

PCB current detection:

For the operation of this circuit I refer to an article as published in Modelspoormagazine [MSM 00-00 Stroomdetectie VKJ4 TC4 LD-DEF.pdf](#) (Dutch)

Different types of Si diodes can be used on this PCB. 1A diodes 1N4007 or 3A diodes 1N5408, others are also possible.

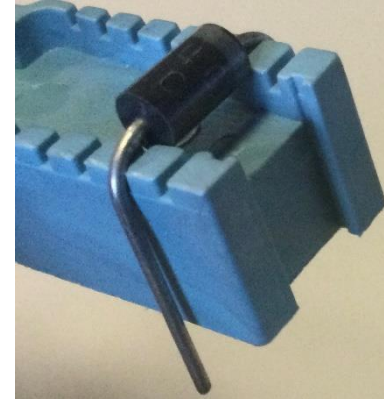
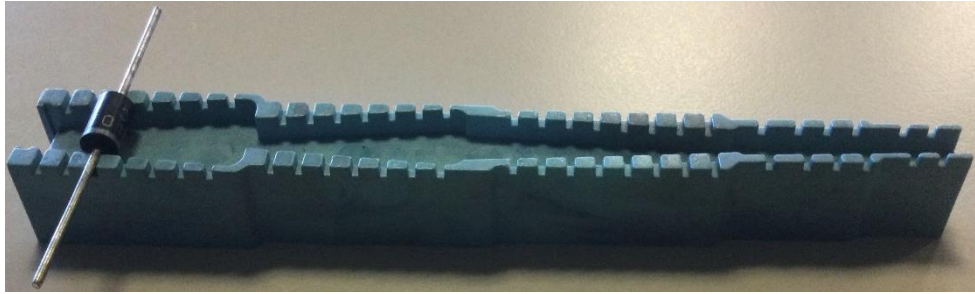
The layout of the PCB current detection has been slightly changed to also accommodate diodes up to 3A (the first version **had** holes that were too small for the wires of these 3A diodes)

There are several options to link this current detection with LocoNet feedbacks or S88 feedbacks.

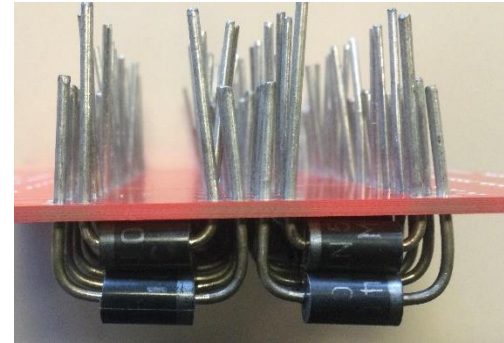
The connection to the tracks to be detected are grouped per 4. Here, too, you can choose which connector type you place on the PCB. (pitch=3,81mm)

Tips for building the PCB:

There are handy tools available for bending the diodes nicely.



To make soldering the diodes easier, I have found that the 4 diodes per circuit are already inserted through the PCB before soldering it.



Since most of the components are in line, you can temporarily tape them down before soldering the components.



Cost price PCB (apr 2021):

PCB: 1,77€ (10 pcs. 17,72€)

R 16x 0.0148 = 0,23€

IC ILQ620 4x0,284 = 1,14€

Connector 9pin 2,54 female 90° 2x0.11 = 0.22€

Connector 5pin 3,81mm 4x0.335 = 1,34€

Diode 1N4007 64x0,00674= 0,431€

Total: 5,131€

Option IC socket 16pin 4x0,2 = 0,8€

Option Diode 1N5408 64x0,04= 2,56€