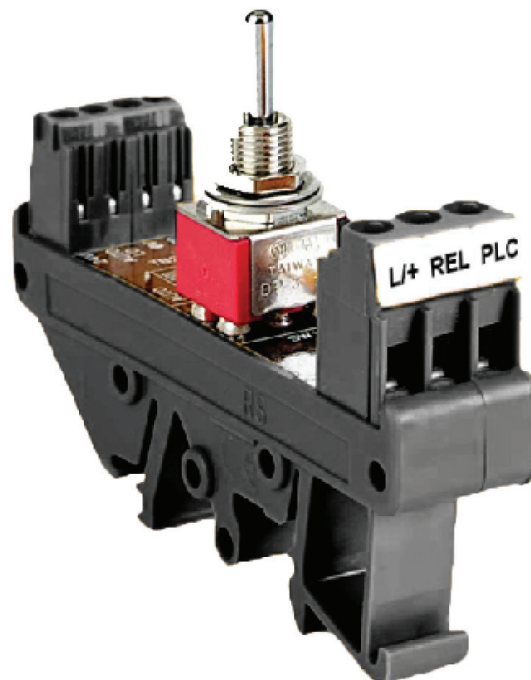# Emphatec SigNext® - On-Off-Auto Switch Module
Application Note

In applications where it is necessary or desirable to be able to operate a system when the PLC or DCS that normally controls it is not working it is common to use specialty On-Off-Auto ("1-0-A") relays or panel mounted selector switches in conjunction with standard relays or contactors. The specialty relays have the selector switch built-in while the panel mounted switches make access easier (not always a good thing!) but require more installation time and material.
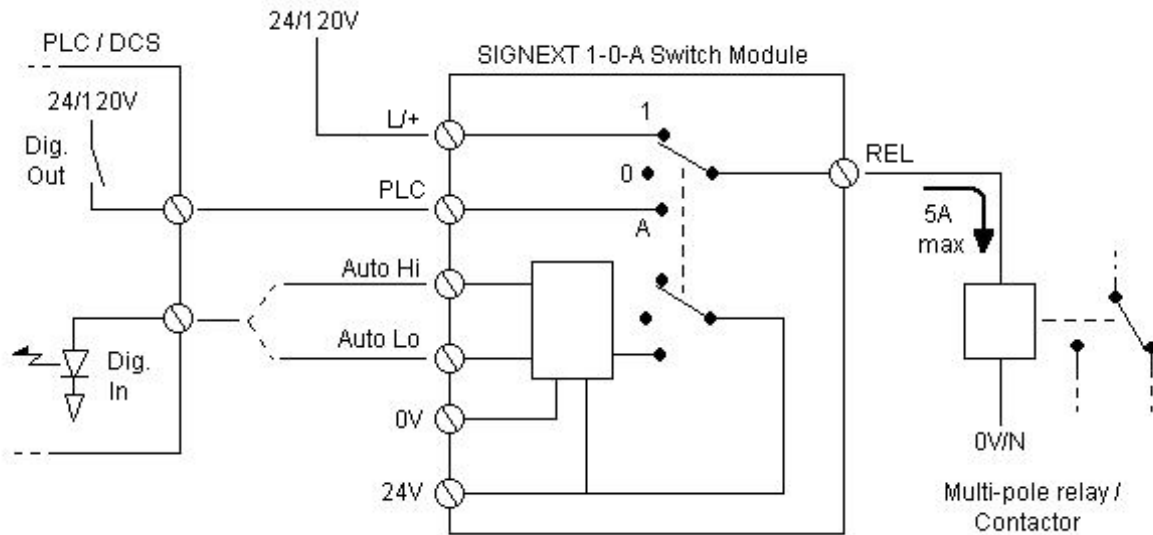
Incorporating the 1-0-A switch into a relay module saves space and wiring but also limits the user's flexibility – not every relay or contactor is available with a built-in 1-0-A switch (Emphatec does offer one such relay module). Emphatec addresses this issue with the Emphatec SigNext® - On-Off-Auto Switch Module. It is a DIN rail mounted 3 position switch that can be used with any relay or contactor with a coil rated up to 120Vac, 5A.

#330221

A unique feature offered by the Emphatec SigNext® - On-Off-Auto Switch Module is a pair of digital status outputs that indicate the position of the switch. These are intended to interface to the PLC or DCS to indicate whether the relay is connected to the controller ("auto / "A" mode) or not ("on / 1" or "off / 0" mode). All that is needed is a digital input on the controller. The status outputs are rated 24Vdc and are electrically isolated from the relay coil voltage.

wo status outputs are provided – one is high (24Vdc) when the switch is in the "A" position ("Auto Hi") and the other is high when the switch is in the "1" or "0" position ("Auto Lo"). The status of these outputs toggle when the switch position is changed. This gives the user the flexibility to choose the logic that works best for their application. Of course, the use of the status outputs is optional. Figure 1 shows the connections between the SIGNEXT® - On-Off-Auto Switch Module, the relay and the PLC/ DCS.

Switch Position	Auto Hi	Auto Lo
On / 1	0V	24V
Off / 0	0V	24V
Auto / A	24Vdc	0V

The Emphatec SigNext® - On-Off-Auto Switch Module requires just 16.2mm of DIN rail and mounts on both 32mm and 35mm rails. The relay and status output terminals are on opposite ends of the module to clearly indicate the separation between the two circuits.

The Emphatec SigNext® - On-Off-Auto Switch Module is cULus Llisted.