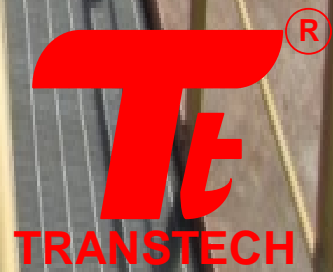
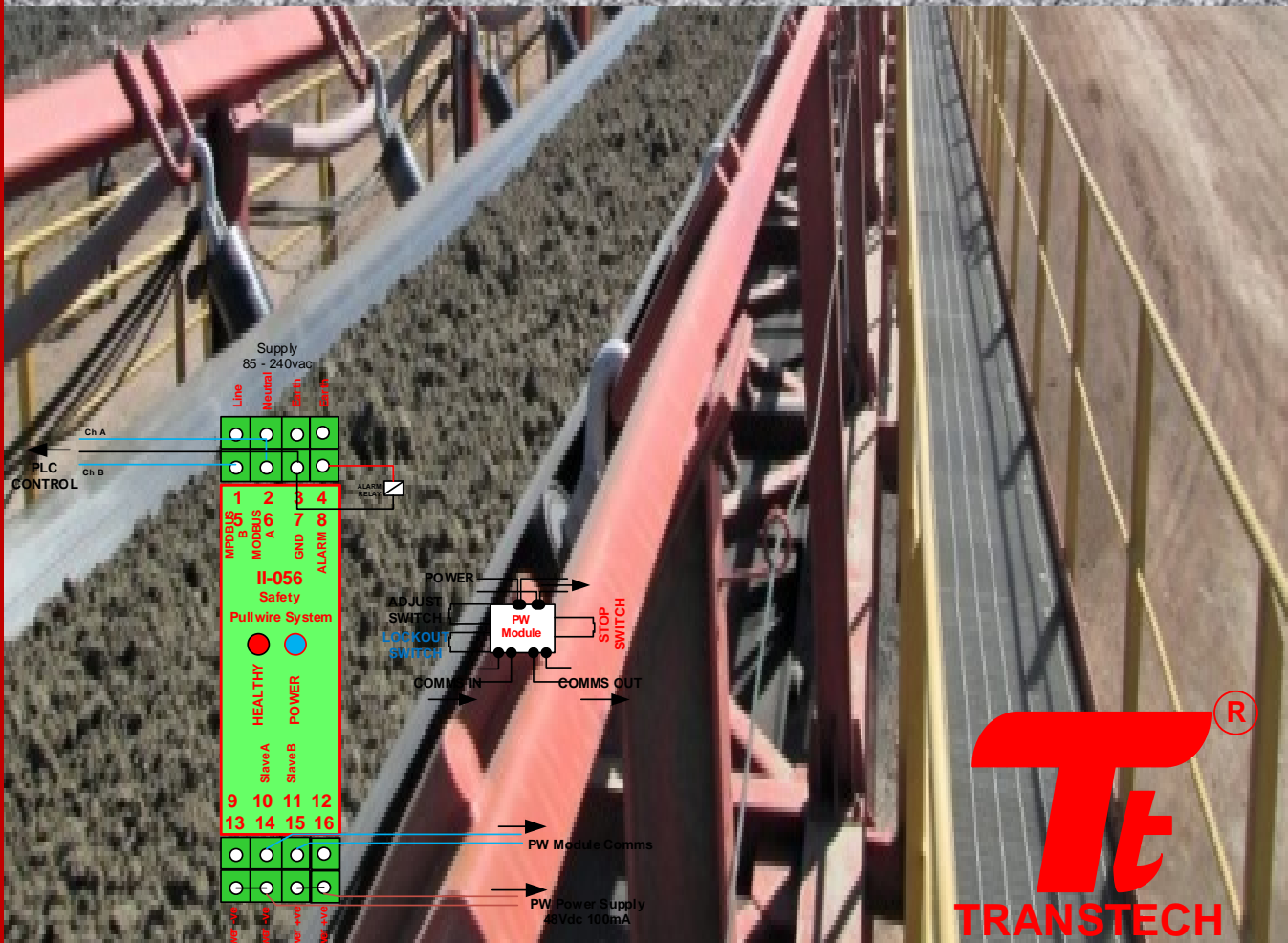


# Transtech Conveyor Monitoring System

Developed exclusively for Electric Control Products  
[www.safe-t-products.com.au](http://www.safe-t-products.com.au)



## SAFE-T-MONITOR FAULT CONDITIONS revB

**Q1.** What happens if the communications goes down between the PLC Controller and the II-056 Master Module?

**Answer-** The PLC will not be able to talk to the II-056 Master so an alarm condition should be generated within the PLC as the “supervisor”. The alarm output from the II-056 Master Module is the “watchdog” alarm so this can be hard wired into the PLC and the closed status monitored. The output contact is open with no power on and closes if power is on, the processor is running and communications are all OK.

**Q2.** What happens if the communications is lost between the Master Module and the field modules (short or open circuit)?

**Answer-** The Master Module will report a fault back to the PLC and identify which furthest module it can talk to.

**Q3.** What happens if the Master Module loses power?

**Answer-** The Master Module has a normally closed electronic alarm output – this will open and act as a watchdog output.

**Q4.** What happens if the communications line to the field modules is short circuited?

**Answer-** The Master Module communicates to the field module before the short or break and reports a fault. Once the short is removed or open fixed the system will resume working.

**Q5.** What happens if the power cable to the field modules is short circuited?

**Answer-** The Master Module power supply is designed to actively limit the current to the field to approx. 100mA, even with a short circuit. When the short is removed the power is restored, the short circuit condition will cause an alarm output.

**Q6.** What happens if the power and/or the communications cables are open circuited (cut)?

**Answer-** The Master Module talks to the field modules and reports a fault as the next module down the line. The Master Module knows the last field module it can talk to so reports to the PLC the next module and all remaining are in “fault” condition.

**Q7.** What happens if the cables from the switch input to the field module are shorted or opened?

**Answer-** The field module has a “window” type input which detects either a short circuit or open circuit.

**Q8.** What about surge/lightning protection?

**Answer-** The II-056 modules have lightning protection in-built.

**Q9.** What happens if the software fails in the Master Module?

**Answer-** The II-056 Master Module has an internal watchdog which resets the micro-processor.

**Q10.** How is the system configured for the number of field modules, what happens if a user programs 50 field modules and there are 55?

**Answer-** The system is self-configuring, the last module in the line permanently reports a fault by the very fact it is last in line. In the example above the PLC would know there are 55 modules despite the system being set for 50 and can be programmed to report the difference and the II-056 system adjusted manually. It is possible to set a unique serial number in each module so that the PLC reads them sequentially on start-up and the user can set relevant site tags for each module.

**Q11.** Earthing?

**Answer-** The Master Module input has an Earth connection. The power to the field modules is SELV compliant therefore must NOT be earthed. Care needs to be taken that the 4 field wires are not shorted to Earth. If the field wire is earthed the circuit is no longer SELV compliant.