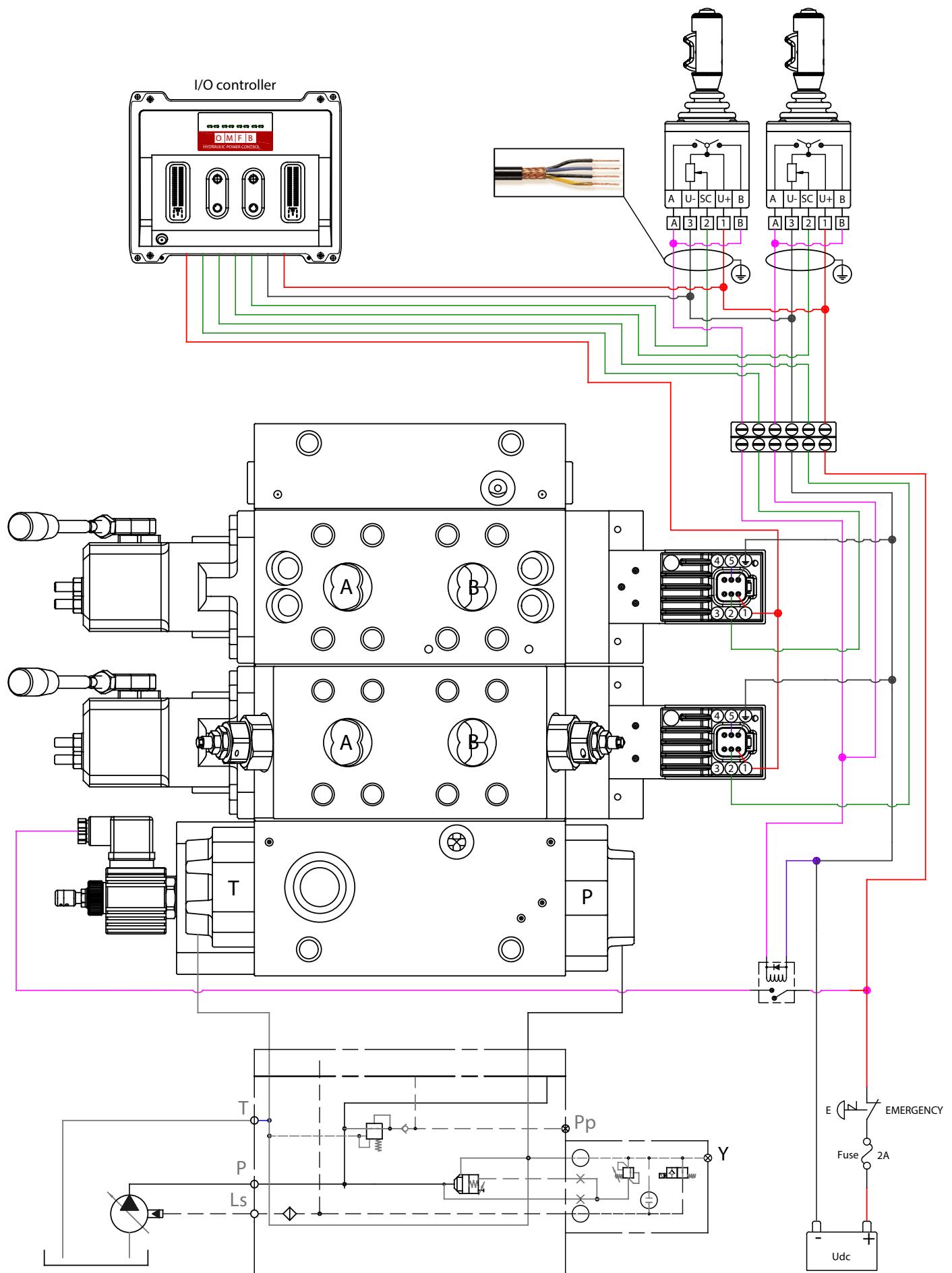


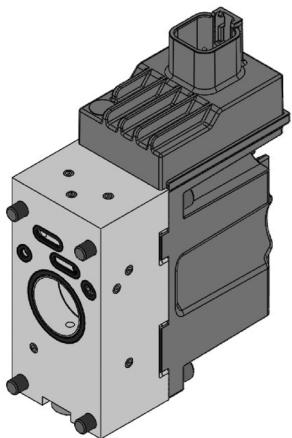
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment		
1	Power supply	
2	Input signal control	
3	Fault monitoring signal	
4	Ground	

Connector version	Code numbers			
	Active version		Passive version	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAC0186000	PEAC1186000	PEAC0176000	PEAC1176000
DIN 43650	PEAC0186200	PEAC1186200	PEAC0176200	PEAC1176200







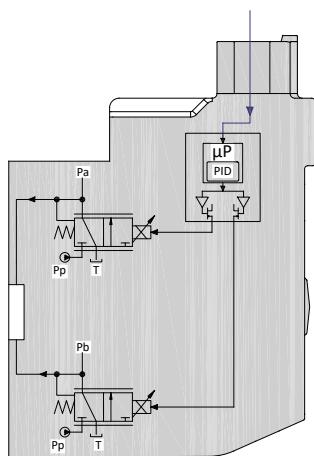


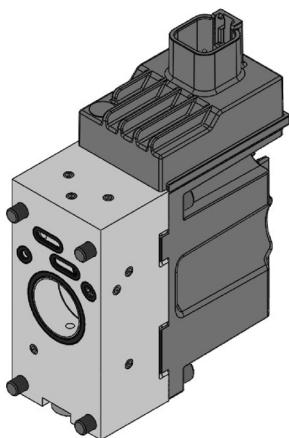
PEAC031 is a proportional open loop spool actuation with integrated electronics that operates the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the PCB and the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

PEAC031 does not have neither the transducer spool position control nor fault monitoring system, this means that any forces which override the pilot pressure spool forces, may change the spool position with no error signal, and the safety of the whole system is left to the operator's visual control, only.

PEAC031 is recommended where a simple proportional control is required, and where hysteresis and reaction time are not so critical.





PEAC031 is defined by:

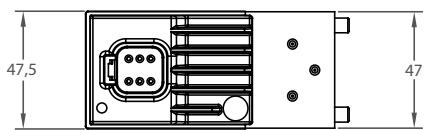
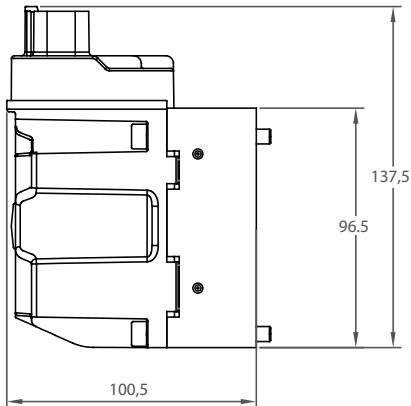
- High spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Quick reaction time
- Integrated PWM/Pulse Width Modulation
- Low electrical power
- Robust and reliable design

PEAC031 Technical data

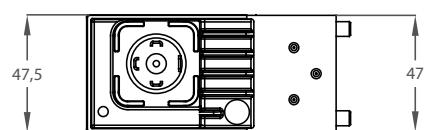
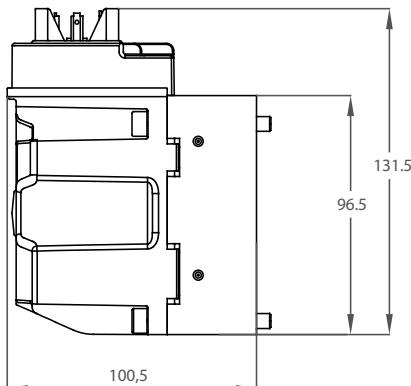
Rated supply voltage	10-30 Vdc
Max ripple	5%
Signal control	0,5 Udc
Range control signal	0,25 Udc to 0,75 Udc
Neutral spool position	0,5 Udc
Max threshold signal, A port	1 V
Max threshold signal, B port	1 V
Max current signal @ rated voltage	48 mA
Input capacitor	100 nF
Signal control impedance	25 kΩ
Power consumption	8,7 W
Heat insulation	Class H (180°C)
Duty cycle	ED 100%
Max current consumption	650 mA
Current consumption in neutral position	80 mA
Coil impedance @ 20°C	8,9 Ω
Dither frequency	50-200 Hz
Recommended frequency	100 Hz
Enclosure degree	(Electrical wiring excepted)
Weight cast iron body	1,8 kg
Weight aluminium body	1,3 kg

**Bootloader function, debugging parameters and set-up function available only
with Deutsch connector DT06-6S**

Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms

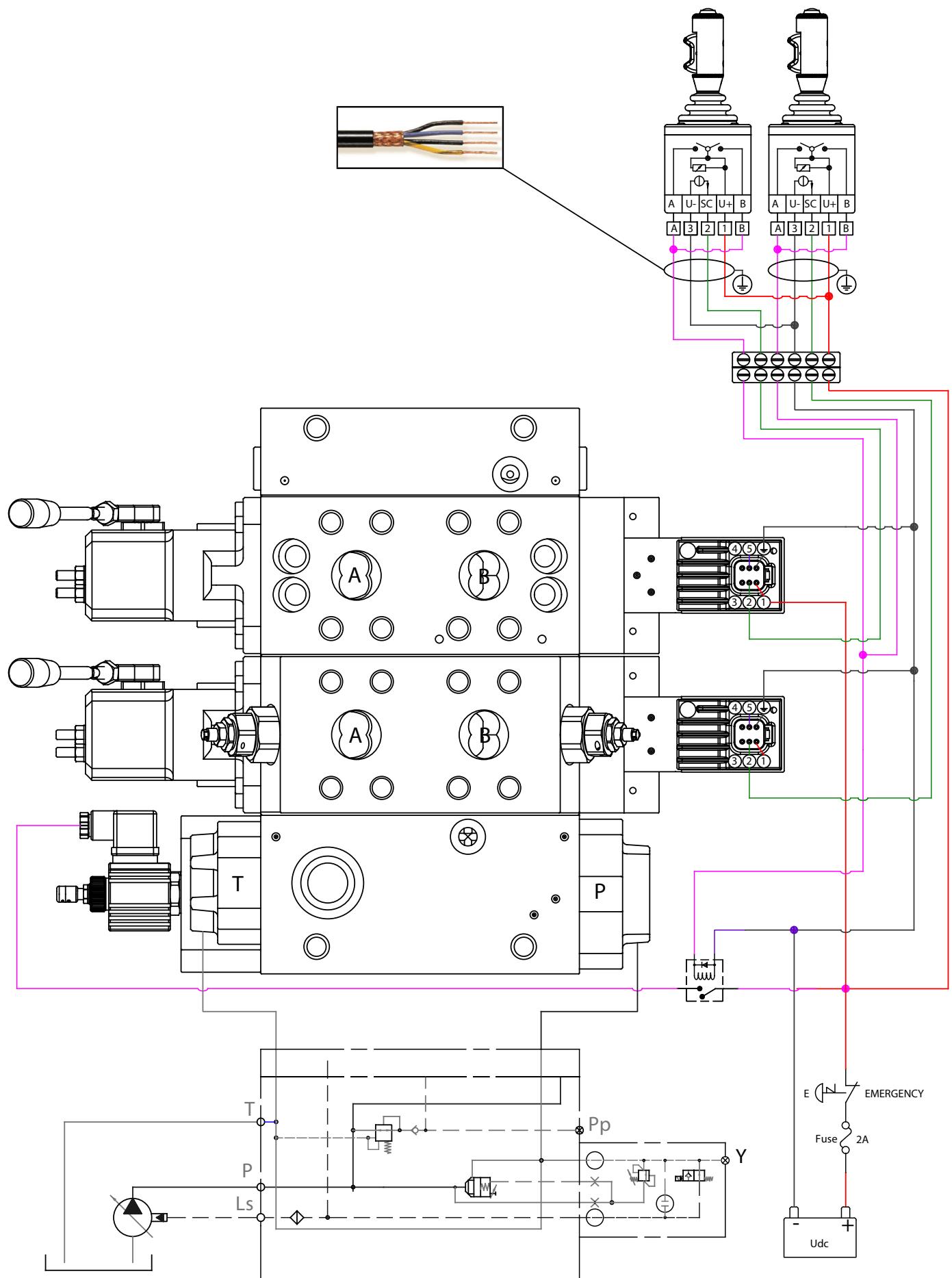


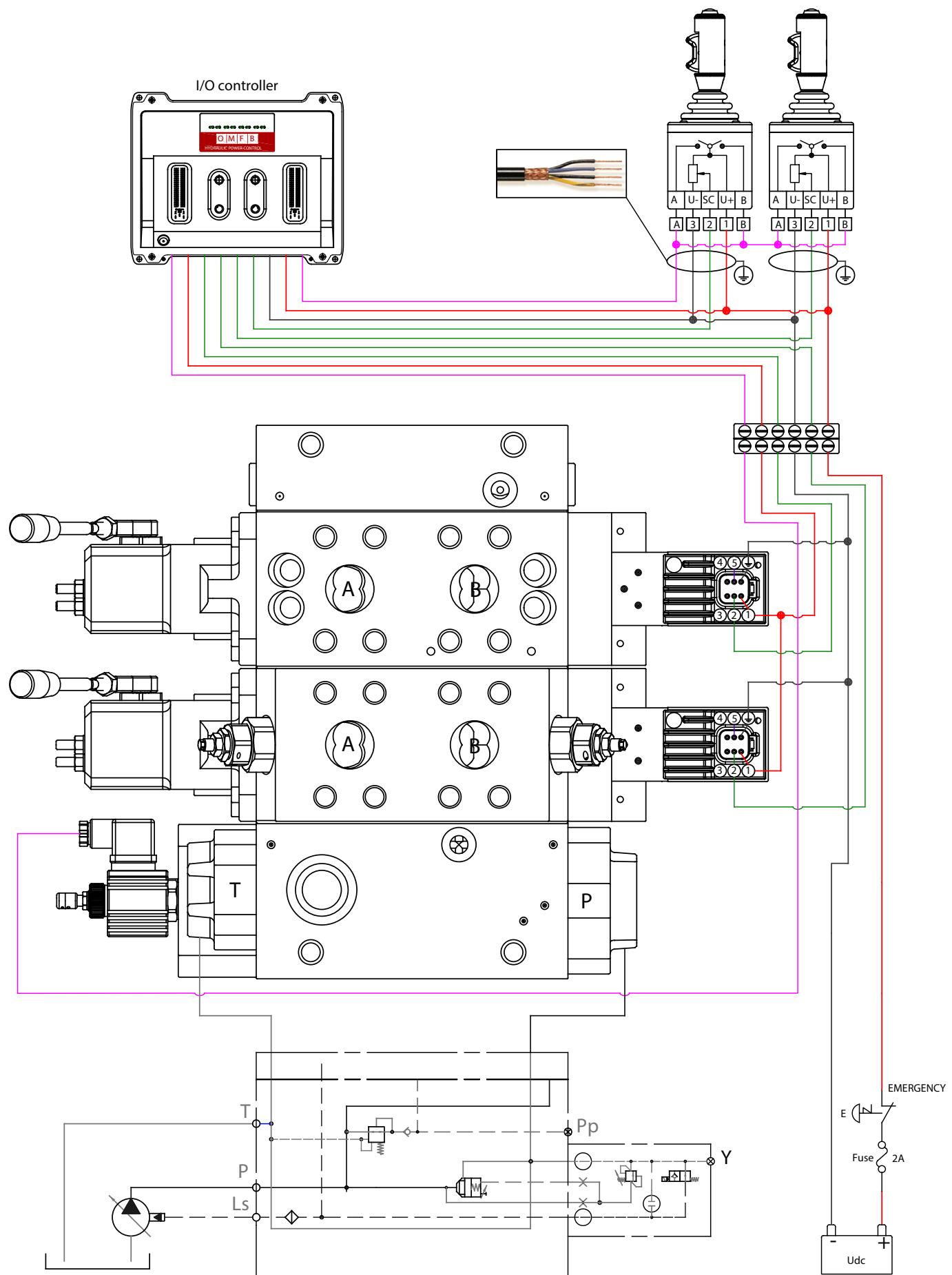
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment	
1	Power supply
2	Input signal control
3	CAN-high
4	CAN-low
5	Free
6	Ground

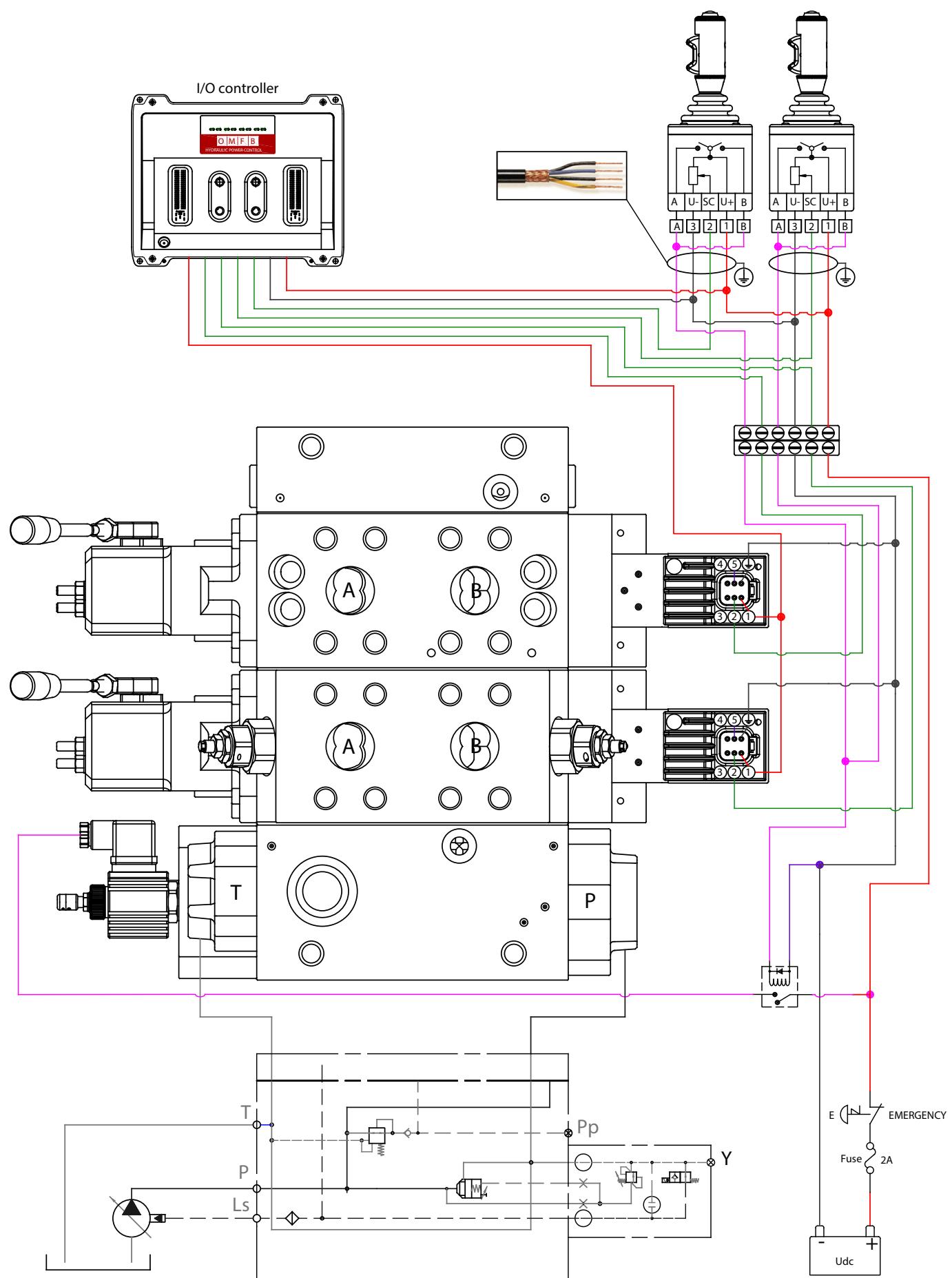


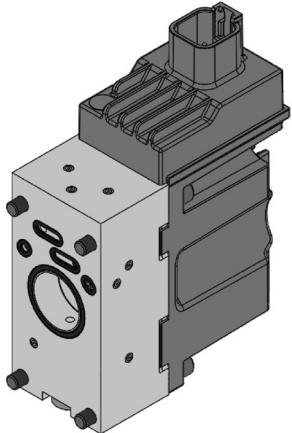
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment	
1	Power supply
2	Input signal control
3	Free
4	Ground

Connector version	Code numbers			
	Active version		Passive version	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAC0081000	PEAC1081000	PEAC0071000	PEAC1071000
DIN 43650	PEAC0081200	PEAC1081200	PEAC0071200	PEAC1071200







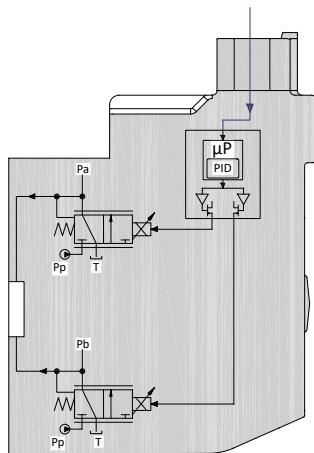


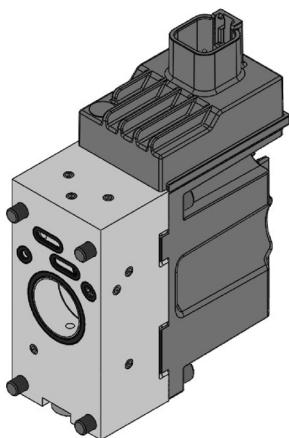
PEAC032 is a proportional open loop spool actuation with integrated electronics that operates the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the PCB and the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

PEAC032 does not have neither the transducer spool position control nor fault monitoring system, this means that any forces which override the pilot pressure spool forces, may change the spool position with no error signal, and the safety of the whole system is left to the operator's visual control, only.

PEAC032 is recommended where a simple proportional control is required, and where hysteresis and reaction time are not so critical.





PEAC032 is defined by:

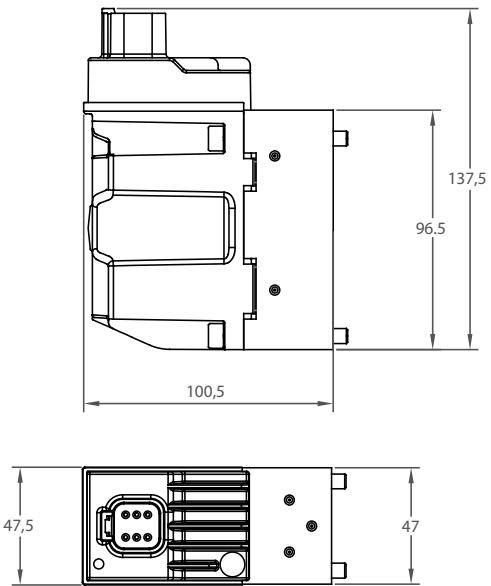
- High spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Quick reaction time
- Integrated PWM/Pulse Width Modulation
- Low electrical power
- Robust and reliable design

PEAC032 Technical data

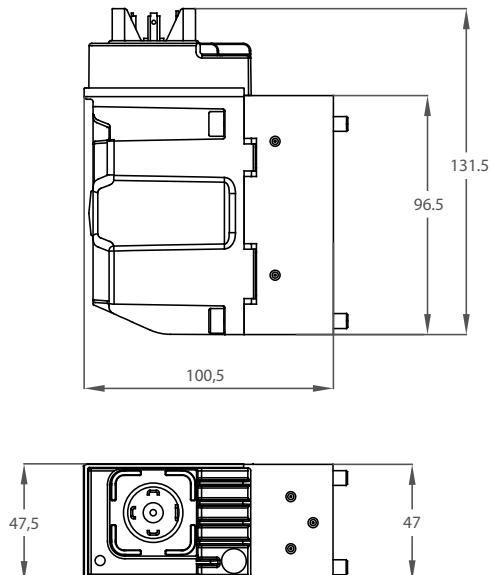
Rated supply voltage	10-30 Vdc
Max ripple	5%
Signal control	0-10 V
Range control signal	2,5 V to 7,5 V
Neutral spool position	5 V
Max threshold signal, A port	1 V
Max threshold signal, B port	1 V
Max current signal @ rated voltage	48 mA
Input capacitor	100 nF
Signal control impedance	25 kΩ
Power consumption	8,7 W
Heat insulation	Class H (180°C)
Duty cycle	ED 100%
Max current consumption	650 mA
Current consumption in neutral position	80 mA
Coil impedance @ 20°C	8,9 Ω
Dither frequency	50-200 Hz
Recommended frequency	100 Hz
Enclouser degree	(Electrical wiring excepted)
Weight cast iron body	1,8 kg
Weight aluminium body	1,3 kg

Bootloader function, debugging parameters and set-up function available only with Deutsch connector DT06-6S

Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms

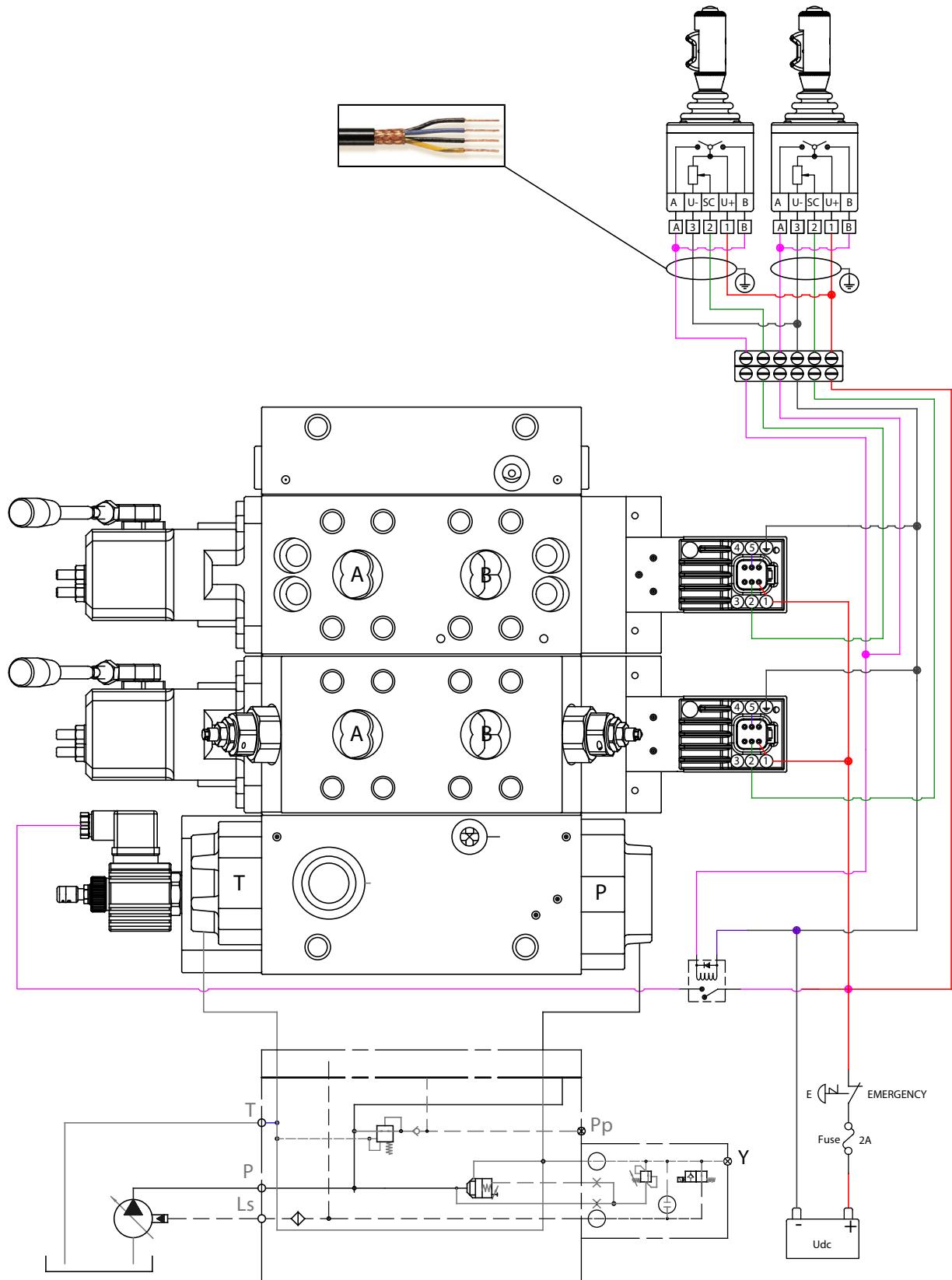


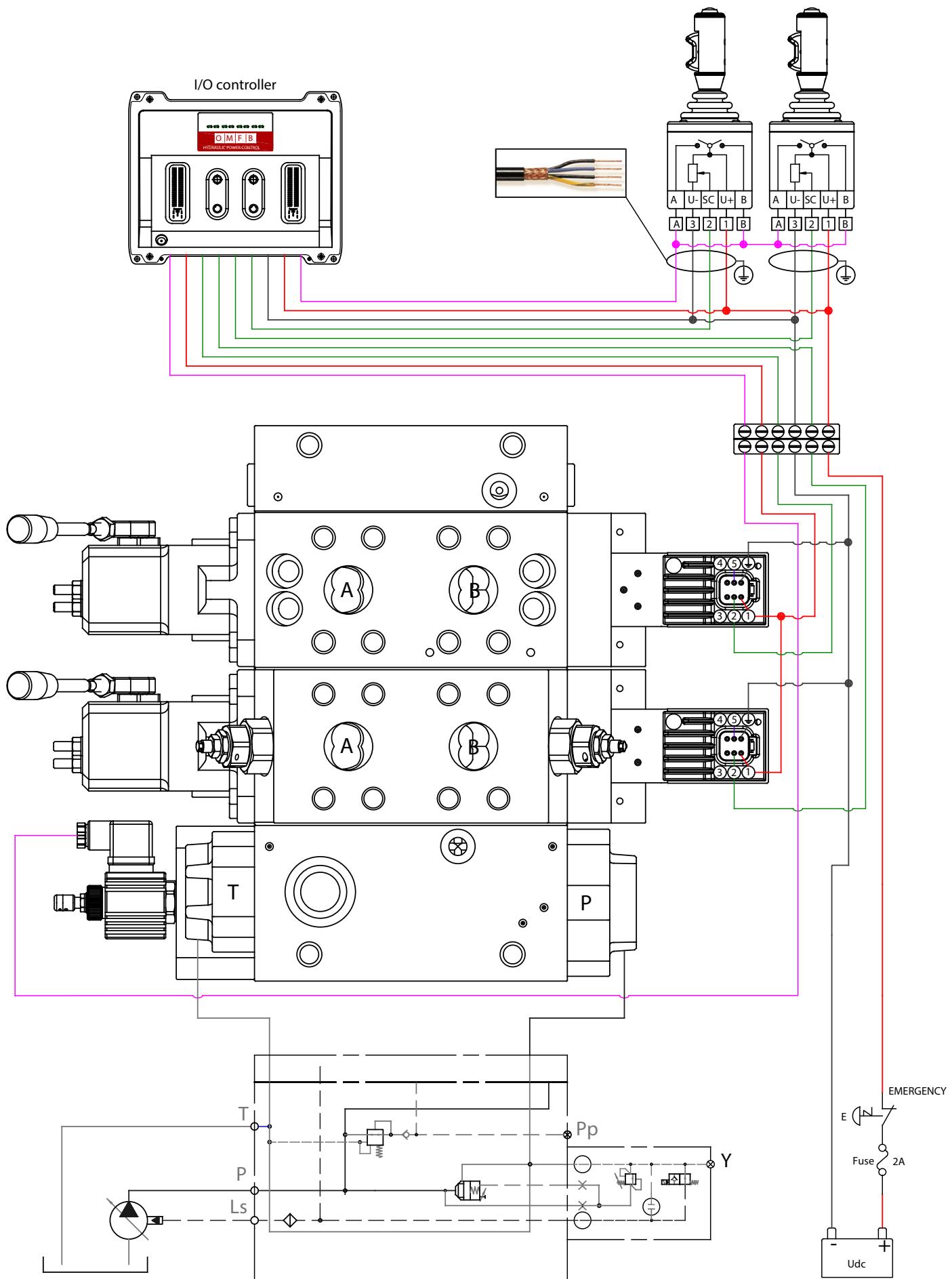
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment	
1	Power supply
2	Input signal control
3	CAN-high
4	CAN-low
5	Free
6	Ground

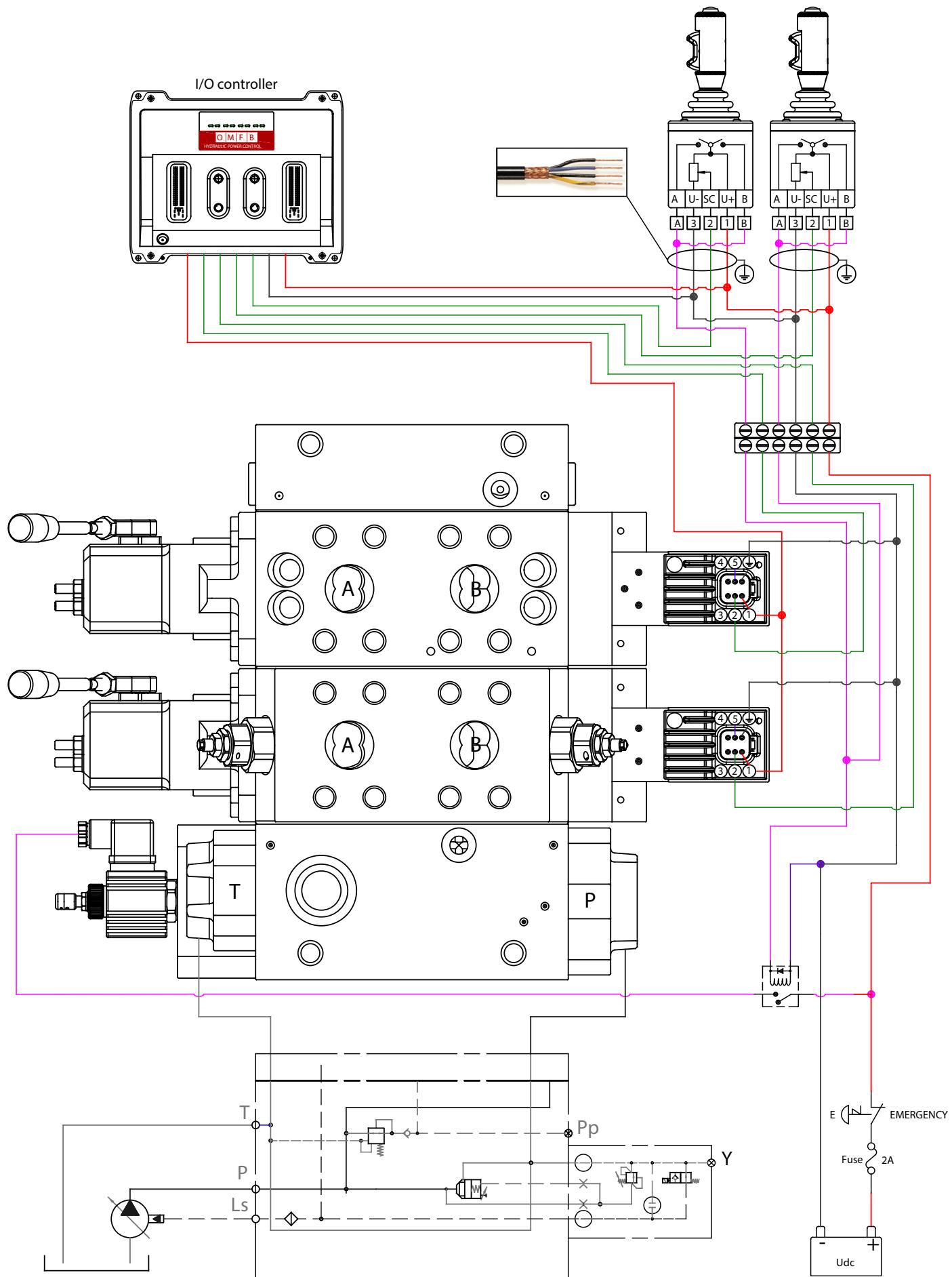


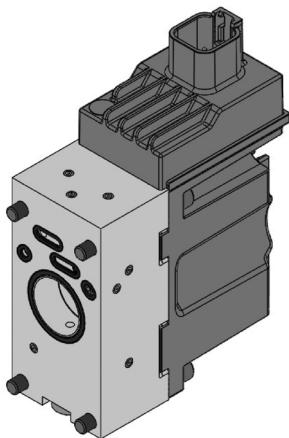
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment	
1	Power supply
2	Input signal control
3	Free
4	Ground

Connector version	Code numbers			
	Active version		Passive version	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAC0082000	PEAC1082000	PEAC0072000	PEAC1072000
DIN 43650	PEAC0082200	PEAC1082200	PEAC0072200	PEAC1072200







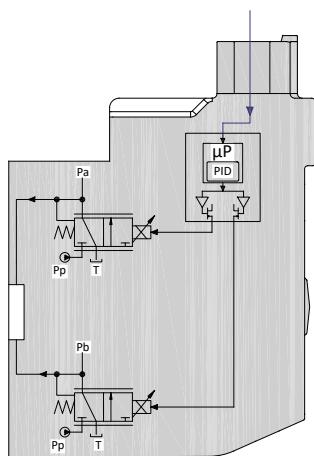


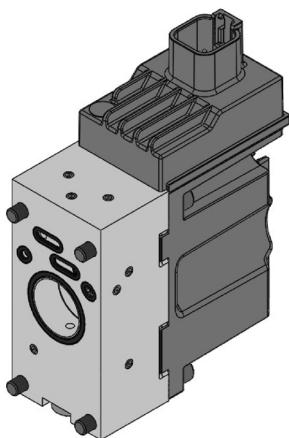
PEAC036 is a proportional open loop spool actuation with integrated electronics that operates the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the PCB and the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

PEAC036 does not have neither the transducer spool position control nor fault monitoring system, this means that any forces which override the pilot pressure spool forces, may change the spool position with no error signal, and the safety of the whole system is left to the operator's visual control, only.

PEAC036 is recommended where a simple proportional control is required, and where hysteresis and reaction time are not so critical.





PEAC036 is defined by:

- High spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Quick reaction time
- Integrated PWM/Pulse Width Modulation
- Low electrical power
- Robust and reliable design

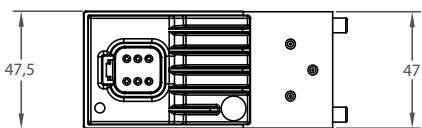
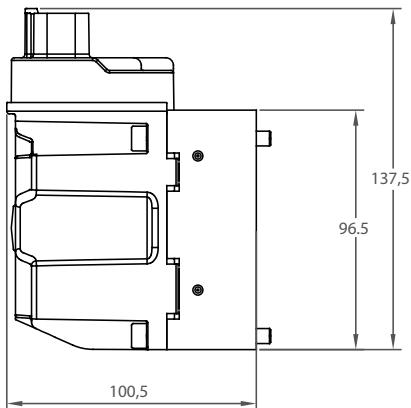
PEAC036 Technical data

Rated supply voltage	10-30 Vdc
Max ripple	5%
Signal control	4-20 mA
Range control signal	4 mA to 20 mA
Neutral spool position	12 mA
Max threshold signal, A port	1,5 mA
Max threshold signal, B port	1,5 mA
Input capacitor	100 nF
Input impedance	220 Ω
Power consumption	8,7 W
Heat insulation	Class H (180°C)
Duty cycle	ED 100%
Max current consumption	650 mA
Current consumption in neutral position	80 mA
Max current start spool travel	140 mA
Max current end spool travel	450 mA
Coil impedance @ 20°C	8,9 Ω
Signal control impedance	50 KΩ
Dither frequency	50-200 Hz
Recommended frequency	100 Hz
Enclosure degree	(Electrical wiring excepted) IP65 - IP66 - IP69K

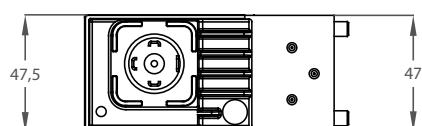
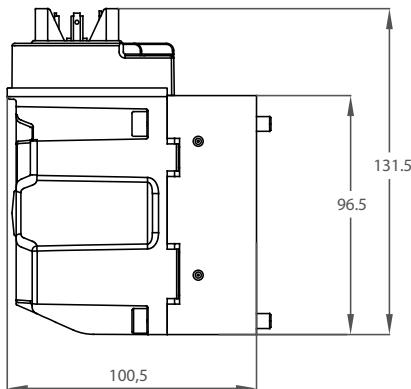
**Bootloader function, debugging parameters and set-up function available
with Deutsch connector DT06-6S, only**

Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms

PDV315 - PEAC036 Electro-hydraulic proportional actuation.
Input signal control 4 ÷ 20 mA
Electrical connectors

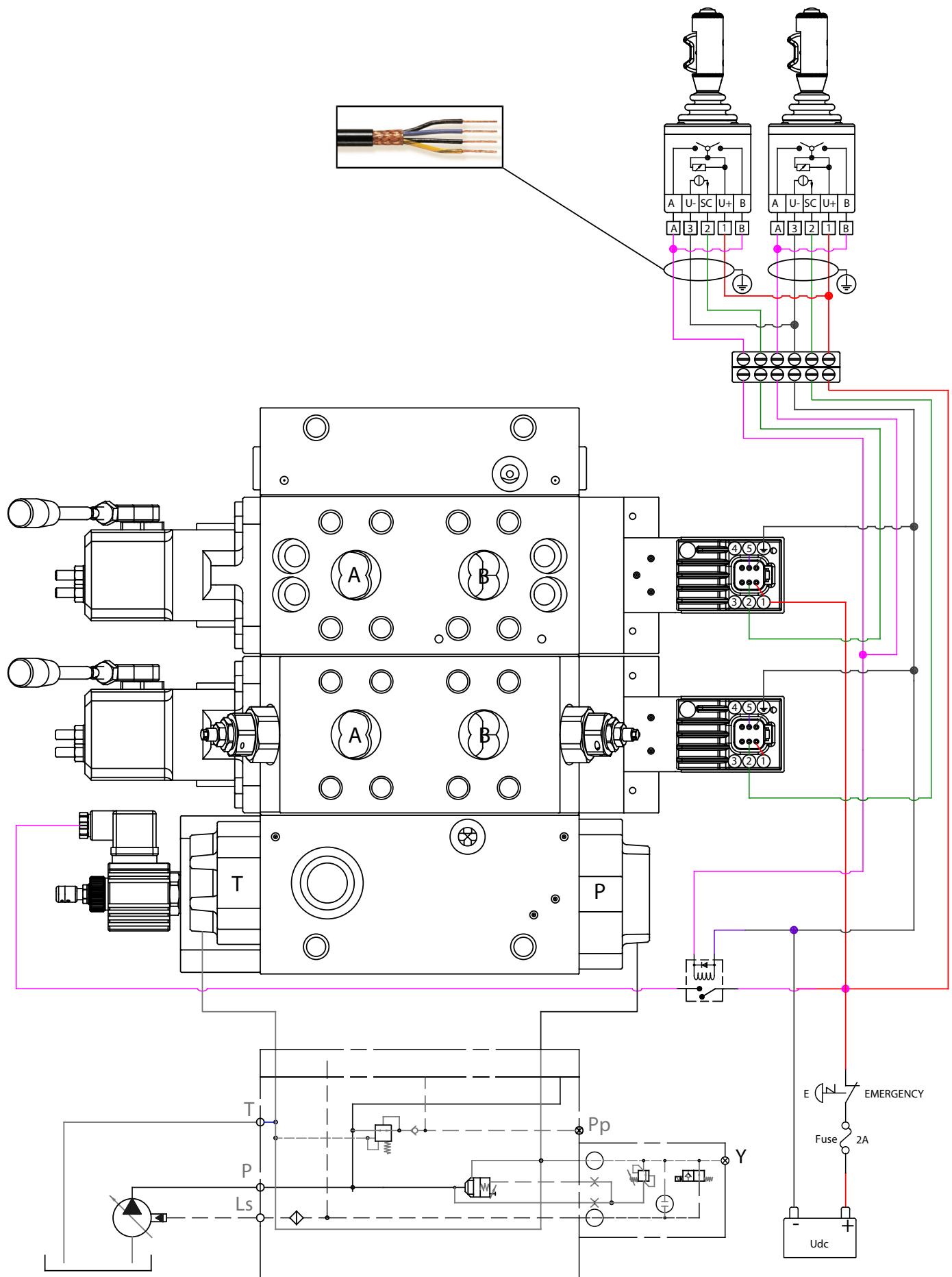


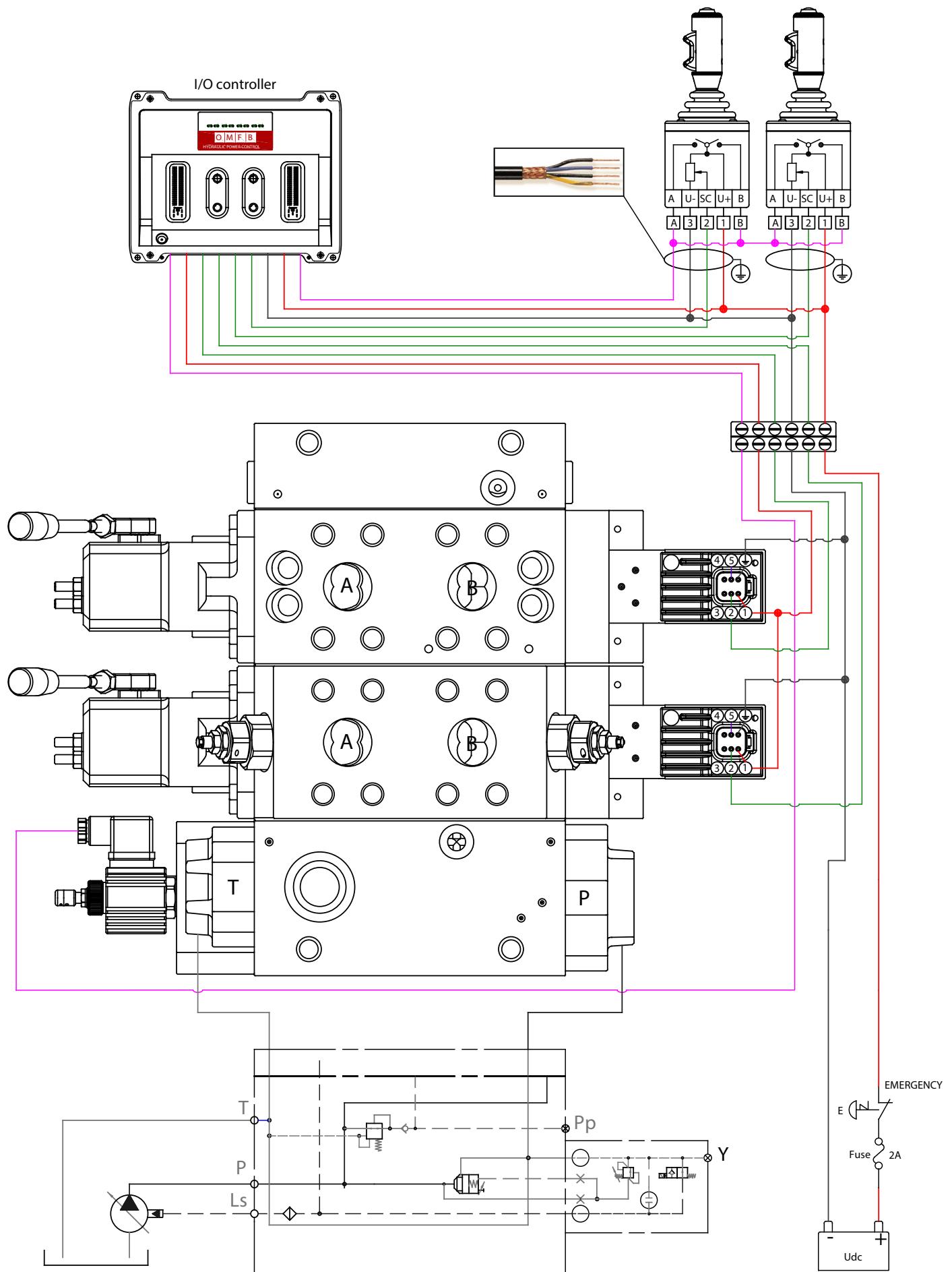
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment	
1	Power supply
2	Input signal control
3	CAN-high
4	CAN-low
5	Free
6	Ground

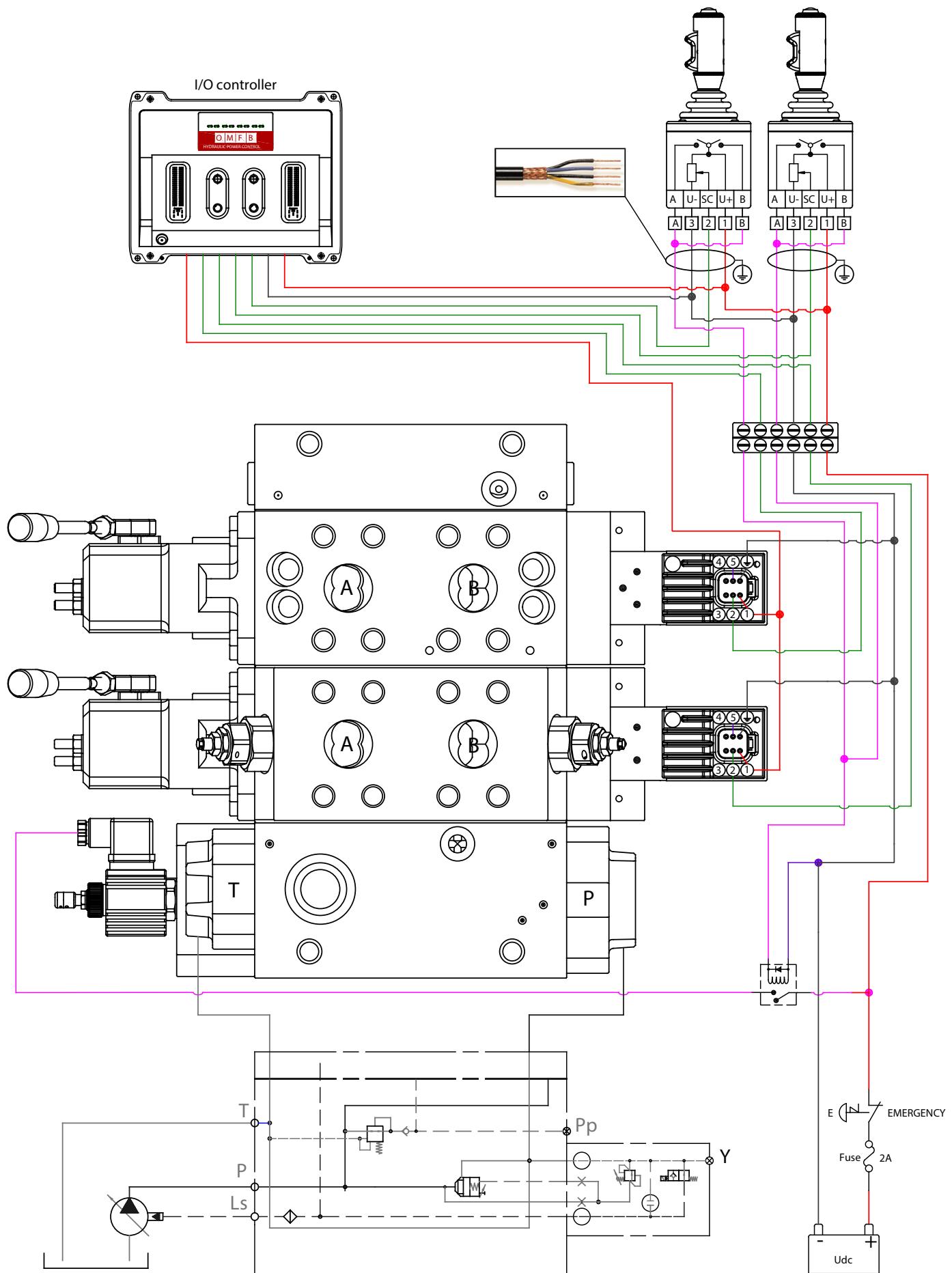


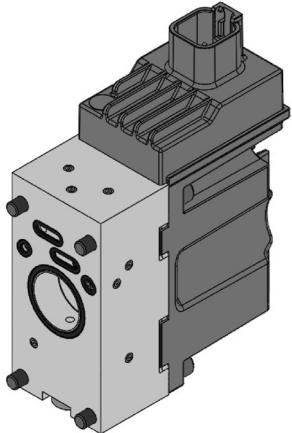
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment	
1	Power supply
2	Input signal control
3	Free
4	Ground

Connector version	Code numbers			
	Active version		Passive version	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAC0086000	PEAC1086000	PEAC0076000	PEAC1076000
DIN 43650	PEAC0086200	PEAC1086200	PEAC0076200	PEAC1076200







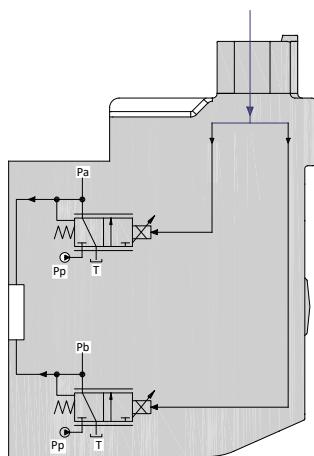


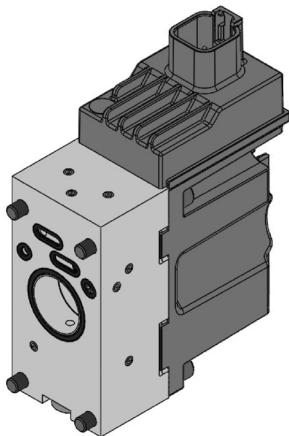
PEAD3 is a proportional open loop spool actuation without integrated electronics that operates the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

PEAD3 does not have neither the transducer spool position control nor fault monitoring system, this means that any forces which override the pilot pressure spool forces, may change the spool position with no error signal, and the safety of the whole system is left to the operator's visual control, only.

PEAD3 is recommended where a simple proportional control is required, and where hysteresis and reaction time are not so critical.



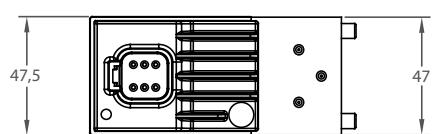
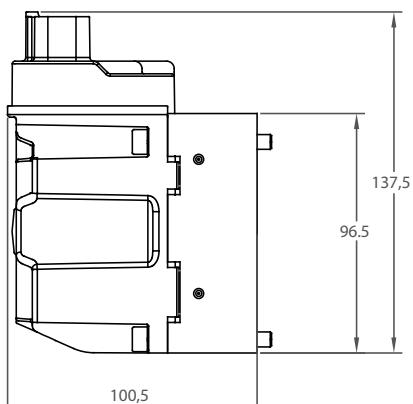


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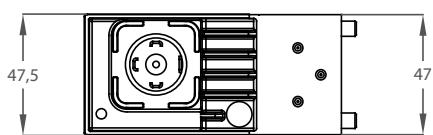
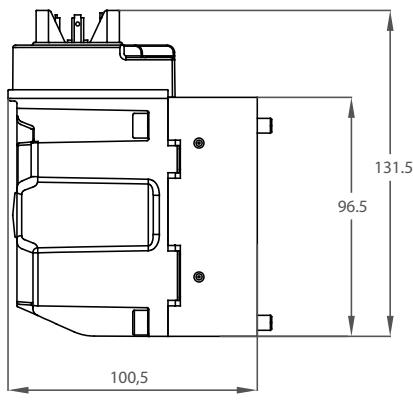
- High spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Quick reaction time
- Integrated PWM/Pulse Width Modulation
- Low electrical power
- Robust and reliable design

PEAD3 Technical data

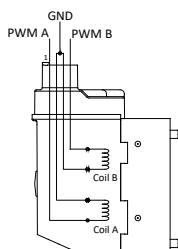
Supply voltage	12 Vdc	24 Vdc
Voltage range	10-16 V	20-30 V
Max ripple	5%	5%
Current consumption at rated voltage	750 mA @ 12 Vdc	400 mA @ 24 Vdc
Power consumption	9 W	9,6 W
R @ 20°C	8,9 Ω	35 Ω
Start spool travel	220 mA	140 mA
End spool travel flow control	650 mA	350 mA
Max spool flow in pre-floating position	650 mA	350 mA
Spool floating position	750 mA	400 mA
Heat insulation	Class H (180°C)	
Oil temperature (Recommended)	20 ÷ 60 °C	
Oil temperature (Min)	-30 °C	
Oil temperature (Max)	80 °C	
Ambient temperature	-30 ÷ 60 °C	
PWM frequency	50 ÷ 200 Hz	
Best frequency	100 Hz	
Duty cycle	100% ED	
Plug connector	6 pins Deutsch or 4 pins DIN	
Enclosure degree (Electrical wiring excepted)	IP69K	
Weight cast iron body	1,8 kg	
Weight Aluminium body	1,3 kg	
Max current output signal for spool direction movement	50 mA	
Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms



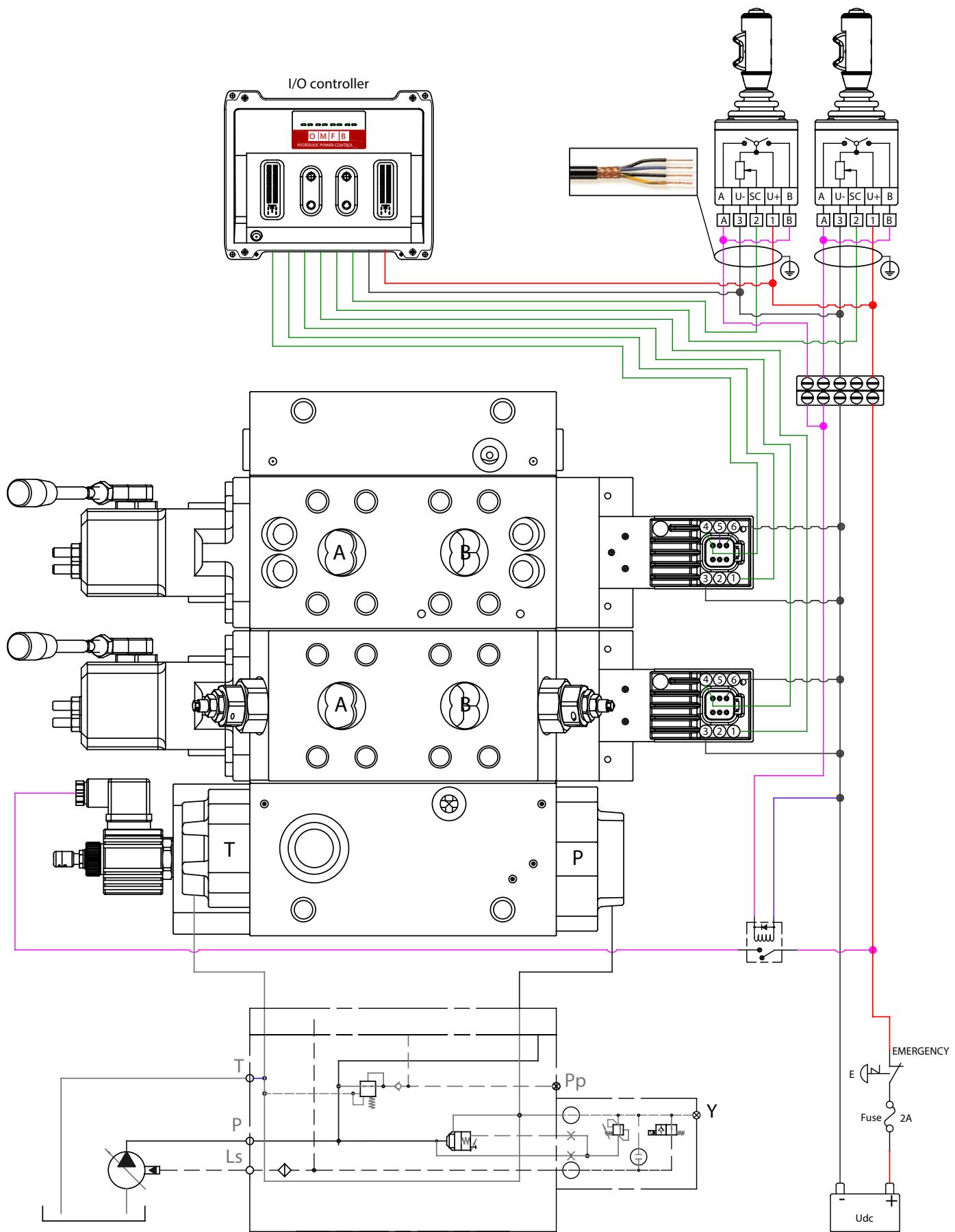
Deutsch connector DT06-6S Enclosure degree IP 69K PIN-assignment	
1	A port +
2	Free
3	A port -
4	B port +
5	Free
6	B port -

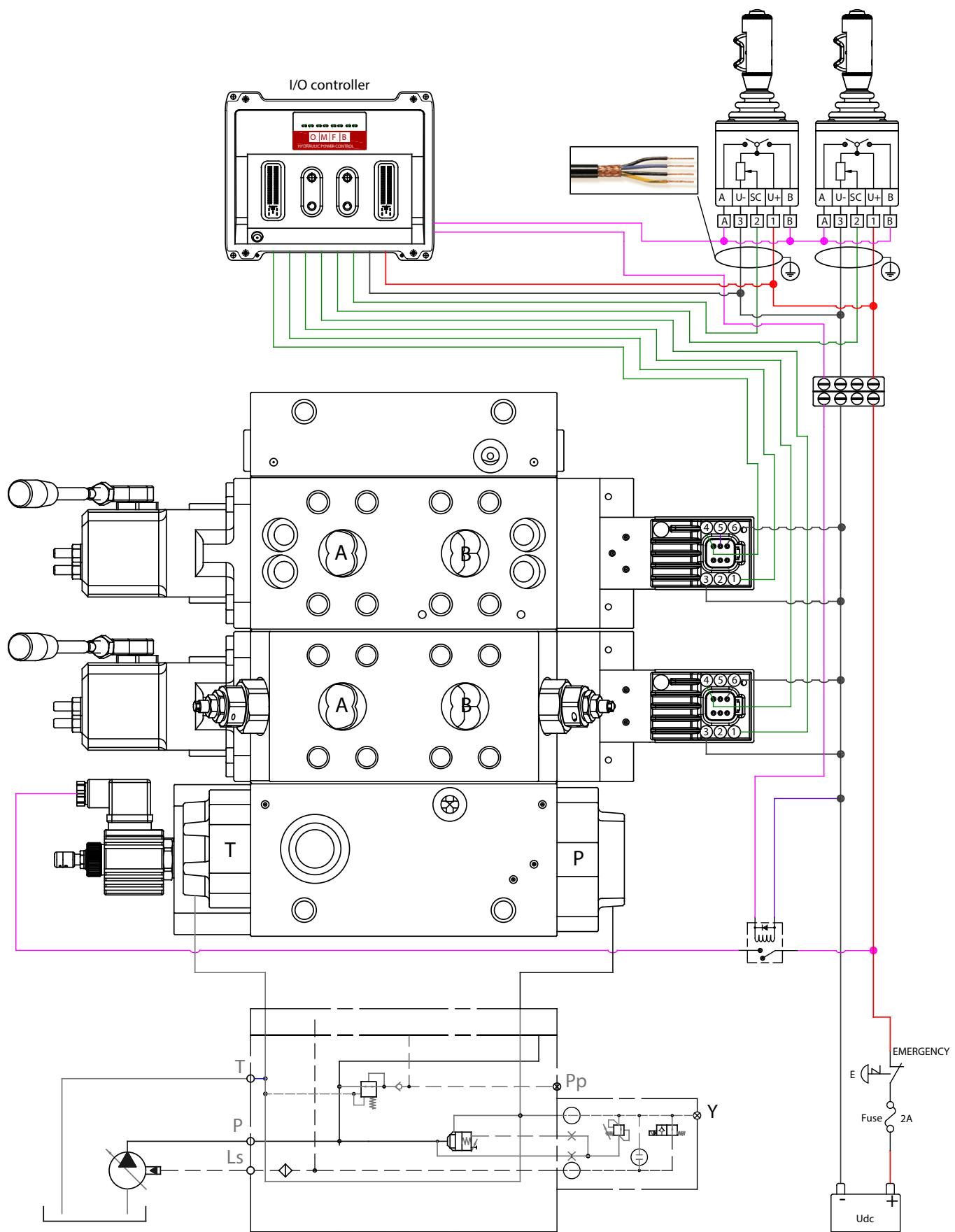


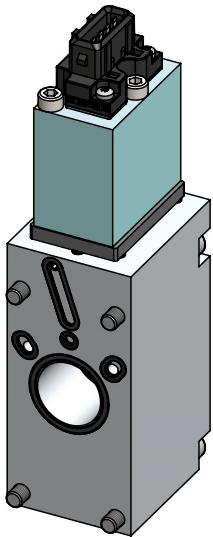
Hirschmann connector DIN 43650 Enclosure degree IP 65 PIN-assignment	
1	A port +
2	B port +
3	Free
4	Ground



Connector version	Code numbers			
	12V		24V	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
Deutsch DT06-6S	PEAD0100002	PEAD1100002	PEAD0200002	PEAD1200002
DIN 43650	PEAD0120002	PEAD1120002	PEAD0220002	PEAD1220002





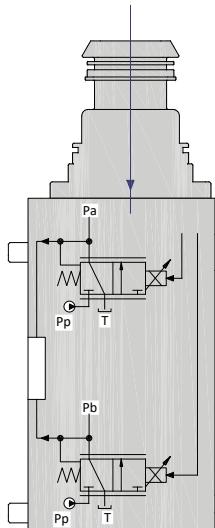


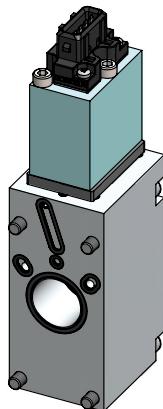
PEAP3 is a proportional open loop spool actuation without integrated electronics that operates the main spool movement according to an electrical signal coming from a remote control.

The input signal by means of the two proportional pressure reducing valves, determines the level of the pilot pressure which moves the main spool.

PEAP3 does not have neither the transducer spool position control nor fault monitoring system, this means that any forces which override the pilot pressure spool forces, may change the spool position with no error signal, and the safety of the whole system is left to the operator's visual control, only.

PEAP3 is recommended where a simple proportional control is required, and where hysteresis and reaction time are not so critical.



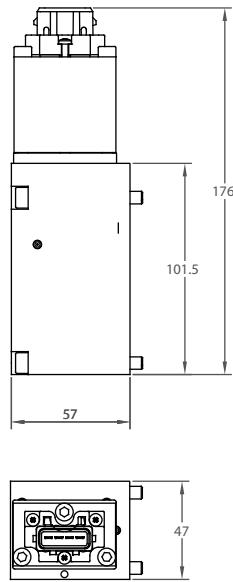


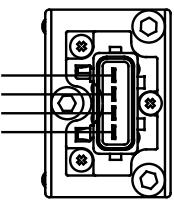
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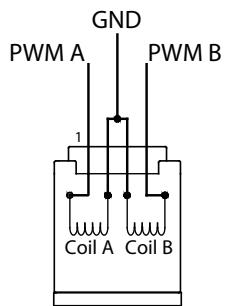
- High spool control accuracy
- EMC performance according to Directive 2014/30/UE
- Quick reaction time
- Integrated PWM/Pulse Width Modulation
- Low electrical power
- Robust and reliable design

PEAP3 Technical data

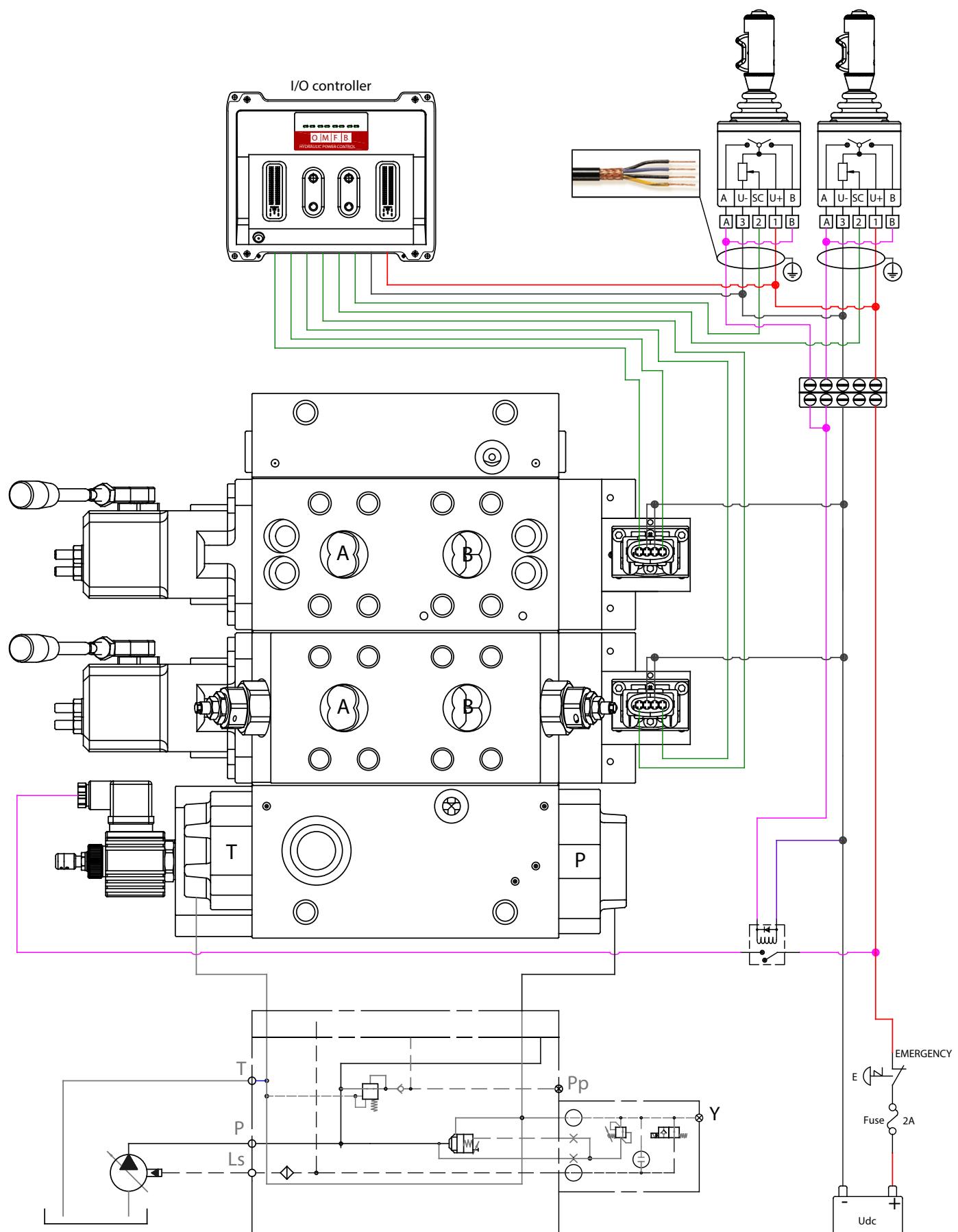
Supply voltage	12 Vdc	24 Vdc
Voltage range	10-16 V	20-30 V
Max ripple	5%	5%
Current consumption at rated voltage	1330 mA @ 12 Vdc	630 mA @ 24 Vdc
Power consumption	23 W	21 W
R @ 20°C	6,3 Ω	27 Ω
Start spool travel	220 mA	140 mA
End spool travel flow control	1330 mA	550 mA
Max spool flow in pre-floating position	1330 mA	630 mA
Spool floating position	750 mA	400 mA
Heat insulation	Class H (180°C)	
Oil temperature (Recommended)	-20 ÷ 60 °C	
Oil temperature (Min)	-30 °C	
Oil temperature (Max)	80 °C	
Ambient temperature	-30 ÷ 60 °C	
PWM frequency	50 ÷ 200 Hz	
Best frequency	100 Hz	
Duty cycle	100% ED	
Plug connector	Amp Junior Power Timer 4 pins	
Enclosure degree	(Electrical wiring excepted)	
Max current output signal for spool direction movement	50 mA	
Reaction time (constant voltage)	From neutral position to max spool travel	110 - 140 ms
	From max spool travel to neutral	70 - 90 ms
Reaction time (neutral switch)	From neutral position to max spool travel	130 - 170 ms
	From max spool travel to neutral	70 - 90 ms

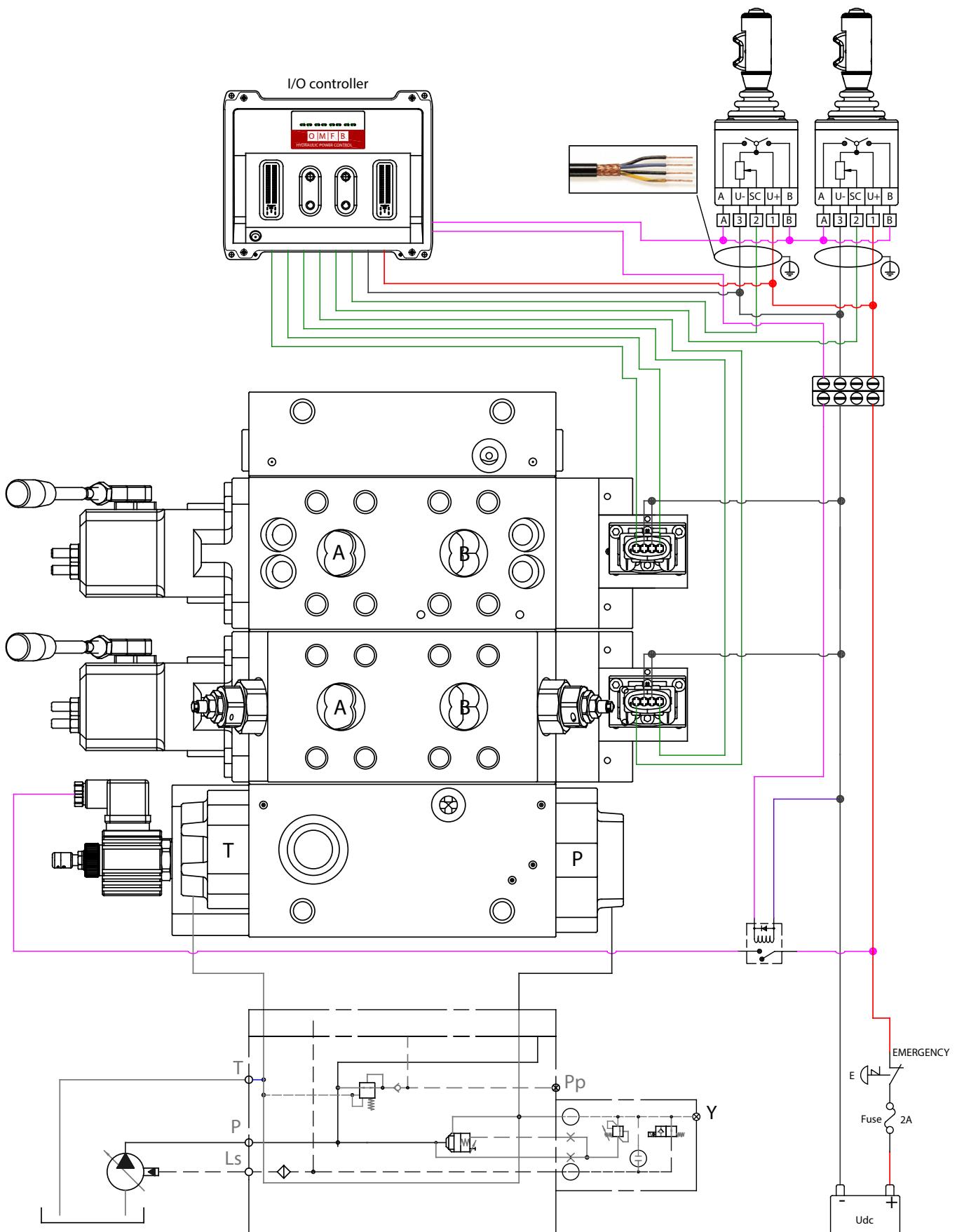


Amp Junior Power Timer 4 pin connector Enclosure degree IP 65 PIN-assignment	
	1 A port +
	2 A port -
	3 B port -
	4 B port +

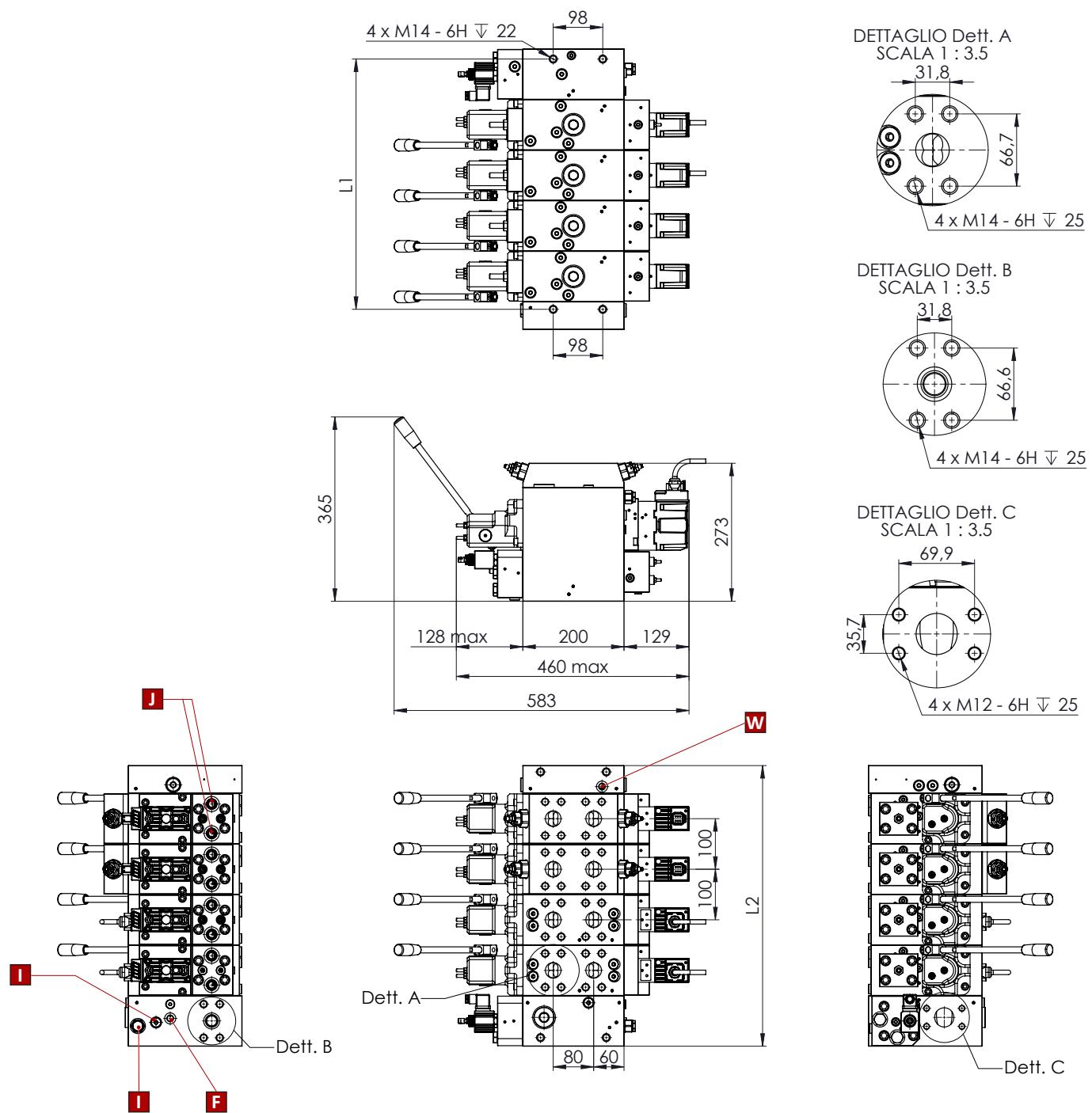


Connector version	Code numbers			
	12V		24V	
	Cast-iron body	Aluminium body	Cast-iron body	Aluminium body
AMP Junior timer 4 Pin	PEAP0312002	PEAP1312002	PEAP0412002	PEAP1412002





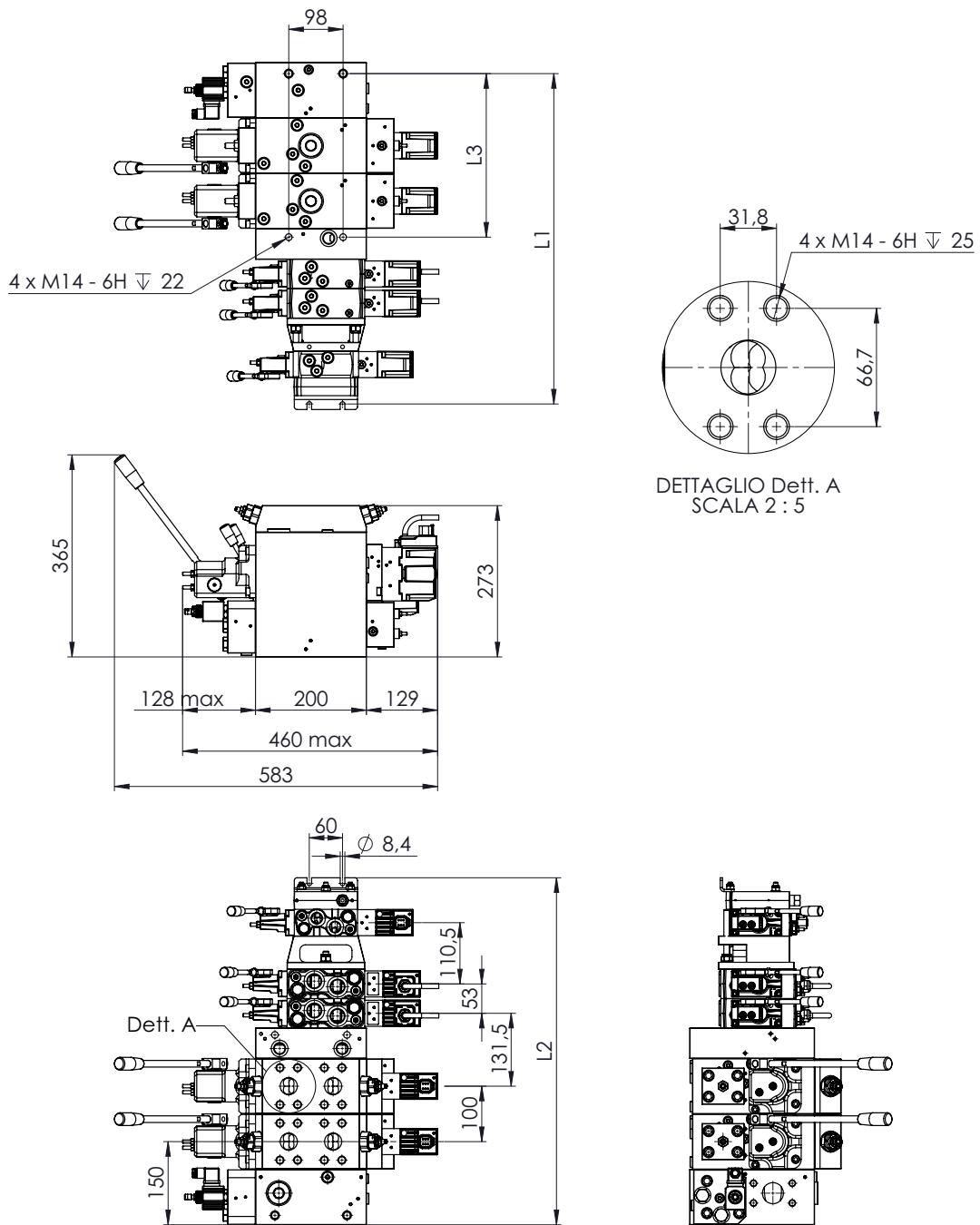
PDV315 Proportional valve
Overall dimensions drawing with standard inlet section
Right assembly version



PDW	1	2	3	4	5	6	7	8	9	10	11	12
L1	mm	180	228	276	324	372	420	468	516	564	612	660
	in	7,09	8,98	10,87	12,76	14,65	16,54	18,43	20,31	22,20	24,09	25,98
L2	mm	200	248	296	344	392	440	488	536	584	632	680
	in	7,87	9,76	11,65	13,54	15,43	17,32	19,21	21,10	22,99	24,88	26,77

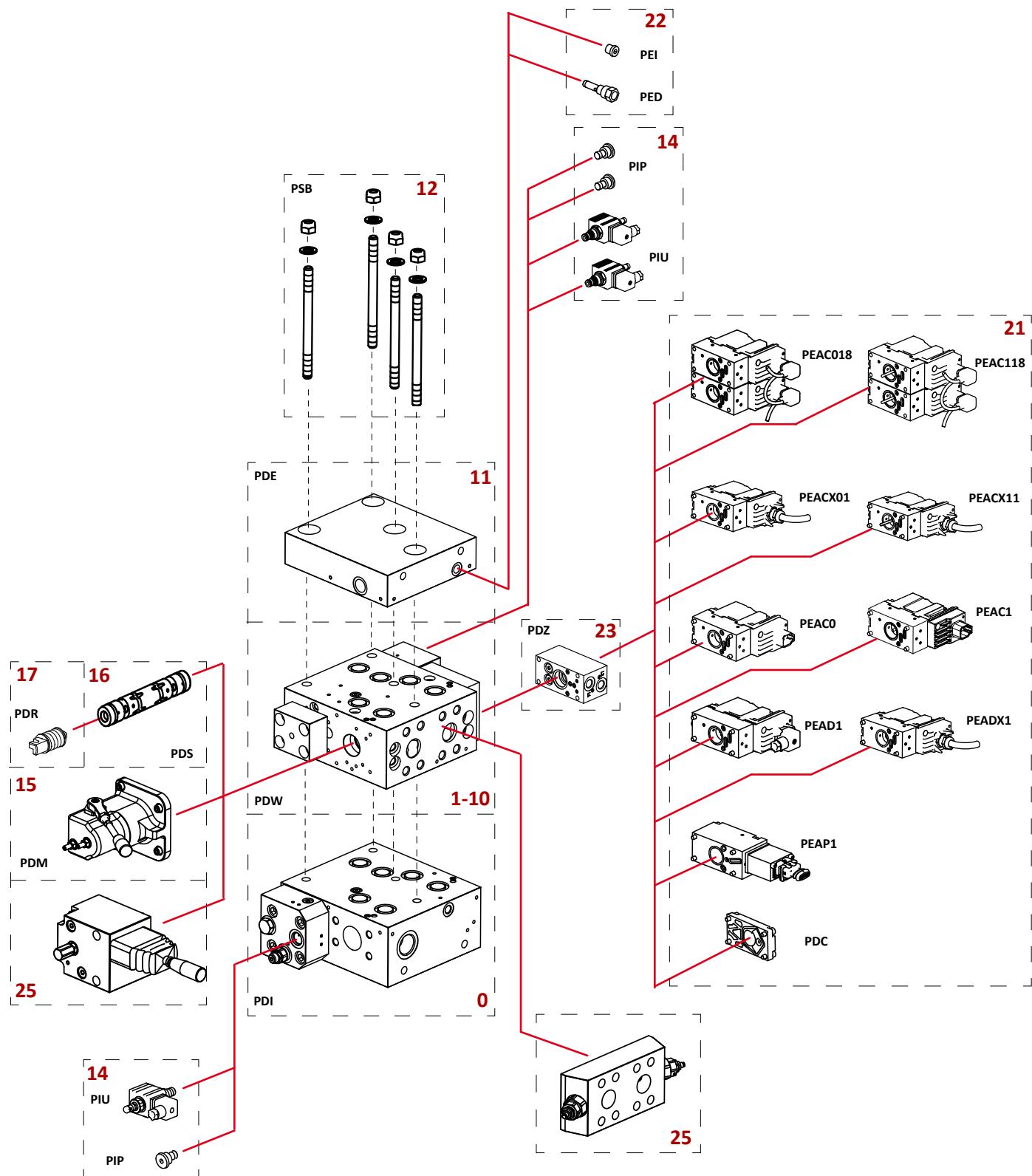
- A** = Pump side port - 3/4" BSPP - 17 mm deep [1 1/16 in 12 UN-2B - 0,67 in deep]
- B** = T port - 3/4" BSPP - 17 mm deep [1 1/16 in 12 UN - 2B - 0,67 in deep]
- C** = Main pressure relief valve
- D** = Main pressure reducing valve
- E** = Pump pressure gauge connection - 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- F** = LS connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- G** = External pilot pressure supply connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- H** = External feeding main pressure reducing valve 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- I** = Tank pressure gauge connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- J** = Electrical LS/pump unloading function
- K** = Pump unloading drain port, 1/4" BSPP - 12 mm deep [7/16 in-20 UNF - 2B - 0,47 in deep]
- L** = Pump unloading mechanical override
- M** = A-B port mechanical flow adjustment
- N** = LSA
- O** = LSB } remote pilot pressure connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF - 2B - 0,47 in deep]
- P** = LS
- Q** = Port A } 1/2" BSPP - 17 mm deep [7/8 in-14 UNF-2B - 0,67 in deep]
- R** = Port B }
- S** = Lsb } pilot pressure relief valve
- T** = Lsa }
- U** = Shock/suction valve B port
- V** = Shock/suction valve A port
- W** = External drain connection electric actuations - 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]

PDV315 Proportional valve
Overall dimensions drawing with double inlet
and MID end section



PDW		2	3	4	5	6	7	8	9	10	11	12
L1	mm	331	379	427	475	523	571	619	667	715	763	811
	in	13,03	14,92	16,81	18,70	20,59	22,48	24,37	26,26	28,15	30,04	31,93
L2	mm	351	399	447	495	543	591	639	687	735	783	831
	in	13,82	15,71	17,60	19,49	21,38	23,27	25,16	27,05	28,94	30,83	32,72

- A** = Pump side port - 3/4" BSPP - 17 mm deep [1 1/16 in 12 UN-2B - 0,67 in deep]
- B** = T port - 3/4" BSPP - 17 mm deep [1 1/16 in 12 UN - 2B - 0,67 in deep]
- C** = Main pressure relief valve
- D** = Main pressure reducing valve
- E** = Pump pressure gauge connection - 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- F** = LS connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- G** = External pilot pressure supply connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- H** = External feeding main pressure reducing valve 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- I** = Tank pressure gauge connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]
- J** = Electrical LS/pump unloading function
- K** = Pump unloading drain port, 1/4" BSPP - 12 mm deep [7/16 in-20 UNF - 2B - 0,47 in deep]
- L** = Pump unloading mechanical override
- M** = A-B port mechanical flow adjustment
- N** = LSA
- O** = LSB } remote pilot pressure connection 1/4" BSPP - 12 mm deep [7/16 in-20 UNF - 2B - 0,47 in deep]
- P** = LS
- Q** = Port A } 1/2" BSPP - 17 mm deep [7/8 in-14 UNF-2B - 0,67 in deep]
- R** = Port B }
- S** = Lsb } pilot pressure relief valve
- T** = Lsa }
- U** = Shock/suction valve B port
- V** = Shock/suction valve A port
- W** = External drain connection electric actuations - 1/4" BSPP - 12 mm deep [7/16 in-20 UNF-2B - 0,47 in deep]



**PDV315 Proportional valve,
Product selection chart**

Reference field	Description			Code numbers see pag	
0	Inlet sections	Open centre	PDI		
		Closed centre			
1-10	Working sections	with pressure compensator	PDW		
		without pressure compensator			
11	End sections			PDE	
12	Stay bolt set			PSB	
14	Solenoid Ls unloading			PIU	
	Plug for LS unloading cavity			PIP	
15	Mechanical actuation			PDM	
16	Spool			PDS	
17	Spool centered set			PDR	
21	Proportional electro-hydraulic actuations	Open loop spool control current signal for PWM and ON-OFF control	PEAD1		
		Open loop spool control high resolution	PEAC0		
		Closed loop spool control high performance resolution	PEAC1		
		Open loop spool control high resolution CAN-Bus	PEAC018		
		Closed loop spool control high performance resolution CAN-Bus	PEAC118		
		Open loop spool control high resolution ATEX	PEACX01		
		Closed loop spool control high performance resolution ATEX version	PEACX11		
		Open loop spool control current signal for PWM and ON-OFF control ATEX version	PEADX1		
		Open loop spool control current input signal for PWM and ON-OFF control - AMP JPT 4 pin	PEAP1		
	Rear cover for	Hydraulic control	PDH		
		Detent	PDD		
		Friction detent	PDF		
		Mechanical actuation	PDC		
22	End sections	External drain line cartridge	PED		
		Internal plug	PEI		
23	Dual function control body			PDZ	
25	Antishock body				

I	Valve type:	PDV 315	v	Working sections Up:	8	IX	Rated voltage [V]:	12
II	Type of threads:	BSPP	VI	Working sections Down:		X	Certifications:	None
III	Type of inlet:	standard	VII	Inlet section side:	Right version	XI		
IV	Pump type:	Open Center	VIII	2 nd pump type:		XII	Pump flow [l/min]:	
	Notes							Notes
0			B Port	0	bar		13	A Port
				23			14	
			Actuation side					Handle side
1			21	1	bar		bar	16
			17	20				20
				19				19
				18				23
2			21	2	bar		bar	16
			17	20				20
				19				19
				18				23
3			21	3	bar		bar	16
			17	20				20
				19				19
				18				23
4			21	4	bar		bar	16
			17	20				20
				19				19
				18				23
5			21	5	bar		bar	16
			17	20				20
				19				19
				18				23
6			21	6	bar		bar	16
			17	20				20
				19				19
				18				23
7			21	7	bar		bar	16
			17	20				20
				19				19
				18				23
8			21	8	bar		bar	16
			17	20				20
				19				19
				18				23
9			21	9	bar		bar	16
			17	20				20
				19				19
				18				23
10			21	10	bar		bar	16
			17	20				20
				19				19
				18				23
11			11				12	
			22					

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
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Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
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Санкт-Петербург (812)309-46-40
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Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
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