



A6 PAK

Control system for motorised slides

Simplified service manual

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WARNING



ARC WELDING AND CUTTING CAN BE INJURIOUS TO YOURSELF AND OTHERS. TAKE PRECAUTIONS WHEN WELDING. ASK FOR YOUR EMPLOYER'S SAFETY PRACTICES WHICH SHOULD BE BASED ON MANUFACTURERS' HAZARD DATA.

ELECTRIC SHOCK - Can kill

- Install and earth the welding unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to keep fumes and gases from your breathing zone and the general area.

ARC RAYS - Can injure eyes and burn skin.

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

MALFUNCTION

- Call for expert assistance in the event of malfunction.

**READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE
INSTALLING OR OPERATING THE EQUIPMENT**

PROTECT YOURSELF AND OTHERS!

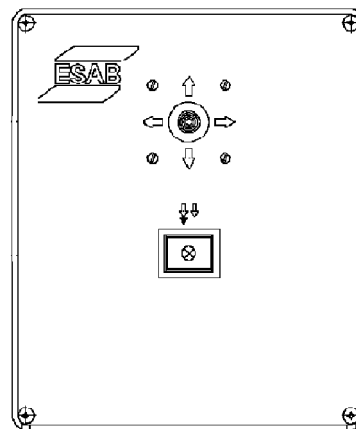
TECHNICAL DESCRIPTION

A6 PAK is a control system for motorised slides.

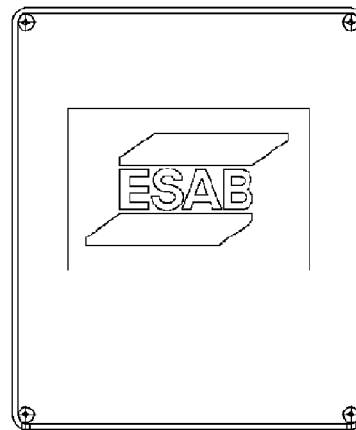
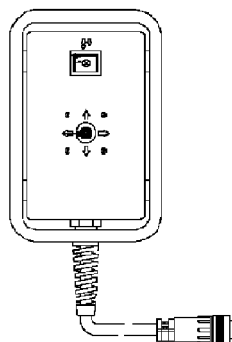
The system is available in two versions:

1. As a complete standard system with or without remote control unit for automatic welding machines
 - Joint tracking unit, order no. 417 587-880
 - Joint tracking unit with remote control, order no. 417 587-882
2. As a build-in component for a column and boom
 - Joint tracking unit, order no. 417 587-881

Group 880



Group 881, 882



agb1d003

Technical data

Control system for motorised slides	A6 PAK
Supply and control voltage	42V AC 50-60 Hz
Power	460 V A
Motor regulator, model	Switched four quadrant reg.
Speed (high)	
Speed (low)	
Rotor voltage, Joy-stick control	40 V DC
Stator voltage, independent magnet motor	48 V DC
Enclosure class	IP 53
Max. ambient temperature	+ 45° C
Weight:	
Joint tracking unit	4.5 kg
Remote control	2 kg

A6 PAK consists of:

1. Joint tracking unit
2. Control unit
3. Motor cable, order no. 417 310.

Optional equipment for A6 PAK

4. Transformer to provide separate power supply from mains
190, 220, 380, 415, 440, 500V 50 Hz
200, 230, 380, 415, 440, 500V 60 Hz to secondary 42V, 660 VA order no. 148 636-002.
Cable 3 x 2.5 mm², for connection to transformer, order no. 2626 134-04.

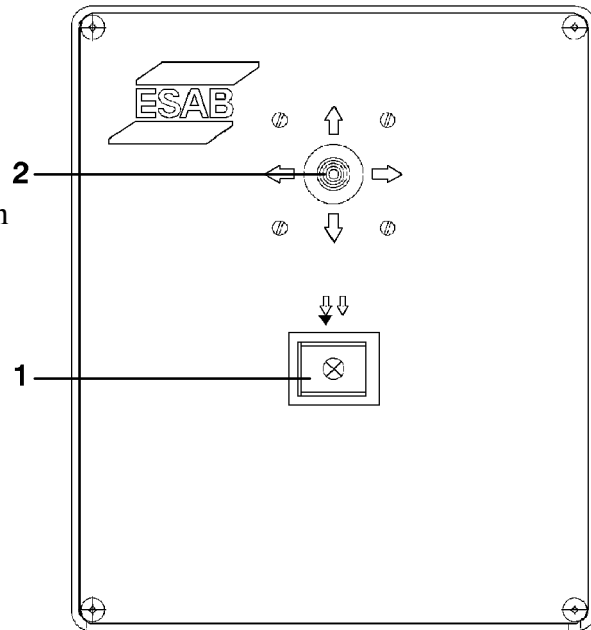
ESAB standard servo slides for A6 PAK

- A6 servo slide, ball screw type with permanent magnet motor 42 V DC, order no. 334 333.
- A6 motor-driven slide, sliding on runners, with A6 VEC motor 42V - 4000 rpm, gear ratio 74:1, order no. 334 426.

Controls and connections

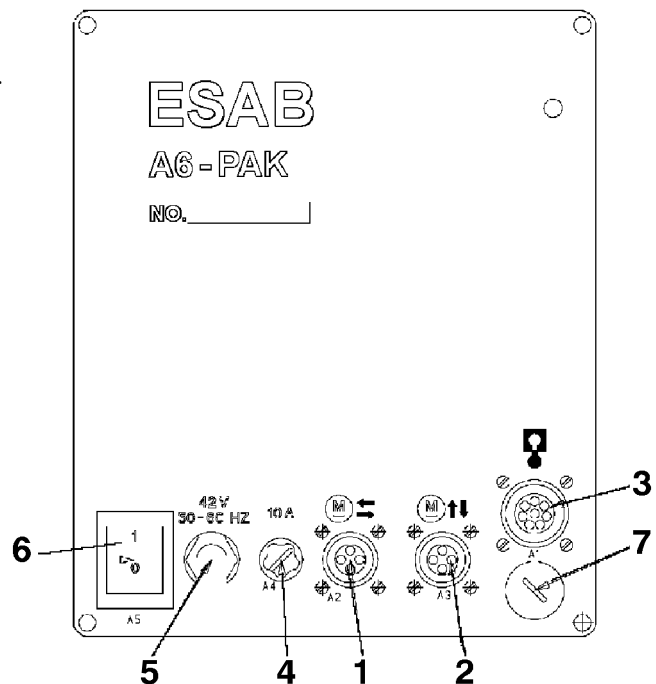
1. **Illuminated pushbutton, orange**
For selection of high speed
2. **Control lever**
Manual operation of servo slides up/down and left/right

Component position for joint tracking device, see page 19.



Rear panel

1. Socket, 4 pin.
for connecting horizontal slide motor
2. Socket, 4 pin.
for connecting vertical slide motor
3. Socket, 23 pin.
for connecting control unit
4. Control fuses, 10 A slow (1 off)
5. 42 V supply
6. Switch
Supply voltage on/off
7. Spare socket



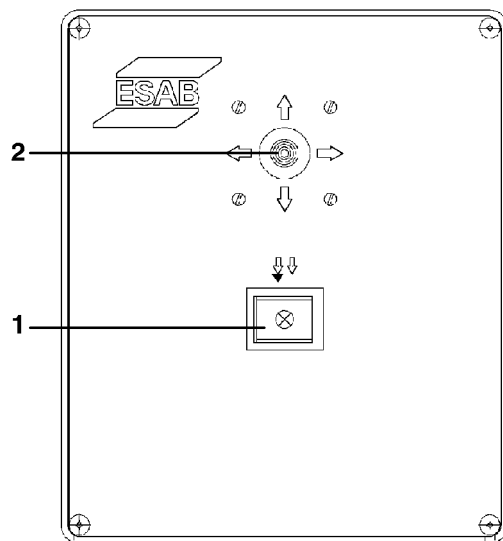
INSTALLATION

1. For dimensions, see dimension drawing on page 8.
2. Connections
 - for welding machines, see on page 9.
 - for column and booms, see on page 10.
3. Check that the necessary power supplies, of the correct voltage, are available.
 - When using a power power sources of one of the types LAE 800 - 1000 - 1250 - 1600, connected for 42 V control voltage, the necessary power can be obtained from the standard automatic welding machine, see terminal PEG1.
 - When suitable voltage is unavailable or when an LAH 500-630 42 V power source is used, there must always be installed a 42 V intermediary transformer for the voltage supply to the A6 PAK (see “Accessories” section).
4. See the picture on page 6 for details of the controls.

OPERATION

Positioning to start welding

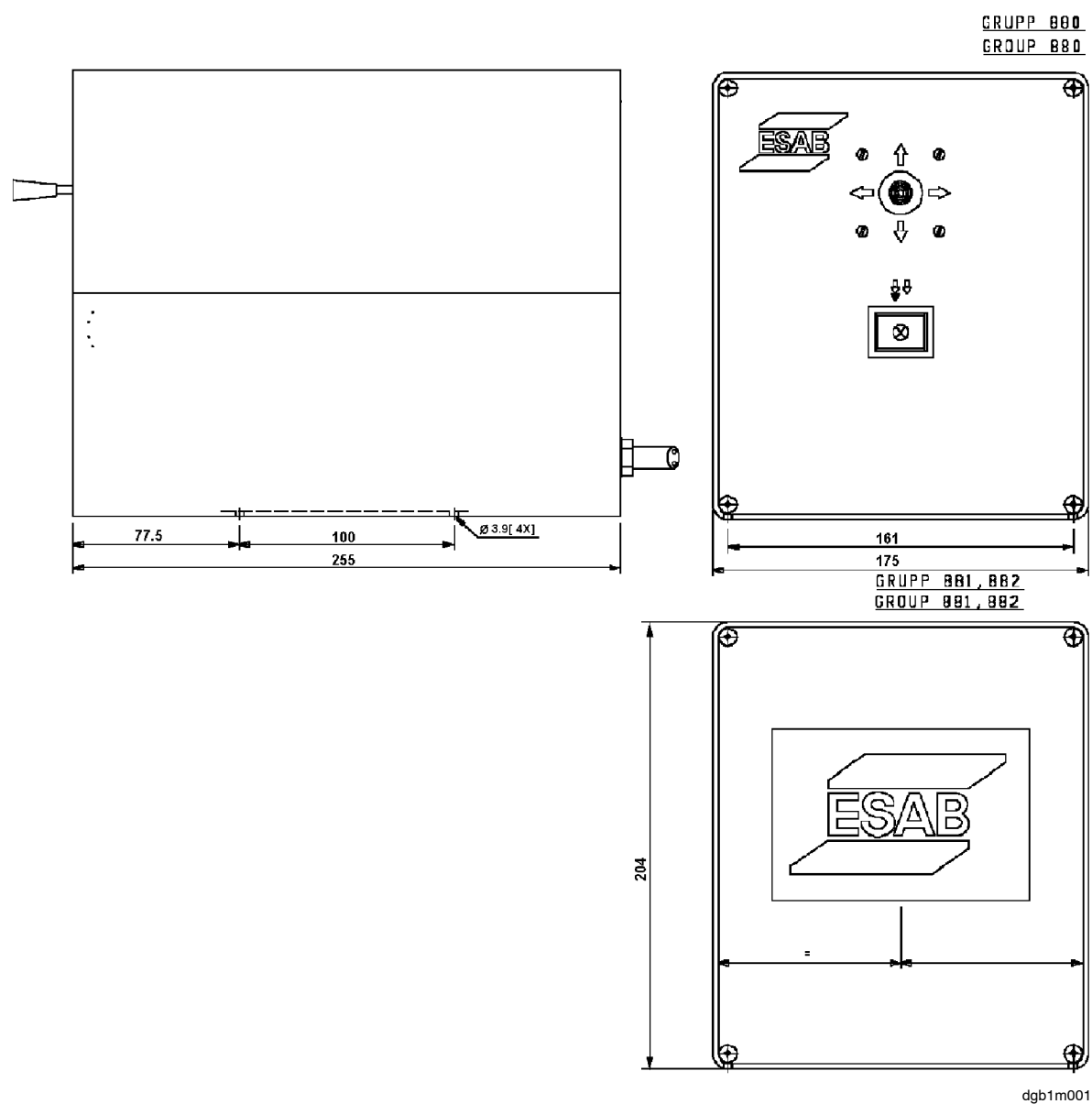
1. Position the welding equipment over the joint using the Joystick (2).
 - Coarse adjustment
Press the illuminated pushbutton (1).
The lamp should light up.
 - Fine adjustment and during welding
The illuminated pushbutton (1) must **NOT** be pressed. The lamp should not light up.



MAINTENANCE

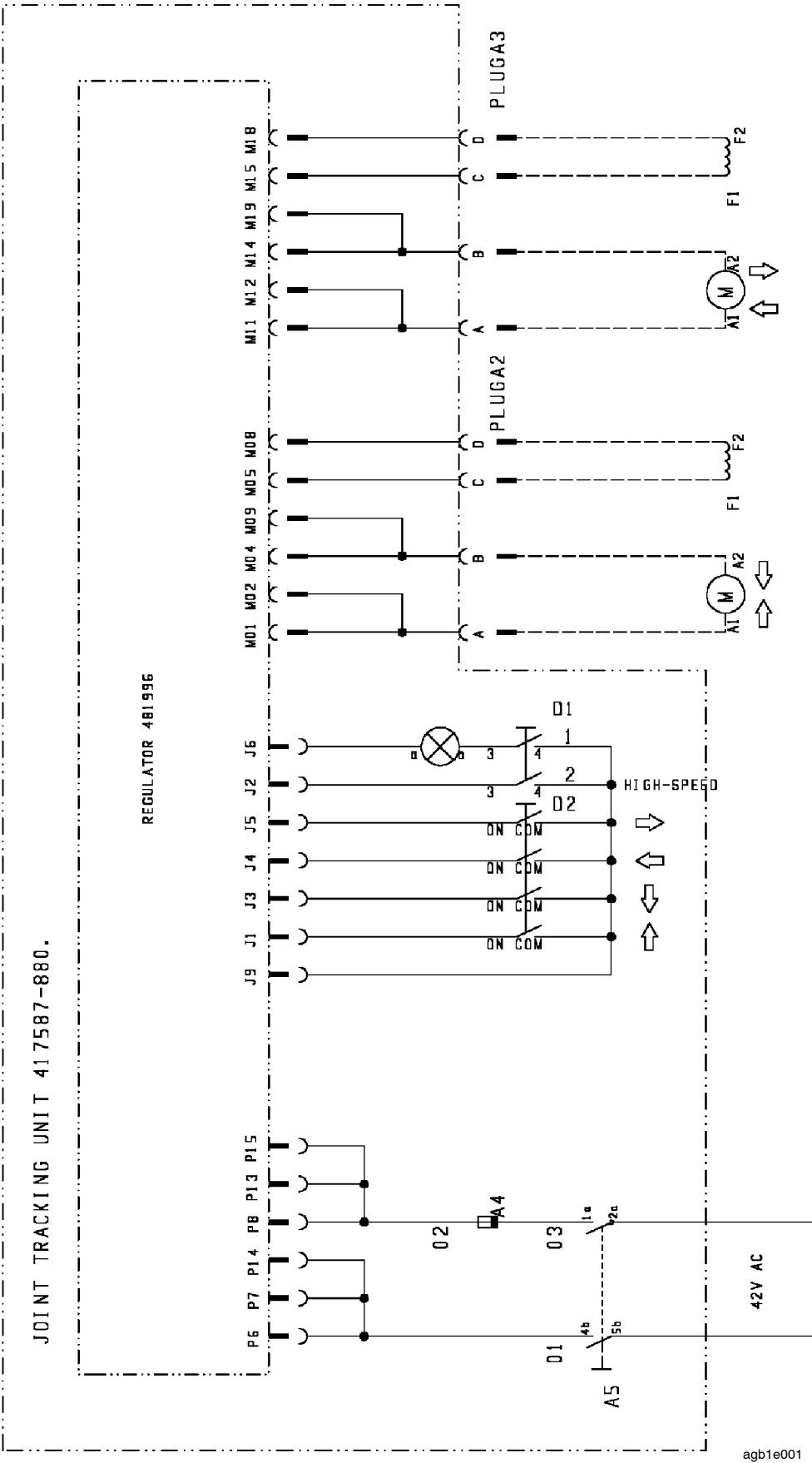
- Check that the cables are undamaged and that they are properly connected.
- Clean the equipment regularly using compressed air.
- Follow the instructions for each component.

DIMENSION DRAWING

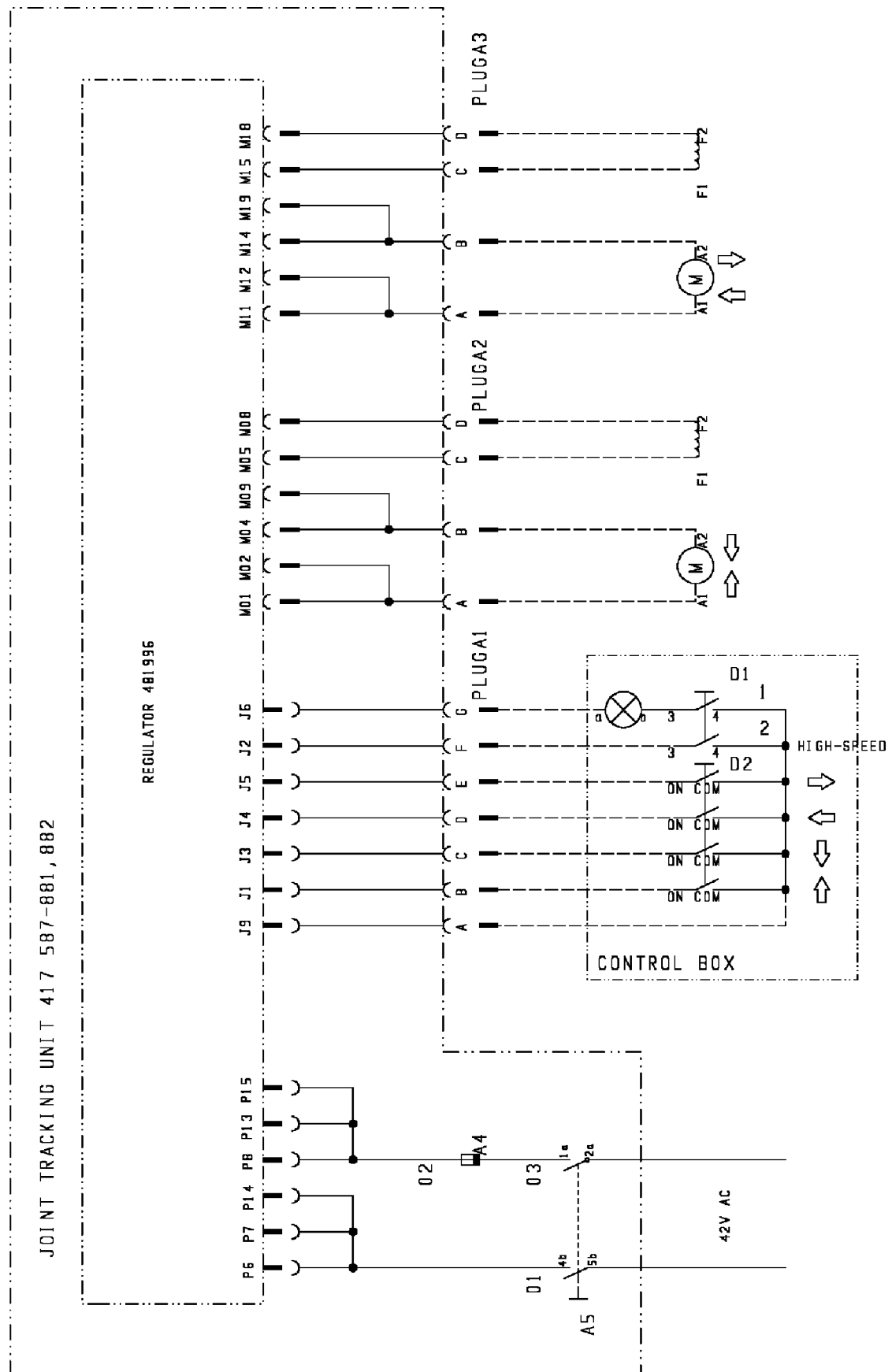


dgb1m001

DIAGRAM
(418 138)



(418 139)



agb1 e002

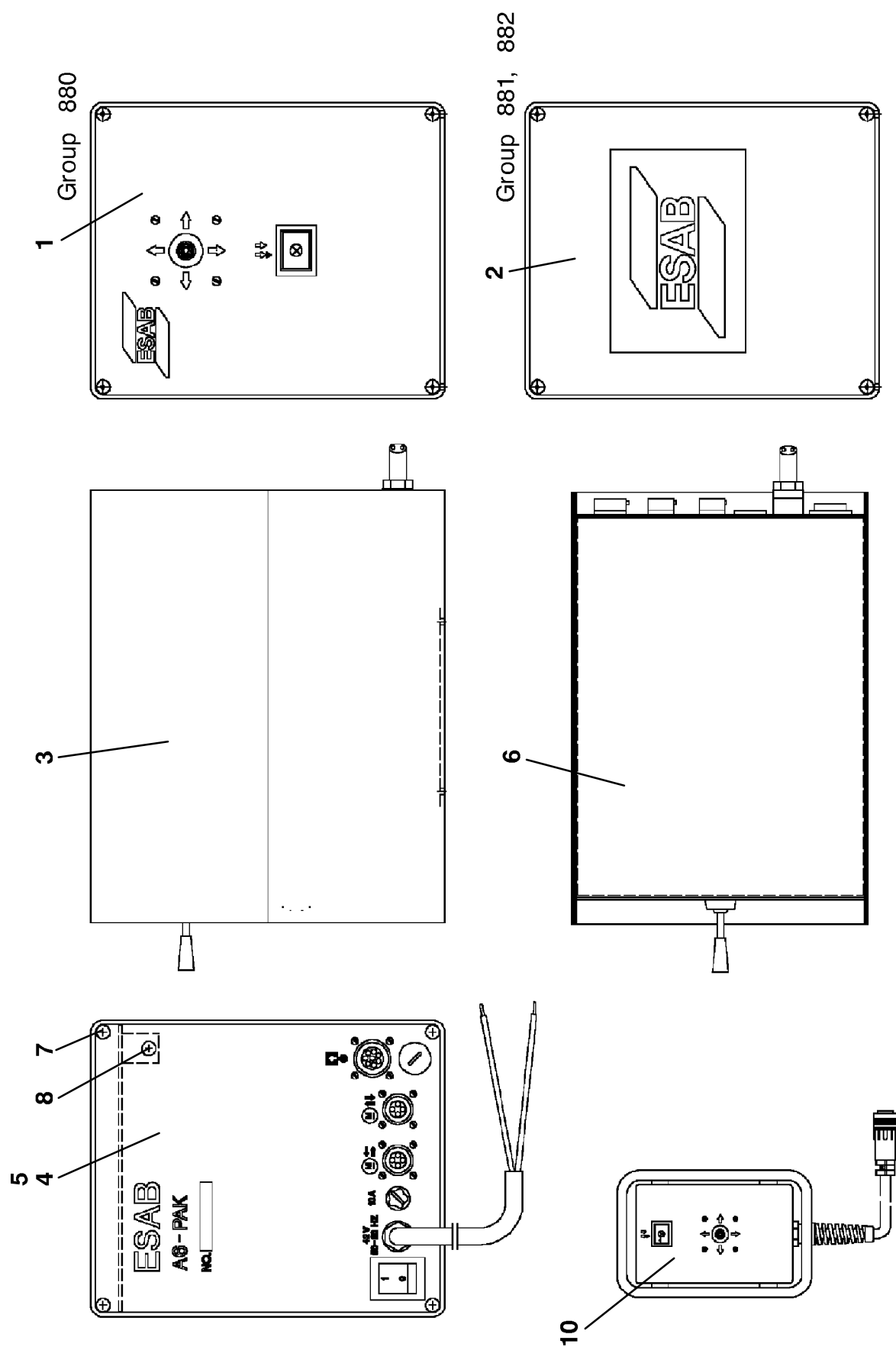
SPARE PARTS LIST A6 PAK

Edition 9702

Spare parts are to be ordered through the nearest ESAB agency as per the list on the back of the cover. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

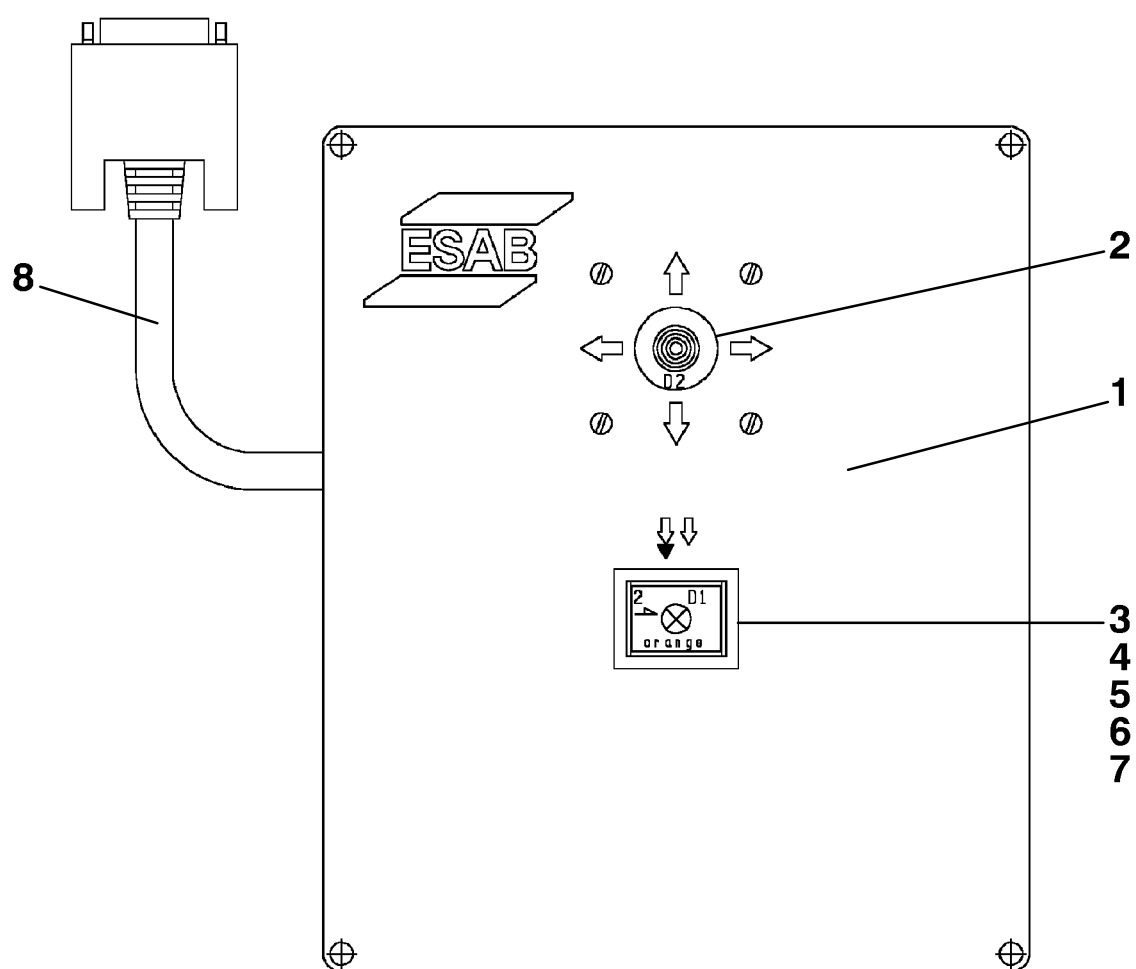
Reservdelsförteckning - Spare parts list - Ersatzteilverzeichnis - Liste de pièces détachées

Item	Qty	Orderingno.	Denomination	Remarks	Component designation in the circuit diagram
		417 587-880	Joint tracking equipment, excl. control box		
1	1	417 588-880	Cover plate, front		
3	1	332 908-880	Box		
4	1	417 591-881	Rear panel, compl		
6	1	481 995-880	PC-board		
7	8	2121 107-18	Screw	B8x13	
8	1	2117 107-17	Screw	B8x9.5	
		417 587-881	Joint tracking equipment for column and boom		
2	1	416 060-001	Cover plate, front		
3	1	332 908-880	Box		
5	1	417 591-880	Rear panel, compl		
6	1	481 995-880	PC-board		
7	8	2121 107-18	Screw	B8x13	
8	1	2117 107-17	Screw	B8x9.5	
		417 587-882	Joint tracking equipment, incl. control box		
2	1	416 060-001	Cover plate, front		
3	1	332 908-880	Box		
5	1	417 591-880	Rear panel, compl		
6	1	481 995-880	PC-board		
7	8	2121 107-18	Screw	B8x13	
8	1	2117 107-17	Screw	B8x9.5	
10	1	417 899-880	Control box		



Reservdelsförteckning - Spare parts list - Ersatzteilverzeichnis - Liste de pièces détachées

Item	Qty	Orderingno.	Denomination	Remarks	Component designation in the circuit diagram
1		417 588-880	Cover plate, front		
2		417 590-001	Cover plate, front		
3		415 302-001	Manipulator		
4		415 200-001	Pushbutton		
5		415 200-020	Switch mechanism		
6		415 200-027	Cap, orange		
7		415 200-047	Bulb		
8		415 200-058	Splash shield (water)		
		433 070-002	Cable		

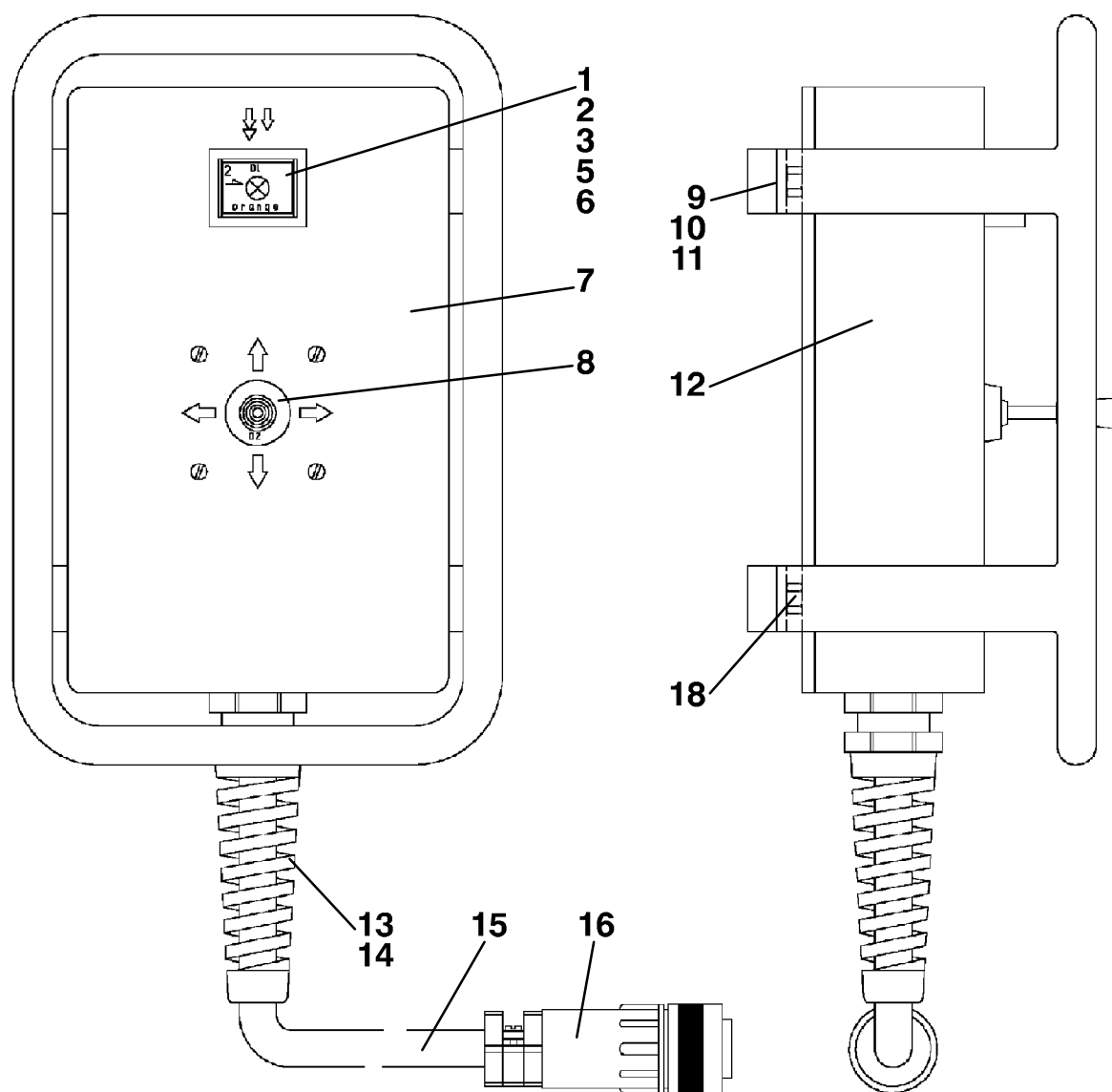


Reservdelsförteckning - Spare parts list - Ersatzteilverzeichnis - Liste de pièces détachées

Item	Qty	Orderingno.	Denomination	Remarks	Component designation in the circuit diagram
		417 591-880	Rear panel, compl		
1	1	417 593-001	Rear panel		
2	1	193 701-001	Fuse holder		
3	1	567 900-107	Quick-blow fuse		
4	1	193 701-002	Fuse holder		
5	1	267 101-301	Fitting		
6	2	2126 022-06	Nut	Pr 15,2	
7	1	2129 101-06	Plug		
8	20	2121 088-23	Screw	M3x6	
9	20	2126 011-03	Nut	M3	
10	2	418 142-880	Cable		
11	1	418 141-880	Cable		
12	1	193 317-001	Switch		
13	1	2626 134-01	Cable		
14	1	193 319-801	Flat-pin sleeve		
15	1	323 941-002	Sleeve socket	8-pol.	
16	1	418 140-880	Cable		
		417 591-881	Rear panel, compl		
1	1	417 593-001	Rear panel		
2	1	193 701-001	Fuse holder		
3	1	567 900-107	Quick-blow fuse		
4	1	193 701-002	Fuse holder		
5	1	267 101-301	Fitting		
6	2	2126 022-06	Nut	Pr 15,2	
7	1	2129 101-06	Plug		
8	20	2121 088-23	Screw	M3x6	
9	20	2126 011-03	Nut	M3	
10	2	418 142-880	Cable		
12	1	193 317-001	Switch		
13	1	2626 134-01	Cable		
14	1	193 319-801	Flat-pin sleeve		
15	1	323 941-002	Sleeve socket	8-pol.	
16	1	418 140-880	Cable		

Reservdelsförteckning - Spare parts list - Ersatzteilverzeichnis - Liste de pièces détachées

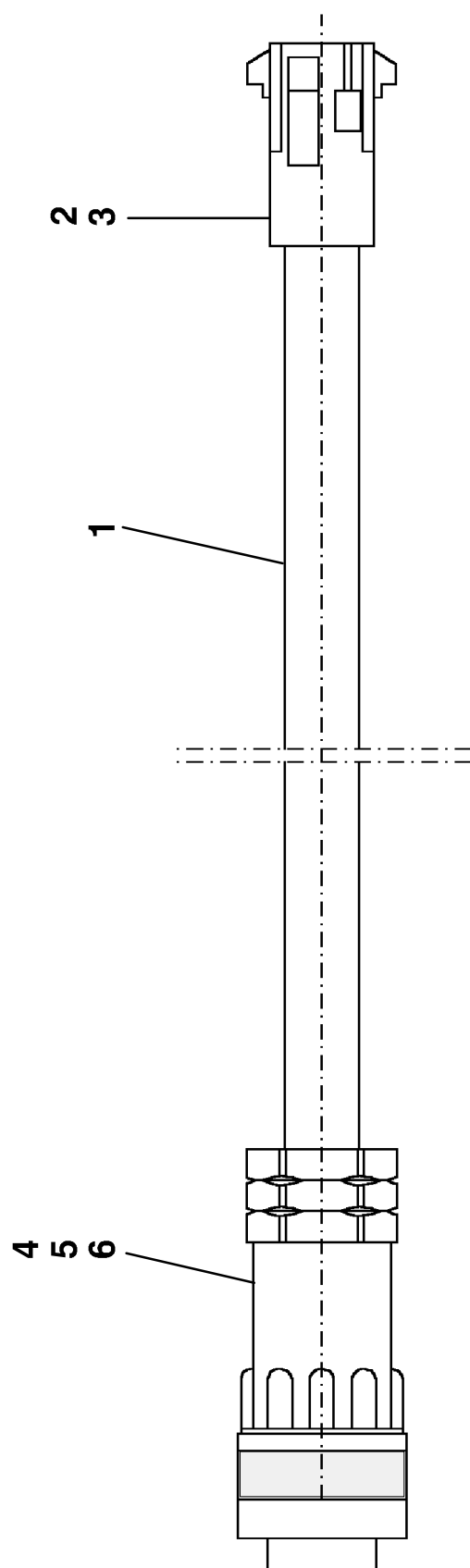
Item	Qty	Orderingno.	Denomination	Remarks	Component designation in the circuit diagram
		417 899-880	Control box		
1		415 200-001	Pushbutton		
2		415 200-020	Switch mechanism		
3		415 200-027	Cap, orange		
4		191 953-101	Cable	0,25 mm ²	
5		415 200-047	Bulb		
6		415 200-058	Splash shield (water)		
7		417 901-001	Plate		
8		415 302-001	Manipulator		
9		332 556-001	Protective clamp		
10		2121 080-45	Screw	M4x12	
11		2126 011-05	Nut	M4	
12		417 900-001	Apparatus box		
13		193 307-104	Cable fitting		
14		2126 022-08	Nut		
15		191 812-104	Cable		
16		368 541-002	Pin plug	23 pol	
17		161 337-051	Box		
18		2126 011-06	Nut	M5	



Reservdelsförteckning - Spare parts list - Ersatzteilverzeichnis - Liste de pièces détachées

Item	Qty	Orderingno.	Denomination	Remarks	Component designation in the circuit diagram
1		417 310-880	Control cable	*)	
		2626 134-01	Apparatus cable	L = 19 m	
		417 310-881	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 22 m	
		417 310-882	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 25 m	
		417 310-883	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 28 m	
		417 310-884	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 32 m	
		417 310-885	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 36 m	
		417 310-886	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 40 m	
		417 310-887	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 2 m	
		417 310-888	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 5 m	
		417 310-889	Control cable	*)	
1		2626 134-01	Apparatus cable	L = 10 m	
2		192 784-002	Sleeve plug		
3		192 784-101	Plug		
4		323 942-001	Pin plug	4-pol	
5		323 945-001	Plug		
6		323 943-102	Counterbalance		

*) Additional system components



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