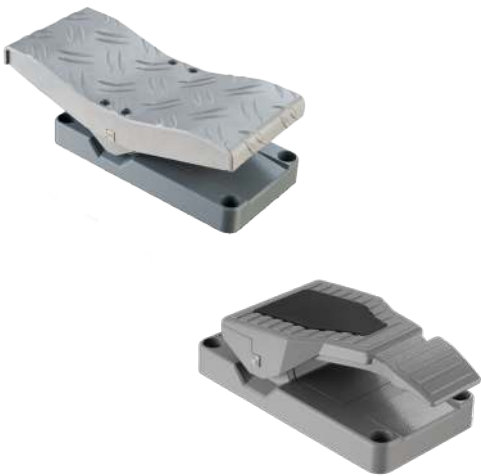


Foot Pedal

P20



The Foot Pedal P20 is a rugged switching device for electro-hydraulic. A long service life and high reliability is ensured by the latest contactless hall-technology. Due to the modular construction and the different electrical interfaces it is universally applicable..



Technical data

Mechanical life P20	10 million operating cycles
Operation temperature	-40°C to +85°C
Degree of protection P20	IP67 (electronic)
Functional safety	PLd compatible (EN ISO 13849, complies SIL2 to DIN EN IEC 61508)

			P20	-1	Example -ZZ	-E1041	-S...	-X
Basic unit								
P20	Foot Pedal							
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°						
5		Pedal shape D 15°-0-15°						
	HL	Gearshift mounted on the left side						
	HR	Gearshift mounted on the right side						
Spring return								
Z	Spring return							
ZZ	Spring return redundant							
Interfaces (description see on the following pages)								
E	0xx	Switching output						
E	1xx	Voltage output						
E	2xx	Current output						
E	3xx	CAN-interface						
E	4xx	CAN Safety interface						
Plug connectors								
S...	Standard plug connectors (see page 127)							
Special model								
X	Special / customer specified							

Digital output

Supply voltage	9-32 V DC		
Current carrying capacity	Direction signal 150 mA		
	Zero position signal 500 mA		
Wiring	Cable 500mm long without plug connector		
	Optional with plug connector (<i>standard plug connectors see page 127</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	4,75-5,25 V DC		
Current carrying capacity	Direction signal 8 mA		
Wiring	Cable 500mm long without plug connector		
	Optional with plug connector (<i>standard plug connectors see page 127</i>)		S
0,5...2,5...4,5 V redundant + 2 direction signals		E104 1	
0,5...2,5...4,5 V redundant + 1 direction signal		E145 1	
Output options			
Characteristic:			
Inverse dual			1
Dual			2
Inverse dual with dead zone +/- 3° (standard)			3
Dual with dead zone +/- 3°			4

Voltage output

Supply voltage	9-32 V DC (*11,5-32 V)		
Current carrying capacity	Direction signal 150 mA		
	Zero position signal 500 mA		
Wiring	Cable 500mm long without plug connector		
	Optional with plug connector (<i>standard plug connectors see page 127</i>)		S
0,5...2,5...4,5 V redundant + 2 direction signals + 1 zero position signal (galvanically isolated)		E112 1	
0,5...2,5...4,5 V redundant + 1 direction signal + 1 zero position signal (galvanically isolated)		E146 1	
0...5...10 V redundant + 2 direction signals + 1 zero position signal (galvanically isolated), supply voltage 11,5 - 32 V DC		E132 1	
0...5...10 V redundant + 1 direction signal + 1 zero position signal (galvanically isolated), supply voltage 11,5 - 32 V DC		E147 1	
10...0...10 V + 2 direction signals + 1 zero position signal (galvanically isolated), supply voltage 11,5 - 32 V 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 (standard)			3
Dual with dead zone +/- 3° *1			4
*1 Not combinable with output E136X			
Single *2			5
Single with dead zone +/- 3° *2 (standard)			6
*2 Not combinable with output E1121 and E1321, E1461 und E1471			
Voltage output with other value on request!			

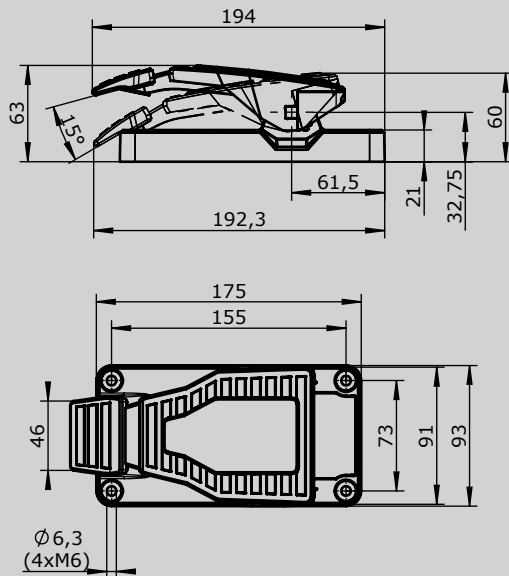
Current output		
Supply voltage	9-32 V DC	
Current carrying capacity	Direction signal 150 mA Zero position signal 500 mA	
Wiring	Cable 500 mm long without plug connector	
	Optional with plug connector (<i>standard plug connectors see page 127</i>)	S
0...10...20 mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E206 1	
0...20 mA + 1 direction signal + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring signal and error signal	E222 1	
20...0...20 mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E208 1	
4...12...20 mA + 2 direction signals + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E214 1	
4...20 mA + 1 direction signal + 1 zero position signal (galvanically isolated), sensor redundant with error monitoring and error signal	E223 1	
20...4...20 mA + 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° (standard)		6
Current output with other value on request!		

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

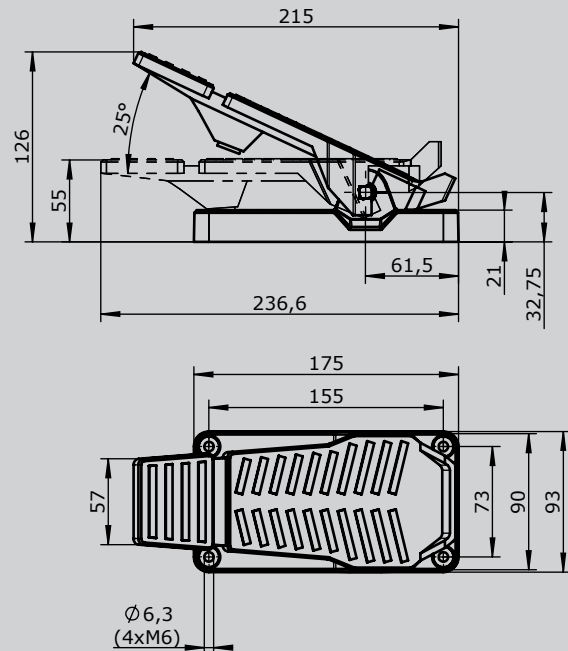
CAN Safety		
Supply voltage	9-36 V DC	
Idle current consumption	120 mA	
Current carrying capacity	Direction signal 100 mA	
Protocol	CANopen Safety EN50325-5 or J1939-76	
Baud rate	125 kBit/s bis 1 MBit/s (standard 250 kBit/s)	
Wiring	CAN (IN) cable 500 mm with plug connector M12 (male) CAN (OUT) cable 500 mm with plug connector M12 (female)	
CAN Safety P20	E407 1	
With additional digital outputs separately wired (not via CAN)		
- 1 direction signal		2

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

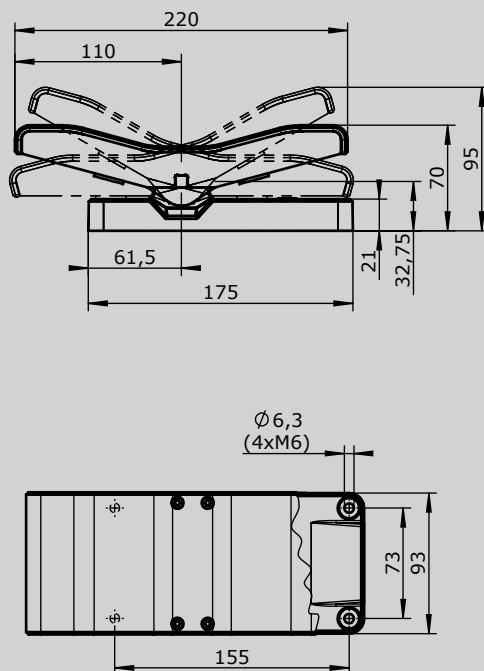
Pedal form A



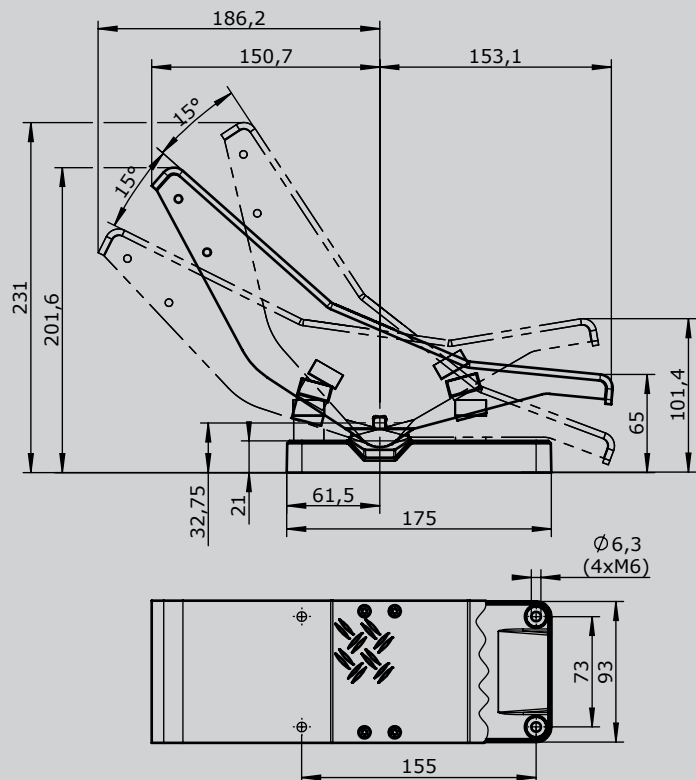
Pedal form B



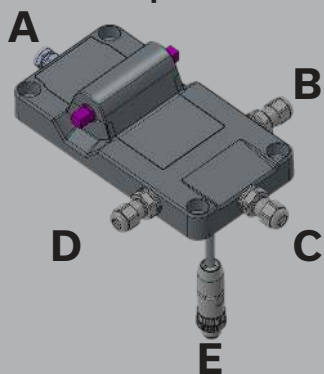
Pedal form C



Pedal form D



Possible cable outputs



optional with gear lever

