Single Section Digital Axle Counter SSDAC-G36R

Versatile High Availability Dual Redundant Axle Counting System 2x2oo2 Architecture

Overview

- G36R is a fail-safe, reliable and user-friendly 2x2oo2 architecture based axle counting system
- RDSO approved
- Complies with RDSO/SPN/177/2012 Ver 3.0
- Certified CENELEC SIL-4 standard EN50126, 50128, 50129, 50159 Part A

Configuration

- 2DP-1SR — Single Section Block proving

Strength

- No TP circuit required for push trolley with spoke wheel
- Scalable to higher configuration with same hardware and software
- Protection against wrong configuration at site

Features

- Communication using V.23 FSK modem with cable loss of 30dB
- Built-in event-logger logs up to 14000 events
- Train detection up to 250Kmph
- 24VDC working
- Protected against lightning surges
- Stable operation at –10 to 70oC and RE area
- 2 Independent safety electronics in a single card frame for high availability
- 2 separate output Vital Relays for paralleling to achieve highest availability
- Configurable as common wheel sensing detectors for both axle counting electronics

Reset

- Co-operative — Preparatory mode piloting
- Direct — With/without Line Verification

System

- Microprocessor based fail-safe embedded system
- Detection of axles and direction of train movement
- Fixed pair communication, CRC check & unique addressing of units ensures fail-safety
- User friendly GUI aids to download events via RS232 port
- Units are housed in location boxes near the tracks

Axle Detectors

- Web mounted on track, works with 90-R, 52Kg, 60Kg rails
- Phase detection principle employed
- Signals fed at 21Khz and 25Khz to Tx coils at 60V RMS
- Axles above 550mm are detected

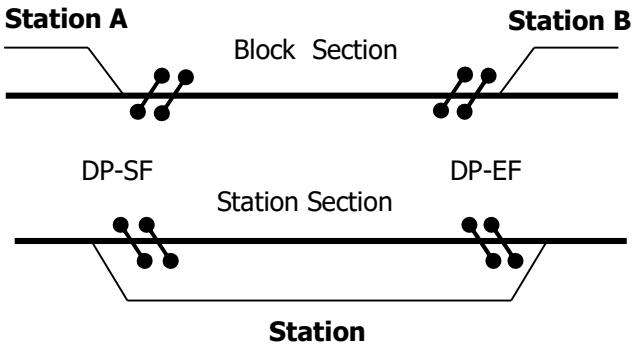
Dual Reset Box

- Amended as per RDSO Ver 3.0 Specification
- Interactive RESET Box with Separate status LCD display for individual axle counting system on single quad cable multidrop mode and common Resetting
- Independent system status and combined parallel Section
- Stores events locally to download at station only

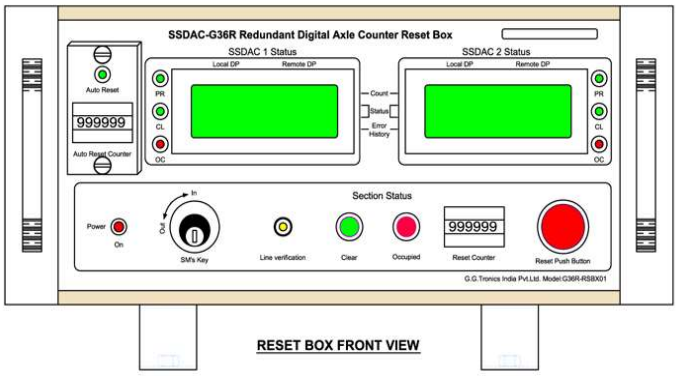
Configurations of SSDAC-G36R

2DP Configuration

- Operation on straight lines - station or block section
- Communication using one pair quad cable per system
- Preparatory Reset configurable either with or without piloting
- **PR** and **VR** contacts at detection points



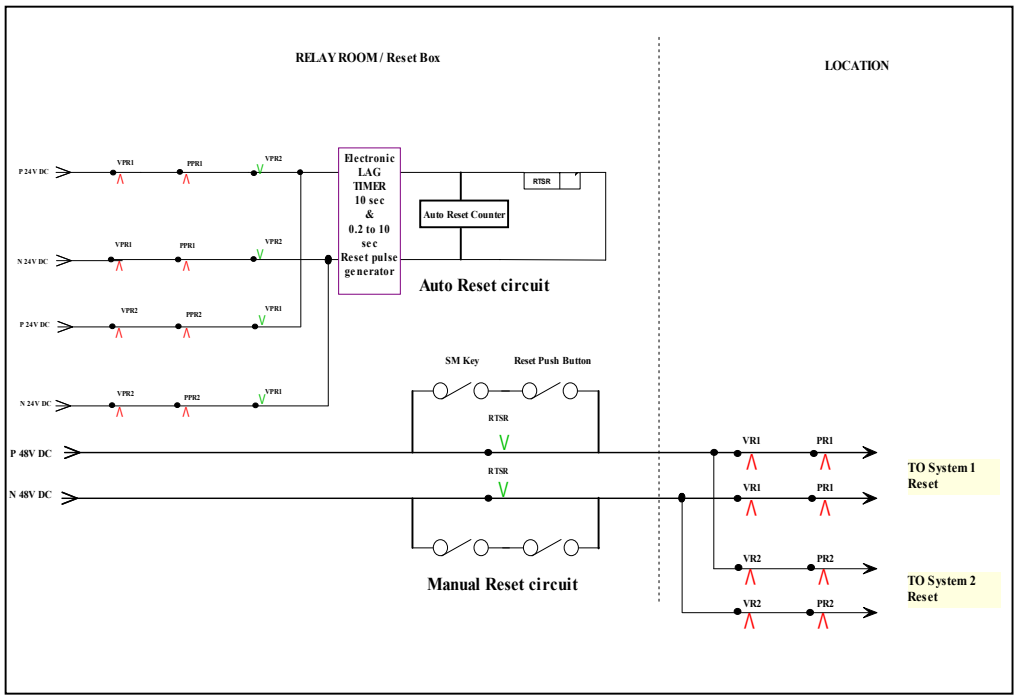
Automatic Reset



Automatic Reset Philosophy

- Any failure of single SSDAC initiates Resetting automatically to normalise the failed SSDAC without affecting system working
- Manual Resetting required only when both SSDAC fails
- Reset configurable either with or without piloting
- Auto Resetting counter for analysis

SSDAC-G36R typical Automatic Resetting circuit



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