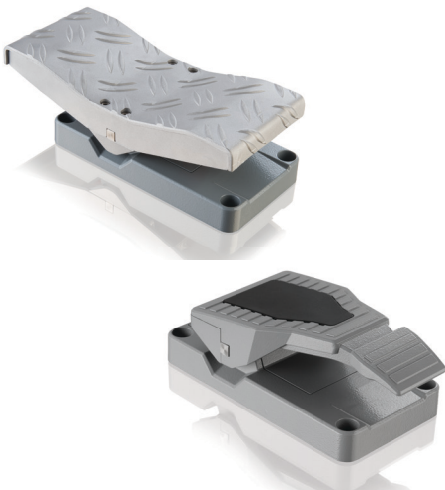


Pedal-controller P20

The pedal-controller P20 is a rugged switching device for electro-hydraulic. The modular design enables the switching device to be used universally. The P20 is resistant to oil, maritime, climate, ozone and UV radiation.



Technical data	
Mechanical life P20	10 million operating cycles
Operation temperature	-40°C to +60°C
Storage temperature	-50°C to +80°C
Degree of protection P20	IP67 (electronic)
Functional safety	PLd (EN ISO 13849) possible

		P20	- 1	- ZZ	- E1041	- S...	- X
Basic unit							
P20	Pedal-controller						
Pedal							
1	Pedal shape A 0-15°						
2	Pedal shape B 0-25°						
3	Pedal shape C 15°-0-15°						
4	Pedal shape C 0-15°						
Spring return							
Z	Spring return						
ZZ	Spring return redundant						
Interfaces <i>(description see on the following pages)</i>							
E	0xx Switching output						
E	1xx Voltage output						
E	2xx Current output						
E	3xx CAN-interface						
E	4xx CANopen Safety interface						
Plug connectors							
S...	Standard plug connectors <i>(see page 129)</i>						
Special model							
X	Special / customer specified						

Technical details may vary based on configuration or application! Technical data subject to change without notice!

Digital output

Supply voltage	9-32V DC	
Current carrying capacity	Direction signal 150mA	
	Zero position signal 500mA	
Wiring	Cable 500mm long without plug connector	
	Optional with plug connector (<i>standard plug connectors see page 129</i>)	S
2 direction signals + 1 zero position signal (galvanically isolated)		E001 1
1 direction signal + 1 zero position signal (galvanically isolated)		E003 1

Voltage output (not stabilized)

Supply voltage	4,75-5,25V DC	
Current carrying capacity	Direction signal 8mA	
Wiring	Cable 500mm long without plug connector	
	Optional with plug connector (<i>standard plug connectors see page 129</i>)	S
0,5...2,5...4,5V redundant + 2 direction signals		E104 1
0,5...2,5...4,5V redundant + 1 direction signal		E145 1
Output options		
Characteristic:		
Inverse dual		1
Dual		2
Inverse dual with dead zone +/- 3°		3
Dual with dead zone +/- 3°		4

Voltage output

Supply voltage	9-32V DC (*11,5-32V)	
Current carrying capacity	Direction signal 150mA	
	Zero position signal 500mA	
Wiring	Cable 500mm long without plug connector	
	Optional with plug connector (<i>standard plug connectors see page 129</i>)	S
0,5...2,5...4,5V redundant + 2 direction signals + 1 zero position signal (galvanically isolated)		E112 1
0,5...2,5...4,5V redundant + 1 direction signal + 1 zero position signal (galvanically isolated)		E146 1
0...5...10V redundant + 2 direction signals + 1 zero position signal (galvanically isolated), supply voltage 11,5 - 32V DC		E132 1
0...5...10V redundant + 1 direction signal + 1 zero position signal (galvanically isolated), supply voltage 11,5 - 32V DC		E147 1
10...0...10V + 2 direction signals + 1 zero position signal (galvanically isolated), supply voltage 11,5 - 32V DC, sensor redundant with error monitoring and error signal		E136 1
Output options		
Characteristic:		
Inverse dual *1		1
Dual *1		2
Inverse dual with dead zone +/- 3° *1		3
Dual with dead zone +/- 3° *1		4
*1 not combinable with output E136X		
Single *2		5
Single with dead zone *2		6
*2 not combinable with output E1121 and E1321, E1461 und E1471		
Voltage output with other value on request!		

Pedal-controller P20

Current output		
Supply voltage	9-32V DC	
Current carrying capacity	Direction signal 150mA Zero position signal 500mA	
Wiring	Cable 500mm long without plug connector	
	Optional with plug connector (<i>standard plug connectors see page 129</i>)	S
0...10...20mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E206 1	
0...20mA + 1 direction signal + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E222 1	
20...0...20mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E208 1	
4...12...20mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E214 1	
4...20mA + 1 direction signal + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E223 1	
20...4...20mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E216 1	
Output options		
Single		5
Single with dead zone +/- 3°		6
<i>Current output with other value on request!</i>		

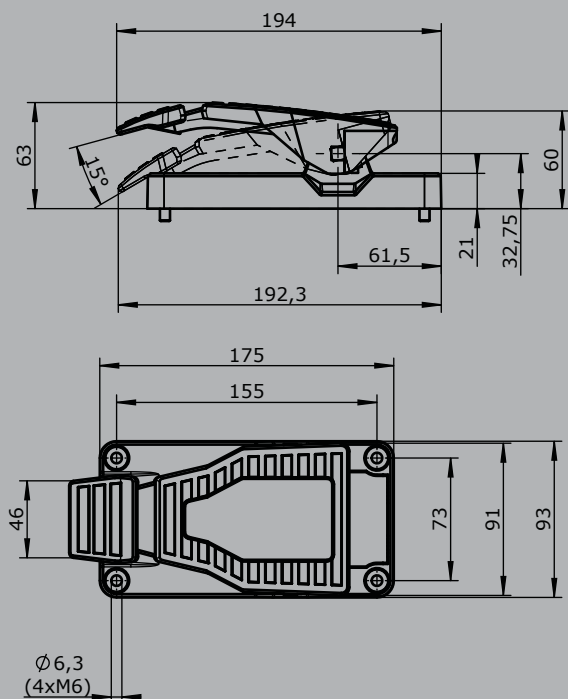
CAN		
Supply voltage	9-36V DC	
Idle current consumption	120mA	
Current carrying capacity	Direction signal 100mA	
Protocol	CANopen CiA DS 301 or SAE J 1939	
Baud rate	125kBit/s to 1Mbit/s (standard 250 kBit/s)	
Output value	0...255 / 255...0...255	
Wiring	CAN (IN) cable 500mm with plug connector M12 (male) CAN (OUT) cable 500mm with plug connector M12 (female)	
CAN P20	E307 1	2
With additional digital output separately wired (not via CAN) - 1 direction signal		

CANopen Safety		
Supply voltage	9-36V DC	
Idle current consumption	120mA	
Current carrying capacity	Direction signal 100mA	
Protocol	125kBit/s bis 1MBit/s (standard 250 kBit/s)	
Baud rate	0...255 / 255...0...255	
Ausgangswert	CANopen Safety CIA 304	
Wiring	CAN (IN) Kabel 500mm mit Stecker M12 (Stifte)	
	CAN (OUT) Kabel 500mm mit Stecker M12 (Buchse)	
CANopen Safety P20		
		E407 1
With additional digital outputs separately wired (not via CAN)		
- 1 direction signal		

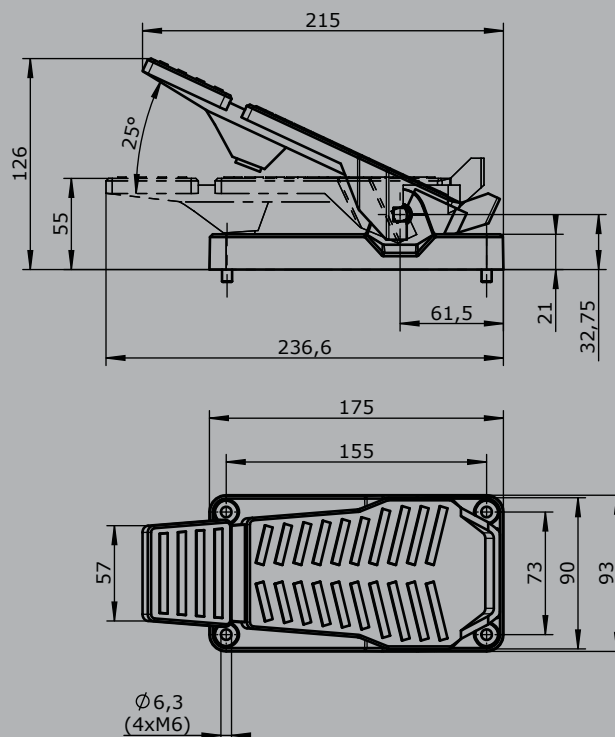
Attachments		
Z01 Mating connector M12 male insert with 2m cable	20201140	
Z02 Mating connector M12 female insert with 2m cable	20202298	

Technical details may vary based on configuration or application! Technical data subject to change without notice!

Pedal form A



Pedal form B



Pedal form C

