



## Signal and Data Line Check List

To enable LEPS's Application Engineering staff to recommend appropriate communications and data line protection, the following information is required. As a guide there are a number of areas to address when prescribing communications and data line protection.

- 1: Establish the type of system(s) that requires protection, eg;
  - Communications, phone, data
  - Fire/security alarm
  - Process controller (PLC)
  - Irrigation control (Golf course)
  - Weighbridge or Crane load/tension cell
  - Feed back control line
  - Instrumentation
  - C.C.T.V
- 2: Establish whether the system operates using:
  - Balanced pairs
  - Un-balanced lines with common signal return
- 3: Specifically identify:
  - Any communications lines that enter or leave each building
  - Any communication line over 150' (50 meters) in length
- 4: Establish system termination type, eg;
  - Screw terminal
  - Plug in, e.g, BNC, N-Type etc
  - Krone LSA disconnect block
  - AT&T and 66 block
  - Other insulation displacement type terminations
- 5: Establish maximum system operating voltage for each circuit. For RF communication circuits peak power and VSWR are acceptable.
- 6: Establish maximum system operating current for each circuit.
- 7: Establish maximum system operating frequency;
  - Digital Data in Mbits/s or Baud rate
  - Analogue in Hz
- 8: Alternatively to items 5, 6 & 7, establish the signaling protocol, e.g. RS-232, RS-485, 10BaseT UTP etc.
- 9: Local and international standards that may apply.
- 10: Identify those circuits that are critical to the safe and economic operation of the facility.