EASY 1/3/6
SERVICE MANUAL

EASY •START

Indhold:

1. Setup

Machine menu

In this menu, set the terminal up to the machinery it needs to control, change the location ID and view statistics. Machine menu is for laundry installer

Use **Machine-card** to get access to the Machine menu.

A menu item is selected by moving the cursor (>) using the arrow keys (machine # 1 key = up, machine # 3 key = down). When the cursor is next to the desired item, press the OK / ENTER (machine # 2 key). You will leave the menu if you take out the card or by timeout 5 seconds after last keystroke.

Note: the setup for a Easy1 is like the Easy3, but without choice of machine no.

Menu listing

Menu Item	Short description
SERVICE MENU	*Go to the Service menu*
TOTAL COUNTERS	*Read out consumption of each machine*
MACHINE TYPE	*Setup of machine types*
PULSE TIME	*Set pulse length (50ms steps)*
PULSE PAUSE	*Set pulse pause (50ms steps)*
OPTO LEVEL	*Set the level of the feedback signals from washing machines*
PLACE ID	*Chance the Place ID (customer code)*
SYSTEM ID	*Chance the System ID (don't change it)*

Service menu

Choose this item to get the **Service** menu

Total counters

There are 2 types of counters - DAY COUNTER and TOTAL COUNTER. Only TOTAL COUNTER is showing here. For each machine you can readout:
• Total sale
• Running time (minutes) (dryers)
• Number of starts

Items in Total counters:
#1 (KR):   Total sales for machine #1.
#1 (MIN):   No. of minutes machine #1 has been used.
#1 (STK):   No. of starts for machine #1**.**
#2 (KR):   Total sales for machine #2.
#2 (MIN):   No. of minutes machine #2 has been used.
#2 (STK):   No. of starts for machine #2**.**
#3 (KR):   Total sales for machine #3.
#3 (MIN):   No. of minutes machine #3 has been used.
#3 (STK):   No. of starts for machine #3**.**
(The number of machines is equal with the model of the payment system - 3 for Easy3 and 6 for Easy6)

Switching between the lines by pressing any key. (The menu will time out after 15 sec.)
At the bottom you can read out the amount there have been loaded to user cards by the Update Card function.

At the end you will be asked: | **RESET COUNTERS?** |

If you press OK within 5 sec. the DAY <u>and</u> TOTAL COUNTERS will be reset.

Machine type

The type of the machines must selected here.

Select this menu and you will be asked:

#1, #2, #3, (#4, #5 or #6?)

(The number of machines is equal with the model of the payment system - 3 for Easy3 and 6 for Easy6)

Press on the machine #1 button for chosen machine #1, Press machine #2 for the machine #2 etc.

The machine type changes by pressing the up or down button, pres OK for selection the showing machine type. The menu will time out 5 sec. after last key stroke.

The following description tells witch relays and opto feedback there are you at each machine.

Easy3:

Machine type	Description	Machine #1 1.relay	Machine #1 2.relay	Machine #1 opto input	Machine #2 1.relay	Machine #2 2.relay	Machine #2 opto input	Machine #3 1.relay	Machine #3 2.relay	Machine #3 opto input
None	No machine connected	0	0	0	0	0	0	0	0	0
Wash	Washing machine with a feedback signal	1	0	1	2	0	2	3	0	3
TIME-CRTL	All time controlled machines e.g. dryers (Use 1 relay only)	1	0	0	2	0	0	3	0	0
MOTOR/COOL	Dryers with cooling controlled by a 2. relay.	1	2	0	3	4	0	5	6	0

Easy6:
Machine no. uses same relay no. and opto no. E.g. Relay/Opto1 to machine 1, Relay/Opto2 to machine2 etc.
The type MOTOR/COOL can only be used if you have free relays left, that means less than 6 machines need be connected to the Easy6. If you have to connect more than 3 washing machines to the Easy 6 then you need a special Expander print board with additional opto inputs (Normally only 3 are available)

Pulse time

If a machine require pulse to start the machine, you can set the pulse length in 50mS steps (0= no pulse).

Select this menu and you will be asked:

#1, #2, #3, (#4, #5 or #6?)

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

The time increases by pushing on the UP button (the machine #1 button) and decreases on the Down button (the machine #3 button).
Select the time length you want by the clicking on the OK button (the machine #2 button).
The menu will time out 5 sec. after the last key stoke.

Pulse pause

If pulse time is used you can set the pause between the pulses (relevant at dryers there may get more than one pulse (1 pulse= 1 time period) The pause is set in intervals of 50ms.

Select this menu and you will be asked: | **#1, #2, #3, (#4, #5 or #6?)** |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

The time increases by pushing on the UP button (the machine #1 button) and decreases on the Down button (the machine #3 button).
Select the time length you want by the clicking on the OK button (the machine #2 button).
The menu will time out 5 sec. after the last key stoke.

OPTO Level

OPTO Level indicates whether the machine is busy or ready to use (washing machines only)
Chose HIGH if the machine gives a high feedback signal to the opto input when it's busy (>12V.)
Chose LOW if the machine gives a LOW signal to the opto input when it is busy (<10V.)

Select this menu and you will be asked: | **#1, #2, #3, (#4, #5 or #6?)** |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

You toggle the between HIGH and LOW by the up and down buttons.

OPTO LEVEL:	Voltage at inputs (Opto)	
	0-10V (inactive)	**12-24V (aktive)**
HIGH	Machine **READY** (to buy)	Machine **active** (busy)
LOW	Machine **active** (busy)	Machine **READY** (to buy)

Select the level you want by the clicking on the OK button (the machine #2 button).
The menu will time out 5 sec. after the last key stoke.

Place ID

Each customer are given an unique ID on four digits. This place ID are programmed on the users chip card as well. Therefore the users can only be using laundries they are allowed to.

The place ID can be changed by the up and down buttons - The OK button steps on digit forward.

System ID

Don't change this code, normally it is the code for the Laundry installers cards.

2. Service menu

In the Service menu you can start and stop machines, open and close machines, set prices and opening hours. The Laundry owner can access this menu by a SERVICE CARD.

Access

Use either **SERVICE** or **MASKIN**-card to get access to the service menu.

A menu item is selected by moving the cursor (>) using the arrow keys (machine # 1 key = up, machine # 3 key = down). When the cursor is next to the desired item, press the OK / ENTER (machine # 2 key).
You will leave the menu if you take out the card or by timeout 5 seconds after last keystroke.

Menu description

Menu item	Short description	Default
TRANSFER AMOUNT	*ADD amount to user cards*	
START/STOP MACH	*Start or stop of a machine*	
OPEN/CLOSE MACH.	*Open or Close a machine (Close= you can't buy it)*	*Open*
COUNTERS	*Read out how much a machine have been used*	
PRICES	*Set Prices for each machine*	*1 kr.*
TIME (1)	*The Period time for dryers and "time to start" on washing machines*	*1 min*
TIME (2)	*Cooling time for MOTOR/COOL machines only*	*0*
Opening hours	*Set Opening hours*	
CLOCK	*Set clock*	
SHOW CLOCK	*Show clock in display*	*On*

Update card

With this option you can add an amount to one or more chip cards.

The last added amount will be showing when e.g. 100kr.:
ADD: 100

The amount increases / decreases by the up and down buttons, press OK when you have set the right amount.

The Display will show:
INSERT USER CARD

Remove the service-card and insert the user card you want to add the amount on.
The following example tells you insert a card with 48 kr. left and now with the added amount the new balance is 148 kr.
48 NOW: 148

The user card is now updated and you can take the card.

The Display will show
INSERT USER CARD

The system is ready to update an another card. If you don't have other cards to update you leave this menu by pushing the up or down button. The menu will time out after 15 sec.

Start / STOP mach.

Machines can manually by started or stopped.

Select this menu and you will be asked: | **#1, #2, #3, (#4, #5 or #6?)** |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

You toggle between START and STOP by the Up and Down buttons.

You leave the menu by pressing OK or 5 sec. after last key stroke.

OPEN/CLOSE MACH.

It is possible to close one or more machines. A closed machine can't be bought by users

Select this menu and you will be asked: | **#1, #2, #3, (#4, #5 or #6?)** |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

You toggle between OPEN and CLOSE by the Up and Down buttons.

You leave the menu by pressing OK or 5 sec. after last key stroke.

Counters

There're r 2 types of counters - DAY COUNTER and TOTAL COUNTER. Only DAY COUNTER is showing here.
For each machine you can readout:
• Total sale
• Running time (minutes) (dryers)
• Number of starts

Items in Total counters:
#1 (KR):	Total sales for machine #1.
#1 (MIN):	No. of minutes machine #1 has been used.
#1 (STK):	No. of starts for machine #1.
#2 (KR):	Total sales for machine #2.
#2 (MIN):	No. of minutes machine #2 has been used.
#2 (STK):	No. of starts for machine #2.
#3 (KR):	Total sales for machine #3.
#3 (MIN):	No. of minutes machine #3 has been used.
#3 (STK):	No. of starts for machine #3.

(The number of machines is equal with the model of the payment system - 3 for Easy3 and 6 for Easy6)

Switching between the lines by pressing any key. (The menu will time out after 15 sec.)
At the bottom you can read out the amount there have been loaded to user cards by the transfer amount function.

PRICES

Setup the price for each machine
(at time controlled machine it is the price for each period e.g. 5kr. for a period of 10min. on a dryer).

Select this menu and you will be asked: | #1, #2, #3, (#4, #5 or #6?) |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

Increase the machine price by the UP button and decrease the machine price by the DOWN button.
You leave the menu by pressing OK or 5 sec. after last key stroke.

TIME (1)

This is the Period time for a Time controlled machine e.g. 10 min. and for Washing machines it is the time there shows the machine as busy whatever the machine is started or not. Normally set to 10-15 min.
With other words the users gets 10 to 15 min. to hit the start button on the washing machine.

Select this menu and you will be asked: | #1, #2, #3, (#4, #5 or #6?) |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

Increase the time by the UP button and decrease the time by the DOWN button.
You leave the menu by pressing OK or 5 sec. after last key stroke.

Time (2)

This the cooling time for **MOTOR/COOL** machines ONLY (dryers there can't control its cooling by itself).
Normally 2-3 min.

Select this menu and you will be asked: | #1, #2, #3, (#4, #5 or #6?) |

Press on the machine #1 button for machine #1 , press on the machine #2 button for machine #2 etc.

Increase the time by the UP button and decrease the time by the DOWN button.
You leave the menu by pressing OK or 5 sec. after last key stroke.

CLOCK
Setting the clock by the UP or Down buttons

Openings hours
Set the Opening and closing time for the laundry for each day in the week

Delay
Only used in a special version of a Easy 6.
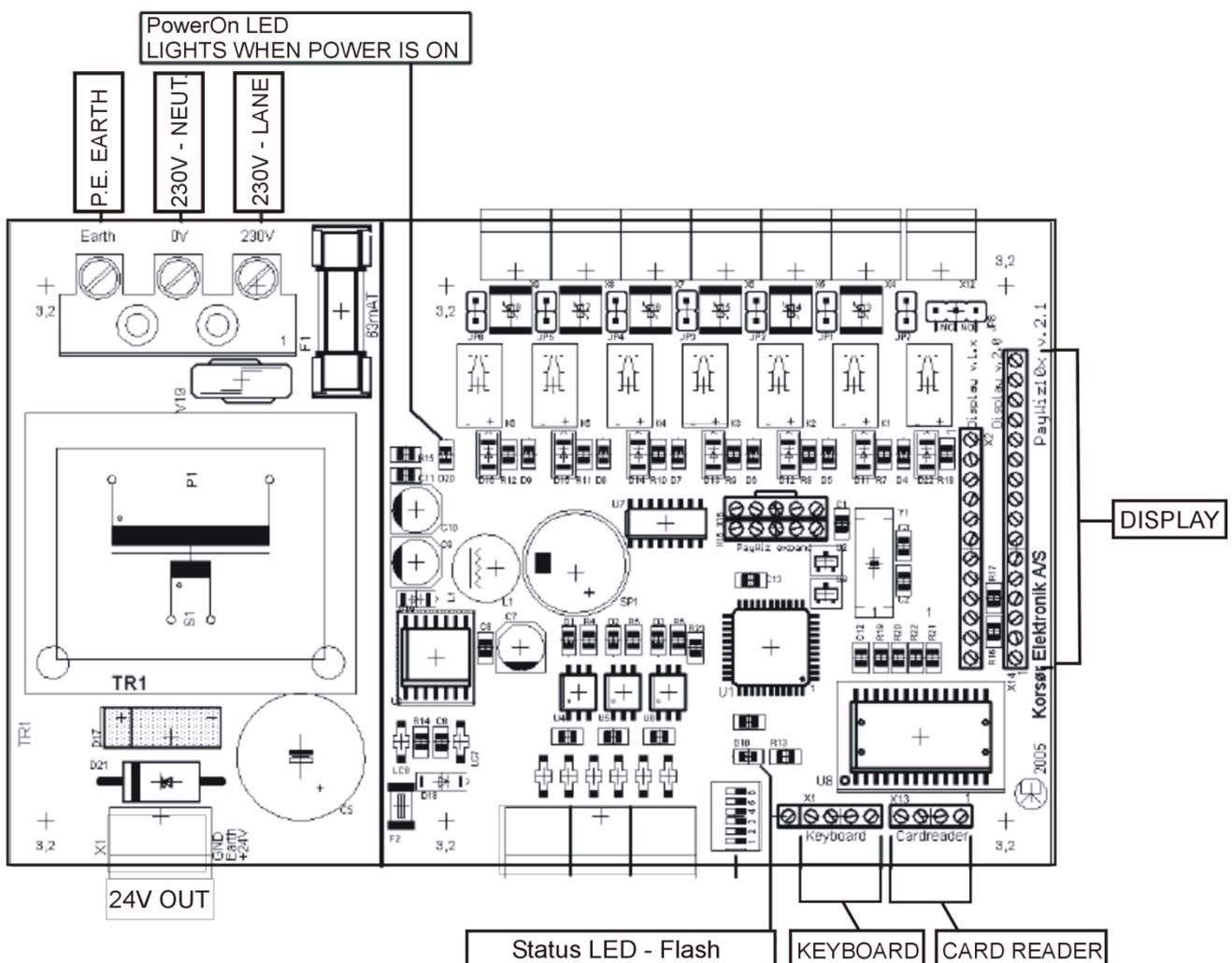
3. Hardware

Power supply

Voltage :   230vac + jord
Power consumption: 5Watt

Front
Display must be connected to X14
Card reader must be connected to X13
Keyboard must be connected to X1

Note:
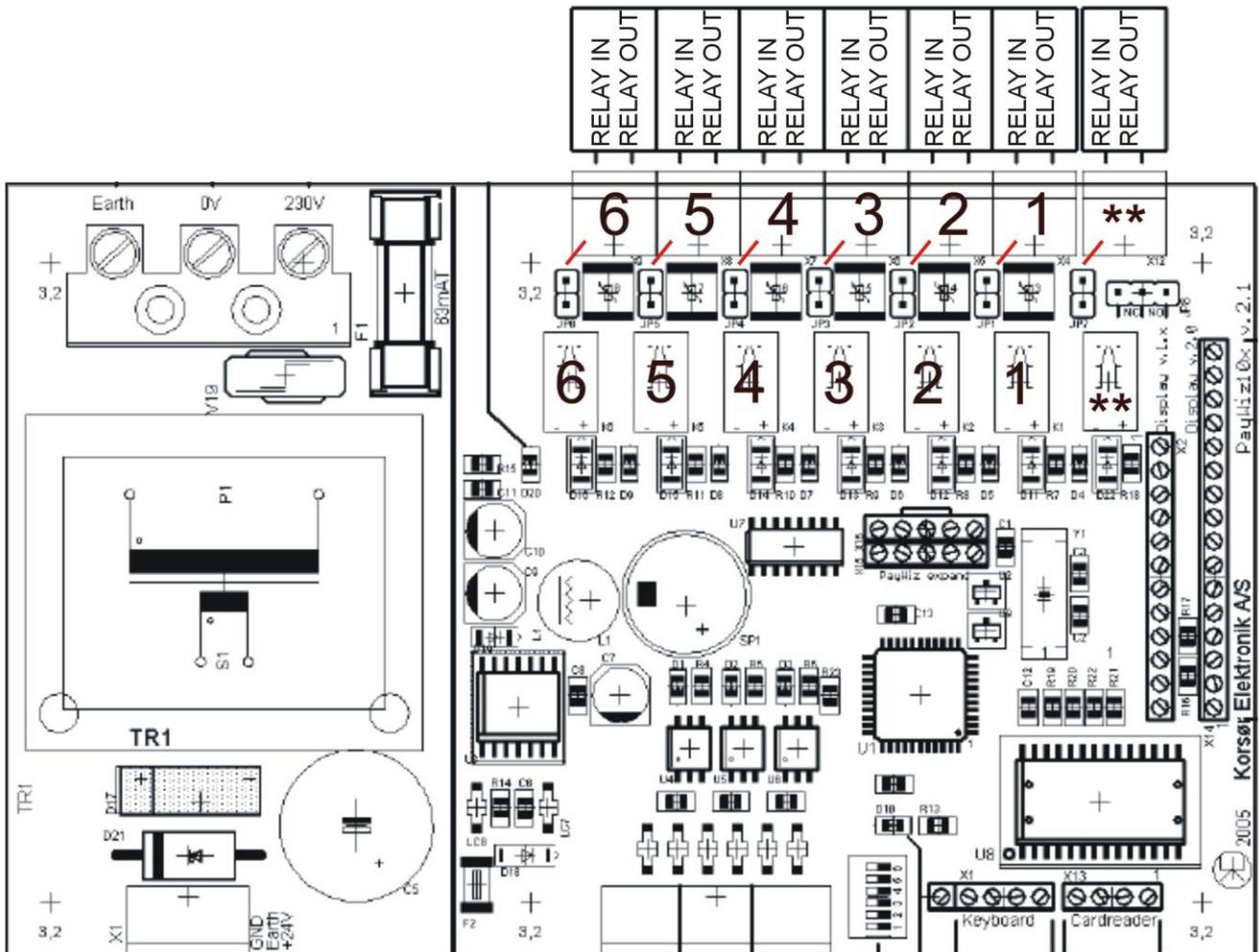The two marks on the white connectors from display and card reader <u>MUST</u> turn into the middle of the print board. (see illustration on the last page)

Relay output

Each relay have two terminals, Relay out (NO) and Relay IN (C).
If the relays JUMPER is mounted, there will be set 24V. to its Relay In terminal.
If the relays JUMPER is removed you can connect your own power to Relay In.
Jumper JP1 is for Relay1, JP2 is for Relay2 etc..
Each relay have a LED indication the lights up when rely is "on".

The power limits for the relays are max: 30V/1A/30W (NOT 230V. !!)
If you use the internal power supply for the relays (JP1-JP6 on) you can max. draw 33,33mA per relay or total 200mA.

**)
This relay follow the EASY 3/6 opening time and can be used to activate e.g. light in the laundry.
When the laundry is open the relay will be "ON" when the laundry is closes, the Relay will be "OFF"
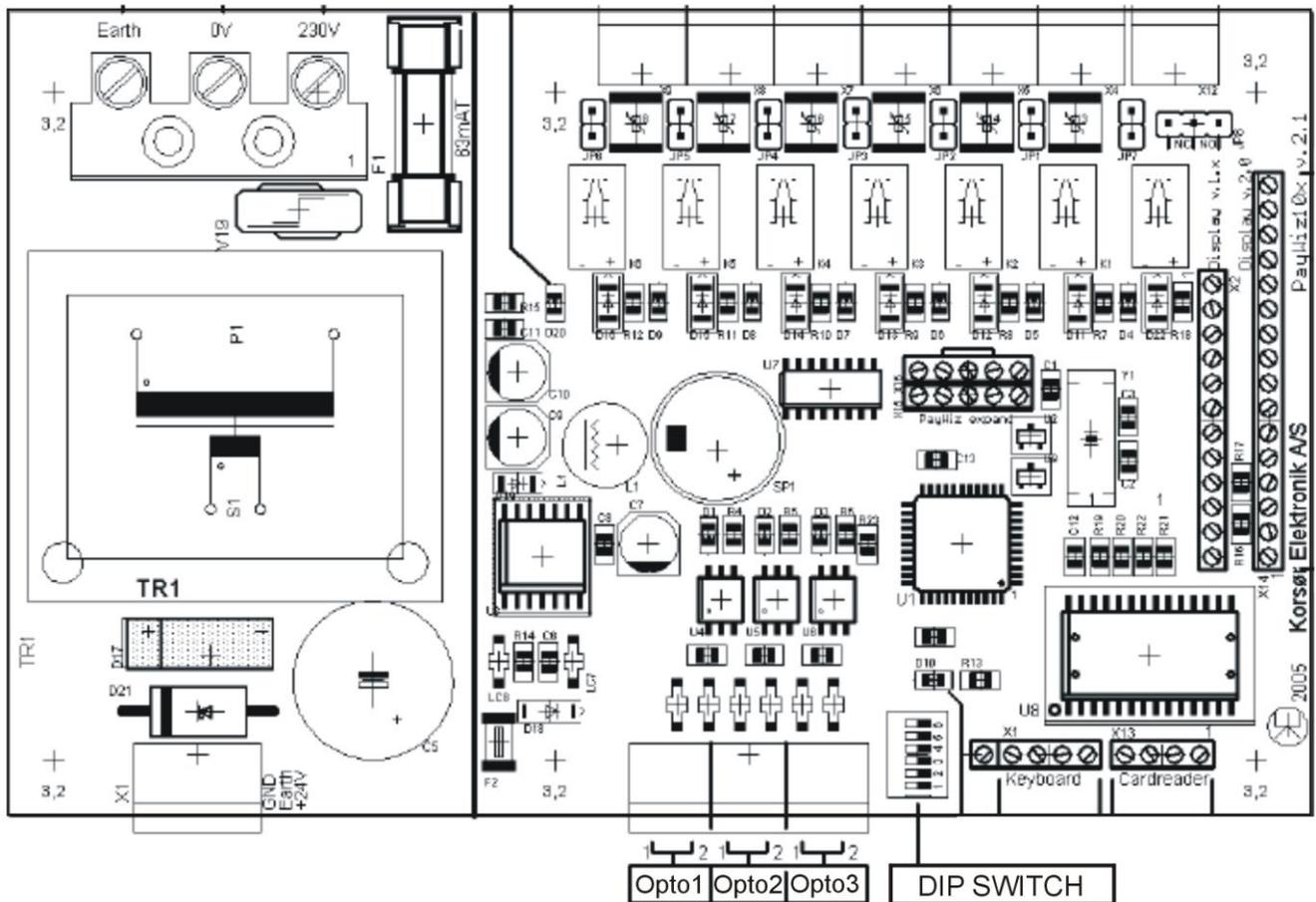By the JP8 you can set relay function NC or NO (Normally closed / Normally OPEN).

Opto input

Opto input 1 uses terminal pin 1(+) and 2(-) on connector X3, Opto 2 uses pin 3(+) and 4(-), Opto 3 uses pin 5(+) and 6(-).

Opto inputs need 12-30VDC to get activated.
Opto length must be >100mS.
Each opto input have a LED indication, it light up when 12-30V connected to the input.

S1 (6pol. Dip switch) can set GND on each opto inputs pin 2 (X3 pin 2,4 og 6), that can save wiring.

Dipswitch contact 1 set GND to OPTO 1 pin2 (X3 pin2)
Dipswitch contact 2 set GND to OPTO 2 pin2 (X3 pin4)
Dipswitch contact 3 set GND to OPTO 3 pin2 (X3 pin6)
Contact 4,5 og 6 are not used

Note!
When dipswitches is used you may NOT connect any wires to the terminalt on X3 pin 2,4 or 6.

The two marks on the white connectors from display and card reader <u>MUST</u> turn into the middle of the print board.