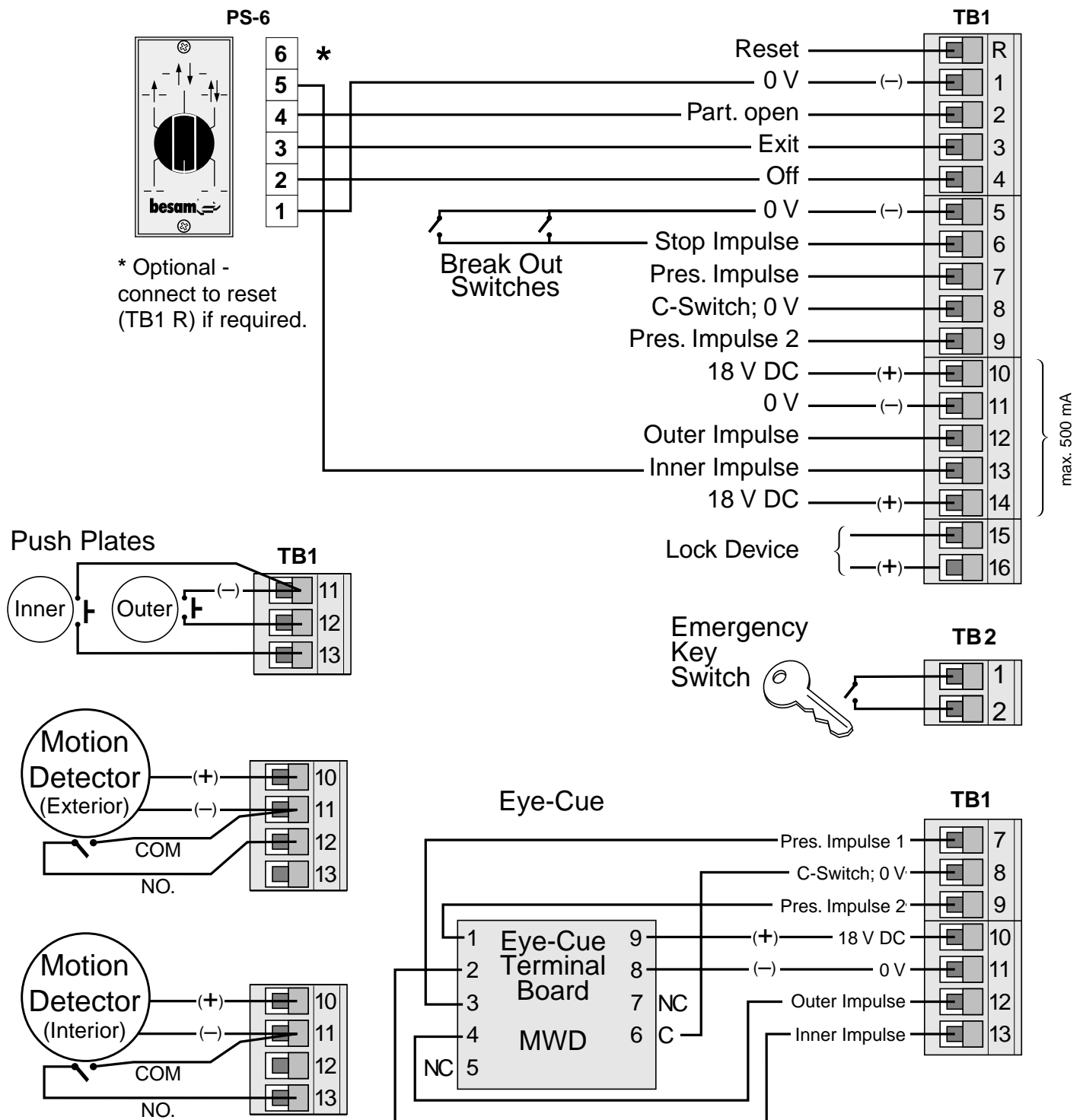


# Wiring The CUD-9 (CUD-9S)



# PMD – Push Button Set

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## Copying and transferring of programmed values (Function 98)

This function is used to ease adjustment by copying and transferring the values from one smoothly running operator to another one with similar operating conditions. The values can be copied and transferred in two levels.

- Copying and transferring of user values only – Functions 01–27.
- Copying and transferring of all values.

### Copying and transferring of user values only:

- Control Unit → PMD**
1. Plug the PMD into the control unit on the operator having the values to be copied.
  2. Select function **98** and value **99**.
  3. Press the program button **P** within 5 seconds. The user values only will now be transferred from the control unit to the PMD.

- PMD → Control Unit**
1. Plug the PMD into the control unit on the operator receiving the copied values.
  2. Select function **98** and value **98**.
  3. Press the program button **P** within 5 seconds. The user values will now be transferred from the PMD to the control unit on the new operator.

### Copying and transferring of all values:

- Control Unit → PMD**
1. Plug the PMD into the control unit on the operator having the values to be copied.
  2. Select function **98** and value **97**.
  3. Press the program button **P** within 5 seconds. All programmed values will now be transferred from the control unit to the PMD.

- PMD → Control Unit**
1. Plug the PMD into the control unit on the operator receiving the copied values.
  2. Select function **98** and value **96**.
  3. Press the program button **P** within 5 seconds. All values will now be transferred from the PMD to the control unit on the new operator.

# PMD – Functions And Values

Function	Description	Eng. Value (approx.)	Metric Value (approx.)	*)
01	High speed opening	7.8 - 27.5 in/sec	20-70 cm/sec	60
02	Low speed opening	1.9 - 5.9 in/sec	05-15 cm/sec	07
03	Low speed distance opening	0 - 11.8 inches	00-30 cm	10
04	High speed closing	5.9 - 27.5 in/sec	15-70 cm/sec	20
05	Low speed closing	1.9 - 5.9 in/sec	05-15 cm/sec	07
06	Low speed distance closing	0 - 11.8 inches	00-30 cm	10
07	Hold open time		00-60 sec	02
08	Hold open time with key impulse		00-60 sec	06
09	Presence and stop impulse type, make/break <sup>1</sup>		A/b (make/break)	A
10	Not used		A/b	A
11	Emergency opening / Emergency closing (EUE) <sup>2</sup>		A/b (opening/closing)	A
12	Electronic emergency unit / Elastic cord <sup>2</sup>		A/b (elect./elastic cord)	A
13	Monitoring of the emergency unit <sup>2</sup>		A/b (no/yes)	A
14	Emergency function with the PS... in "Off" <sup>2</sup>		A/b (yes/no)	A
15	Partial opening width <sup>3</sup>	11.8 - 78.7 inches	03-20 decimeters	08
16	Hold open time for partial opening <sup>3</sup>		00-60 sec	02
17	"Auto width" hold open time <sup>3</sup>		00-60 sec	02
18	Perm. partial opening/Time from "Auto width" to full opening <sup>3</sup>		00-60 sec	15
19	Resume time for "Auto width" after closing, from full opening <sup>3</sup>		00-60 sec	05
20	Add run program, opening <sup>4</sup>		00-20	10
21	Opening delay for unlocking <sup>5</sup>		00-60	00
22	Electro-mechanical lock, locked without/with power <sup>6</sup>		A/b (without/with)	A
23	Hold force on closed door <sup>7</sup>	0 - 44.5 pounds	00-10 Newtons	00
24	Not used		A/b	A
25	Interlocking <sup>8</sup>		A/b (yes/no)	b
26	C-switch distance (always select a value)	0 - 31.5 inches	00-80 cm	45
27	Motor direction <sup>9</sup>		A/b	b
28	Number of operator cycles performed x 10 000		00-99	00
29	Number of operator cycles performed x 100		00-99	00
30	Change of PIN code <sup>10</sup>		A/b (no/yes)	A
98	Run program <sup>11</sup>		01-06	02
	Copying and transferring of values between operators <sup>10</sup>		96-99	–
99	System tests <sup>12</sup>		01-07	–

\*) Values factory pre-programmed into the control unit.

1) See monitoring of activation units, pages ##.

2) See emergency units pages ##-##. If emergency unit is not installed, select value A.

3) See program selectors, page ##.

**Note! Value 00 for function 18 gives permanent partial opening.**

4) Value 00 = Function 98

Value 05 = Function 98 + 1

Value 10 = Function 98 + 2

Value 15 = Function 98 + 3

Value 20 = Function 98 + 4

**Note! Max. performance can never exceed the performance valid for run program 98/06.**

5) Value 00 = Used when lock is not installed.

Value 01 = Used for ELD/ELDP.

Value 02-60 = Opening delay (<sup>2</sup> 0,1-3 seconds).

6) Always press the reset button R after changing.

7) With this function a hold force can be selected that holds the door with a certain force in closed position.

8) See "Interlocking," page 62.

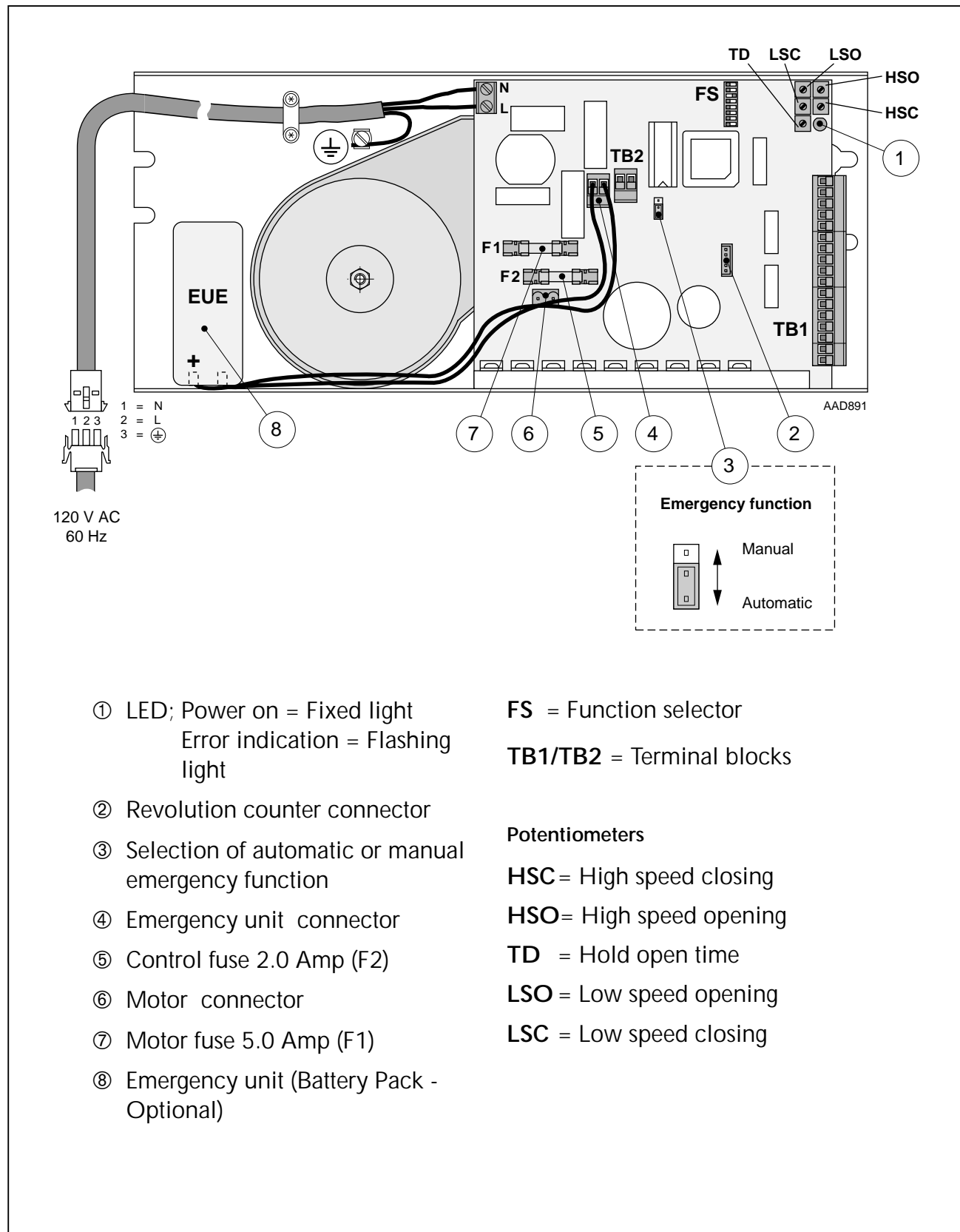
9) Always press the reset button R after changing the direction of rotation.

10) See PMD manual.

11) Pre-programmed basic values for 6 different run programs can be selected (see PMD manual).

12) See "Troubleshooting" or PMD manual.

# Control Unit – CUJ-9 (CUJ-9S)



# Troubleshooting

## Overview of Structured Troubleshooting

When troubleshooting a complex system where the source of the problem is not readily apparent, break the problem down into component subsystems, such as the door panels, pivot guides, tooth belt assembly, and so on.

### 1. Mechanical checking and remedies

Disconnect the main power and the transmission rods. Pull the door leaf manually and check that the door can be easily moved over the complete sliding track/floor guide. If the door leaf stops or is hard to move, the reason may be sand, stones, rubbish etc. in the floor guide. The door leaf may also be jamming on the floor or on the weather stripping. Clean the floor guide, adjust the door leaf height/depth or take other necessary measures until the door leaf is running smoothly when manually operated.

Motion and presence sensors are in reality switches and are either on or off. Check each sensor for proper voltage and check output at the control box for a switch change when tested\*. Likewise, test any door panel breakout switches and the six-position program switch, if used.

\* Test motion sensors by walking. Test presence sensors with a trash can or similar object in the sensor zone.

### 2. Error indication on CUD-9 or CUJ-9 control

During normal operation the light emitting diode (LED) on the control unit is illuminated. A flashing light on the LED or an extinguished LED indicates that the operator is out of function.

Flash frequency	Reason	Remedy
2 flashes/sec.	EUE defective.	1. Replace EUE.
1 flash/sec.	Overspeed detected during closing.	1. Reset the operator with the program selector PS-6 or 2. Switch off the power, wait 60 s, switch on the power. 3. Make sure "C" switch distance (Func. 26) has been selected.
1 flash every two sec.	The operator is powered by the EUE (main power failure). The LED will normally extinguish after 60 sec.	1. Restore the main power. 2. If the LED keeps on flashing, check the motor fuse (F1).
The LED is extinguished.	1. Program selector is set to the "Reset" position. 2. Main power failure. 3. Control fuse (F2) defective.	1. Set the program selector to correct position. 2. Restore the main power. 3. Check the control fuse (F2).

# Troubleshooting

## 3. PMD as a troubleshooting tool

Connect the main power.

### Symptom

### Remedies

No lights on the PMD-display.

Check the mains power and fuses (F1, F2).

## 4. Check if any error code is flashing on the PMD display

If the operator does not function properly depending on any of the reasons below, an error code will be flashing on the PMD display. If more than one reason for the malfunction is found, the highest code will be displayed. After remedy the second highest code will be displayed, etc.

**Note! Before replacement disconnect the mains power and all necessary plugs.**

Reason	Error code (value)	Remedies
Door opened without impulse	- - 50 flashing	Check why the door moved (e.g., door opened manually)
Presence/Stop detection unit defective	- - 51 flashing	Check safety systems and breakout switches
Electronic emergency unit EUE defective	- - 53 flashing	Replace EUE
Mechanical emergency unit ME defective	- - 54 flashing	Check the emergency unit ME / Set emergency function switch to auto
Motor direction error	- - 55 flashing	Replace the control unit or motor / Check motor leads
Control unit defective	- - 56 flashing	Replace the control unit
Overspeed detection	- - 57 flashing	Reset the operator (check function 26 for value other than 00)
Programming module PMD defective	- - 69 flashing	Replace the PMD
Communication error PMD ↔ CUD9	- - 70 flashing	Check the connections
PMD access denied	- - 71 flashing	Return the PMD to be updated; try another PMD

# Troubleshooting

## 5. Check the status code on the PMD display

The PMD display continuously shows the following status codes during the operation. These status codes are not error codes but show the present active impulse. If any of the status codes is constantly displayed the corresponding unit has to be checked and if necessary remedied or replaced. Always press the **reset** button **R** after remedy/ replacement.

Status code (value)	Status	Remedies
- - on	Operation OK	—
- - 10	Search cycle running (open/close)	Let the door finish its cycle
- - 11	Inner impulse is active	Check the impulse input
- - 12	Outer impulse is active	Check the impulse input
- - 14	Key impulse is active	Check the impulse input
- - 16	Interlocking impulse is active	Check the connections
- - 17	Presence impulse -1 is active	1. Check that correct photocell type is selected on the PMD, function 09 2. Check the photocells or Eye-Cues
- - 18	Presence impulse -2 is active	Same as 17 above
- - 21	Stop impulse is active	1. Check that correct photocell type is selected on the PMD, function 09 2. Check breakout switch function
- - 24	EUE active	Check the mains power, fuses and CUD9
- - 27	Door blocked	Check for obstacles or increase run program

# Troubleshooting

6. After remedy or replacement the operator has to be checked as follows:

1. Study the door movement and adjust the functions to the values required for a smooth door operation.
2. Check that correct functions and values have been selected for the accessories to be installed and that the installation complies with valid regulations and requirements from the authorities.
3. A direct selection system test (function 99) can be carried out on some of the units stated in the table below.

7. PMD/System test codes (function 99)

Make sure that correct parameters are selected for the unit to be tested. See **Function/Value** in the table.

Select function **99** and any of the values **01-07** on the PMD. Press the program button **P** and the test corresponding to the selected value will be performed. If the test is unsuccessful an error code will be flashing on the PMD-display.

Value	Test of	Error code	Function/Value
01	Presence/Stop detection units	51 flashing	09/b
02	Not used	—	—
03	Electronic emergency unit EUE	53 flashing	12/A, 13/b
04	Mechanical emergency unit ME	54 flashing	12/b, 13/b
05	Not used	—	
06	Motor, visual test <sup>1)</sup>	—	
07	Revolution counter <sup>1)</sup>	57 flashing	

<sup>1)</sup> Close and unlock the door(s) before commencing the test. The motor runs approx. 1 second in the opening direction and then closes the door(s) again.

If problem still cannot be diagnosed and fixed, please refer to the detailed step guide on the following page.