

BPW Agricultural Solutions

Product catalogue

Field of application: Livestock farming

EN

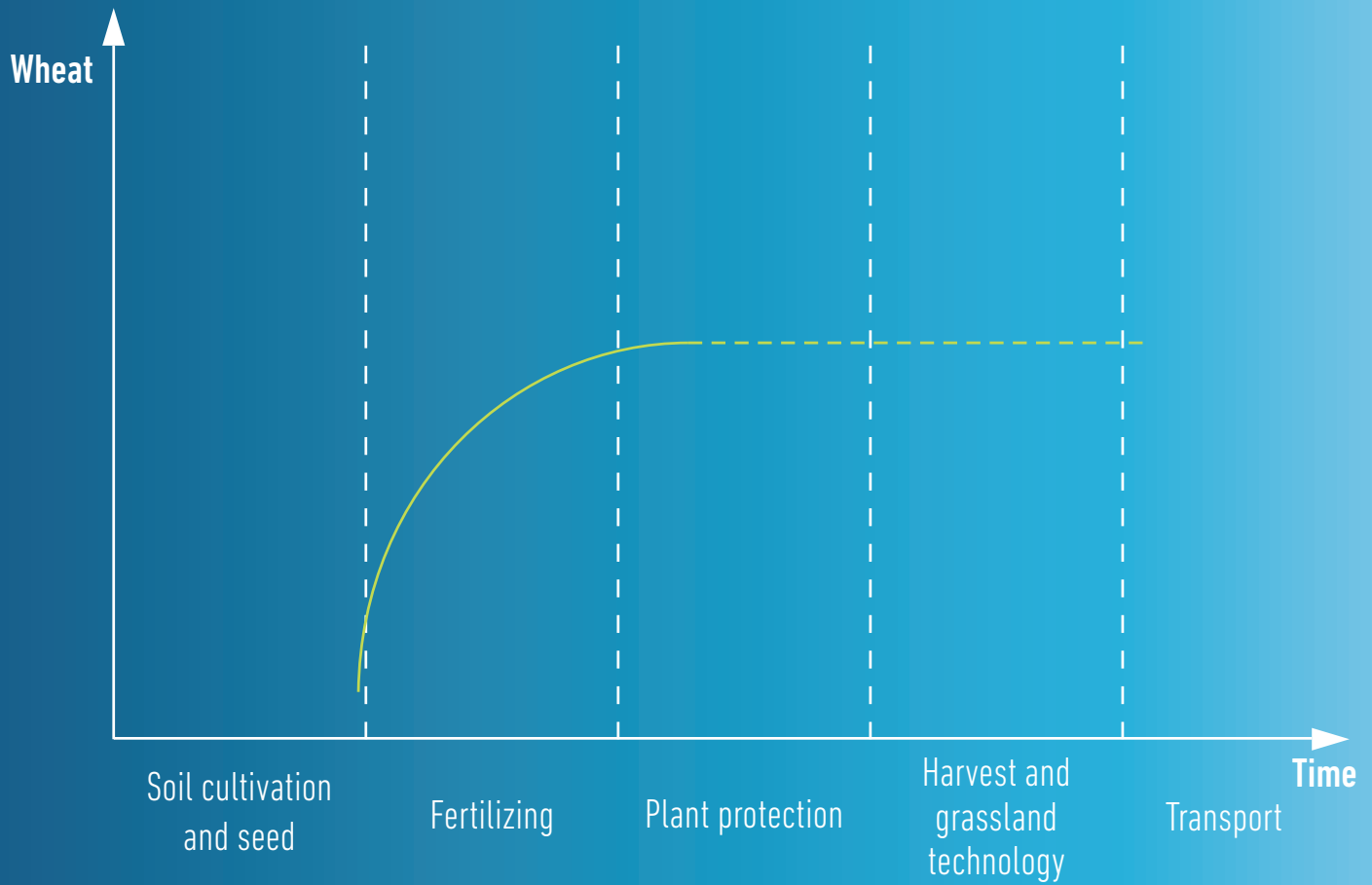


Customised Solutions

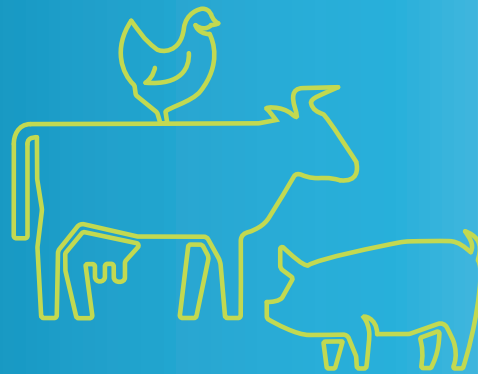


Fields of application

Customised Solutions for agricultural use



Forest technology



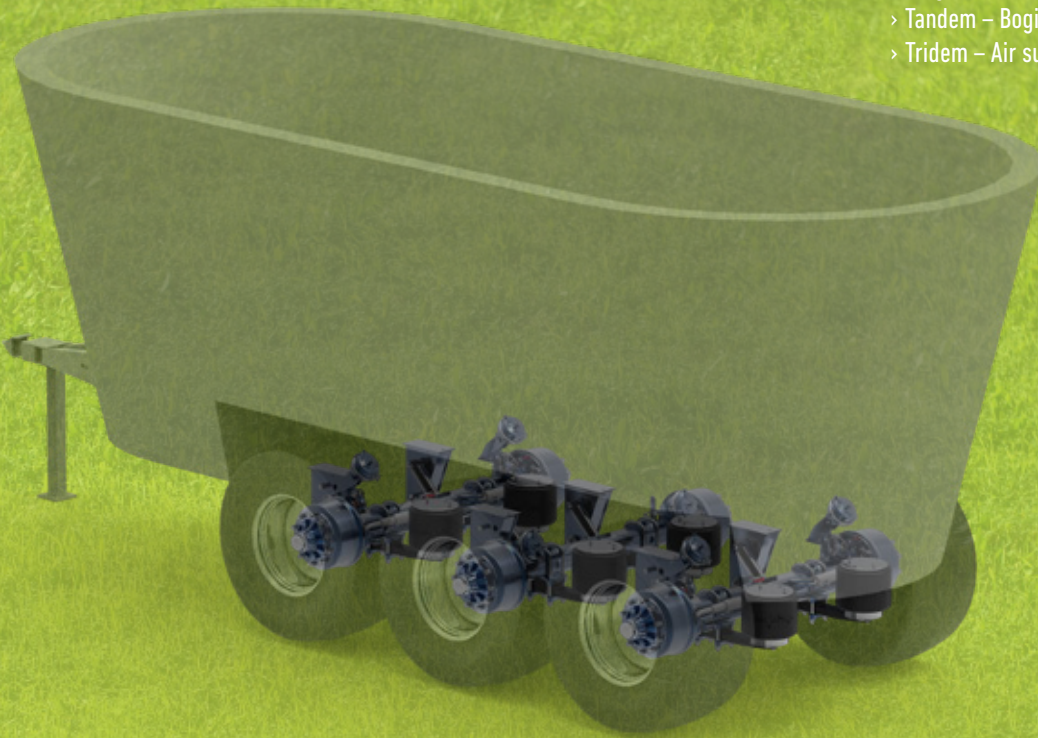
Livestock farming

Relevant vehicles

BPW recommendations

Feeder wagon

- › Single axle – Unsprung
- › Tandem – Bogie suspension, Air suspension
- › Tridem – Air suspension

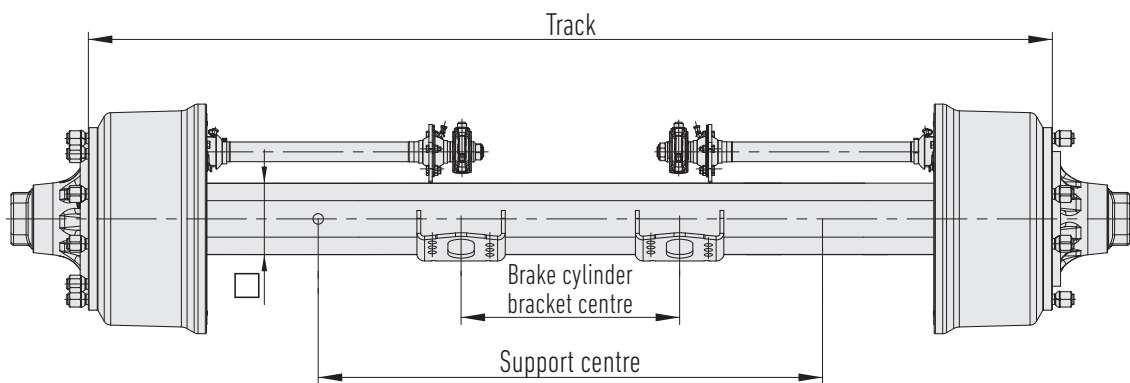


Animal transport

- › Single axle – Unsprung
- › Tandem – Bogie suspension



BPW Solutions for Unsprung single axle applications



Axle type	Axle cross section [mm]	Brake	Wheel connection				Static axle load [kg]*		
			Z		Ø X [mm]	Ø Y [mm]	25 km/h	40 km/h	60 km/h
GS 3606	 55	N 3006	6	M18 x 1,5	160	205	4.000	3.700	3.400
GS 4006	 60	N 3006	6	M18 x 1,5	160	205	5.300	4.900	4.500
GS 4006	 70	N 3006	6	M18 x 1,5	160	205			
GS 5506	 70	N 3006	6	M18 x 1,5	160	205	7.000	6.500	6.000
GS 5506	 70	N 3108	6	M18 x 1,5	160	205			
GS 5506	 80	N 3108	6	M18 x 1,5	160	205			
GS 5508	 80	N 3108	8	M20 x 1,5	220	275	7.000	6.500	6.000
GS 5508	 90	N 3108	8	M20 x 1,5	220	275			
GS 7006	 80	N 3108	6	M18 x 1,5	160	205	9.000	8.500	7.500
GS 7006	 90	N 3108	6	M18 x 1,5	160	205			
GS 7006	 80	N 3411	6	M20 x 1,5	220	275			
GS 7006	 90	N 3411	6	M20 x 1,5	220	275			
GS 7008	 80	N 3108	8	M20 x 1,5	220	275	9.000	8.500	7.500
GS 7008	 90	N 3108	8	M20 x 1,5	220	275			
GS 7008	 80	N 3411	8	M20 x 1,5	220	275			
GS 7008	 90	N 3411	8	M20 x 1,5	220	275			
GS 9008	 110x10	N 3411	8	M20 x 1,5	220	275	11.500	10.500	9.500
GS 9008	 110x14	N 3411	8	M20 x 1,5	220	275			
GS 9008	 110x10	N 4012	8	M20 x 1,5	220	275			
GS 9008	 110x14	N 4012	8	M20 x 1,5	220	275			
GS 9010	 110x10	N 4012	10	M22 x 1,5	280	335			
GS 9010	 110x14	N 4012	10	M22 x 1,5	280	335			
GS 11010	 120x10	N 4012	10	M22 x 1,5	280	335	13.000	13.000	11.500
GS 11010	 120x15	N 4012	10	M22 x 1,5	280	335			
GS 11010	 120x10	FL 4112	10	M22 x 1,5	280	335			
GS 11010	 120x15	FL 4112	10	M22 x 1,5	280	335			
GS 11010	 120x10	FL 4118	10	M22 x 1,5	280	335			
GS 11010	 120x15	FL 4118	10	M22 x 1,5	280	335			
GS 12010	 150x10	FL 4112	10	M22 x 1,5	280	335	15.000	15.000	14.500
GS 12010	 150x16	FL 4112	10	M22 x 1,5	280	335			
GS 12010	 120x15	FL 4118	10	M22 x 1,5	280	335			
GS 12010	 150x10	FL 4118	10	M22 x 1,5	280	335			
GS 12010	 150x16	FL 4118	10	M22 x 1,5	280	335			
GS 14010	 150x16	FL 4118	10	M22 x 1,5	280	335	17.000	17.000	16.000
GS 14010	 150x20	FL 4118	10	M22 x 1,5	280	335			
GS 14010	 150x24	FL 4118	10	M22 x 1,5	280	335			

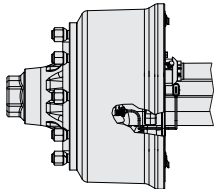
*The axle load depends on the track, support centre and the tyres used.

Other design dimensions

	GS 5500	GS 7000	GS 9000	GS 11000	GS 12000	GS 14000
Track	1.700-2.300 mm in 50 mm increments. Other dimensions are available on request					
Support centre	On request					
Brake cylinder bracket centre	On request					

Options

Wheel sensors



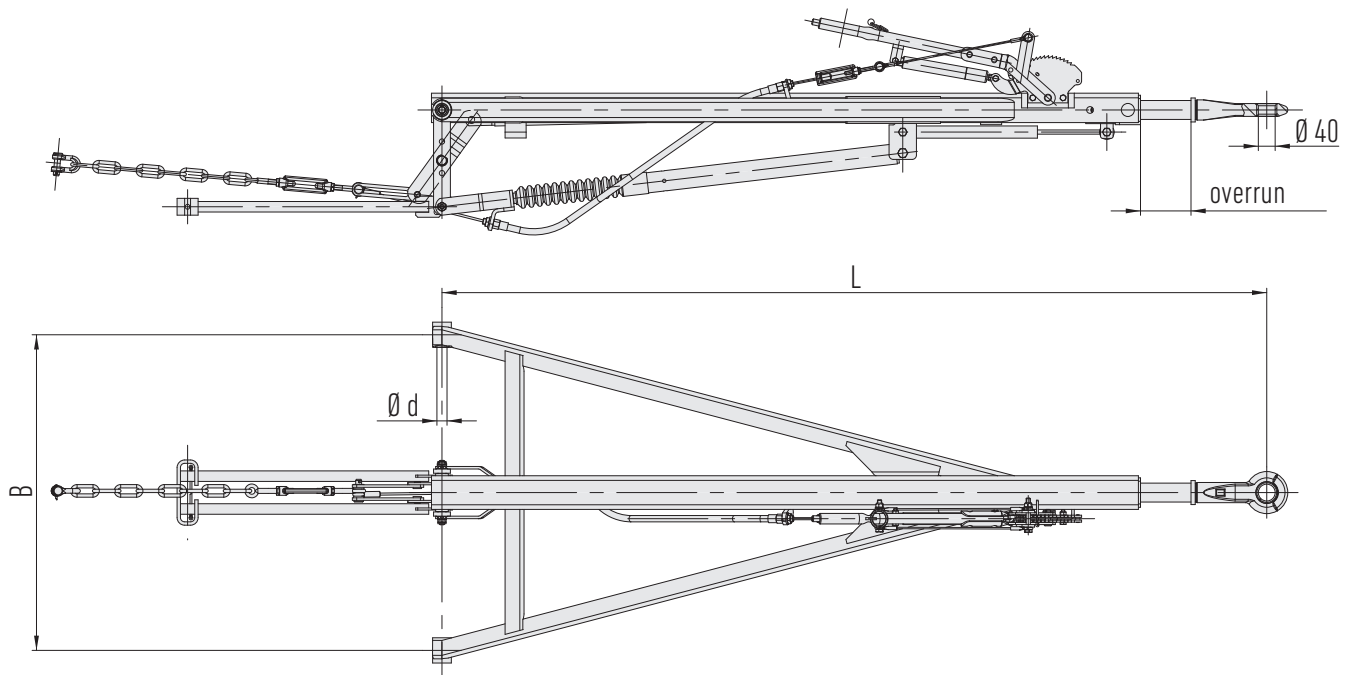
	GS 5500	GS 7000	GS 9000	GS 11000	GS 12000	GS 14000
ABS Sensor *		✓	✓	✓	✓	✓
SDS Sensor *		✓	✓	✓	✓	✓

*Possible sensor variations are available at the chapter of sensors



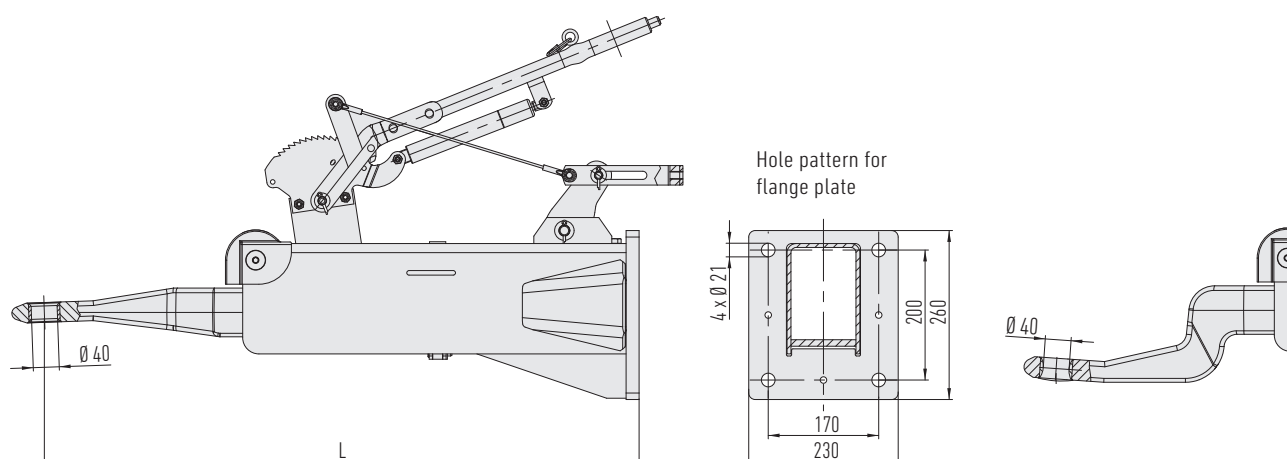
BPW Solutions for

Overrun hitches for multi-axle trailers



Type	Version	Permitted total weight Min.-Max. [kg]			Wheel brake	Overrun travel [mm]	Steering lever: Ratio [mm]
		German Road Traffic Licensing Regulations TA 30 up to 25 km/h	German Road Traffic Licensing Regulations TA 30 up to and more than 25 km/h	EU 2015/68 up to 40 km/h			
AM 2000	AK 12	3.264-8.000	-	-	S 3006-7	120	120/100
AM 2000	BK 12	-	5.175-8.000	4.200-8.000	S 3006-7	120	120/100
AM 2007	AK 12	3.264-8.000	-	-	S 3006-7	120	120/100
AM 2007	BK 12	4.050-8.000	5.175-8.000	4.200-8.000	S 3006-7	120	120/100

Overrun hitches for central axle trailers



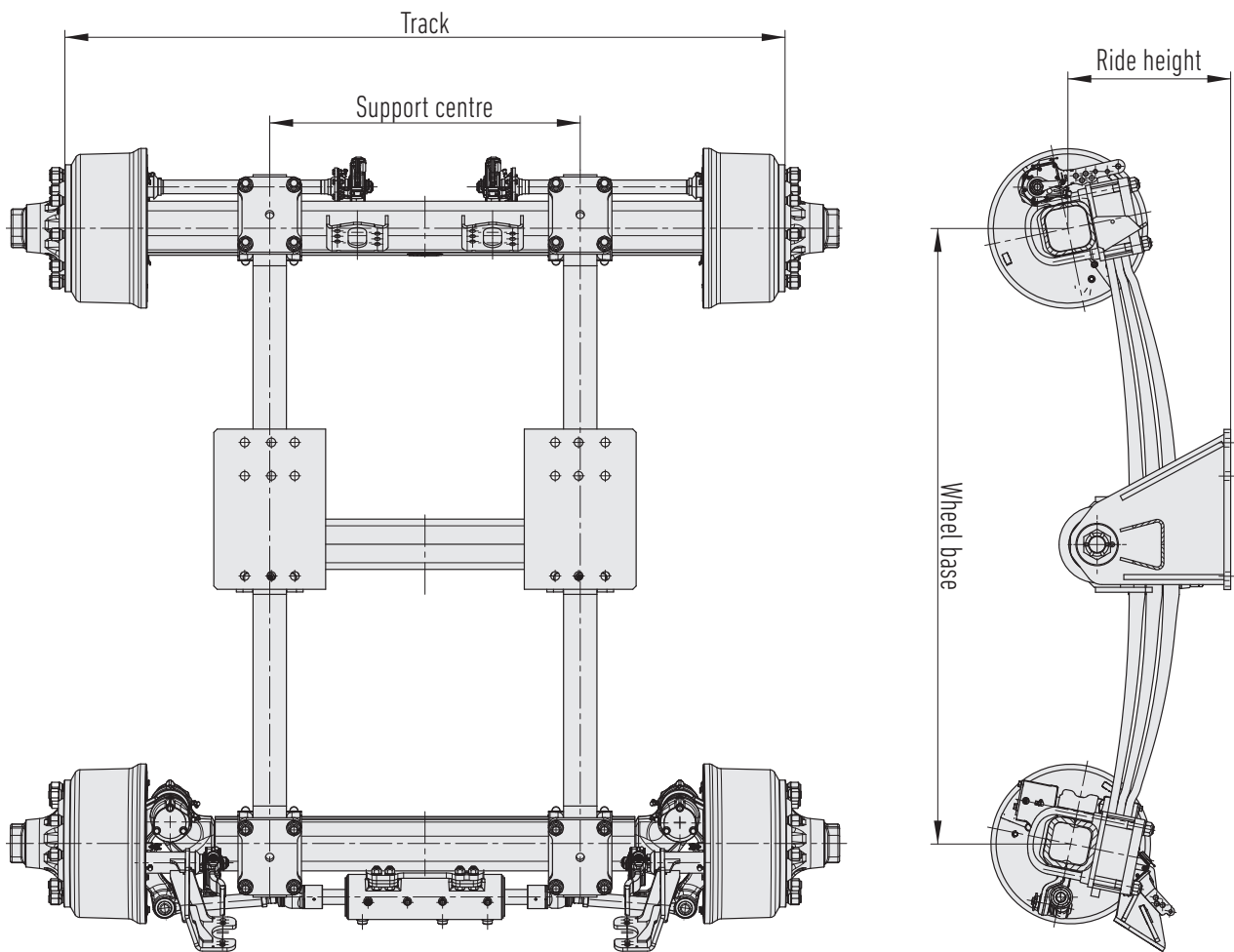
Type	Version	Permitted total weight Min.—Max. (kg) EU 2015/68 — up to 40 km/h	Max. permissible drawbar load (kg)
AVE 2000	NK	2.141—6.153	500
			840
			1.000
			1.200
AVE 2000	GK	2.559—7.774	500
			840
			1.000
			1.200
AVE 2000	NH	4.281—8.000	500
			840
			1.000
			1.200
AVE 2000	GH	5.362—8.000	500
			840
			1.000
			1.200

Type	Version	Permitted total weight Min.—Max. (kg) according to the German Road Traffic Licensing Regulation TA 30 up to and more than 25 km/h	Max. permissible drawbar load (kg)
AVEG 2000	NK	5.046—8.000	
			1.000
AVEG 2000	GK	6.348—8.000	
			1.200
AVEG 2000	NH	5.600—8.000	
			1.200

N: needle bearing
G: sliding bearing
K: lower total weight
H: higher total weight

BPW Solutions for

Tandem - Bogie suspension unit



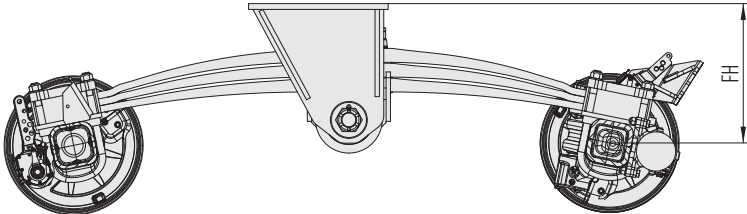
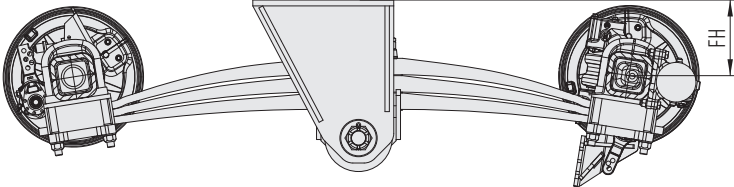
Axle type	Axle cross section [mm]	Brake	Wheel connection			Static suspension unit load [kg]*		
			Z	Ø X [mm]	Ø Y [mm]	40 km/h	60 km/h	
GSBW 7006	 90	N 3411	6	M18 x 1,5	160	205	13.000	12.000
GSBW 7008	 90	N 3411	8	M20 x 1,5	220	275	13.000	12.000
GSBW 9008	 110x14	N 3411-1	8	M20 x 1,5	220	275	17.000	16.000
GSBW 9008	 110x14	N 4012-4	8	M20 x 1,5	220	275		
GSBW 9010	 110x14	N 4012-4	10	M22 x 1,5	280	335	17.000	16.000
GSBW 11010	 120x10 (15)	N 4012	10	M22 x 1,5	280	335	20.000	18.000
GSBW 11010	 120x10 (15)	FL 4112	10	M22 x 1,5	280	335		
GSBW 12010	 150x10 (16)	FL 4118	10	M22 x 1,5	280	335	24.000	22.000

*Suspension unit load depends on the ratio of the track and support centre, and on the tyres.

Other design dimensions

	GSBW 11000	GSBW 12000
Track	1.700-2.300 mm in 50 mm increments. Other dimensions are available on request	
Support centre	On request	

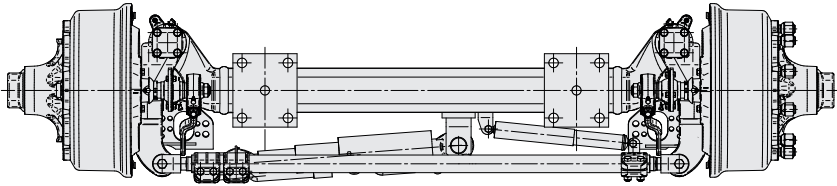
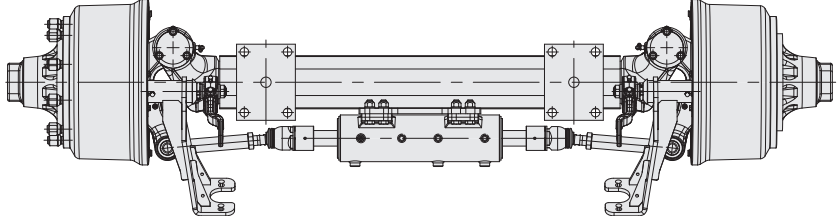
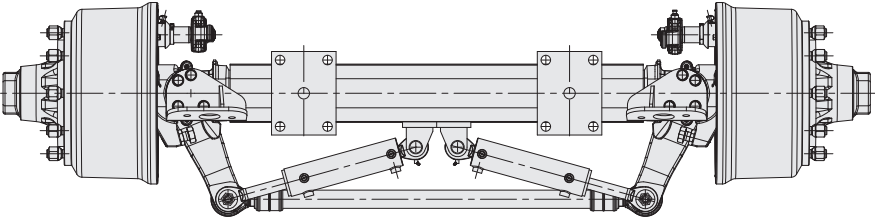
Wheelbase	Versions		Comment
	GSBW 11000	GSBW 12000	
1.450	✓	✓	
1.600	✓	✓	
1.900	✓	✓	

Spring mounting	
Spring mounted upon the axle FO	
Spring mounted below the axle FU	

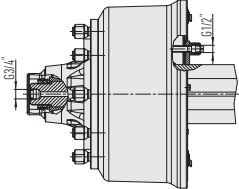
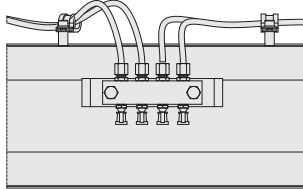
Ride height (FH [mm])										
Wheel base	1450		1600		1600 HD**		1900		1900 HD**	
Support height	FU	FO	FU	FO	FU	FO	FU	FO	FU	FO
400	202	465	219	476	-	-	223	486	-	-
430	232	495	249	506	-	-	253	517	-	-
470	272	535	287	546	-	-	291	557	-	-
530	332	-	347	-	-	-	353	-	-	-



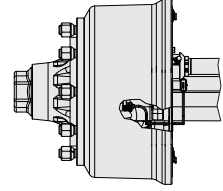
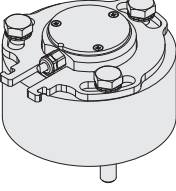
Options

Steering axles	
GSLA Self-steering axle with self-steering	
GSLL AGRO Turn with self-steering or with force steering	
GSL Force-steering axle with force steering	

Steering				
Versions		GSBW(L/LA) 11000	GSBW(L/LL) 12000	Comment
rigid	GSLA self-steering axle	✓		
rigid	GSLL - AGRO Turn		✓	
rigid	GSL force-steering axle	✓	✓	

Preparation for central tyre inflation system (CTIS)	Central lubrication system
	

	Versions		Comment
	GSBW 11000	GSBW 12000	
CTIS	✓	✓	
Central lubrication system	✓	✓	for specific lubrication points further consultation is necessary

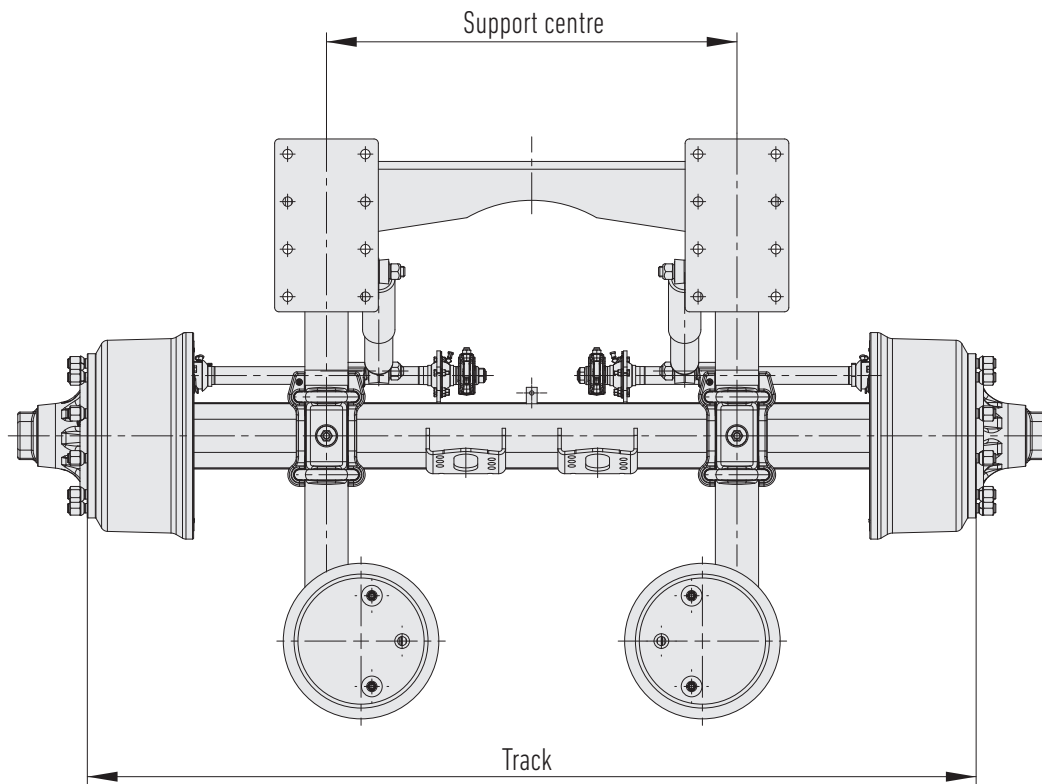
Wheel sensors	Integrated steering angle sensor
	

	Versions		Comment
	GSBW 11000	GSBW 12000	
ABS sensor*	✓	✓	
SDS sensor*	✓	✓	
Steering angle sensor	✓	✓	

*Sensor descriptions can be found on page 22

BPW Solutions for

Air suspension units

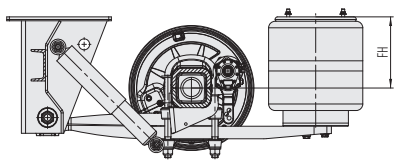
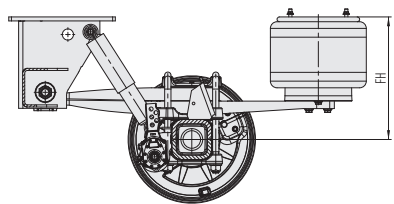


Type	Axle cross section [mm]	Brake	Wheel connection				Static suspension unit load [kg]*	
			Z		Ø X [mm]	Ø Y [mm]	40 km/h	60 km/h
GSSLO(U) 9008	110x14	N 3411-1	8	M20 x 1,5	200	275	8.500	8.000
GSSLO(U) 9008	110x14	N 4012-4	8	M20 x 1,5	200	275		
GSSLO(U) 9010	110x14	N 4012-4	10	M22 x 1,5	280	335	8.500	8.000
GSSLO(U) 11008	120x15	N 4012	8	M20 x 1,5	200	275	10.000	9.000
GSSLO(U) 11008	120x15	FL 4112	8	M20 x 1,5	200	275		
GSSLU/O 11010	120x15	N 4012	10	M22 x 1,5	280	335	10.000	9.000
GSSLU/O 11010	120x15	FL 4112	10	M22 x 1,5	280	335		
GSSLU/O 12010	150x16	FL 4118	10	M22 x 1,5	280	335	13.000	12.000

*Suspension unit load depends on the ratio of the track and support centre, and on the tyres.

Other design dimensions

	GSSLU/O 11000	GSSLU/O 12000	GSSLU/O 14000
Track	1.700-2.300 mm in 50 mm increments. Other dimensions are available on request		
Support centre	On request		

Spring mounting	
Spring mounted below the axle SLU	
Spring mounted upon the axle SLO	

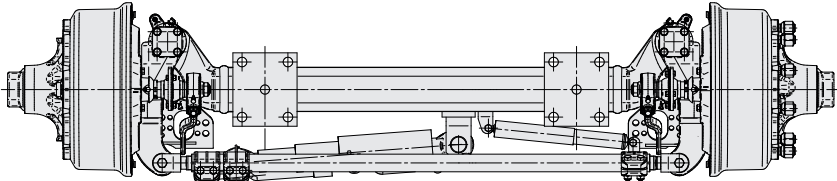
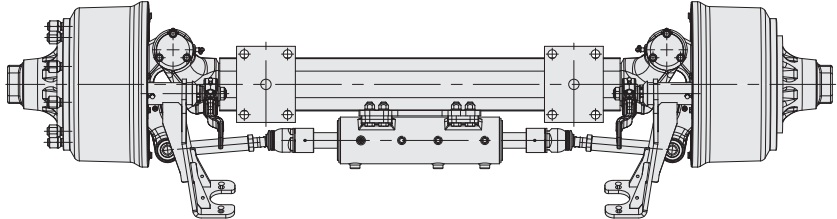
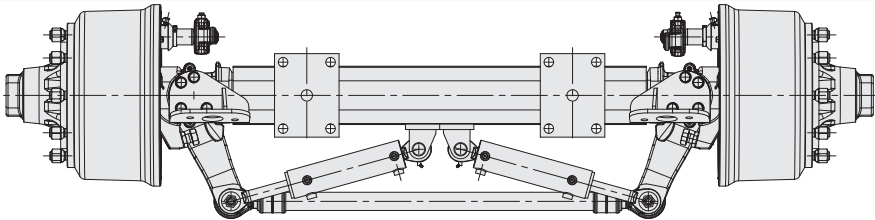
Ride heights of the single modules GS 11000 (FH [mm])				
Wheel base (Spring)	SLO		SLU	
Support height	without plate	with plate	without plate	with plate
184	414-439	421-454	-	-
268	474-523	480-538	217-267	224-282
302	-	-	230-301	237-316
370	-	-	283-369	290-384

Ride heights of the single modules GS 12000 / GS 14000 (FH [mm])				
Wheel base (Spring)	SLO		SLU	
Support height	without plate	with plate	without plate	with plate
184	430-455	435-470	-	-
268	488-538	495-553	175-252	182-267
302	-	-	215-286	222-301
370	-	-	268-351	275-370

Product variations

		GSSLU/O 11000	GSSLU/O 12000	GSSLU/O 14000	Comments
Tandem	Single module	✓	✓	✓	
	AGRO FlexModul		✓		
	L-Frame		✓		
	individual Frame	✓	✓	✓	
	AGRO FlexFrame		✓		See further options
3-axle unit (Tridem)	Single module	✓	✓	✓	
	AGRO FlexModul		✓		
	L-Frame		✓		
	individual Frame	✓	✓	✓	
	AGRO FlexFrame		✓		See further options

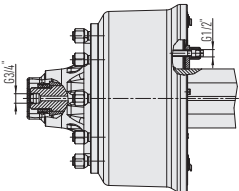
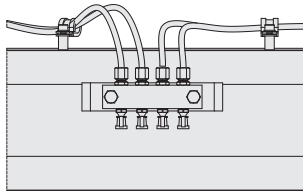
Options

Steering axles	
GSLA Self-steering axle with self-steering	
GSLL AGRO Turn with self-steering or with force steering	
GSL Force-steering axle with force steering	

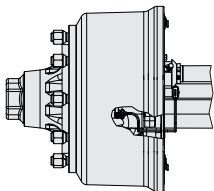
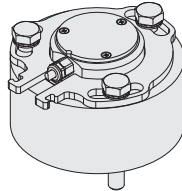
Tandem		GSSLU/O(L/LA) 11000	GSSLU/O(L/LL) 12000	GSSLU/O(L/LL) 14000
Versions				
rigid	GSLA self-steering axle	✓		
rigid	GSLL – AGRO Turn		✓	✓
rigid	GSLL self-steering axle		✓	✓
rigid	GSL force-steering axle	✓	✓	

3-axle unit (Tridem)					
Versions			GSSLU/O(L/LA) 11000	GSSLU/O(L/LL) 12000	GSSLU/O(L/LL) 14000
GSLA self-steering axle	rigid	GSLA self-steering axle	✓		
GSLL – AGRO Turn	rigid	GSLL – AGRO Turn		✓	✓
GSLL self-steering axle	rigid	GSLL self-steering axle		✓	✓
GSL force-steering axle	rigid	GSL force-steering axle	✓	✓	

4 axle unit (Quadrem)		
Versions	GSSLU/OLL 12000	Comment
GSLL – AGRO Turn with electric force-steering	✓	Further consultation is necessary

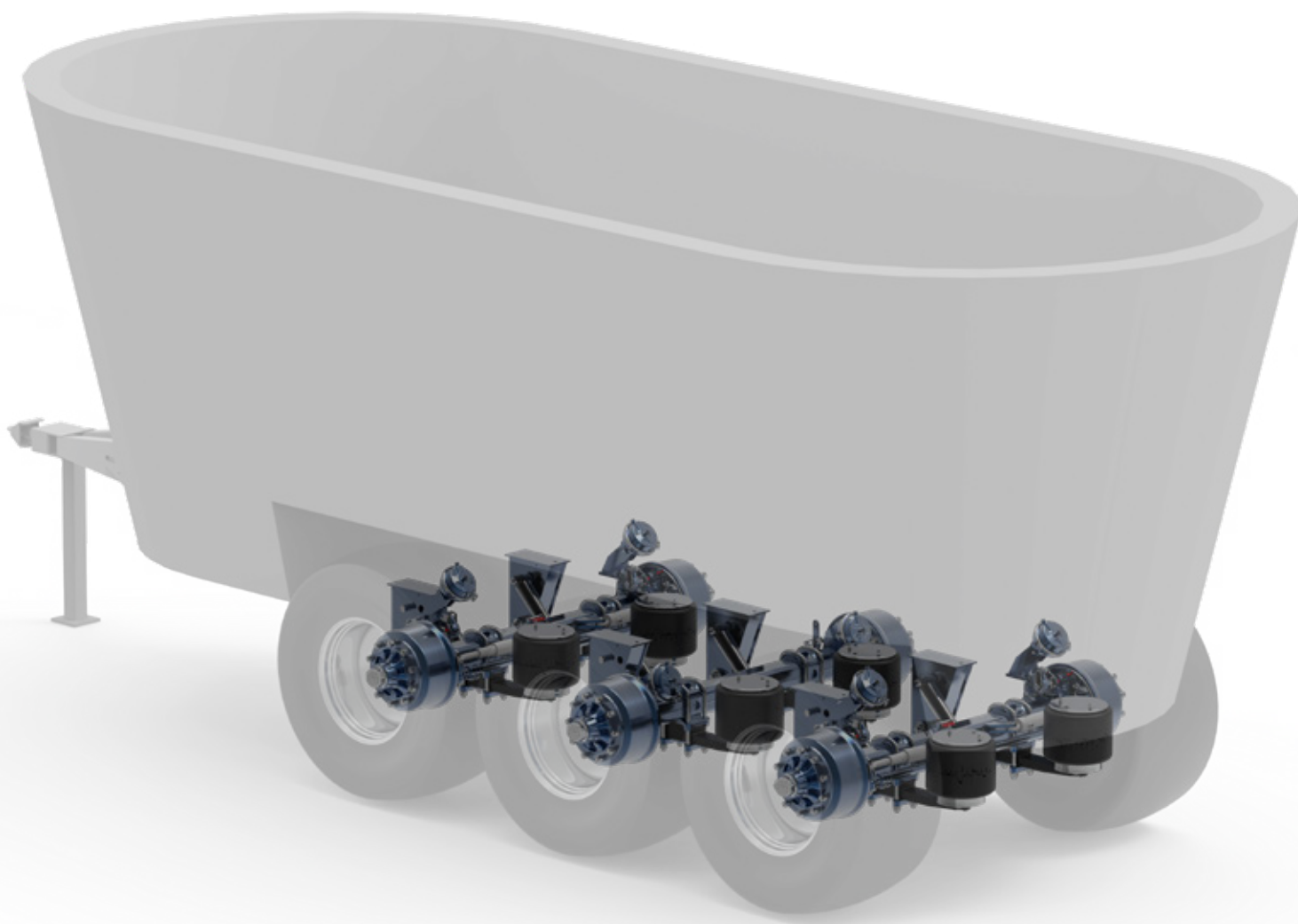
Preparation for central tyre inflation system (CTIS)	Central lubrication system
	

	Versions			Comment
	GSSLU/O 11000	GSSLU/O 12000	GSSLU/O 14000	
CTIS	✓	✓	✓	
Central lubrication system	✓	✓	✓	for specific lubrication points further consultation is necessary

Wheel sensors	Integrated steering angle sensor
	

	Versions		
	GSSLU/O 11000	GSSLU/O 12000	GSSLU/O 14000
ABS sensor*	✓	✓	✓
SDS sensor*	✓	✓	✓
Steering angle sensor	✓	✓	✓

*Sensor descriptions can be found on page 22



Wheel sensors

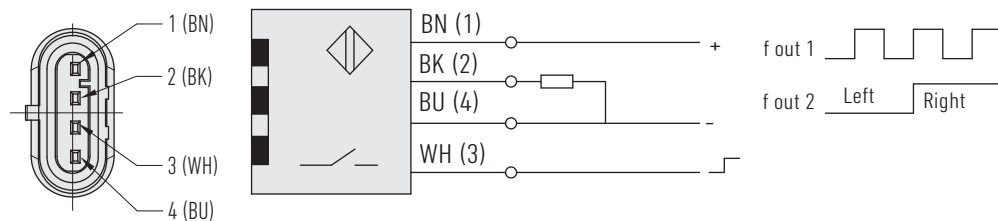
ABS

The anti-lock brake system (ABS) ensures a shorter braking distance, the best possible drive stability and steering properties - for tractors and trailers. Heavy braking is carried out without the wheels blocking which reduces tyre wear. High ABS functional reliability thanks to positioning the sensor in the bend neutral axle centre, no change of air gap at variable axle load.

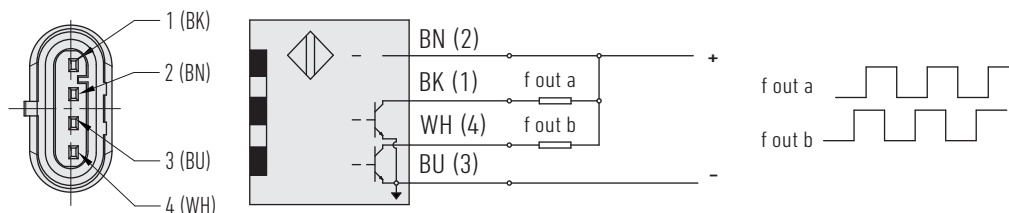
SDS

The speed sensor with recognition of rotating direction is a product developed by BPW. It is an important element of the electronic forced steering system. The sensor signal can also be used for the optimisation of application rates. The to the requirements adapted sensor bracket protects the sensor against twisting. This offers a higher functional reliability.

Type PNP: separate channels for speed and direction of rotation



Type NPN: direction of rotation should be detected by software technology



SDS technical specifications

	PNP	NPN
Output	4 wire PNP pulse output	4 wire NPN 2 channel with phase shift
Operating voltage	10–30 VDC	
Voltage drop	≤ 2,4 V	≤ 0,4 V
Maximum load current	200 mA	
No-load current	≤ 30 mA	
Usable switching frequency	5.000 Hz	
EMC durability	according to DIN EN 60947-5-2 2008-08	
Protection class	IP 67 according to DIN EN 60529	
Type of connection	400 mm cable with Superseal 4-pin	400 mm cable with Superseal 4-pin*

*Cable marked with yellow shrink hose.

Sensor matrix for rigid axle

Left	Right	Code
Z100 + ABS	0	A
Z100 + SDS	0	B
Z100 + ABS	Z100 + ABS	C
Z100 + SDS	Z100 + ABS	D
Z100 + SDS	Z100 + SDS	E
Z120 + ABS	0	F
Z120 + ABS	Z120 + ABS	G

Other options on request.

Sensor matrix for steering axle

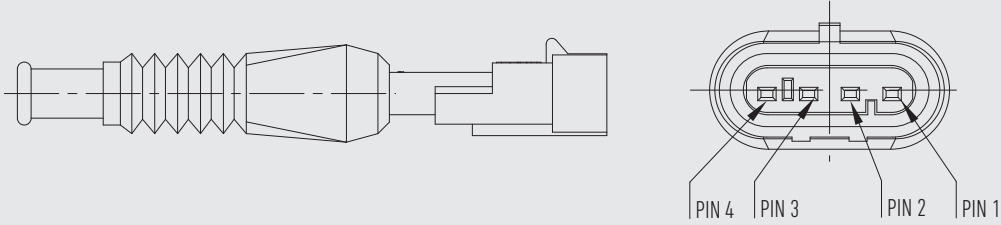
Left	Right	Code
Z100 + SDS	0	A
Z100 + SDS	Z100 + SDS	B
Z100 + ABS	Z100 + ABS	C
Z120 + ABS	Z120 + ABS	D
Z100 + SDS + ABS	Z100 + SDS + ABS	E
Z120 + SDS + ABS	Z120 + SDS + ABS	F

Other options on request.

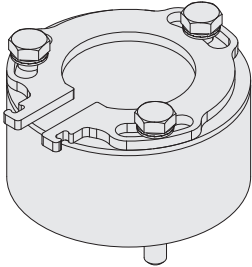
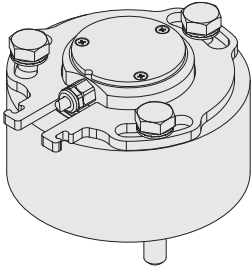
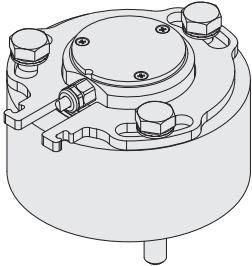
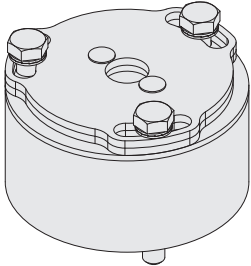
Adapter for steering angle sensor

Installation options for ME sensors

- Simple adjustment
- Pre-set sensor
- "Ready to use" in combination with the electronic steering system from the company ME - Mobil Elektronik

	With voltage output	With current output		
Voltage supply	9–34 V			
Current consumption	max. 25 mA	max. 60 mA		
Output range	0,25–4,75 V	4–20 mA		
Measuring range	2x 70 ° (0°± 35 ° for 2,5 V ± 2,25 V)	2x 70°(0°± 35 ° for 12 mA ± 8 mA)		
Repeat precision	≤ 0,1 % in case of play-free and central positioning on the installation side	<0,2 % of the measuring range with play-free and central bearing equipped		
Temperature range	-30— +80 °C			
Cable length	2,0 m	0,3 m		
Housing	IP6K6K/IP6x8 (1 m; 12 h)/IP6K9K			
Plug connection	IP6K6K/IPx7/IPx9K when plugged in			
Superseal				
PIN assignment	PIN 1	+UB	PIN 1	GND
	PIN 2	OUT A	PIN 2	+UB
	PIN 3	OUT B	PIN 3	OUT A
	PIN 4	GND	PIN 4	OUT B

Sensor matrix for the steering wheel sensor

Code	Description	Figure	Code	Description	Figure
1	Adapter for ME sensor (without sensor)		3	ME sensor installed (current output)	
2	ME - sensor installed (voltage output)		4	Adapter for ELOBAU sensor (without sensor, the adapter is compatible with various ELOBAU steering angle sensors)	



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