Overview

- MSDAC-G39 is a fail safe, reliable and user friendly 2oo3 architecture based Axle Counter
- Complies with RDSO/SPN/176/2005 Ver 2.0
- Designed to meet Cenelec SIL-4 standard EN50126, 50128, 50129, 50159 Part A and B

Configuration

- MSDAC - G39 basic system (support 12 I/O modules )
- MSDAC - G39 extender system (support 16 I/O modules )
- Detection Point card MDP-G39 supports 2 DP / card
- Section card MSC-G39 supports 1 Section / card

Features

- Supports up to 40 Detection points and 40 sections
- Works with 24 VDC +30% - 50% power
- Field Electronics FDP-G39 works with 60 to 120 VDC
- Power and data can be combined for short distances up to 3.2 Kms
- Fault tolerant data communication of V.23 as per CCITT standard
- Supports communication on PIJF cable, half quad copper, OFC on voice and data channel and RF communication with Cenelec 50159 Part B
- Support 16 + 16 shared track sections, ( 12 RI section and 4 SSI section )
- Supports 16 numbers of Vital and Non Vital inputs and outputs for multiplexing
- Supports 16 SSI interface sections through fail safety telegrams and data logger

Features continued ....

- Supports hot swapping of card modules in Central Evaluator
- Event logging up to 40000 events
- Capable of extending Central Evaluator in daisy chain form
- Stable operation at -10 to 70 Degrees Celsius
- Field DP system can be configured as standalone SSDAC system ( 2DP-1S, 3DP-1S, 3DP-2D and 3DP-3S ) without Central Evaluator
- The Field Detection system FDP supports various mode of operation
  - 1C1E : Single communication with single Evaluator
  - 2C1E : Dual redundant communication with single Evaluator
  - 2C2E : Dual independent communication with two Evaluators

Reset

- Conditional Direct : Minimum one out count
- Un Conditional Direct : No out count required
- Preparatory : With/without piloting
- Direct Conditional / Un Conditional : With/without Line Verification
- Reset can be applied either Manual or through software from VDU panel
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
- Supports Axles above 330mm and 550mm (buyer selectable)

System

- Microcontroller based fail-safe embedded system
- Upgradable for higher configuration system
- Central Evaluator: 2003 CPU, 2003 Section output and 1002 DC-DC Converter power supply
- Complete SMT technology, miniaturized 3U card frame
- Fixed pair communication, CRC check with AES128 Cryptography algorithm. Unique addressing of units ensures fail-safety.
- User friendly GUI aids to configure DP’s and Sections
- Units can be housed in location boxes / Mushroom boxes near the tracks
- Supports VDU display for monitoring

MSDAC – G39 Card Modules

MCPU : Central Processing Unit
MDP : DP card supports 2 DP
MSC : Section card supports 1 section
MCE : Communication
MDC : DC-DC Converter

FDP-G39 Field DP system

FCPU : Central Processing Unit
FCOM : Communication
FPD1/FPD2 : Wheel Detector
FRD : Relay Drive Card
FDC : DC-DC Converter wide range
GUI Configuration of MSDAC-G39

VDU Panel of MSDAC-G39
About us
• Established in 1991
• We value Customers, professionalism, quality, safety and ethical business practices
• Meeting challenges is a way of life

Vision
• To be a leading solution provider right from design, development, manufacture, testing and Commissioning in Railway Signaling and Industrial Automation sectors

Mission
• Committed to satisfy customer expectations with a focus on continuous improvement

Our People
• Inherent competency and committed team of professionals in respective domains

Our Strength
• Design, Manufacture, Supply, Installation and Commissioning of Safety Embedded Systems
• In-House Embedded System R&D
• Safety System design capability
• Product Engineering with PCB and mechanical design facility
• Hardware and Software safety validation
• System Hazard Analysis
• Reliability Analysis
• Incoming and Outgoing Quality Assurance
• In-House Automatic Testing of PCB’s using In-Circuit Tester
• In-House Environmental Stress Screening
• Antistatic protected SMD and Leaded components production line
• In-House mechanical fabrication and Panel building

Quality policy of the company

“To provide value added products and services to the automation and transport control Sectors by continuously upgrading technology quality and reliability”

Total commitment by management for Quality Assurance right from Design, Development, Production, Supply, Installation and Commissioning Products meet environmental specifications laid by customers