



Electrical Point heating systems

Turnout heating for depot switches



Principle of point heating solution for depots

Principle of solution:

Temperature controlled, simple to operate; also equipped with a possibility for manual switching-on of the heating;

Temperature control will provide only heating when it is needed. No unnecessary heating, providing energy cost savings. But in case of winter weather conditions it will ensure that the switch will never block due to snow or ice;

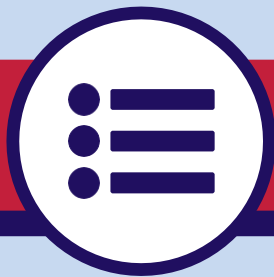
All systems are equal and are easy to install;

In contrary to large systems providing heating for >20 switches, the investment to be done in cabling is low because the systems can be installed close to the turnouts, reducing cabling;

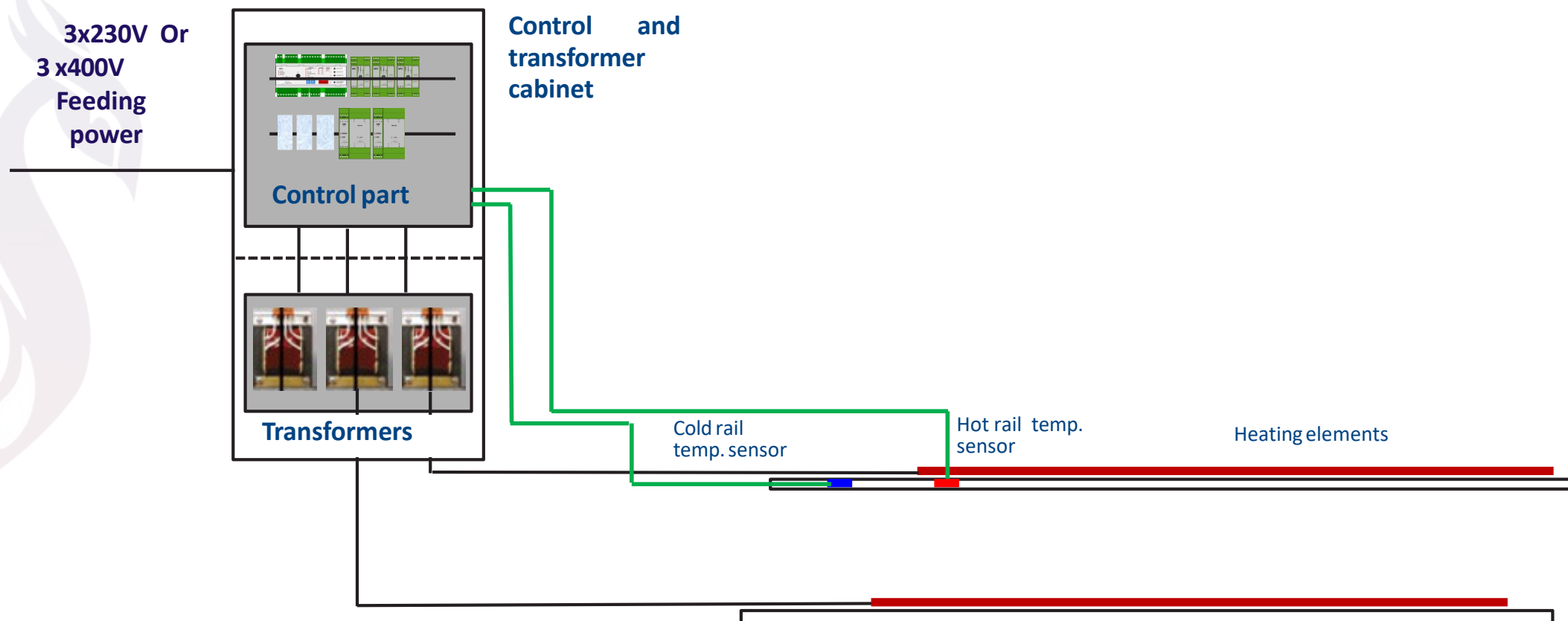
Low investment in equipment required compared to large systems;

System capacity: heating for 1 up to 6 turnouts of 3000 Watt/turnout per system; Safety: heating elements are galvanically separated from the control cabinet; Combined control and transformer cabinet;

System has been delivered to Norway for 1 turnout per system. The system has been made usable for the UK for 1 to 6 turnouts per system



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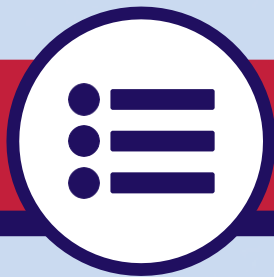


Solution is based on:

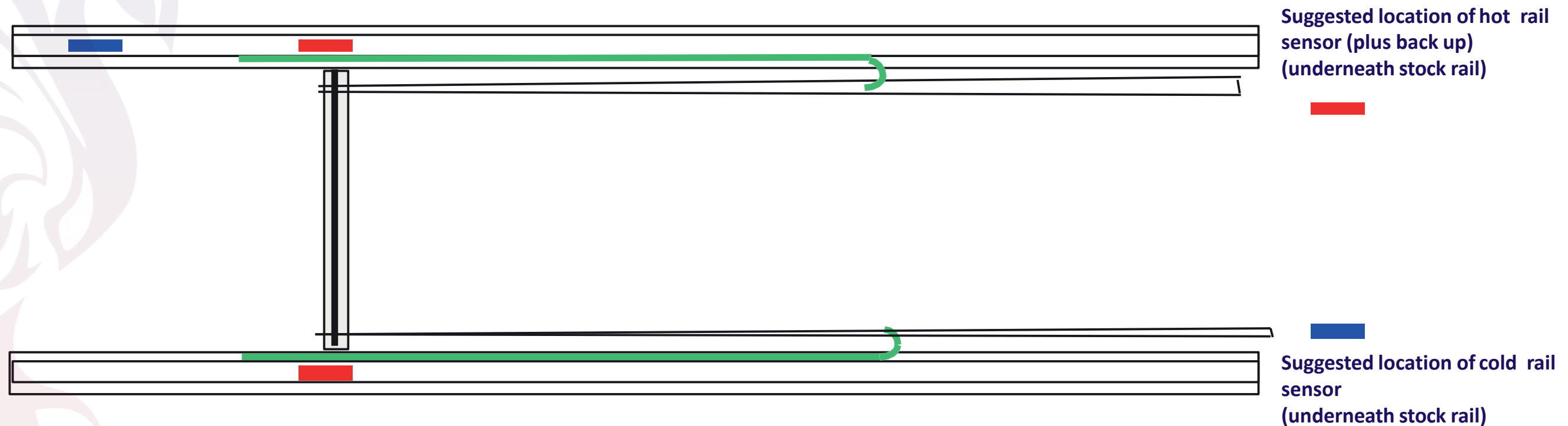
Heating element mounted on the stock rail;

The temperature of the rail is controlled by temperature control only. The outdoor temperature is measured on the rail with a cold temperature sensor. If a low temperature is reached, the heating will start and will heat the rail until the rail has reached a pre-set value, usually +7 degrees Celsius.

This temperature is measured with a hot rail temperature sensor that is mounted on the stock rail of the turnout. The hot rail temperature sensor is duplicated.



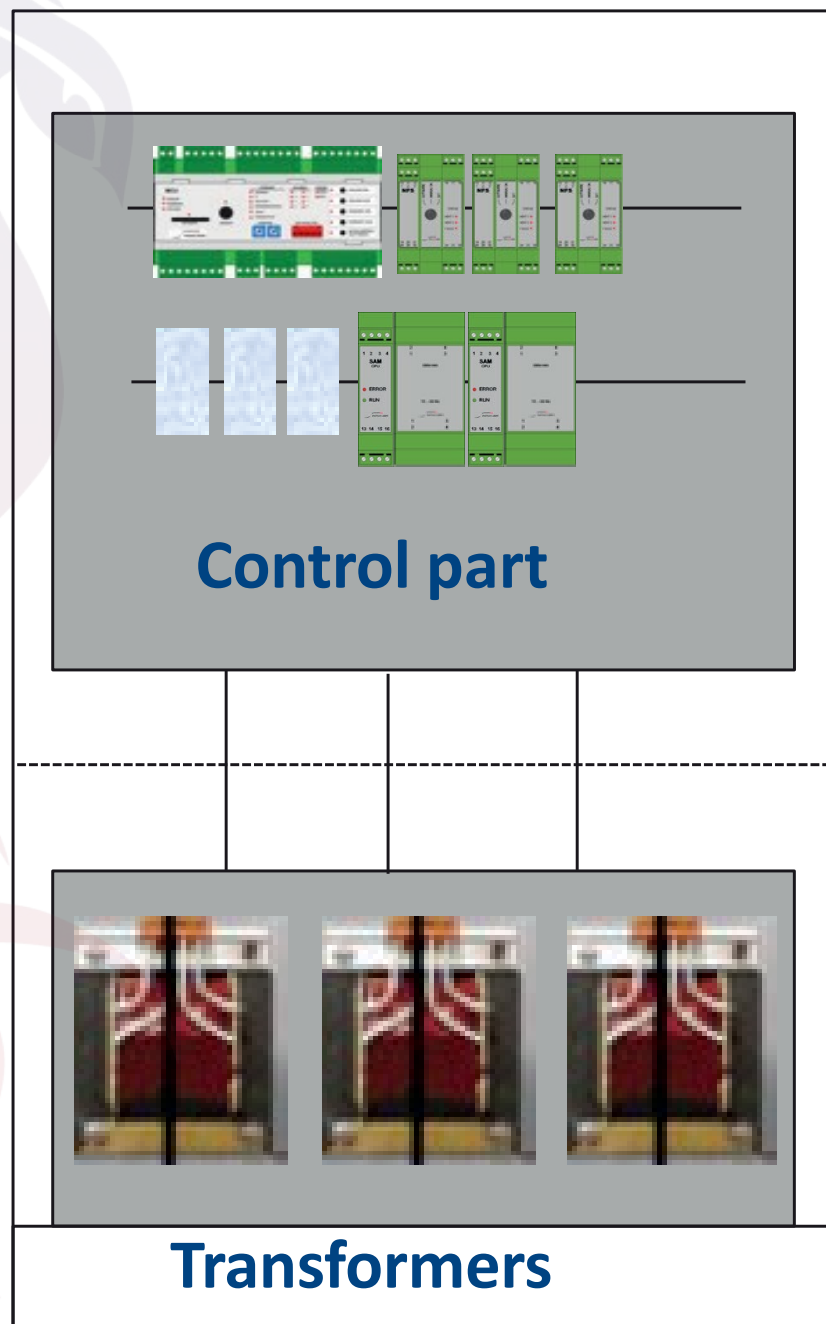
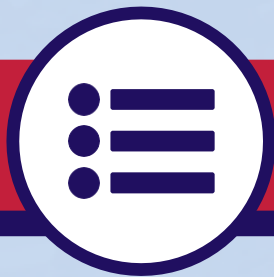
Proposed heating configuration for depot turnouts in moderate climates



Solution:

Heating with 300Watt/meter with 2 x heating elements of 5000 mm. Total heating per turnout is $2 \times 1500 \text{ W} = 3000 \text{ Watt}$. It should be checked if this heating element will fit on the stock rail.

No heating of the tongue, is not needed.



Configurations:

Configuration A:

Control part plus 1 x 6kVA transformer to be used for 1-2 turnouts of 3 kW/turnout

Configuration B:

Control part plus 2 x 6kVA transformer to be used for 3-4 turnouts of 3 kW/turnout

Configuration C:

Control part plus 3 x 6kVA transformer to be used for 5-6 turnouts of 3 kW/turnout

How simple can it be?