



Applications:

- Traffic planning
- Vehicle data collection
- Ramp metering
- Car park monitoring
- Boom gate triggering
- VMS triggering

The XL-CCC is a DIN rail mountable contact-closure unit with inputs for up to 4-loops. Units can be paired to provide for 8-loop capability. Each of the four contact closure outputs are optically isolated. It is highly configurable and includes an on-board graphical user interface.

Key Features:

- Detection for up to 4 loops (8 loops via device pairing)
- Opto-isolated contact closure outputs
- Integrated LCD screen with user interface
- Triggers on presence and speed
- Adjustable loop sensitivity
- Self-tuning for loops
- Support for a subset of STREAMS extended messages for TSI-SP-026.
- Compact and reliable.

Device Configuration (per channel)

- Channel enable/disable
- Operational mode: presence, pulse (variable output pulse width), vehicle detection
- Loop sensitivity: 10 step
- Presence delay: 0 to 5 seconds, 100 ms step size
- Presence hold time: 0 to 5 seconds, 100 ms step size
- Loop retune period: 5 mins, 30 mins, 1 hr, 4 hr, 24 hr, 48 hr.

Communications

- 1x RS-232 for configuration and device analytics.

Outputs

- Four digital outputs (solid-state photovoltaic relays), Max 60 Vdc, 200 mA, 0.4 W
 - Configurable output type - presence, pulse
 - Configurable trigger type - presence, vehicle (using two loops).

Loop Specification

- Vehicle detection: Loops 1,2 and 3,4 can form loop pairs to detect vehicle events (counting/direction)
- Self-tuning, range of 50 to 1500 μ H
- Response time: < 50 ms
- Detection trigger actuation (minimum) d inductance of 0.02% for a period of 10 ms
- Detection trigger actuation (maximum) d inductance of 10% for a period of 50 ms
- Detection sensitivity setting of $\Delta L/L \leq 0.04\%$ the threshold is $\pm 10\%$
- Variable, 10-step sensitivity setting
- Automatic drift compensation
- Sequential loop scanning to eliminate crosstalk (also available in device pair mode)
- Variable presence delay time: 0-5 seconds
- Variable detection hold time: 0-5 seconds
- Automatic loop retune, variable retune period
- Loop open/short detection (channel indicator LED flashes and the output contact defaults to open circuit).

Protection and Isolation

- ± 12 Vdc reverse polarity protection on the power input terminal
- Loop input isolation: 1:1 transformers (typical 100 mH)
- Loop input lightning surge protection: transorb 400 W typical peak pulse power dissipation with forward surge rating half-cycle 40 amps, 83 ms (at 25°C).

Environmental, Power and Physical Specification

- Physical dimensions: 35 mm (W) x 105 mm (H) x 114.5 mm (D)
- DIN rail mountable (horizontal rail)
- Mounting position: vertical
- 1.28" LCD display, push-button user interface
- Power Supply: 5 Vdc - 12 Vdc, screw terminal connection
- Device pair mode: Two XL-CCC units can share power via the DIN rail TBUS connector
- Typical consumption: 60 mA at 5 Vdc, 100 mA at 12 Vdc
- Operational temperature: -20°C to 70°C.