What's different

When we approached offering an alternative to the Boon 10904 circuit board, we set about to solve some of its short comings. After all we did design the MCB 5.0 board for Tomsed which Boon based the 10904 board on. They have just too many parts with high degree of failure. At least that's what their customers tell us.

The objective was to meet the 99+ percentile of user's needs. That meant the serial port interface option had to go. We kept the pulse option but very few need it and the timer, formally an option, is always active. So, a mess of jumpers comes down to one. There is now only one fuse and it is a 5x20 mm type rather than the hard-to-find 5x15mm 2AG type on the 10904. The screw terminals have been changed to the rising clamp type rather than soft leaf type where the wires get stuck.

5 meaningful LEDs White – power on, Yellow – card reader closure, Green – timer circuit controlling the output, Red – key switch override controlling the output, Blue – reset microswitch active.

We have added an option to select whether the reset rotation switch is normally open or normally closed. Legacy design uses normally closed but normally open is the preferred way to go simplifying troubleshooting. If your unit uses microswitches then it can simply be made to operate normally open. We recommend that highly. We've included both IC chips (U5) to enable either.

We have eliminated the fail-safe/fail-lock selector plug in lieu of wiring directly to the terminal board. That means that the wire that formally went to terminal 5 will now go to terminal S or L depending on operation. In addition, we have kept the order of terminated wires the same making changeover easy.

Finally, we are using through-hole components rather than surface mount making it repairable rather than throw away.

Please be aware that because a single transformer is used for both boards, each board creates its own DC and those circuits should never be mixed to avoid back feeding a failed board or defective solenoid. Similarly, the TCB 904 has the same caution. In addition, the 10904 uses positive switching and the TCB 904 uses negative switching (preferred). If your control box has one of each board, take particular care concerning mixed circuits.