

FILL LEVEL SENSOR

PS 120-500 / PS 120-500 D / UDW 250

CONVERSION INSTRUCTIONS



PLEASE READ CAREFULLY BEFORE CONVERSION!

TABLE OF CONTENTS

1	SCOPE OF DELIVERY	2
1.1	Fill level sensor 04000-2-269 for PS 120 – 500 (as of model year 2013) and UDW 250	2
1.2	Fill level sensor 00202-3-131 for PS 120 – 500 (until model year 2012).....	2
2	FILL LEVEL SENSOR 04000-2-269 FOR PS 120 – 500 (AS OF MODEL YEAR 2013).....	3
2.1	Mounting.....	3
2.2	Connection diagram.....	5
3	FILL LEVEL SENSOR 04000-2-269 FOR UDW 250	6
3.1	Mounting.....	6
3.2	Connection diagram.....	7
4	FILL LEVEL SENSOR 00202-3-131 FOR PS 120 – 500 (UNTIL MODEL YEAR 2012)	8
4.1	Mounting.....	8
4.2	Connection diagram.....	9
5	MODE OF OPERATION AND SETTING OF THE FILL LEVEL SENSOR	10
6	NOTES.....	11

1 SCOPE OF DELIVERY

1.1 FILL LEVEL SENSOR 04000-2-269 FOR PS 120 – 500 (AS OF MODEL YEAR 2013) AND UDW 250



Figure 1

Pieces	Item number:	Designation:
1	00602-2-614	Sensor fill level capacitive
1	04000-2-426	Holder fill level sensor P8 fertiliser RAL3020
2	AAN09-M6	Flange nut
1	00300-2-122	Accessories fill level sensor
5	BN20309-204x3.6	Cable ties
1	00603-3-686	Grommet DNG M16
3	BN20381-BM00130	Round plug 4 mm, red

1.2 FILL LEVEL SENSOR 00202-3-131 FOR PS 120 – 500 (UNTIL MODEL YEAR 2012)



Figure 2

Pieces	Item number:	Designation:
1	00602-2-614	Sensor fill level capacitive
1	04009-3-408	Fill level sensor holder retrofit kit
3	BN20381-BM00130	Round plug 4 mm, red
1	00603-3-686	Grommet DNG M16



CAUTION!
Before beginning the conversion work, the control box must be switched off and the implement cable must be disconnected from the control box!

2 **FILL LEVEL SENSOR 04000-2-269 FOR PS 120 – 500 (AS OF MODEL YEAR 2013)**

2.1 **MOUNTING**



Figure 3

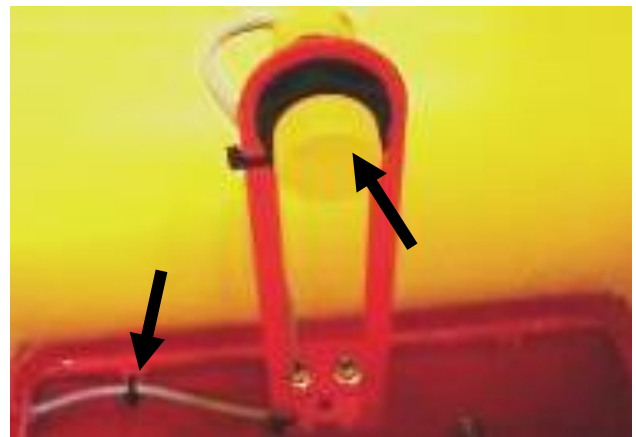


Figure 4

- Install the fill level sensor holder here (Figure 3).
- Install the fill level sensor and fasten in the desired position (Figure 4).
- Fasten the fill level sensor cable with cable ties (Figure 4).



Figure 5

- If there is not yet an opening in the side wall, please drill a hole in the side wall using a 16 mm steel drill. Install a grommet in the opening and insert the fill level sensor cable (Figure 5).



Figure 6



Figure 7

- Remove the cover from the gear motor (Figure 6).
- Connect the fill level sensor (Figure 7).



Figure 8

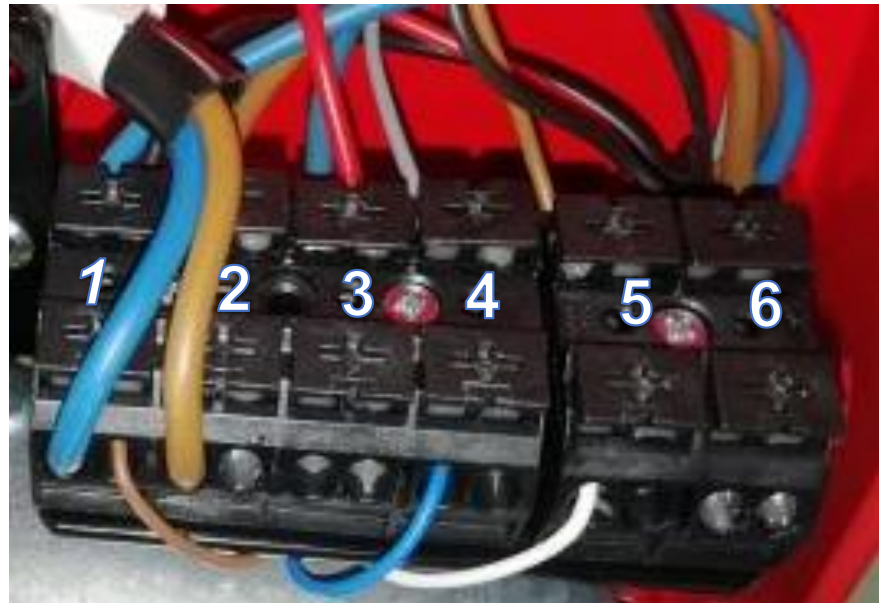
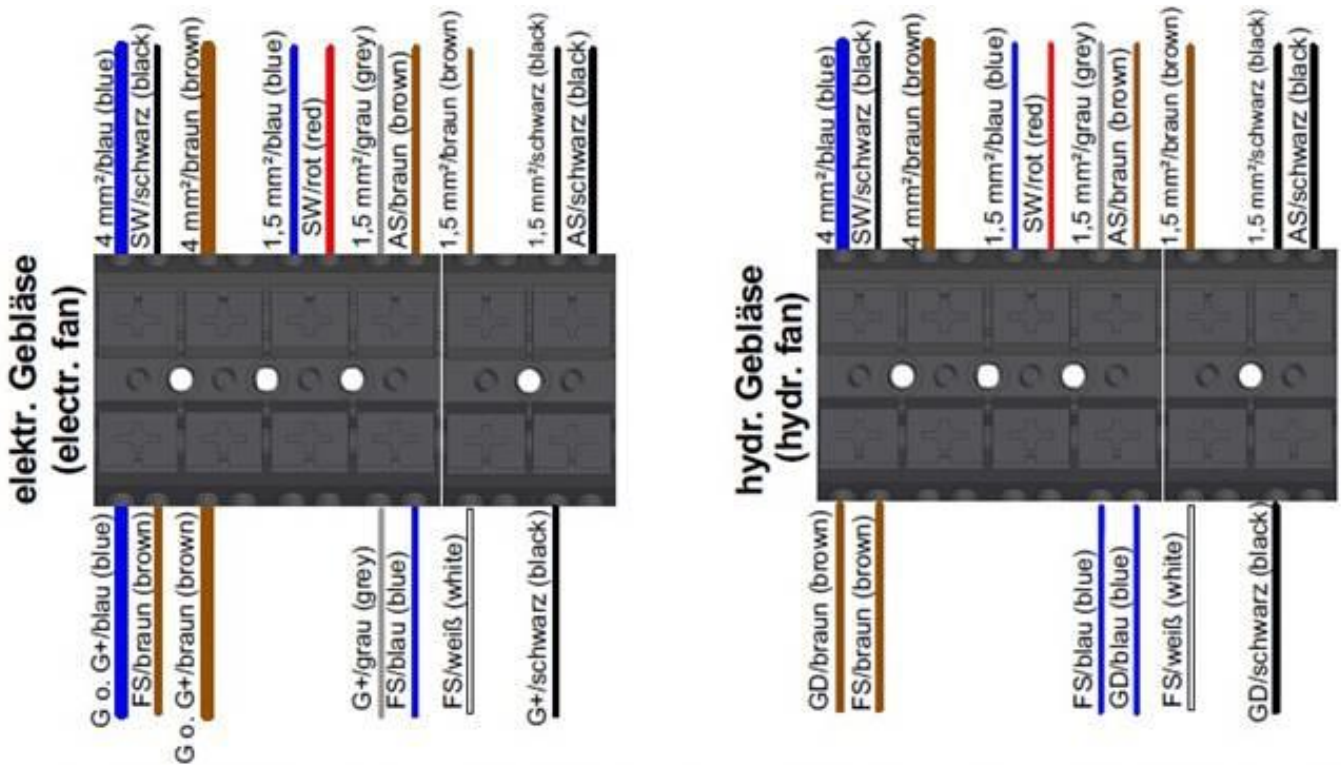


Figure 9

- Using a crosshead screwdriver, press on the terminal block and insert the corresponding wire end of the connection cable into the opening (Figure 8).
- **1** - Brown 0.75 mm²
- **4** - Blue 0.75 mm²
- **5** - White 0.75 mm² (Figure 9)
- The black wire of the fill level sensor should not be connected!
- See connection diagram (Figure 10).
- Install the cover on the gear motor (Figure 6).

2.2 CONNECTION DIAGRAM



Stecker-PIN (plug-pin)	Gerätekabel (machine cable)	Gebläse (G) (fan)	Gebläse PLUS (G+) (fan PLUS)	Säwellenmotor (SW) (sowing shaft motor)	Füllstandsensor (FS) (fill level sensor)	Abdrehschalter (AS) (calibration button)	Gebläsedrehzahl-sensor (GD) (fan speed sensor)
1	4 mm ² / blau (blue)	4 mm ² / blau (blue)	0,5 mm ² / blau (blue)	1,5 mm ² / schwarz (black)	0,75 mm ² / braun (brown)		0,75 mm ² / braun (brown)
2	4 mm ² / braun (brown)	4 mm ² / braun (brown)	0,5 mm ² / braun (brown)				
3	1,5 mm ² / blau (blue)			1,5 mm ² / rot (red)			
4	1,5 mm ² / grau (grey)		0,5 mm ² / grau (grey)		0,75 mm ² / blau (blue)	0,75 mm ² / braun (brown)	0,75 mm ² / blau (blue)
5	1,5 mm ² / braun (brown)				0,75 mm ² / weiß (white)		
6	1,5 mm ² / schwarz (black)		0,5 mm ² / schwarz (black)			0,75 mm ² / schwarz (black)	0,75 mm ² / schwarz (black)

Abisolierlänge 10mm! (stripping length 10mm!)

Figure 10

3 FILL LEVEL SENSOR 04000-2-269 FOR UDW 250

3.1 MOUNTING



Figure 11



Figure 12



Figure 13

- In the tank on the underside of the brace, install the fill level sensor holder along with the fill level sensor (Figure 11).
- Route the connection cable on the underside of the brace to the rear and fasten with cable ties (Figure 11).
- Drill a hole (d=15 mm) on the rear hopper wall; reduce the surrounding wall thickness to approx. 3.5 mm using a counterbore and insert the grommet (Figure 12).
- Open the cover over the terminal block on the rear side (Figure 12).
- Route the cable outside of the tank downwards up to the junction box. Thread in the cable at the grommet and route it to the terminal block (Figure 13).



Figure 14

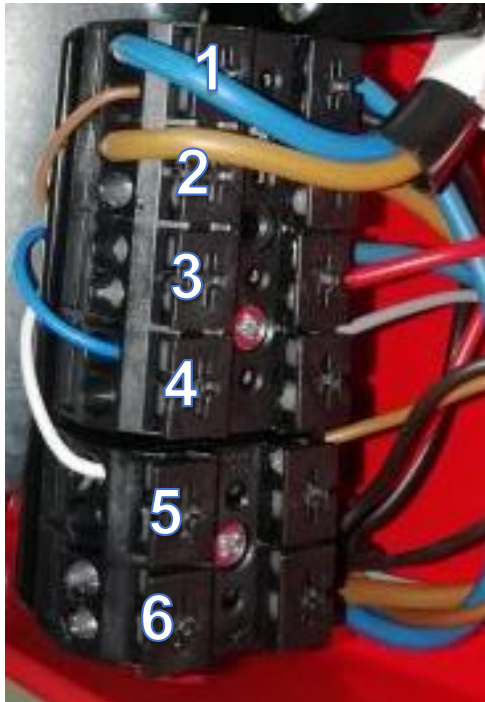


Figure 15

- Using a crosshead screwdriver, press on the terminal block and insert the corresponding wire end of the connection cable into the opening (Figure 14)
- 1 - Brown 0.75 mm²
- 4 - Blue 0.75 mm²
- 5 - White 0.75 mm² (Figure 15).
- The black wire of the fill level sensor should not be connected!
- See connection diagram (Figure 16).
- Reinstall the cover (Figure 12).

3.2 CONNECTION DIAGRAM

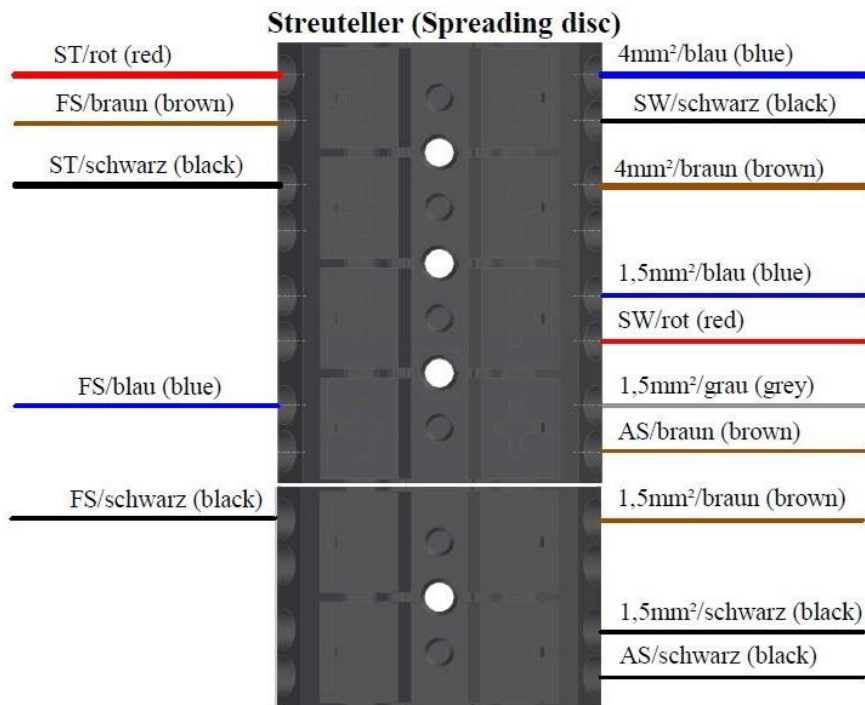


Figure 16

Plug PIN	Machine cable	Spreading disc (ST)	Seeding shaft motor (SW)	Fill level sensor (FS)	Calibration button (CB)
1	4 mm ² / blue	2.5 mm ² / red	1.5 mm ² / black	0.75 mm ² / brown	
2	4 mm ² / brown	2.5 mm ² / black			
3	1.5 mm ² / blue		1.5 mm ² / red		
4	1.5 mm ² / grey			0.75 mm ² / blue	0.75 mm ² / brown
5	1.5 mm ² / brown			0.75 mm ² / black	
6	1.5 mm ² black				0.75 mm ² / black

4 FILL LEVEL SENSOR 00202-3-131 FOR PS 120 – 500 (UNTIL MODEL YEAR 2012)

4.1 MOUNTING



Figure 17



Figure 18



Figure 19

- Loosen the bottom fastening nut in the hopper (Figure 18).
- Install the fill level sensor holder along with the fill level sensor (Figure 17, Figure 19).



Figure 20



Figure 21



Figure 22

- Drill a hole (d=15 mm) in the hopper on the gear motor side and insert the fill level sensor cable with the grommet (Figure 20).
- Remove the gear motor cover (Figure 21).
- Make the connection on the inside of the cover (Figure 22).
- Make the connection exactly as shown in the connection diagram (Figure 23).
- Reinstall the gear motor cover (Figure 21).

4.2 CONNECTION DIAGRAM

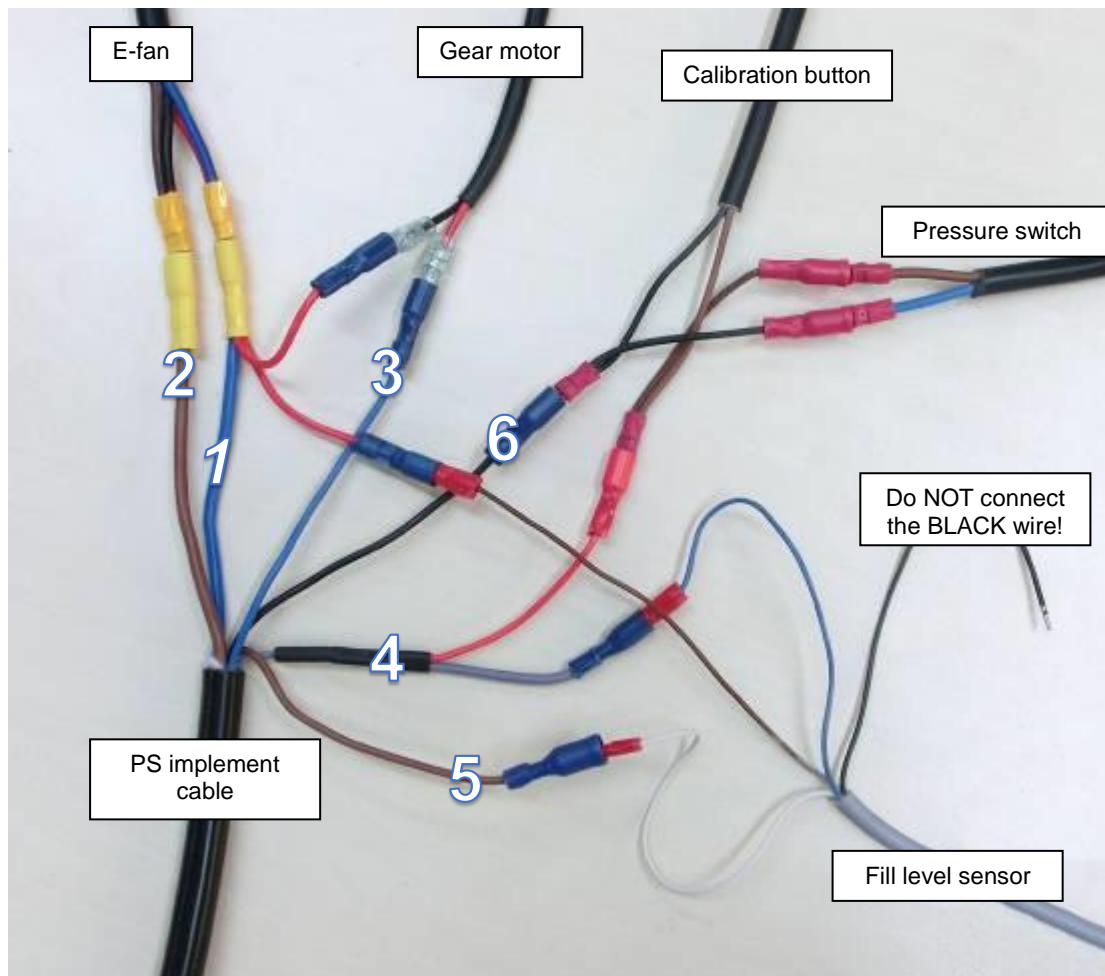


Figure 23

	Implement cable	E-fan	Gear motor	Fill level sensor	Pressure switch	Calibration button
1	4 mm ² / Blue	2.5 mm ² Red / Blue	1.5 mm ² / Black	0.75 mm ² / Brown		
2	4 mm ² / Brown	2.5 mm ² Black / Brown				
3	1.5 mm ² / Blue		1.5 mm ² / Red			
4	1.5 mm ² / Grey			0.75 mm ² / Blue	1.5 mm ² / Blue	0.75 mm ² / Brown
5	1.5 mm ² / Brown			0.75 mm ² / White		
6	1.5 mm ² / Black				1.5 mm ² / Brown	0.75 mm ² / Black

5 MODE OF OPERATION AND SETTING OF THE FILL LEVEL SENSOR



Figure 24

- Use of a Control Box 1.2, 5.2, 5.7, 6.2 or ISOBUS is required.
- It measures how much seed is still left in the hopper, and triggers an alarm on the Control Box when there is not enough seed in the hopper.
- The sensitivity of the sensor can also be adjusted. It is adjusted using the small slotted screw at the rear of the sensor. "+" means that the sensitivity is increased (Figure 24).
- The "Hopper almost empty" message is shown when the seed drill is in operating mode and the seed level in the hopper falls below the sensor.



6 NOTES

Large grid area for taking notes, consisting of many empty cells.



APV – Technische Produkte GmbH
Zentrale: Dallein 15
AT - 3753 Hötzelndorf

Tel.: +43 2913 8001
office@apv.at
www.apv.at

