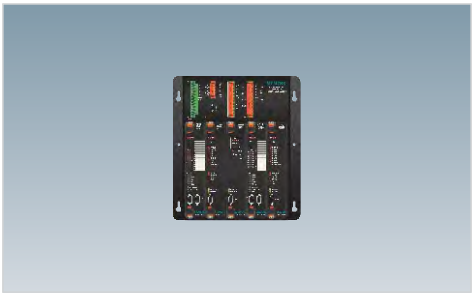
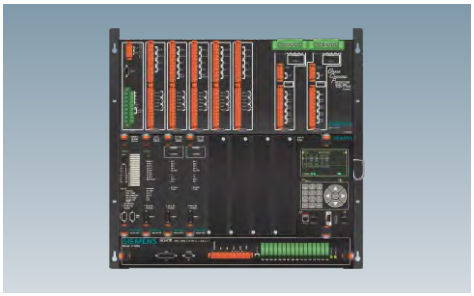
Grade Crossing Control Systems Products

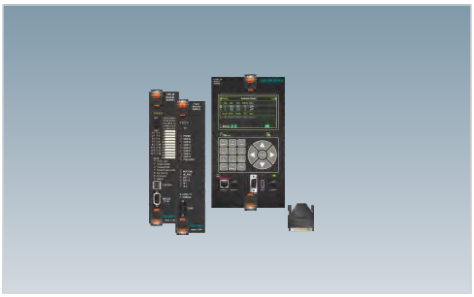


Wayguard® SGCP 4000 / MS 4000 Series
Simple Grade Crossing Predictors / Motion Sensors
A1 - A4

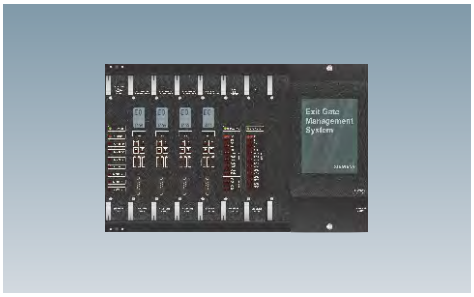
Wayguard® GCP 4000 Series
Grade Crossing Predictors
A5 - A12



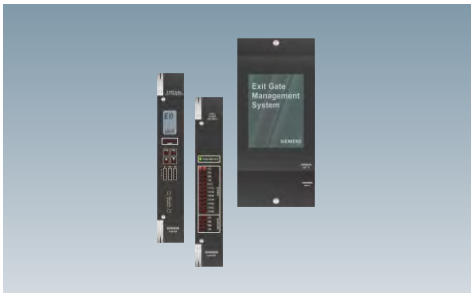
Wayguard® GCP 5000 Series
Grade Crossing Predictors
A13 - A18



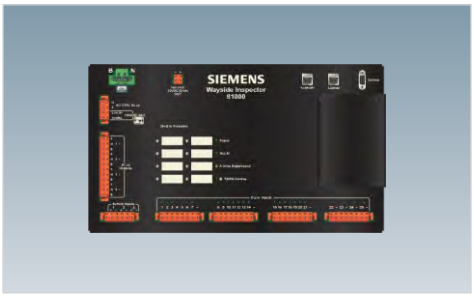
SGCP 4000 / MS 4000 / GCP 4000 / GCP 5000 Series
Modules
A19 - A26



EGMS Series
Exit Gate Management System
A27 - A29



EGMS Series
Modules
A30 - A33



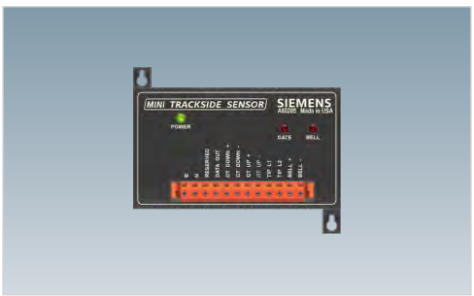
Wayside Inspector
A34

SSCC Series
Solid State Crossing Controllers
A35 - A40

ARGUS Series
Event Recorders
A41 - A43

Clearguard® ACM 200 Series
Axle Count Management System
A44

SEAR Series
Analyzer / Event Recorders
A45 - A48



MTSS
Mini Track Side Sensor
A49

iLOD
Intelligent Lights Out Detector
A50

GFT II Series
Ground Fault Sensors
A51 - A52

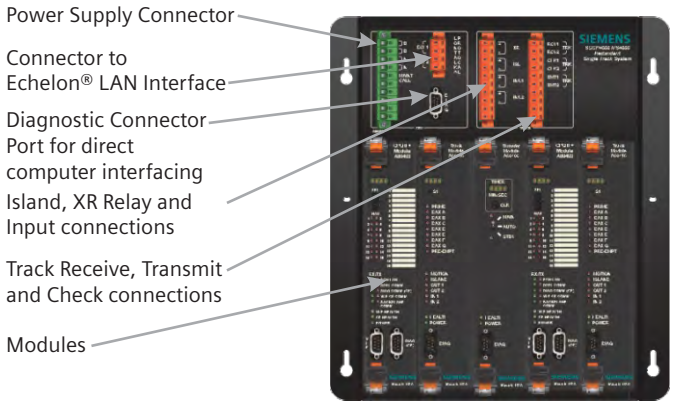
Wayguard®

SGCP 4000 / MS 4000 Series

Simple Grade Crossing Predictor / Motion Sensor

usa.siemens.com/rail-automation

Overview



SIEMENS SGCP 4000 / MS 4000 is an electronic, microprocessor based modular system designed to reliably detect the motion of an approaching train and start the crossing warning system.

Operation of the system is based on the maximum impedance of an unoccupied track circuit, which is determined by the location of termination shunts and rate of change in impedance resulting from physical location of a train as it moves within a track circuit.

System will apply a constant current AC signal to track and measures level of the resulting voltage. These levels vary with approach track impedance, which also varies due to distance of train from the crossing.

System detects inbound motion of train and activates crossing warning equipment.

When the train has cleared crossing, system no longer senses inbound motion and allows crossing warning signal system to recover.

When a train stops before reaching crossing, or reverses direction and backs away from the crossing, system will recover after a short (programmable) time-out as inbound motion is no longer detected.

Features

- Available in single track non-redundant and redundant models.
- Uses proven GCP 4000 / 5000 modules.
  (All of which hot swappable and interchangeable with GCP systems)
- Reduced system size for installation in a smaller equipment house.
- Provides a simple user interface in order to easily setup unit.
- Programming can be confirmed by an Office Configuration Check Number (OCCN) and the track calibration information can be confirmed by a Track Check Number (TCN).
- Provides a diagnostic history log and train move history log capable of interfacing to a SEAR II Event Recorder/ Analyzer for additional capability.
- Supports the use of an external island using a vital input.
- Transfer module can be removed and a strap can be used to force either main or standby operation without transfer module being present.
  (On Redundant A80490 models only)
- Can be configured as either a motion sensor or as a simple grade crossing predictor.

*For additional optional modules, See this section, Pages **A19 - A25***

Single One Track Non Redundant - Narrow Chassis Configurations

NYK:8000804950000

SGCP 4000 / MS 4000 Empty Narrow

- Weight is approx. 8.25 lbs. (3.74 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single one track narrow chassis
- (1) NYK:8000804350001 SPI ECD module
- (2) NYK:Z610393250001 blank module cover panels
- NO other modules
- Reduced footprint for installation almost anywhere
- Simple interface for programming

NYK:8410804950000

SGCP 4000 / MS 4000 Comprehensive Narrow

- Weight is approx. 10.50 lbs. (4.76 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:8000804460003 Chassis
- (1) NYK:8000804030003 CPU II+ module
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804350001 SPI ECD module
- Reduced footprint for installation almost anywhere
- Simple interface for programming

Assembly configurations shown are only a small sampling of commonly ordered assemblies. Other configurations may be available upon request.
Please contact the Technical Assistance for Rail Automation team @ 1-800-793-7233 (Option 1) or RA.RailTechSupport.ic@siemens.com for additional details.

Single One Track Non Redundant - Wide Chassis Configurations

NYK:8000804900000

SGCP 4000 / MS 4000 Empty Wide
- Weight is approx. 16.84 lbs. (7.64 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single one track wide chassis
- (1) NYK:8000804350001 SPI ECD module
- (5) NYK:Z610393250001 blank module cover panels
- NO other modules

NYK:8110804900001

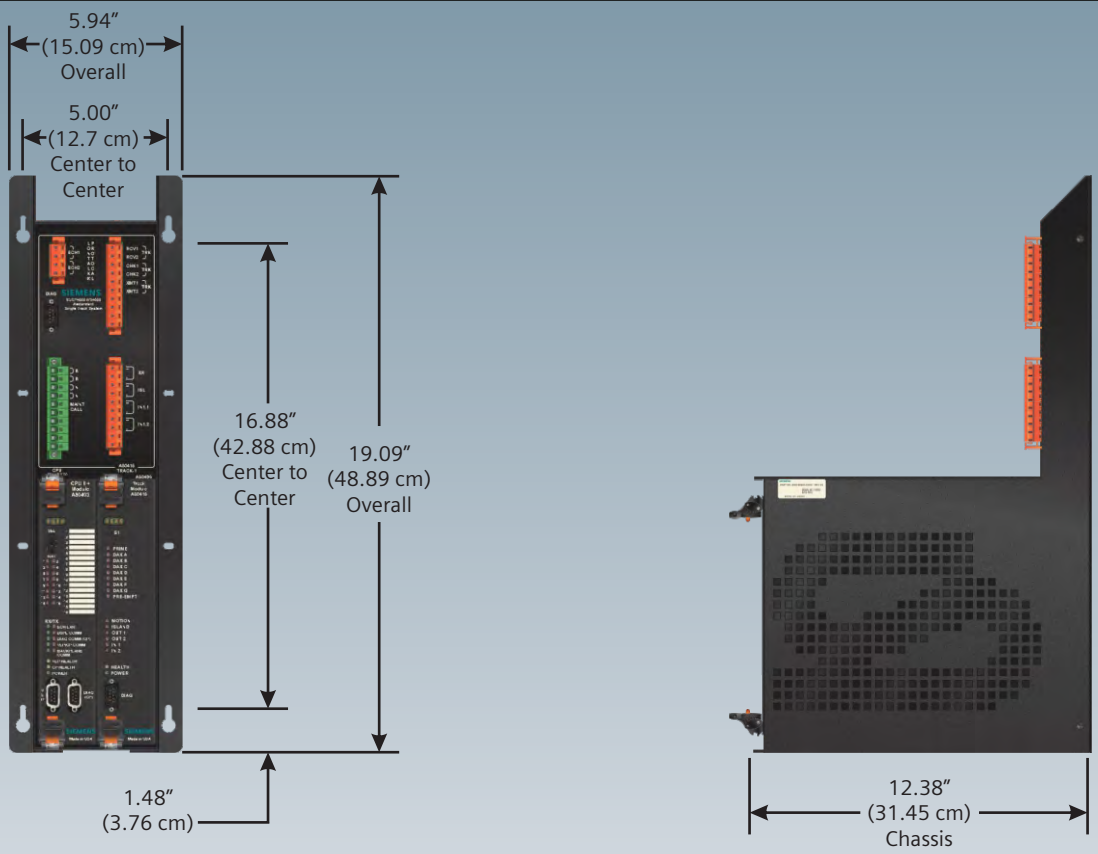
SGCP 4000 / MS 4000 Basic Wide
- Weight is approx. 19.80 lbs. (8.98 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:8000804910001 Chassis
- (1) NYK8000804030003 CPU II+ module
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804350001 SPI ECD module
- (3) NYK:Z610393250001 blank module cover panels
- NO other modules

NYK:8421804900001

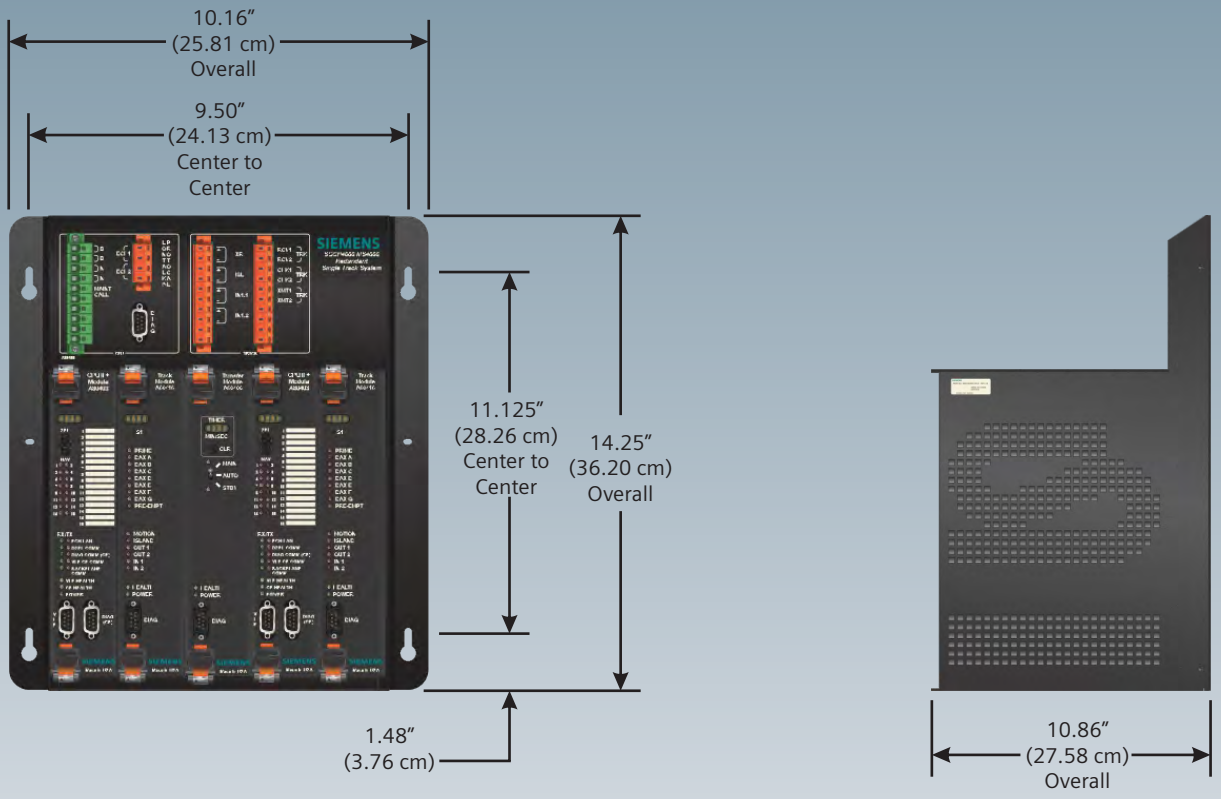
SGCP 4000 / MS 4000 Comprehensive Wide
- Weight is approx. 23.60 lbs. (10.70 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:8000804910001 Chassis
- (2) NYK:8000804030003 CPU II+ modules
- (2) NYK:8000804180001 Track modules
- (1) NYK:8000804060002 Transfer module
- (1) NYK:8000804350001 SPI ECD module
- NO other modules

Assembly configurations shown are only a small sampling of commonly ordered assemblies. Other configurations may be available upon request.
Please contact the Technical Assistance for Rail Automation team @ 1-800-793-7233 (Option 1) or RA.RailTechSupport.ic@siemens.com for additional details.

Narrow Chassis Assembly Configuration Dimensions



Wide Chassis Assembly Configuration Dimensions

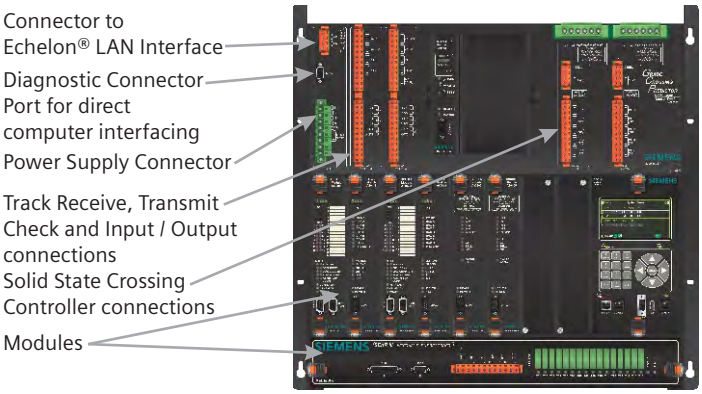


Wayguard®

GCP 4000
Series

Grade Crossing Predictors

Overview



SIEMENS GCP 4000 is an electronic, microprocessor based modular system designed to reliably detect the motion of an approaching train and start the crossing warning system.

Utilizing up to (6) track circuits for train detection, with each track module having (9) track predictors that are configurable as motion sensors or predictors. Each track module has (2) vital inputs and (2) vital outputs. (2) track modules are required for each track circuit in redundant applications.

The Track Module Prime Predictor is generally used for control of local crossings. The Track Module DAX A through DAX G Predictors are generally used for control of remote crossings. The Track Module Preempt Predictor is generally used for interconnection with traffic signal systems. In addition to predictors, each track module is capable of providing a multifrequency island circuit.

Using internal SSCC IIIi crossing controller module(s), system is able to control the bells and gates of a crossing and up to (40) amps of light energy and each SSCC IIIi module contains (5) vital outputs. Providing up to (40) amps of lamp energy and controlling up to (4) gates.

Using internal PSO module(s) system is able to detect train direction on a bidirectional track circuit that allows the control of remote crossings (Bi-DAXing) and each PSO module contains (3) vital outputs and (2) vital inputs.

Using internal RIO modules system is able to extend I/O capability and each RIO modules contains (4) vital inputs and (4) vital outputs.

Features

- Capable of monitoring up to (6) track circuits including Intelligent Processor Island and Bi-DAXing.
  (Number of maximum track modules dependent on chasis of GCP system selected.)
  (On redundant systems, (2) track modules needed for each track circuit.)
- SEAR IIi Event Analyzer / Recorder programmable via OCE and new display.
- Provides a diagnostic history log and train move history log utilizing a SEAR IIi Event Recorder/ Analyzer.
- Internal logic utilizing vital AND gates and vital timers.
- Multiple ethernet ports available for interfacing with eSSR radio, vital communications as well as PTC applications.
  (Depending on configuration, some ports may not be activated.)
- Enhanced user interface tools including OCE, WebUI and new display.
  - Common menu structure between all user interfaces.
  - Generate office configuration check number (OCCN).
  - Simple, tailored dropdown menus for user friendly configuration, diagnostics and troubleshooting.

*For additional optional modules, See this section, Pages **A19 - A25***

Single One Track Non Redundant Configurations

NYK:80008044500000

GCP 4000 Empty Single One Track

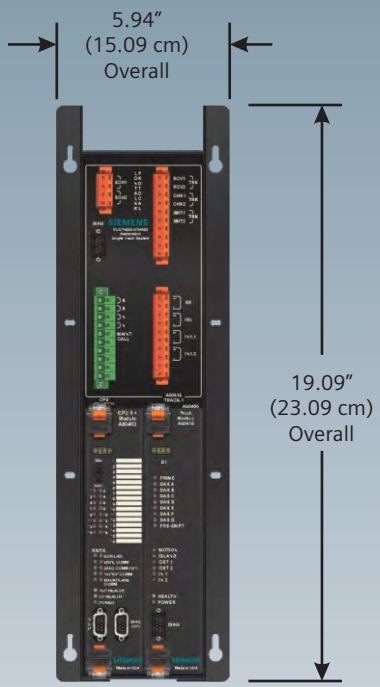
- Weight is approx. 8.25 lbs. (3.74 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single one track narrow chassis
- (1) NYK:8000804350001 SPI ECD module
- (2) NYK:Z610393250001 blank module cover panels
- NO other modules
- Reduced footprint for installation almost anywhere
- Simple interface for programming

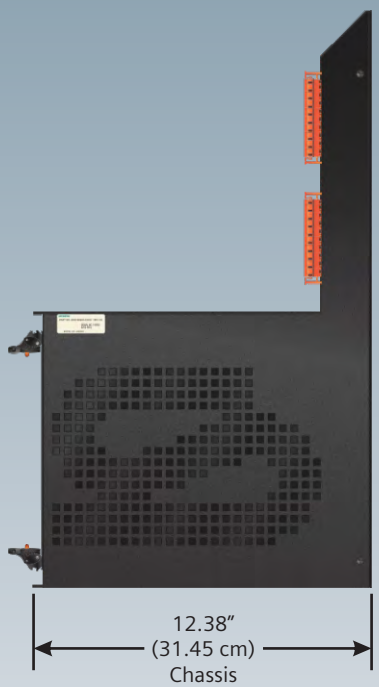
NYK:84108044500000

GCP 4000 Comprehensive Single One Track

- Weight is approx. 10.50 lbs. (4.76 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044500000 Chassis
- (1) NYK:8000804030003 CPU II+ module
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804350001 SPI ECD module
- Reduced footprint for installation almost anywhere
- Simple interface for programming

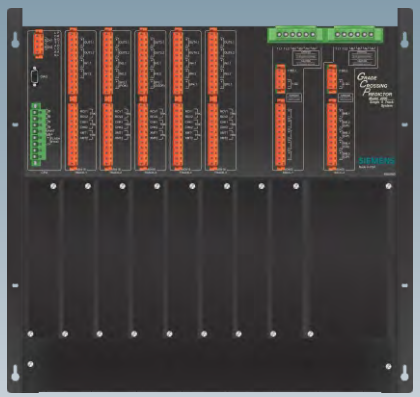
Applicable for all GCP 4000 Series Single One Track Non Redundant configurations





Single Five Track Non Redundant Configurations

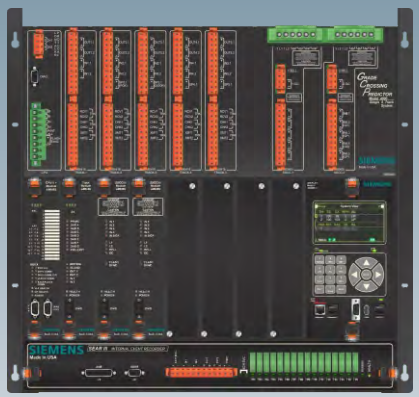
NYK:80008044000000



GCP 4000 Empty Single Five Track

- Weight is approx. 26.01 lbs. (11.80 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single five track chassis
- (1) NYK:8000804350001 SPI ECD module
- (8) NYK:Z610393250001 blank module cover panels
- (1) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules

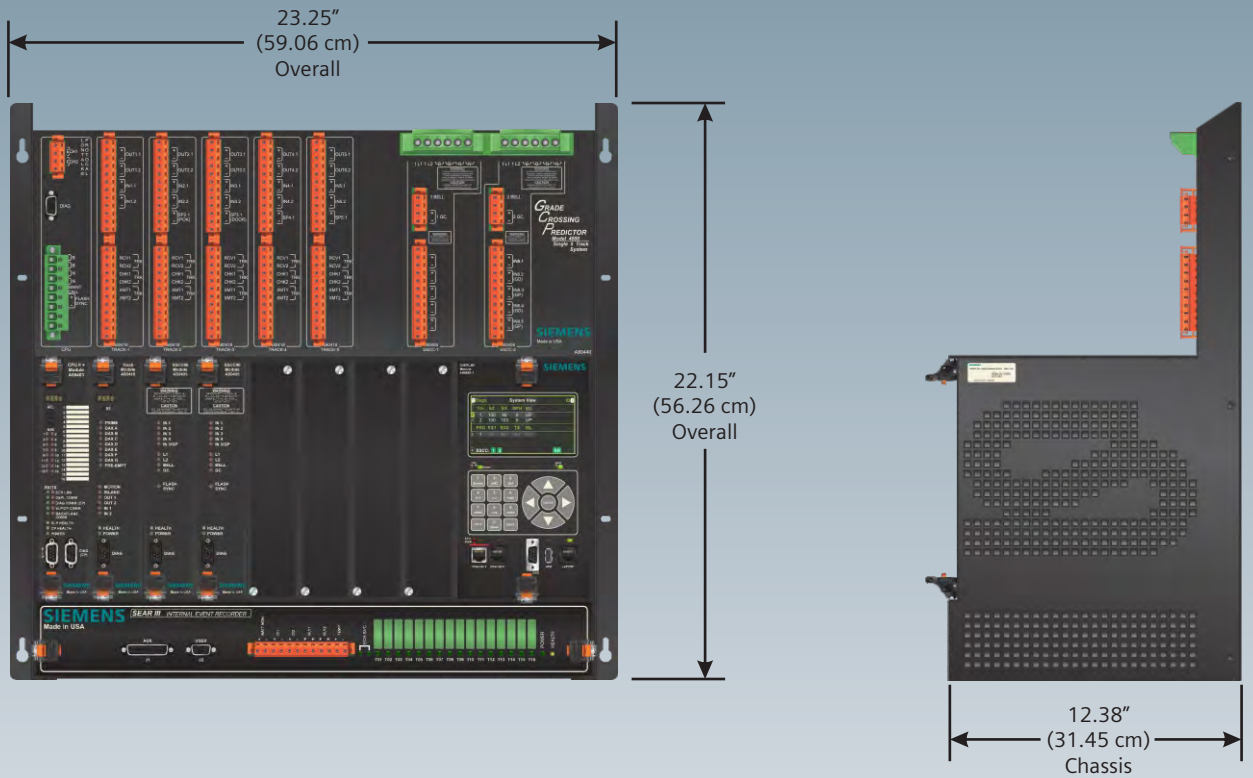
NYK:8110804400002J3



GCP 4000 Comprehensive Single Five Track

- Weight is approx. 48.60 lbs. (22.04 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (1) NYK:8000804030001 CPU II+ module
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804850001 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804350001 SPI ECD module
- (4) NYK:Z610393250001 blank module cover panels
- NO other modules

Applicable for all GCP 4000 Series Single Five Track Non Redundant configurations



Single Basic Crossing Non Redundant Configurations

NYK:80008045500000

GCP 4000 Empty Single Basic Crossing

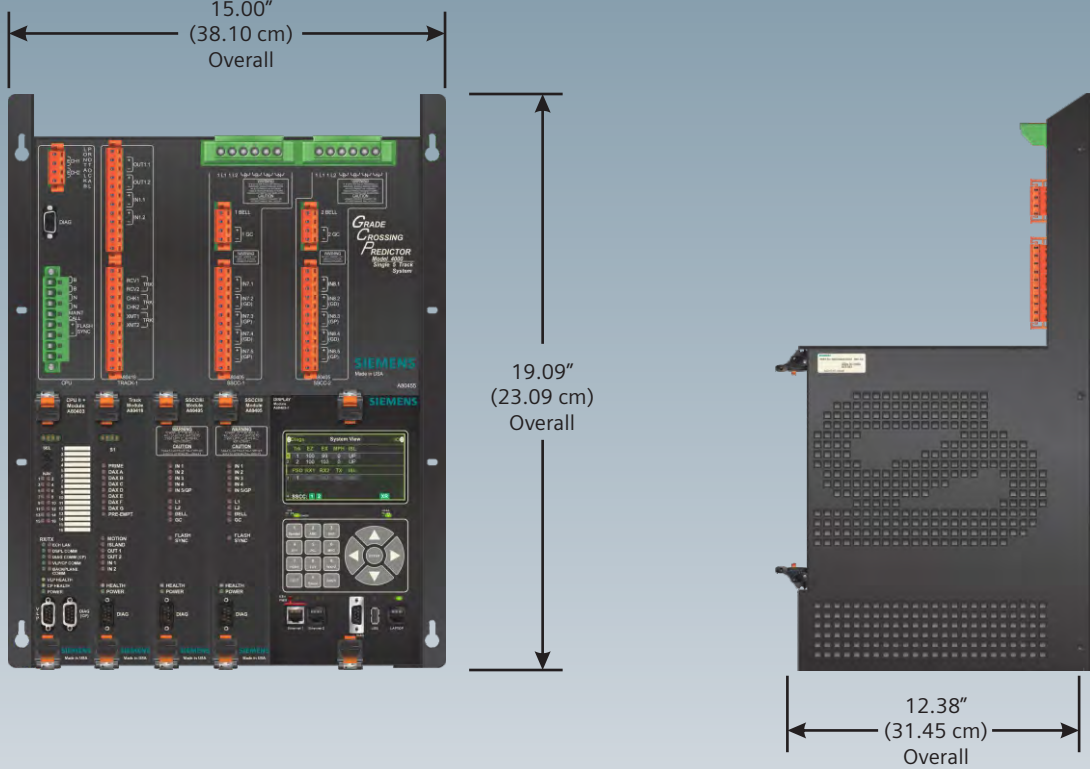
- Weight is approx. 13.33 lbs. (6.05 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single basic crossing chassis
- (1) NYK:8000804350001 SPI ECD module
- (4) NYK:Z610393250001 blank module cover panels
- (1) NYK:Z610393260001 blank display cover panel
- NO other modules
- Reduced footprint for installation almost anywhere
- Simple interface for programming

NYK:811080455002AC

GCP 4000 Comprehensive Single Basic Crossing

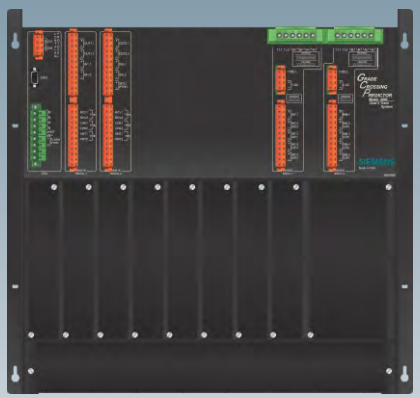
- Weight is approx. 26.70 lbs. (12.11 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008045500000 Chassis
- (1) NYK:8000804030001 CPU III module
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804850001 Display module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804350001 SPI ECD module
- NO other modules
- Reduced footprint for installation almost anywhere
- Simple interface for programming

Applicable for all Wayguard® Grade Crossing Predictor GCP 4000 Series Basic Crossing Non Redundant configurations



Dual Two Track Redundant Configurations

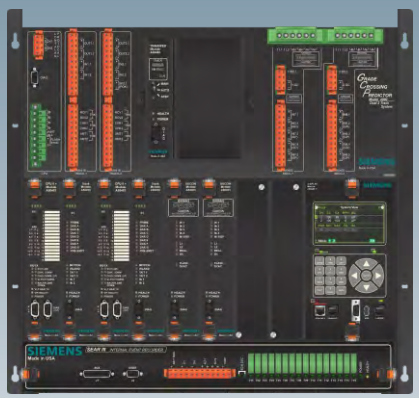
NYK:80008046500000



GCP 4000 Empty Dual Two Track

- Weight is approx. 25.73 lbs. (11.67 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Dual two track chassis
- (1) NYK:8000804350001 SPI ECD module
- (8) NYK:Z610393250001 blank module cover panels
- (1) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules
- Built in DAXing, ATCS communications protocols

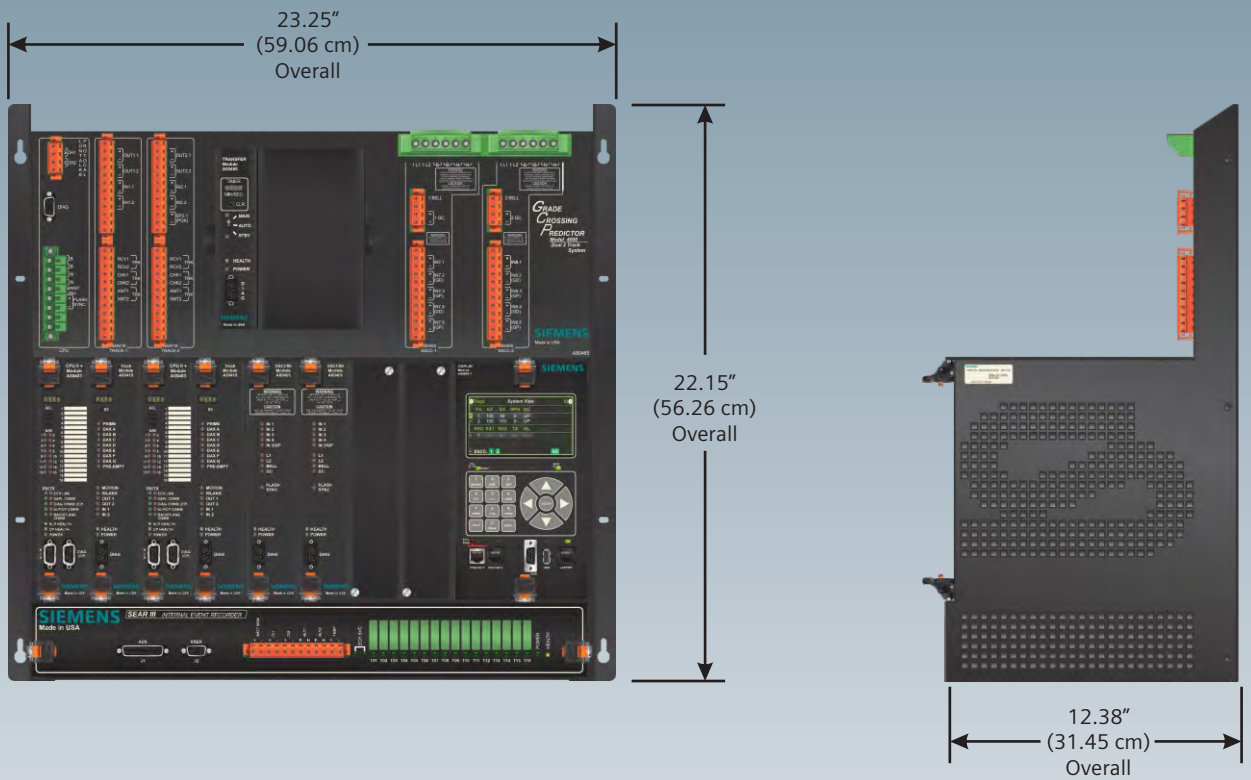
NYK:822080465002W3



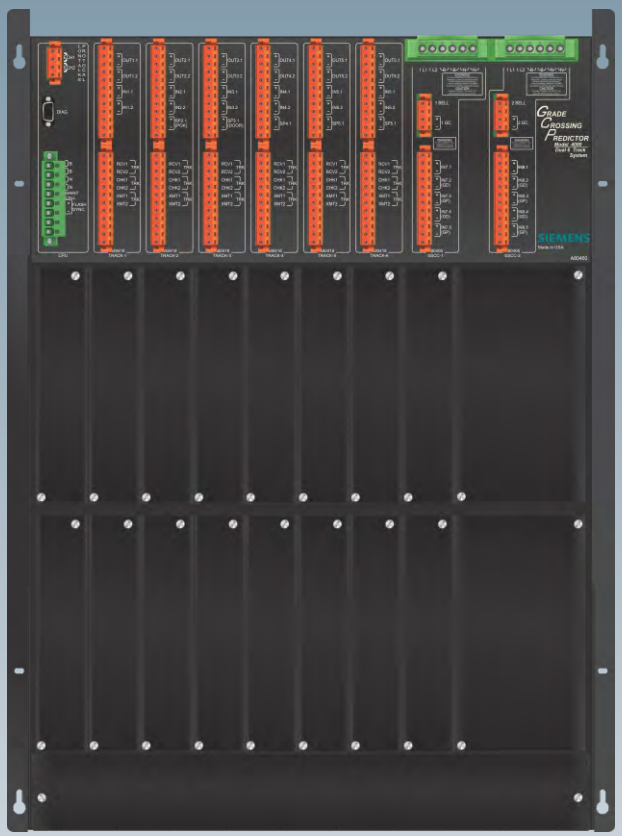
GCP 4000 Comprehensive Dual Two Track

- Weight is approx. 50.10 lbs. (22.73 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (2) NYK:8000804030001 CPU II+ module
- (2) NYK:8000804180001 Track module
- (1) NYK:8000804850001 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804680001 Transfer module
- (1) NYK:8000804350001 SPI ECD module
- (2) NYK:Z610393250001 blank module cover panels
- NO other modules
- Built in DAXing, ATCS communications protocols

Applicable for all Wayguard® Grade Crossing Predictor GCP 4000 Series Dual Two Track Redundant configurations



NYK:80008046000000



GCP 4000 Empty Dual Six Track

- Weight is approx. 35.59 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Dual six track chassis
- (1) NYK:8000804350001 SPI ECD module
- (16) NYK:Z610393250001 blank module cover panels
- (2) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules
- Built in DAXing, ATCS communications protocols

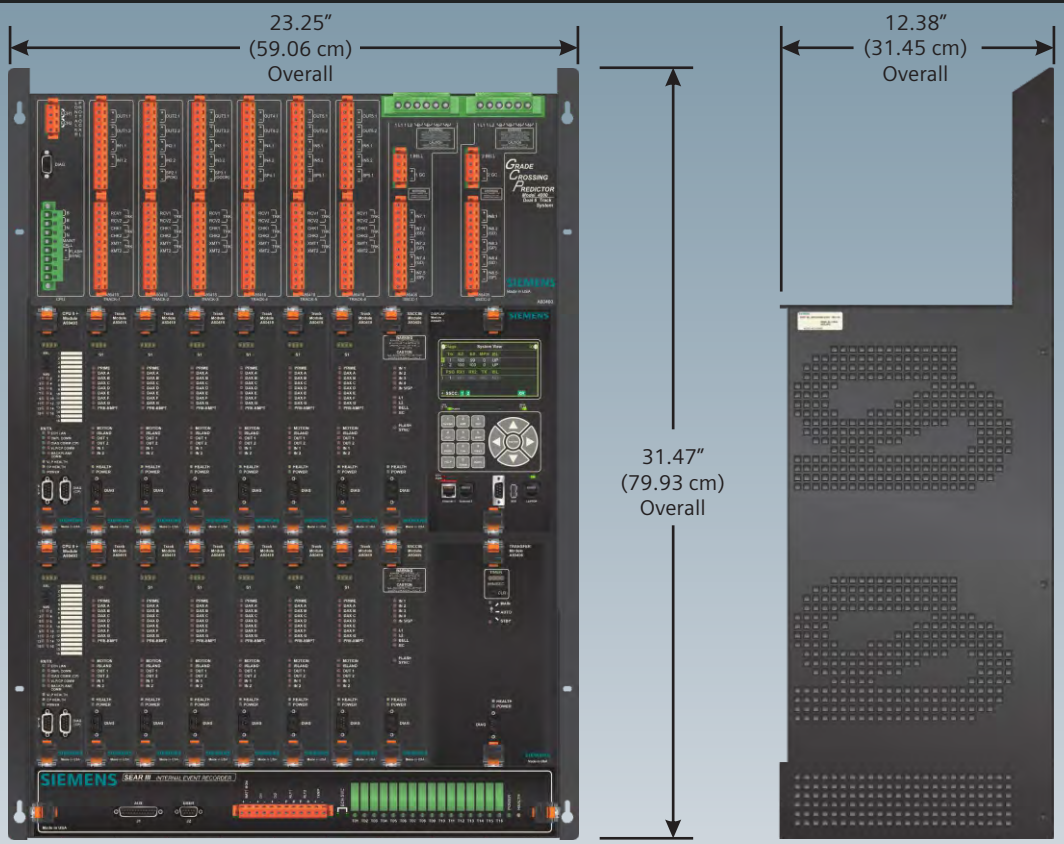
NYK:822080460002W3

GCP 4000 Comprehensive Dual Six Track

- Weight is approx. 66.84 lbs. (30.32 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (2) NYK:8000804030001 CPU II+ module
- (12) NYK:8000804180001 Track module
- (1) NYK:8000804070003 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804060001 Transfer module
- (1) NYK:8000804350001 SPI ECD module
- NO other modules
- Built in DAXing, ATCS communications protocols

Dual Six Track Redundant Configurations

Applicable for all Wayguard® Grade Crossing Predictor GCP 4000 Series Dual Six Track Redundant configurations

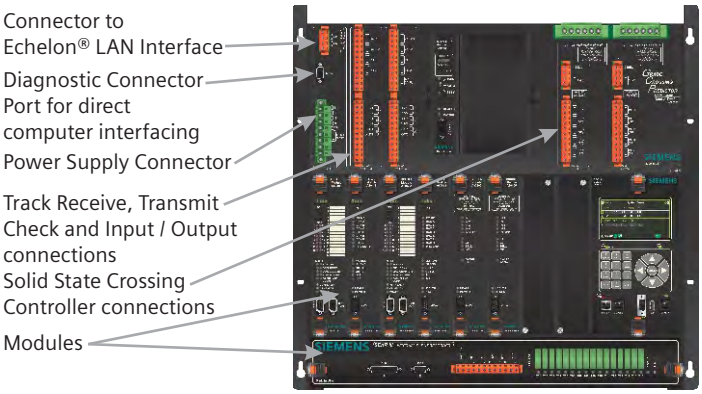


Wayguard®

GCP 5000
Series

Grade Crossing Predictor

Overview



SIEMENS GCP 5000 is an electronic, microprocessor based modular system designed to reliably detect the motion of an approaching train and start the crossing warning system.

Utilizing up to (6) track circuits for train detection, with each track module having (9) track predictors that are configurable as motion sensors or predictors. Each track module has (2) vital inputs and (2) vital outputs. (2) track modules are required for each track circuit in redundant applications.

The Track Module Prime Predictor is generally used for control of local crossings. The Track Module DAX A through DAX G Predictors are generally used for control of remote crossings. The Track Module Preempt Predictor is generally used for interconnection with traffic signal systems. In addition to predictors, each track module is capable of providing a multifrequency island circuit.

Using internal SSCC IIIi crossing controller module(s), system is able to control the bells and gates of a crossing and up to (40) amps of light energy and each SSCC IIIi module contains (5) vital outputs. Providing up to (40) amps of lamp energy and controlling up to (4) gates.

Using internal PSO module(s) system is able to detect train direction on a bidirectional track circuit that allows the control of remote crossings (Bi-DAXing) and each PSO module contains (3) vital outputs and (2) vital inputs.

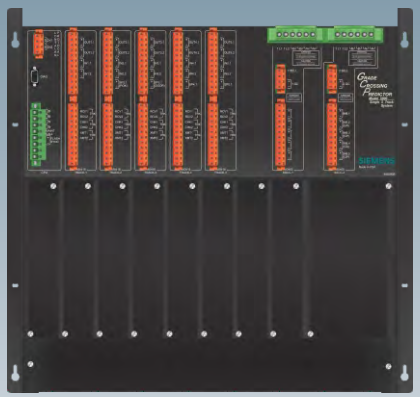
Using internal RIO modules system is able to extend I/O capability and each RIO modules contains (4) vital inputs and (4) vital outputs.

Features

- Capable of monitoring up to (6) track circuits including Intelligent Processor Island and Bi-DAXing.
  (Number of maximum track modules dependent on chasis of GCP system selected.)
  (On redundant systems, (2) track modules needed for each track circuit.)
- SEAR IIi Event Analyzer / Recorder programmable via OCE and new display.
- Provides a diagnostic history log and train move history log utilizing a SEAR IIi Event Recorder/ Analyzer.
- Internal logic utilizing vital AND gates and vital timers.
- Multiple ethernet ports available for interfacing with eSSR radio (PoE) port, vital communications as well as PTC applications.
- Enhanced user interface tools including OCE, WebUI and new display.
  - Aligned menu structure between all user interfaces.
  - Generate office configuration check number (OCCN).
  - Simple, tailored dropdown menus for user friendly configuration, diagnostics and troubleshooting.
  - Improved diagnostics, track monitor saved to ECD and easily downloadable to USB flash drive.
- USB ECD storage of SEAR IIi Event Recorder/ Analyzer parameters.

*For additional optional modules, See this section, Pages **A19 - A25***

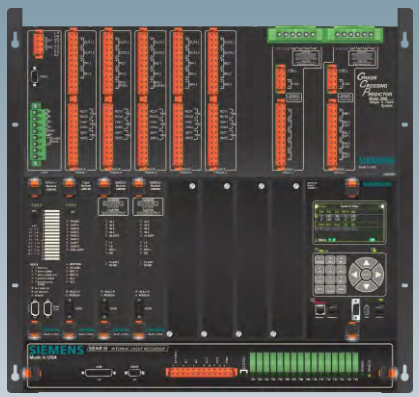
NYK:80008090500000



GCP 5000 Empty Single Five Track

- Weight is approx. 26.01 lbs. (11.80 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single five track chassis
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (8) NYK:Z610393250001 blank module cover panels
- (1) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules

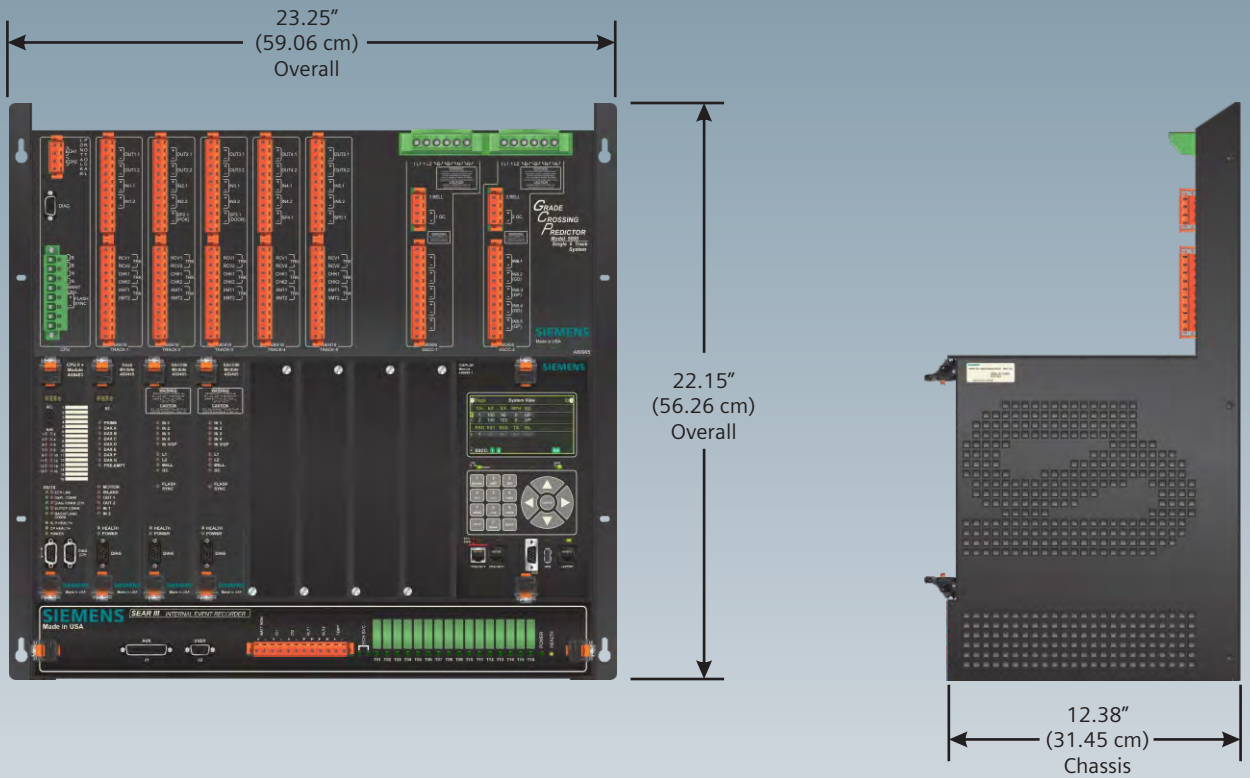
NYK:81018090500216



GCP 5000 Comprehensive Single Five Track

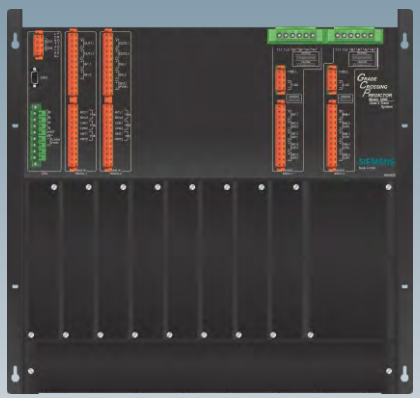
- Weight is approx. 48.60 lbs. (22.04 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (1) NYK:8000804030001 CPU II+ module
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804850001 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (4) NYK:Z610393250001 blank module cover panels
- NO other modules

Applicable for all GCP 5000 Series Single Five Track Non Redundant configurations



Dual Two Track Redundant Configurations

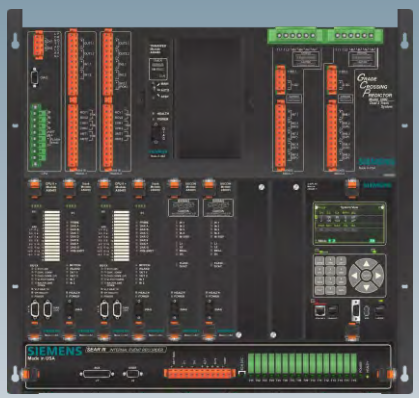
NYK:80008090200000



GCP 5000 Empty Dual Two Track

- Weight is approx. 25.73 lbs. (11.67 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Dual two track chassis
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (8) NYK:Z610393250001 blank module cover panels
- (1) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules

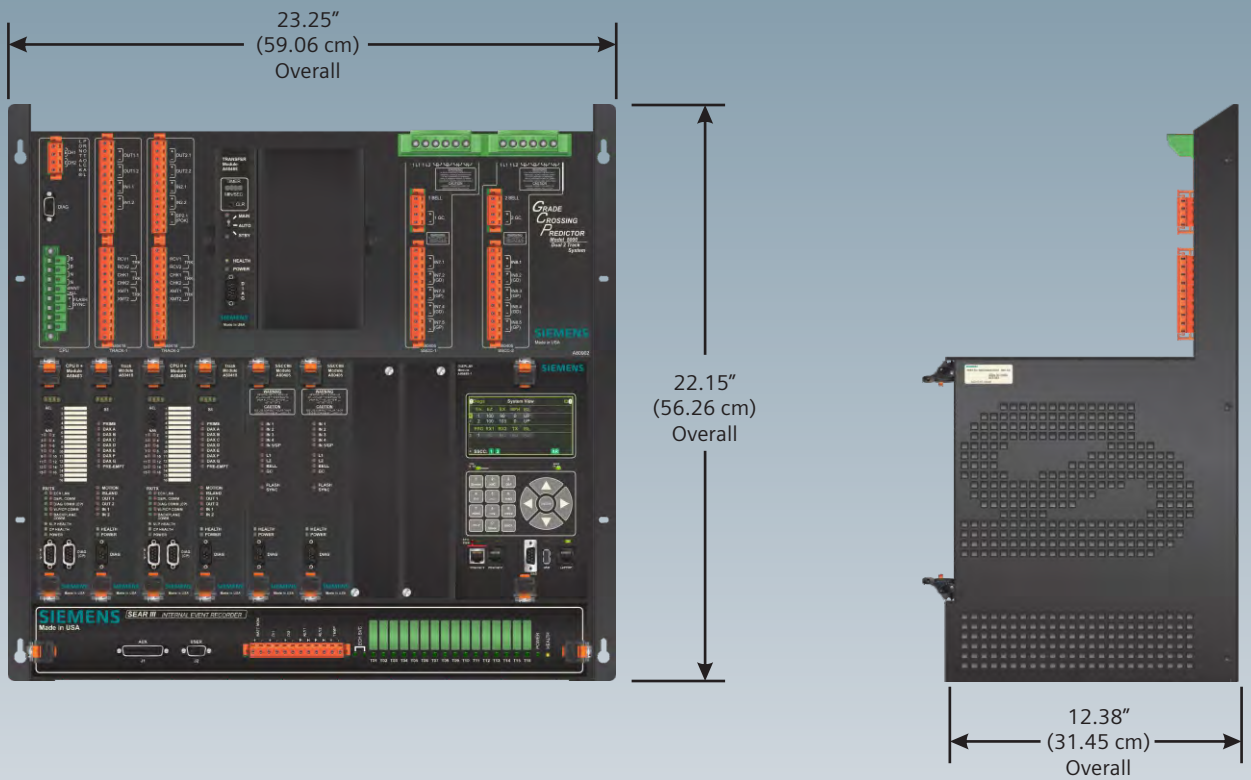
NYK:82028090200220



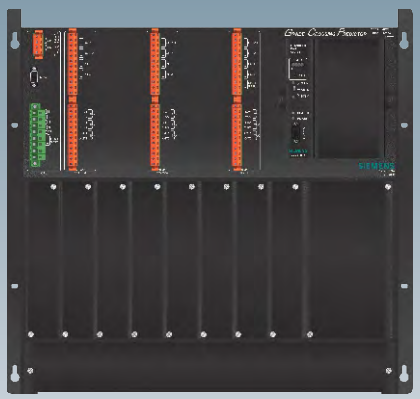
GCP 5000 Comprehensive Dual Two Track

- Weight is approx. 50.10 lbs. (22.73 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (2) NYK:8000809030001 CPU III modules
- (2) NYK:8000804180001 Track modules
- (1) NYK:8000804850001 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804680001 Transfer module
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (2) NYK:Z610393250001 blank module cover panels
- NO other modules

Applicable for all Wayguard® Grade Crossing Predictor GCP 4000 Series Dual Two Track Redundant configurations



NYK:80008090700000



GCP 5000 Empty Dual Three Track

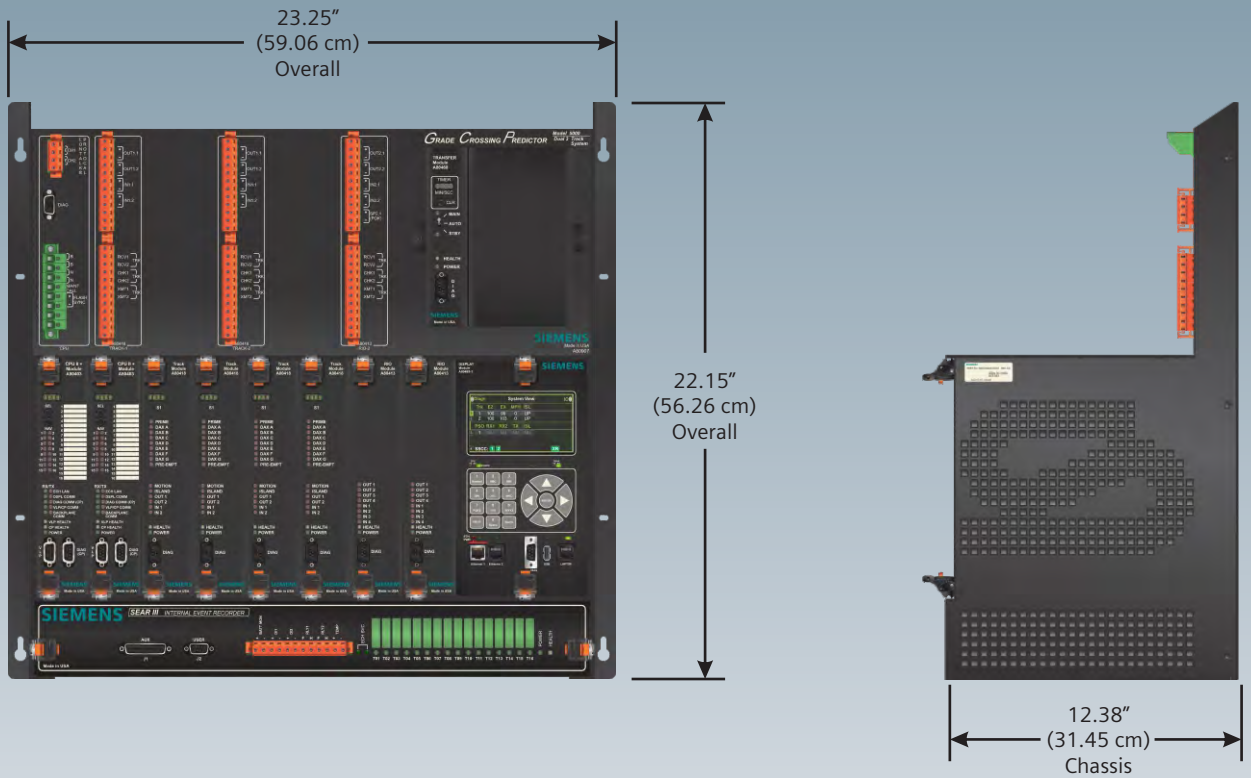
- Weight is approx. 26.01 lbs. (11.80 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Single five track chassis
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (8) NYK:Z610393250001 blank module cover panels
- (1) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules

NYK:82038090700220

GCP 5000 Comprehensive Dual Three Track

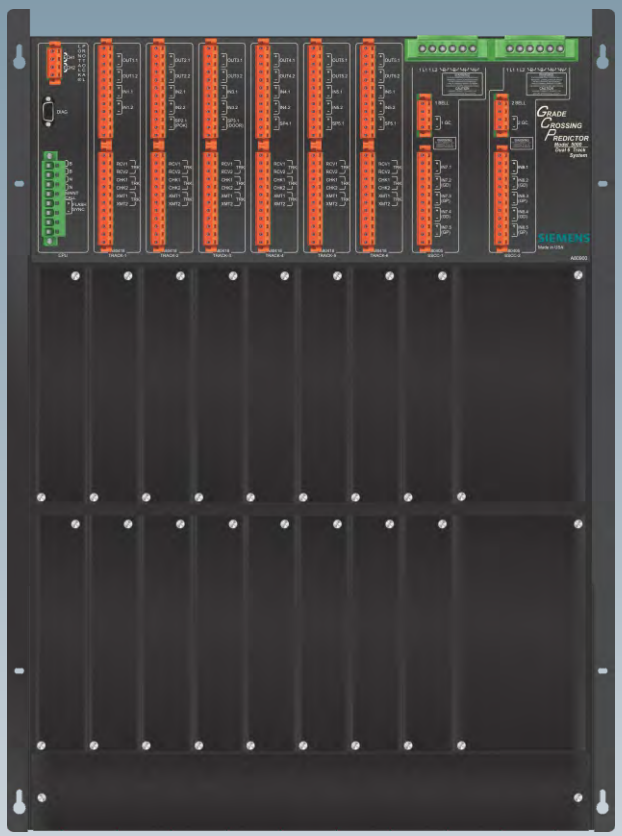
- Weight is approx. 48.60 lbs. (22.04 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (2) NYK:8000804030001 CPU II+ modules
- (1) NYK:8000804180001 Track module
- (1) NYK:8000804850001 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (4) NYK:Z610393250001 blank module cover panels
- NO other modules

Applicable for all GCP 5000 Series Single Five Track Non Redundant configurations



Dual Six Track Redundant Configurations

NYK:80008090000000



GCP 5000 Empty Dual Six Track

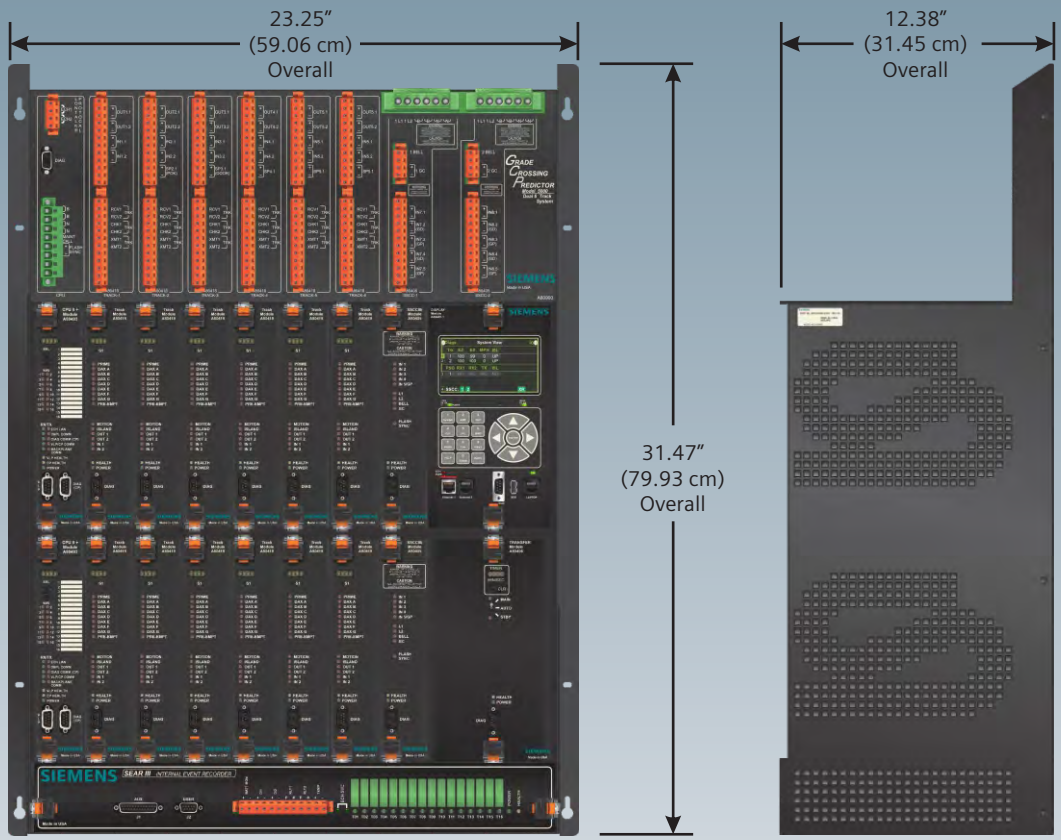
- Weight is approx. 35.59 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Dual six track chassis
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- (16) NYK:Z610393250001 blank module cover panels
- (2) NYK:Z610393260001 blank display cover panel
- (1) NYK:Z610393590001 blank SEAR cover panel
- NO other modules

NYK:82028090000220

GCP 5000 Comprehensive Dual Six Track

- Weight is approx. 66.84 lbs. (30.32 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:80008044000000 Chassis
- (2) NYK:8000804030001 CPU II+ module
- (12) NYK:8000804180001 Track module
- (1) NYK:8000804070003 Display module
- (1) NYK:8000804100001 SEAR IIi module
- (2) NYK:8000804050001 SSCC IIIi modules
- (1) NYK:8000804060001 Transfer module
- (1) NYK:8000804350001 SPI ECD module
- (1) NYK:8000804430001 Backplane ECD module
- NO other modules

Applicable for all Wayguard® Grade Crossing Predictor GCP 5000 Series Dual Six Track Redundant configurations

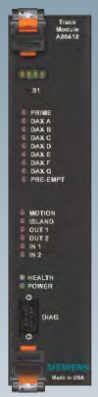


CPU II +, Track, SSCC IIIi and Display Modules

NYK:8000804030001

GCP CPU II+ Module
- Weight is approx. 1.25 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Programmable integrated circuits onboard 9V792-A03X, 9V691-A03X and 9V789-A06X
- Echelon® and communications capabilities

NYK:8000804180001



GCP Track Module
- Weight is approx. 1.0 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (9) Prediction functions

NYK:8000804050001

GCP SSCC IIIi Module
- Weight is approx. 3.6 lbs. (1.63 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Isolated gate controller
- (20) Amp light controller

NYK:8000804850001

GCP 4000 / 5000 Display Module
- Weight is approx. 4 lbs. (1.81 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) onboard USB port

NYK:8000804060001

GCP Transfer Module, Wide
(For use with dual six track GCP 4000 configurations)

- Weight is approx. 0.38 lbs. (0.17 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

NYK:8000804680001

GCP Transfer Module, Chassis
(For use with dual two track GCP 4000 configurations)

- Weight is approx. 1.5 lbs. (0.68 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

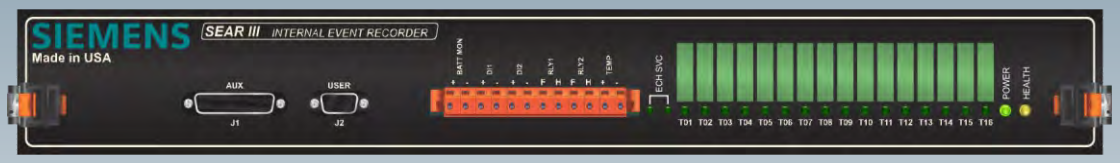
NYK:8000804060002

GCP Transfer Module, Narrow
(For use with single one track SGCP / MS 4000 series)

- Weight is approx. 3 lbs. (1.36 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

Event Analyzer / Recorder (SEAR IIi) Modules

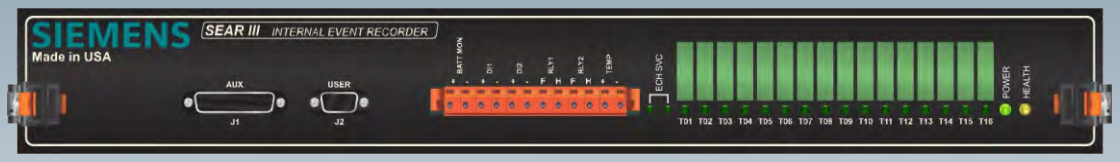
NYK:8000804100001



GCP SEAR IIi Module

- Weight is approx. 5.25 lbs. (2.36 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Utilizes 8000-80411-0001 recorder board

NYK:8000804100002



SEAR IIi Module

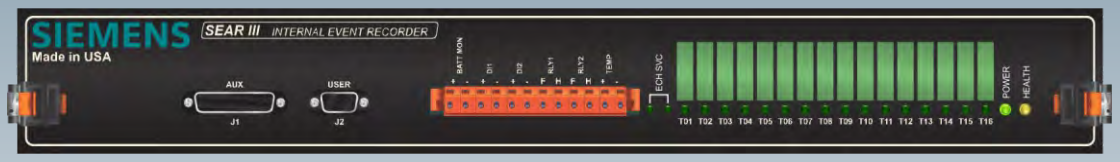
- Weight is approx. 5.25 lbs. (2.36 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Utilizes 8000-80411-0002 recorder board

NYK:8000804100003

SEAR IIi Module

- Weight is approx. 6 lbs. (2.72 kgs.) not including cable
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Utilizes 8000-80411-0001 recorder board
- (1) 8000-26654-0002 10′ (3.05 m) SEAR to CRTU cable

NYK:8000804100004

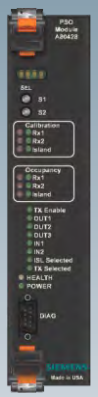


SEAR IIi Module

- Weight is approx. 6 lbs. (2.72 kgs.) not including cable
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Utilizes 8000-80411-0002 recorder board
- (1) 8000-26654-0002 10′ (3.05 m) SEAR to CRTU cable

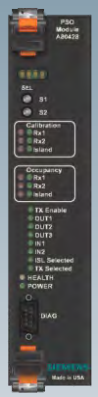
Phase Shift Overlay (PSO) and Relay Input / Output (RIO)Modules

NYK:8000804280001



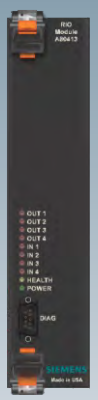
GCP Phase Shift Overlay (PSO) Module
- Weight is approx. 1.0 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Programmable integrated circuits onboard 9V386-A01X,

NYK:8000804280002



GCP Phase Shift Overlay (PSO) Module
- Weight is approx. 1.0 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

NYK:8000804130001



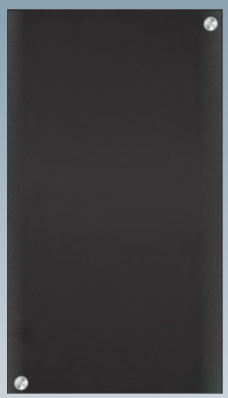
GCP Relay Input /Output (RIO) Module
- Weight is approx. 1.0 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (4) Inputs opto-isolated, vital
- (4) Outputs opto-isolated, vital
- Output voltage 12 VDC into 500 Ω
- Relay loads 100-2000 Ω
- Cab rates 75, 120, 180, 270,420
- Isolation 2000 VAC

Blank Filler Plates

NYK:Z610393250001

Blank Module Filler Plate, Narrow
- Weight is approx. 0.6 lbs. (0.27 kgs.)

NYK:Z610393260001



Blank Display Filler Plate, Wide
- Weight is approx. 0.8 lbs. (0.36 kgs.)

NYK:Z610393590001

Blank SEAR Filler Plate
- Weight is approx. 2.4 lbs. (2.72 kgs.)

Serial Peripheral Interface / External Configuration Device (SPI / ECD) Modules

NYK:8000804350001

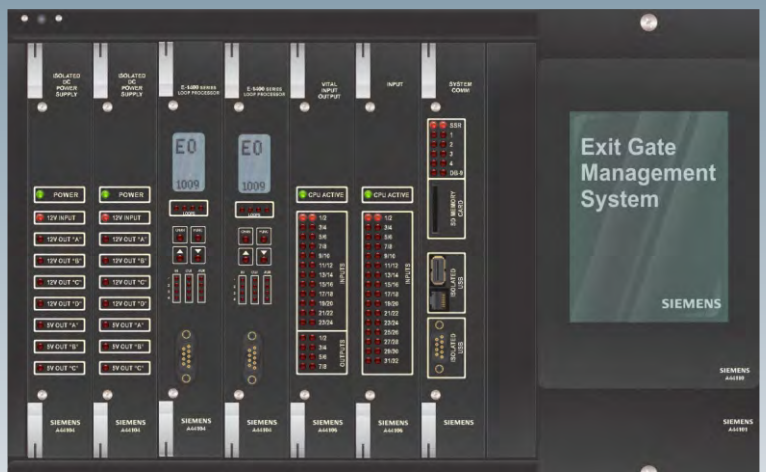
Serial Peripheral Interface /
External Configuration Device (SPI / ECD) Module

- Weight is approx. 1.30 oz.. (0.04 kgs.)
- (4) Megabyte memory capacity
- (25) pin (DB25) male connector
- Knurled barrel screw fasteners

NYK:8000804350002

Serial Peripheral Interface /
External Configuration Device (SPI / ECD) Module

- Weight is approx. 1.30 oz.. (0.04 kgs.)
- (16) Megabyte memory capacity
- (25) pin (DB25) male connector
- Knurled barrel screw fasteners

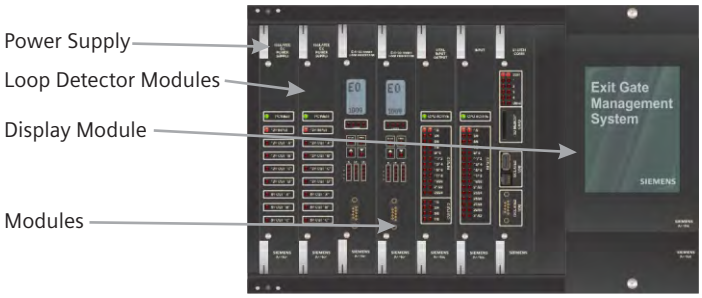


Wayguard®

EGMS
Series

Exit Gate Management System

Overview



SIEMENS Wayguard® Exit Gate Management System (EGMS) is designed to peform exit gate timing and control as a part of an overall (4) Quandrant Gate - Warning System (4QG). Utilizing self checking inductive loop detectors to determine the presence of vehicles within the area between the entrance gates and exit gates also known as the Minimum Track Clearance Distance (MTCD).

If a vehicle is detected within the MTCD, the exit gates will not be lowered until the vehicle clears the MTCD to avoid trapping vehicles within the crossing.

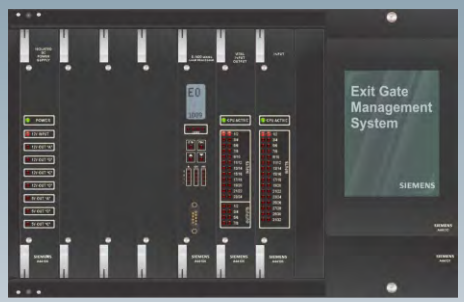
As a backup mode, automatic changeover to timed exit gate or exit gate fail-up mode in the event of inductive loop failure is available through front panel programming. Providing a touch-sensitive liquid crystal display (LCD) to allow data entry and access to all stored data.

Features

- Inductive Loop Operation
- (2) Levels of systems health monitoring
- Dynamic Exit Gate Operation

*For additional optional modules, See this section, Pages **A30 - A33***

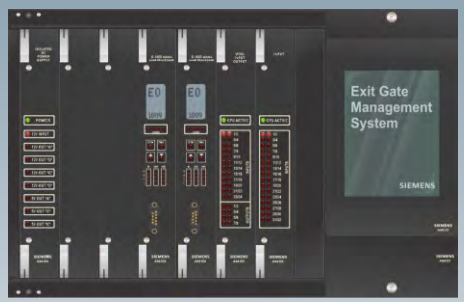
NYK:525-0201-01



4 Loop Assembly

- Weight is approx. 52.2 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (1) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- NO communications module

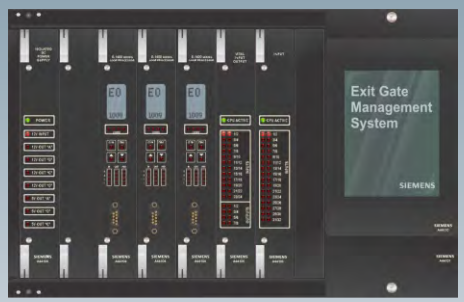
NYK:525-0201-02



8 Loop Assembly

- Weight is approx. 52.8 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (2) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- NO communications module

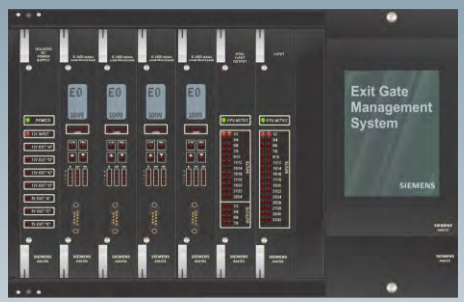
NYK:525-0201-03



12 Loop Assembly

- Weight is approx. 53.4 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (3) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- NO communications module

NYK:525-0201-04

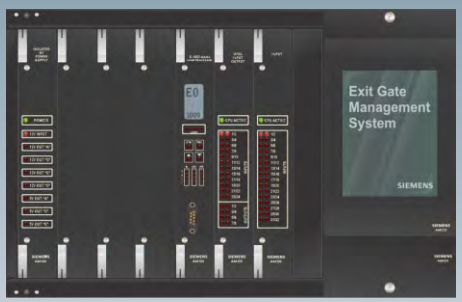


16 Loop Assembly

- Weight is approx. 54.0 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (4) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- NO communications module

Assemblies

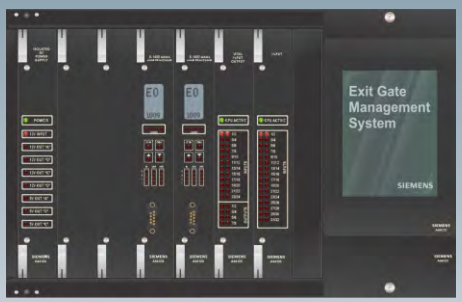
NYK:525-0202-01



4 Loop Assembly

- Weight is approx. 52.2 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (1) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- (1) NYK:010-101-0008 Communications module

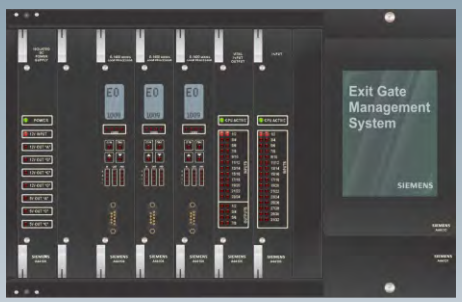
NYK:525-0202-02



8 Loop Assembly

- Weight is approx. 52.8 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (2) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- (1) NYK:010-101-0008 Communications module

NYK:525-0202-03



12 Loop Assembly

- Weight is approx. 53.4 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (3) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- (1) NYK:010-101-0008 Communications module

NYK:525-0202-04

16 Loop Assembly

- Weight is approx. 54.0 lbs. (16.14 kgs.) including connectors.
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- (1) NYK:004-101-0001X Chassis
- (4) E1400S (4) Channel Presence Detector
- (1) NYK:010-101-0006 Power supply module
- (1) NYK:010-101-0002 Display module
- (1) NYK:010-101-0003 CPU module
- (1) NYK:010-101-0004 Vital input module
- (1) NYK:010-101-0009 Vital I/O module
- (1) NYK:010-101-0008 Communications module

NYK:017-100-0001

E1400S (4) Channel Presence Detector

- Weight is approx. 1.0 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

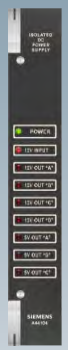
NYK:017-101-0001

P1400 (4) Channel Presence Detector

- Weight is approx. 1.0 lbs. (0.56 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

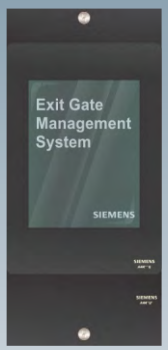
Power Supply, Display and Vital Input Modules

NYK:010-101-0006



EGMS Power Supply Module
- Weight is approx. 1.0 lbs. (0.45 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

NYK:010-101-0002



EGMS Display Module
- Weight is approx. 2.1 lbs. (0.95 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

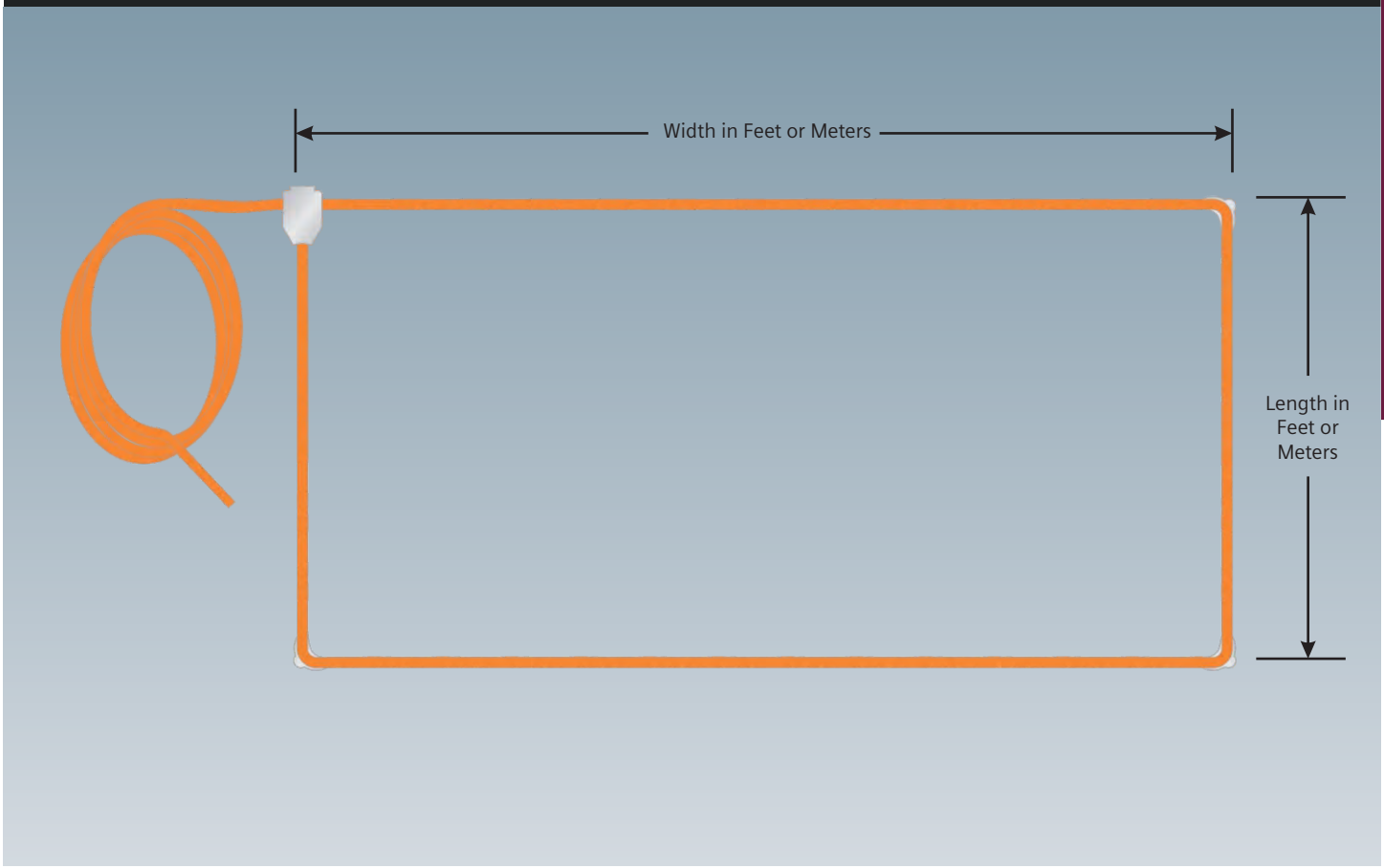
NYK:010-101-0003

EGMS CPU Module
- Weight is approx. 1.0 lbs. (0.45 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

NYK:010-101-0004

EGMS Vital Input Module
- Weight is approx. 1.0 lbs. (0.45 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

Preformed loops and accessories

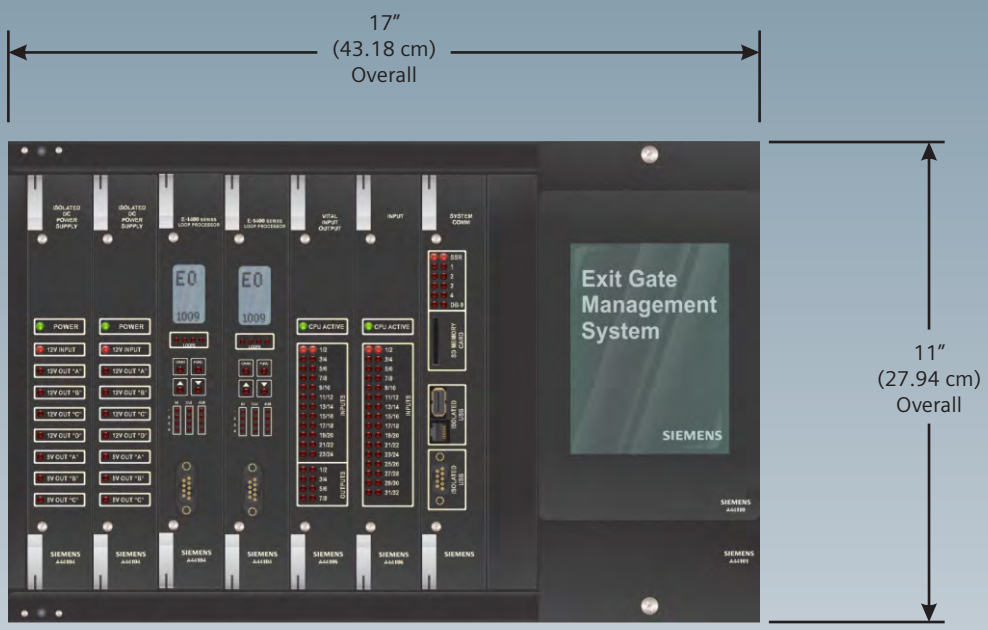


SIEMENS Part Number	Description
NYK:PLC-24-50	24′ (7.3 m) long x 50′ (15.2 m) wide
NYK:PLC-26-50	26′ (7.9 m) long x 50′ (15.2 m) wide
NYK:PLC-28-50	28′ (8.5 m) long x 50′ (15.2 m) wide
NYK:PLC-30-50	30′ (9.1 m) long x 50′ (15.2 m) wide
NYK:PLC-32-50	32′ (9.8 m) long x 50′ (15.2 m) wide
NYK:PLC-34-50	34′ (10.4 m) long x 50′ (15.2 m) wide
NYK:PLC-36-50	36′ (11.0 m) long x 50′ (15.2 m) wide
NYK:PLC-38-50	38′ (11.6 m) long x 50′ (15.2 m) wide
NYK:PLC-40-50	40′ (12.2 m) long x 50′ (15.2 m) wide
NYK:PLC-50-50	50′ (15.2 m) long x 50′ (15.2 m) wide
NYK:017-107-0001	Ø3/8″ 4C #18 AWG RR-418 cable, double jacketed, per linear foot
NYK:07-020-011	Ø3/4″ 4C #18 AWG RR-418 cable, triple jacketed, per linear foot
NYK:03-094-005	Home run cable

Accessories and Dimensions

SIEMENS Part Number	Description
NYK:03-083-003	TB-2 Wago® terminal strip for 1st and 2nd presence detectors
NYK:03-083-004	TB-4 Wago® terminal strip for 3rd and 4th presence detectors
NYK:07-020-006	Presence detector cable harness kit
NYK:018-100-0001	Aluminum foundation mounted junction box
NYK:018-101-0001	Aluminum pedestal mounted junction box
NYK:04-004-005	1" NPT hub gland plate

Applicable for all Wayguard® Exit Gate Management System EGMS Series assemblies



Wayside Inspector
Series

Overview

SIEMENS Wayside Inspector Automated Grade Crossing Testing System automates periodic inspection of crossings such as monitoring the state of discrete I/O signals, battery voltages and AC power.

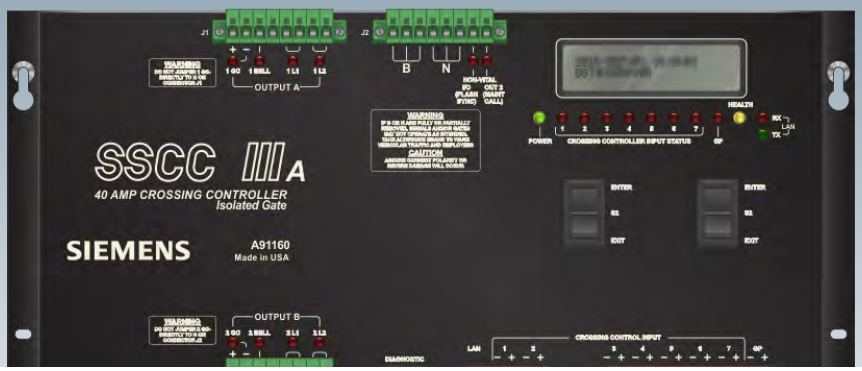
From that information, it analyzes the operation of the grade crossing's warning systems and provides a means for inspection of those systems.

It can send alarms and inspection report logs to a backoffice system or can interact thru a WebUI to allow field personnel to adjust system settings, view statuses etc.

Features

- Scheduled Annual Warning Time inspection available for both main and standby equipment, and for every directional approach and route through associated crossing.
  (When used in conjunction with optional WiMag® sensor and specific setup procedures)
  (Railroad personal must verify warning time)
- Scheduled Monthly Standby Power inspection available.
- Scheduled Monthly Ground inspection available.
  (When used in conjunction with optional Ground Fault Tester - GFT II and specific setup procedures)
- All inspections can be tailored to meet individual railroad threshold requirements.

SIEMENS Part Number	Description
NYK:8000810000001	Wayside Inspector Unit
NYK:Z921004070000	WiMag VSN240-F Sensor
NYK:Z927004220000	WiMag Repeater Unit
NYK:Z927004210000	Access Point Base Station



Wayguard®

SSCC
Series

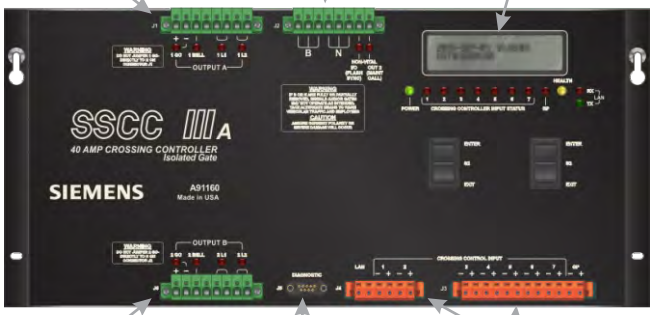
Solid State Crossing Controller

Overview

OUTPUT A Connector Controls:
(1) 20 A Flashing Light
(1) GC Output
(1) Electronic Bell

Power Supply Connector

Status and Program display and related indicators



OUTPUT B Connector Controls:
(1) 20 A Flashing Light
(2) GC Output
(1) Electronic Bell
(Available on 40 A SSCC Units ONLY!)

Diagnostic Connector Port for direct computer interfacing

Connector to Echelon® LAN Interface and Inputs from Crossing Controller

The **SIEMENS** Wayguard® Solid State Crossing Controller (SSCC) Series offers reliable and simple crossing control without breaking the bank.

All parameters are easily set using built in liquid crystal display (LCD) screen and pushbuttons as well as protected against unauthorized changes using available password protection. Alternatively, passwords can also be uploaded or downloaded via computer.

With built in logic you can control a crossing more reliably and more cost effectively with greater flexibility. Eliminate need for relays and related wiring using the built in standardized logic, which can be customized to accommodate a vast array of crossing configurations.

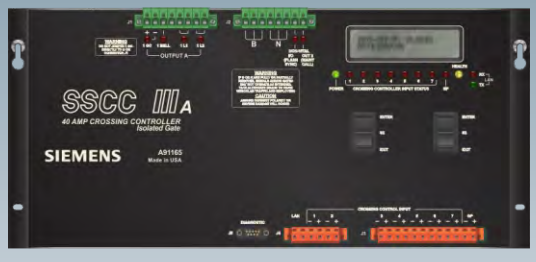
Features

- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable vital control inputs.
  Up to (8) including (1) input for gate position.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- Optional synchronized lamp flashing of multiple units.
- Optional loss of shunt selection with configurable timers.
- Non Volatile Real-Time Clock.
- Expanded menu system includes pre-emption output drive logic.
- "SERVICE" menu option to program Out-of-Service timers.
  (Available on select models)
- Communications via ATCS.
  (Available on select models)

5 built in test modes

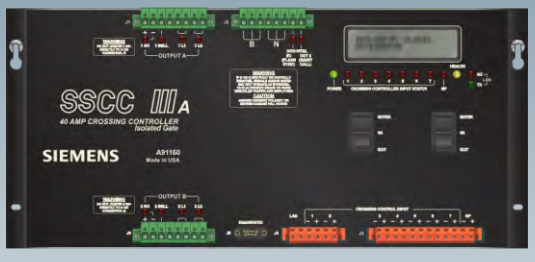
- Lamps Steady - Allows the maintainer to continuously light a lamp for alignment purposes.
- Flash Lamps - Allows the maintainer to flash a lamp to ensure it is working.
- Timed Lamps- Allows the maintainer to set a timing sequence that will flash a lamp for "X" seconds.
- Timed Lamps Repeat - Allows the maintainer to set a timing sequence that will flash a lamp for "X" seconds after "Y" and "2Y" delay.
- Activate Crossing - Allows the maintainer to activate a crossing in a controlled manner.

NYK:9000911651101



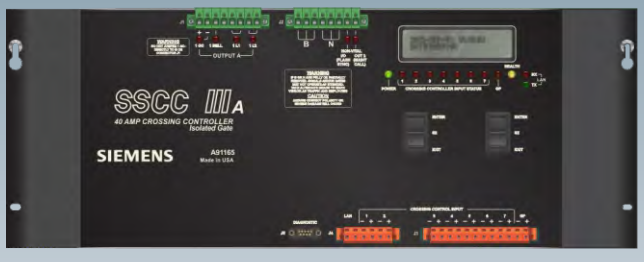
- Easily mountable on 19" (48.3 cm) racks.
- Weight is approx. 9.6 lbs. (4.32 kgs.) including connectors.
- Quiescent power consumption is approx. 0.75 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (1) gate control output
- (1) bell output
- (1) pair of lamp outputs (up to 20 amp load)

NYK:9000911601101



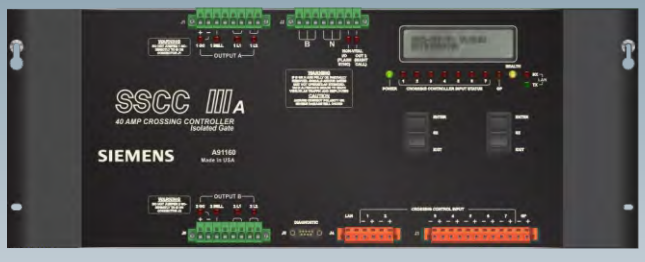
- Easily mountable on 19" (48.3 cm) racks.
- Weight is approx. 11.2 lbs. (5.08 kgs.) including connectors.
- Quiescent power consumption is approx. 0.95 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (2) gate control outputs
- (2) bell outputs
- (2) pairs of lamp outputs (up to 20 amp load)

NYK:9000911650101



- Easily mountable on 23" (58.4 cm) Mounting Rack
- Weight is approx. 9.8 lbs. (4.44 kgs.) including connectors.
- Quiescent power consumption is approx. 0.75 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (1) gate control output
- (1) bell output
- (1) pair of lamp outputs (up to 20 amp load)

NYK:9000911600101



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- Quiescent power consumption is approx. 0.95 A
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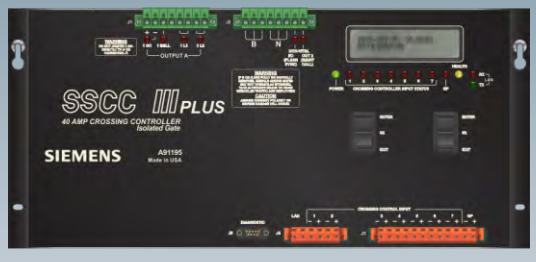
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (2) gate control outputs
- (2) bell outputs
- (2) pairs of lamp outputs (up to 20 amp load)

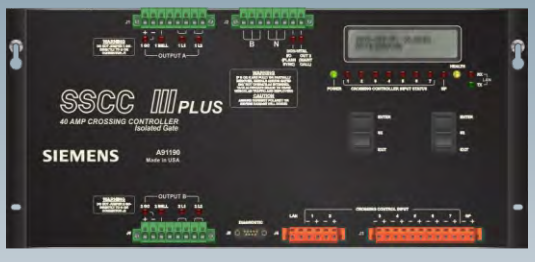
Assemblies

NYK:9000911951101



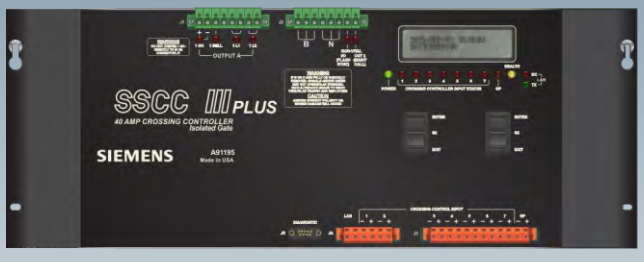
- Easily mountable on 19" (48.3 cm) racks.
- Weight is approx. 9.6 lbs. (4.32 kgs.) including connectors.
- Quiescent power consumption is approx. 0.75 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (1) gate control output
- (1) bell output
- (1) pair of lamp outputs (up to 20 amp load)
- "Service" out of service timers

NYK:9000911901101



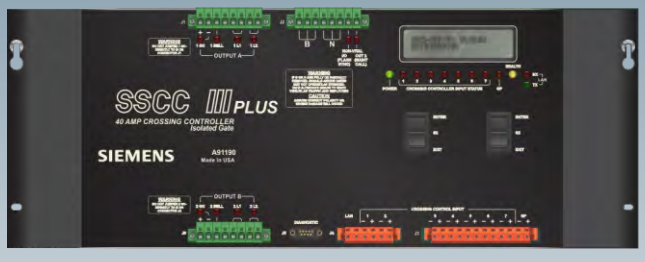
- Easily mountable on 19" (48.3 cm) racks.
- Weight is approx. 11.2 lbs. (5.08 kgs.) including connectors.
- Quiescent power consumption is approx. 0.95 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (2) gate control outputs
- (2) bell outputs
- (2) pairs of lamp outputs (up to 20 amp load)
- "Service" out of service timers

NYK:9000911950101



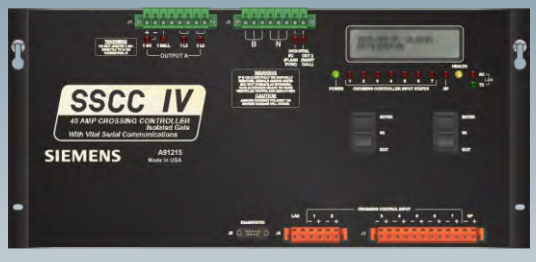
- Easily mountable on 23" (58.4 cm) Mounting Rack
- Weight is approx. 9.8 lbs. (4.44 kgs.) including connectors.
- Quiescent power consumption is approx. 0.75 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (1) gate control output
- (1) bell output
- (1) pair of lamp outputs (up to 20 amp load)
- "Service" out of service timers

NYK:9000911900101



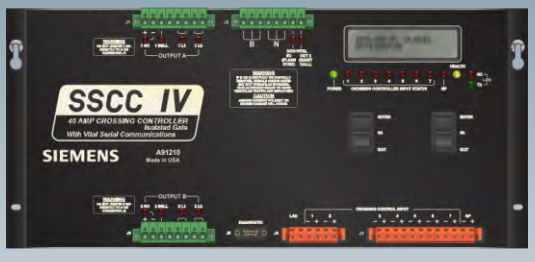
- Easily mountable on 23" (58.4 cm) Mounting Rack
- Weight is approx. 11.4 lbs. (5.13 kgs.) including connectors.
- Quiescent power consumption is approx. 0.95 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (2) gate control outputs
- (2) bell outputs
- (2) pairs of lamp outputs (up to 20 amp load)
- "Service" out of service timers

NYK:9000912151101



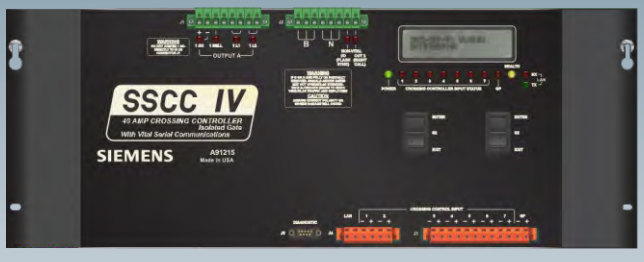
- Easily mountable on 19" (48.3 cm) racks.
- Weight is approx. 9.6 lbs. (4.32 kgs.) including connectors.
- Quiescent power consumption is approx. 0.75 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (1) gate control output
- (1) bell output
- (1) pair of lamp outputs (up to 20 amp load)
- "Service" out of service timers
- Communications via ATCS available

NYK:9000912101101



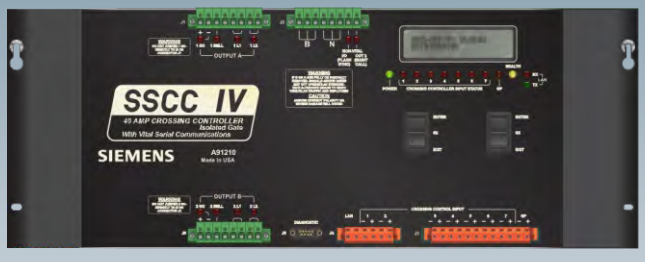
- Easily mountable on 19" (48.3 cm) racks.
- Weight is approx. 11.2 lbs. (5.08 kgs.) including connectors.
- Quiescent power consumption is approx. 0.95 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (2) gate control outputs
- (2) bell outputs
- (2) pairs of lamp outputs (up to 20 amp load)
- "Service" out of service timers
- Communications via ATCS available

NYK:9000912150101



- Easily mountable on 23" (58.4 cm) Mounting Rack
- Weight is approx. 9.8 lbs. (4.44 kgs.) including connectors.
- Quiescent power consumption is approx. 0.75 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (1) gate control output
- (1) bell output
- (1) pair of lamp outputs (up to 20 amp load)
- "Service" out of service timers
- Communications via ATCS available

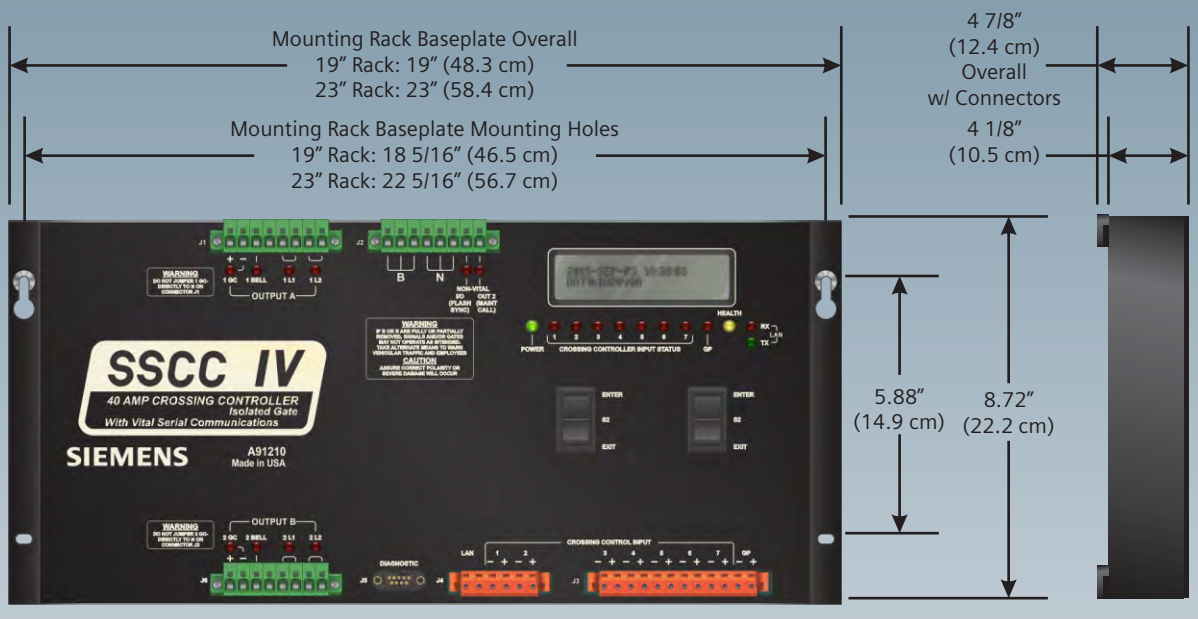
NYK:9000912100101

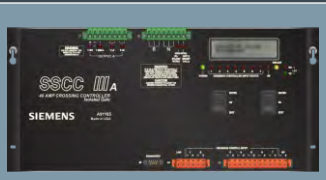
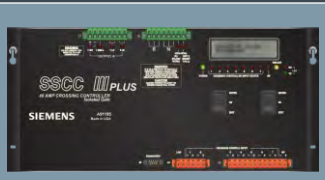
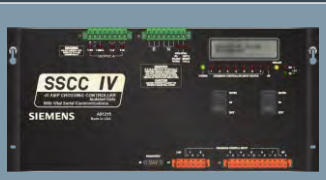


- Easily mountable on 23" (58.4 cm) Mounting Rack
- Weight is approx. 11.4 lbs. (5.13 kgs.) including connectors.
- Quiescent power consumption is approx. 0.95 A
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Echelon® connectivity for communicating recorder and diagnostic information.
- Programmable loss of shunt timers for each input.
- Programmable low battery indication threshold.
- Programmable lamp flash rate.
- (2) gate control outputs
- (2) bell outputs
- (2) pairs of lamp outputs (up to 20 amp load)
- "Service" out of service timers
- Communications via ATCS available

Dimensions

Applicable for all Wayguard® Solid State Crossing Controller SSCC Series assemblies



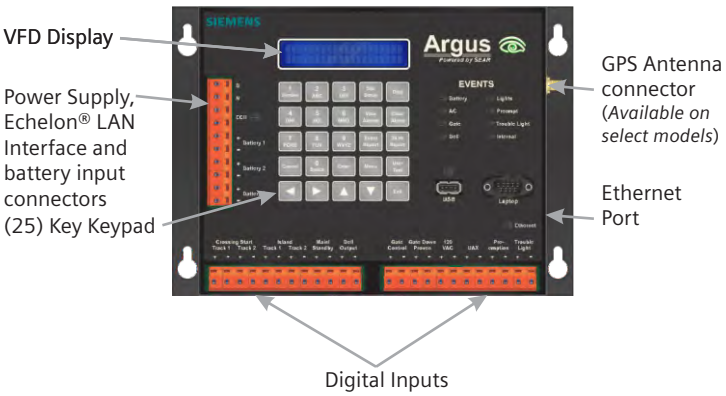
Model	SSCC III A	SSCC III PLUS	SSCC IV
			
Echelon® Compatible	✓	✓	✓
Programmable Loss of Shunt Timers	✓	✓	✓
Programmable Vital Control Inputs	✓	✓	✓
Programmable Low Battery Indicator	✓	✓	✓
Programmable Lamp Flash Rate	✓	✓	✓
Non Volatile Real-Time Clock	✓	✓	✓
Inbuilt onboard Application Configurations	✗	✓	✓
"SERVICE" Out of Service Timers	✗	✓	✓
Communication Via ATCS	✗	✗	✓

Wayguard®

ARGUS
Series

Event Recorder

Overview



The **SIEMENS** Wayguard® Argus Event Recorder Series offers reliable and simple comprehensive monitoring, recording, reporting and alarm generation in one compact simple to install, simple to use unit without breaking the bank.

Immediately reporting anomalies to the where the client's maintainers' specify in order to investigate and maintain.

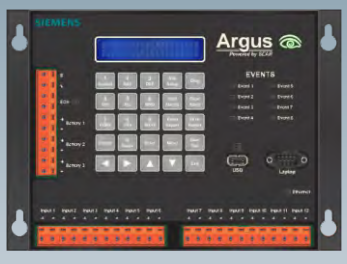
Features

- Provides full monitoring, recording and reporting functions for most standard crossing configurations without the need for any other modules, except for light-out detectors or other optional supported devices (*check with* **SIEMENS** *Technical Assistance for Rail Automation Team for which other devices are currently supported*).
- Allows the railroad to have recorded proof-of-crossing operation. The log from the recorder contains anti-tampering information. Any editing of this log will be obvious to an auditor.
- Provides a user-friendly platform for site configuration and log retrieval, without the need for special hardware or software, via a USB 2.0 flash drive.
- Provides notification of alarm conditions to the Wayside Alarm Management System (WAMS) over a variety of communication networks (*check with* **SIEMENS** *Technical Assistance for Rail Automation Team for the networks and protocols currently supported*).
- Available with either **SIEMENS** proprietary silkscreening of predetermined events or inputs or a non proprietary silkscreening offering generic descriptions instead.

NYK:8000803110001

- Weight is approx. 2.8 lbs. (1.27 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Proprietary silkscreen overlay
- Basic CDL program
- (1) Ethernet port
- NO GPS capability
- NO accessory kit

NYK:8000803110003

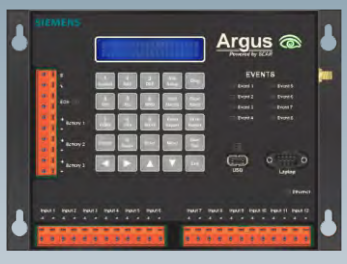


- Weight is approx. 2.8 lbs. (1.27 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Non proprietary silkscreen overlay
- Basic CDL program
- (1) Ethernet port
- NO GPS capability
- NO accessory kit

NYK:8000803110004

- Weight is approx. 2.8 lbs. (1.27 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Proprietary silkscreen overlay
- Basic CDL program
- (1) Ethernet port
- GPS capability
- NO accessory kit

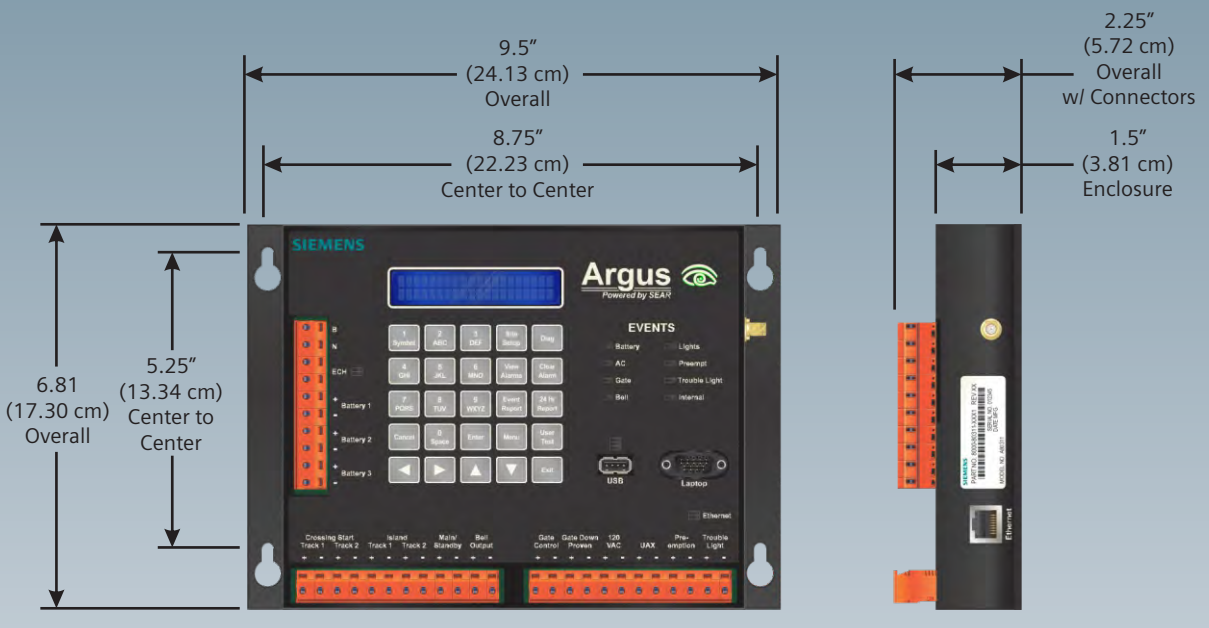
NYK:8000803110006



- Weight is approx. 2.8 lbs. (1.27 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Non proprietary silkscreen overlay
- Basic CDL program
- (1) Ethernet port
- GPS capability
- NO accessory kit

Dimensions

Applicable for all Wayguard® ARGUS Series Event Recorder assemblies



Preconfigured GPS Accessory Kits

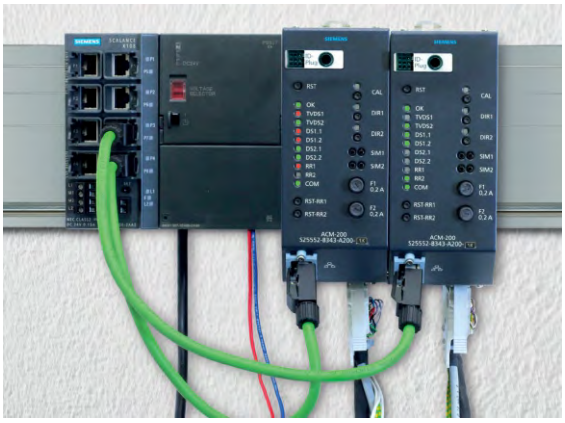
SIEMENS Part Number	Description
NYK:8000267600001	(2) 6' (1.8 m) Antenna / Surge cables, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600002	(1) 6' (1.8 m) Antenna / Surge cable, (1) 15' (4.6 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600003	(1) 6' (1.8 m) Antenna / Surge cable, (1) 30' (9.2 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600004	(1) 6' (1.8 m) Antenna / Surge cable, (1) 50' (15.2 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600006	(2) 15' (4.6 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600007	(1) 15' (4.6 m) Antenna / Surge cable, (1) 30' (9.2 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600008	(1) 15' (4.6 m) Antenna / Surge cable, (1) 50' (15.2 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600011	(2) 30' (9.2 m) Antenna / Surge cables, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600012	(1) 30' (9.2 m) Antenna / Surge cable, (1) 50' (15.2 m) Antenna / Surge cable, (1) SMA/M adapter, (1) DC Arrester
NYK:8000267600016	(2) 50' (15.2 m) Antenna / Surge cables, (1) SMA/M adapter, (1) DC Arrester

Wayguard®

ACM 200
Series

Axle Count Management System

Overview



SIEMENS Clearguard ACM 200 electronic wheel detection equipment is a wheel detection component for use in track vacancy detection systems using the axle counting method.

It is preferentially used in the outdoor equipment of the Clearguard Az S 350 U and Clearguard ACM 200 counting systems and comprises a double wheel detector and a trackside connection box. Clearguard ZP D 43 is the successor model to ZP 43 E and ZP 43 V.

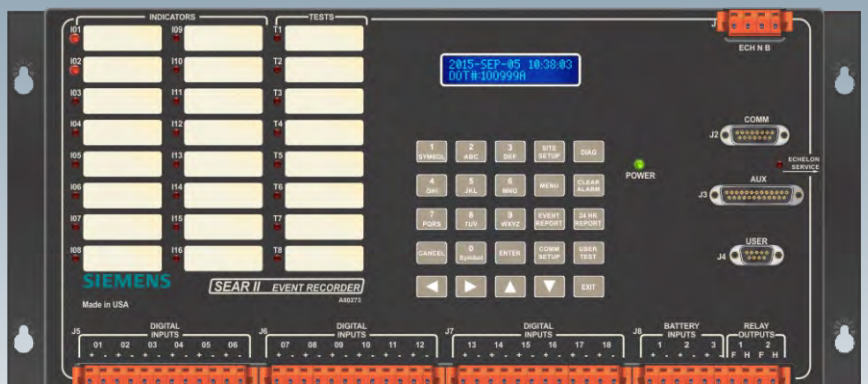
DEK 43 double wheel detector
The DEK 43 double wheel detector is made up of a transmitter and a receiver in separate housings, each mounted with a reducing plate against the rail web.

Trackside connection box
The trackside connection box of the Clearguard ZP D 43 consists of a base plate and a cover which is made of either plastic or aluminum (selectable). The base plate supports a board module which in turn comprises a base plate, the application-specific printed circuit board and a protective cover.

Features

- Connection to electronic and relay interlockings
- HTML communication for attribute configuration, logging and diagnostics
- Modular, compact hardware
- Deployment of Clearguard ZP D 43 and Clearguard ZP 43 E/V counting heads

SIEMENS Part Number	Description
NYK:680001-0040	ZP D 43 Wheel Detector
NYK:680001-0019	ACM 200 ID Plug Module
NYK:680001-0083	SIPLUS SCALANCE X208 Ethernet Switch
NYK:6ES57108MA31	SIMATIC S7-300 Controller

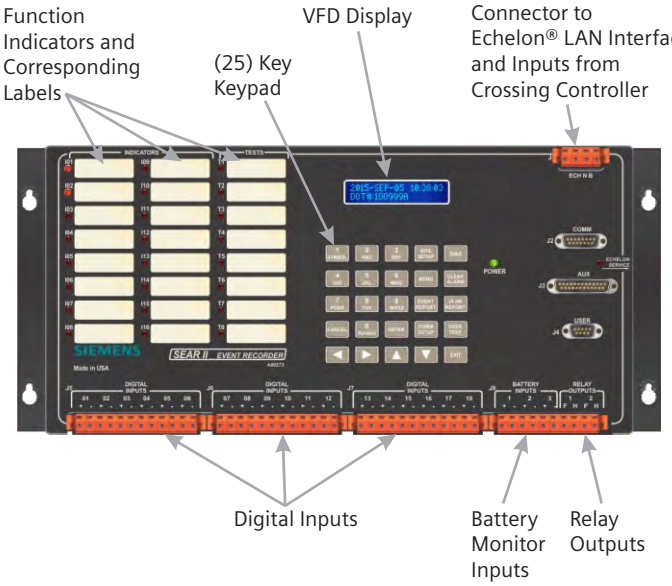


Wayguard®

SEAR II
Series

Event Analyzers / Recorders

Overview



SIEMENS SEAR II Event Analyzer / Recorder
model A80273 shown for reference purposes only!
Actual unit selected may vary in mounting and features.

Railroads have a duty of care to ensure that grade crossings operate safely. **SIEMENS** Wayguard® SEAR II Series Event Analyzer / Recorders immediately report anomalies to the where the client's maintainers' specify in order to investigate and maintain.

Offering reliable and simple comprehensive monitoring, recording, reporting and alarm generation in one compact simple to install, simple to use unit without breaking the bank.

Microprocessor controlled non-vital, stand alone alarm management system designed to provide continuous real-time general purpose status monitoring and event recording for a wide range of functions associated with grade crossings.

Features

- 24 x 7 monitoring and fault reporting.
- Echelon® connectivity for communicating recorder and diagnostic information.
- Non-contact detection of flashing lamps.
  (*Can detect a single failure within a lamp bank when* **SIEMENS** *Intelligent Lights Out Detector (iLOD) is installed*)
- Isolated monitoring of up to 18 separate digital points.
- Isolated monitoring of 3 analog points.
  (*such as a battery*)
- Configurable dry contact outputs for remote testing.
- Configurable internal logic to discriminate faults from normal operation.
- Configurable maintainer call on real alarms.
- Can be remotely interrogated.
- Direct interface to Grade Crossing Predictors
  (*such as a* **SIEMENS** *Wayguard® GCP 4000 Series model*)
- Connects to analogue and digital expansion modules for even larger systems.
- Stores up to 150,000 events
  (*Up to 400,000 with extended memory module*)
- Intranet or internet access.
- Push alarms to nominated staff.
- Shelf or rack mountable.

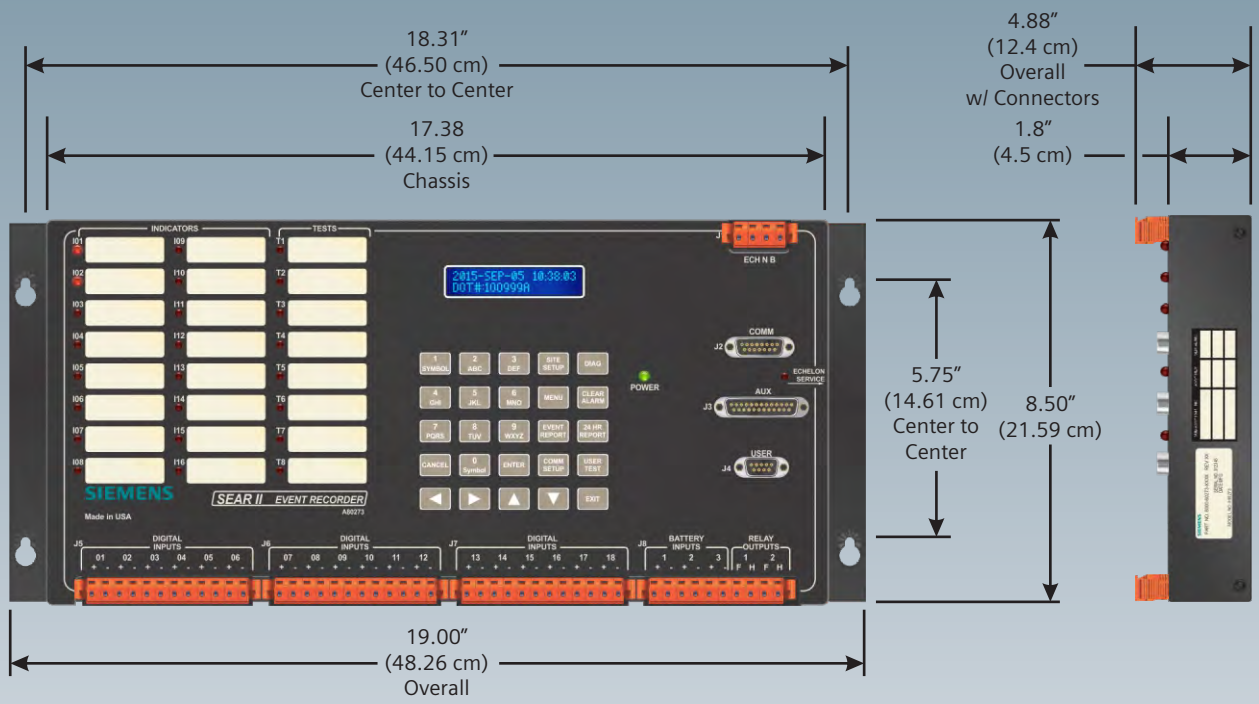
NYK:8000802730001

SEAR w/o Internal Expansion Module
- Weight is approx. 5.8 lbs. (2.63 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Executive program installed

NYK:8000802730002

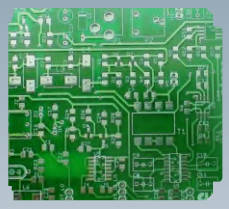
SEAR w/ Internal Expansion Module
- Weight is approx. 5.8 lbs. (2.63 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Executive program installed

Applicable for all Wayguard® SEAR II Series Event Analyzer / Recorder assemblies



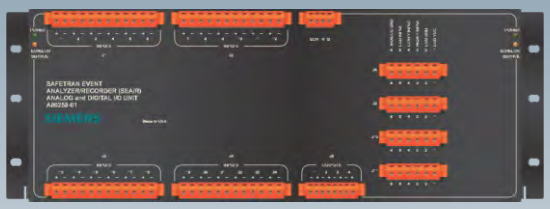
Modules

NYK:8000802550001



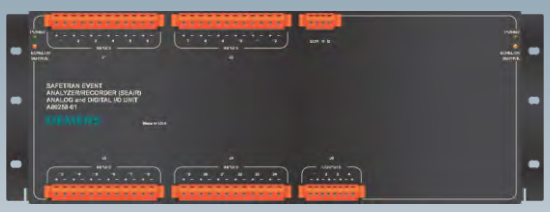
Analog I/O Expansion Module
- Weight is approx. 1.6 lbs. (0.73 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Executive program installed
- Internally installed in SEAR II

NYK:8000802580001



Digital I/O Expansion Module
- Weight is approx. 5.4 lbs. (2.45 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Able to monitor up to (24) external digital inputs
- Able to monitor up to (4) external analog inputs (including high and low voltage sensing)
- Able to monitor internal temperature
- Able to monitor battery sensor functions

NYK:8000802580002



Analog I/O Expansion Module
- Weight is approx. 5.1 lbs. (2.31 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Able to monitor up to (24) external digital inputs
- Able to monitor internal temperature
- Able to monitor battery sensor functions

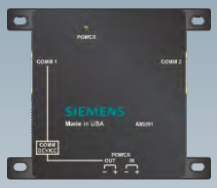
NYK:8000802610001

Analog Input Module
- Weight is approx. 5.4 lbs. (2.45 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Able to monitor up to (4) external analog inputs (including high and low voltage sensing)

NYK:8000800630001

GCP to Echelon® Interface Module
- Weight is approx. 2.6 lbs. (1.18 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

NYK:8000802910001



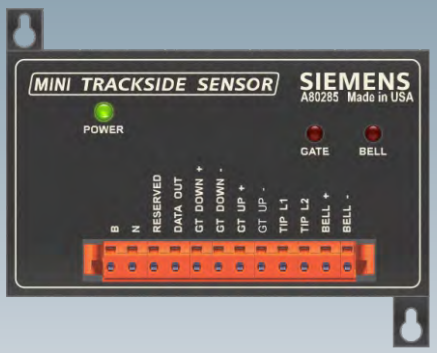
Communications Isolator Module
- Weight is approx. 5.4 lbs. (2.45 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Able to monitor up to (24) external digital inputs
- Able to monitor up to (4) external analog inputs (including high and low voltage sensing)
- Able to monitor internal temperature
- Able to monitor battery sensor functions

NYK:8000802760001

VHF Communicator
- Weight is approx. 5.1 lbs. (2.31 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Able to monitor up to (24) external digital inputs
- Able to monitor internal temperature
- Able to monitor battery sensor functions
- SEAR transmit and receive indicators

NYK:8000802760002

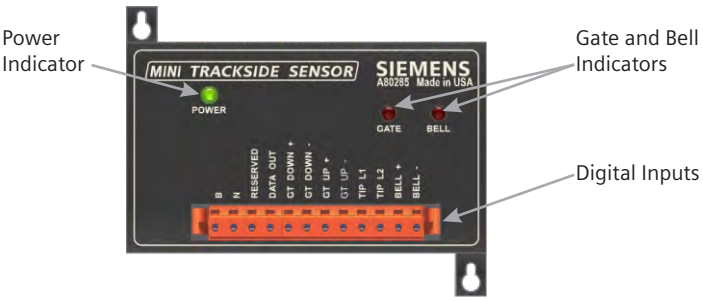
VHF Communicator
- Weight is approx. 5.1 lbs. (2.31 kgs.)
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- Able to monitor up to (24) external digital inputs
- Able to monitor internal temperature
- Able to monitor battery sensor functions
- Console transmit and receive indicators



MTSS

Mini Track Side Sensor

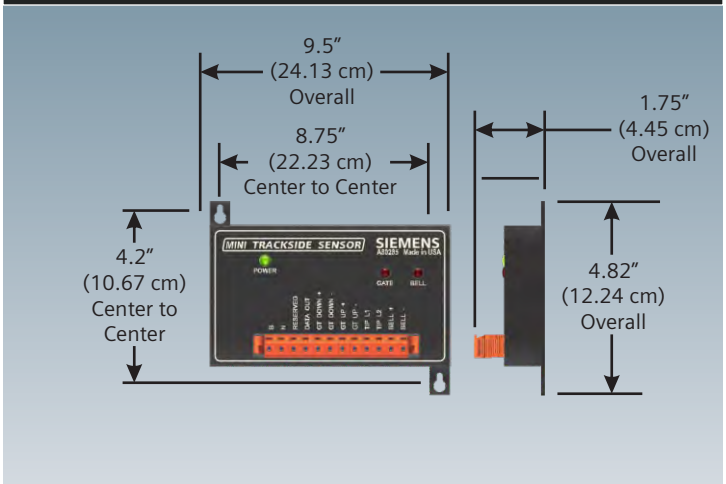
Overview



Model A80285
shown for reference purposes only!
Actual unit selected may vary in mounting and features.

SIEMENS Mini Track Side Sensor (MTSS) interfaces with the various monitored signals via connector J1, a 12-pin, mass-terminated Eurostyle terminal block (board header and wiring plug), and provides LED indicators for power, when the gate is horizontal and the bell is ringing.

NYK:8000802850001

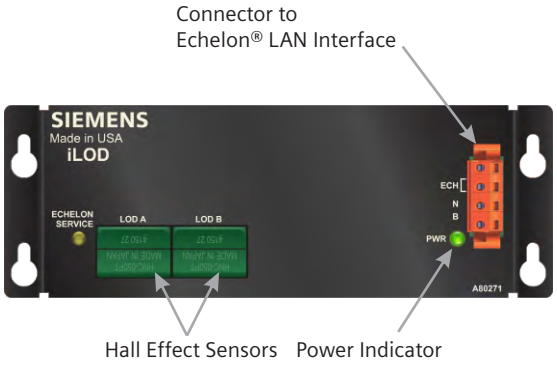


- Easily mountable on instrument house backboards.
- Weight is approx. 1.11 lbs. (0.50 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity

iLOD

Intelligent Lights Out Detector

Overview

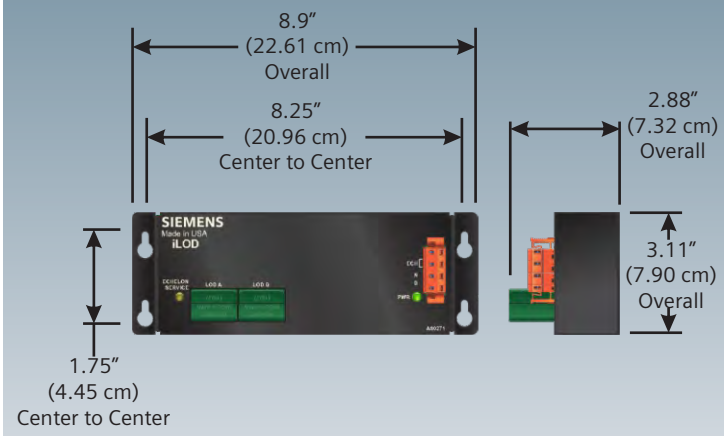


Model A80271
shown for reference purposes only!
Actual unit selected may vary in mounting and features.

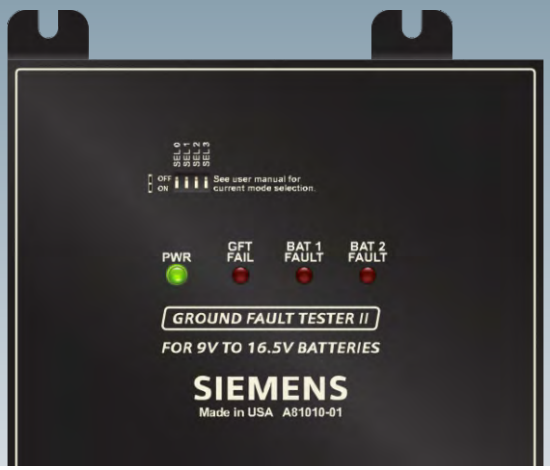
SIEMENS Intelligent Lights Out Detector (iLOD) adds programmable current sensing functionality to **SIEMENS** SEAR II/SEAR IIi Event Analyzer / Recorders.

Including (2) current sensing Hall-effect sensors with analog-digital conversion circuitry and it communicates with the **SIEMENS** SEAR II / SEAR IIi over the Echelon® network.

NYK:8000802710001



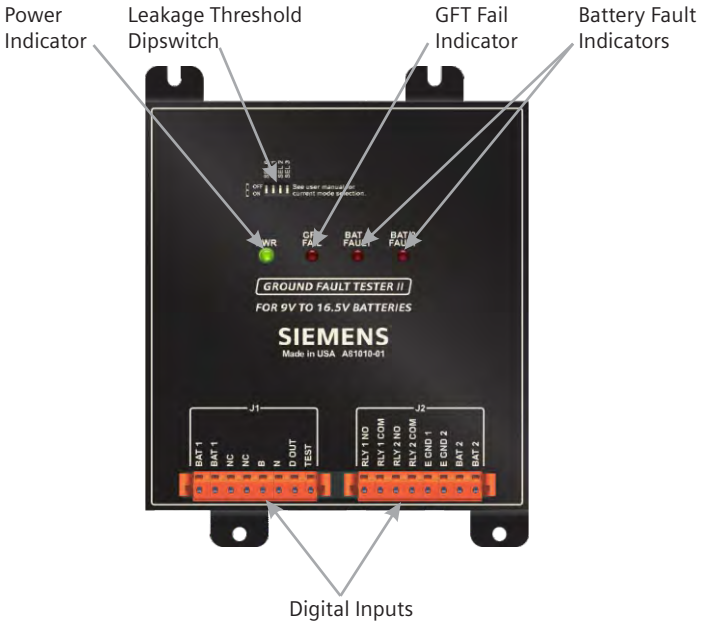
- Easily mountable on instrument house backboards.
- Quiescent power consumption is approx. 0.3 A @ 13.2 V, 0.4 A @ 9.0 V
- Weight is approx. 1.50 lbs. (0.68 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity



GFT II
Series

Ground Fault Tester

Layout



SIEMENS GFT II Model A81010
shown for reference purposes only!
Actual unit selected may vary in mounting and features.

SIEMENS Ground Fault Tester (2nd Generation) GFT II Series can operate in two modes. In normal mode, the GFT II constantly monitors up to two batteries for ground faults and indicates battery fault status to the **SIEMENS** Wayguard® SEAR II Series Event Analyzer / Recorder if connected.

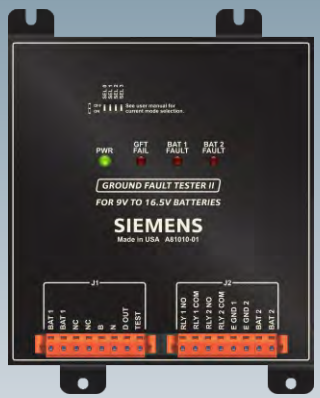
Information is provided to the SEAR II as a pulsed data signal via any unused digital input. The unit can also be placed in test mode where a simulated ground fault is placed internally on an isolated battery input to verify that the unit is properly detecting faults.

A separate internal circuit is used to verify the GFT II's health, as indicated by the status of the GFT FAIL LED on the front panel.

The GFT II can be powered by a 9-30 VDC (*12 VDC nominal*) operating battery, or independently powered from a battery being monitored.

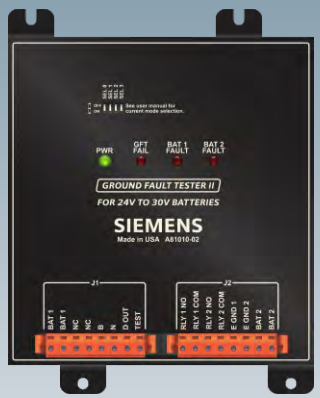
- Monitors leakage resistance between battery terminals and earth ground.
- Can be used as a stand alone monitor or in conjunction with **SIEMENS** Wayguard® SEAR II Series Event Analyzer / Recorders for recording ground fault events.
- (10) Second fault debounce circuitry.
- (2) dry relay contacts to 3rd party inputs .
- Up to (8) leakage current mode detection settings.
- Dipswitch configurable leakage thresholds.

NYK:8000810100001



- Easily mountable on instrument house backboards.
- Quiescent power consumption is approx. 0.3 A @ 13.2 V, 0.5 A @ 9.0 V
- Weight is approx. 4.0 lbs. (1.81 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- For use with either 12 V or 16 V batteries
- Alarm threshold configurable from 1 mA to 4.5 mA
- NO ground integrity check feature

NYK:8000810100002



- Easily mountable on instrument house backboards.
- Quiescent power consumption is approx. 0.3 A @ 13.2 V, 0.5 A @ 9.0 V
- Weight is approx. 4.0 lbs. (1.81 kgs.) including connectors
- Operates in -40° F to +160° F (-40°C to +70°C) @ up to 95% Non-Condensing Relative Humidity
- For use with either 24 V or 30 V batteries
- Alarm threshold configurable from 1 mA to 4.5 mA
- NO ground integrity check feature

Applicable for all GFT II Series Ground Fault Tester assemblies