

Certificate No. NESA-S091

Version No. 1.0

Approval date 07/10/2022

Approved by Acting GM Technical Standards

This certificate is issued to

Supplier **Automation Group**
440 Collins Street
Melbourne VIC 3000

In respect of

Manufacturer Brodersen
832 High Street,
Kew East, VIC 3102, Australia

Product description See list of approved items

Item identification Brodersen - RTU32N and RTU32M

Application ARTC Level Crossing Monitoring

Relevant Standards IEC61000 – Electromagnetic Compatibility
IEC60068 – Environmental Testing
EN55024 - Information technology equipment - Immunity characteristics - Limits and methods of measurement
ESD-05-05 – Level Crossing Monitoring Requirements
SPS02 – Environmental Conditions

Conditions of Approval

- Only approved items shall be used.
- Only permitted for a period of 6 months commencing from the commissioning into service on the ARTC network.
- For use in the application of Level Crossing Monitoring as per ESD-05-05.
- To be used and installed in accordance with the manufacturer's requirements and guidelines.
- Designer shall produce the data design and design report to capture the compliance against the ARTC level crossing monitoring.
- Designer to encrypt the data to avoid installation at an incorrect location in consultation with Project and business unit.
- All personnel who are involved in the development, checking or independent validation of Brodersen application shall have undergone Brodersen training and retain evidence to support this training.

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

- Project and Business unit to ensure that logic developed for Brodersen has been checked and certified before its use on the network and complies to ARTC level crossing monitoring requirements.
- Trial report to be provided by ARTC business unit signal engineers from asset management and maintenance team with feedback of any issues identified and recommendations to support or reject the full type approval.
- During the trial period, maintenance is to be performed based on the manufacturer's guidelines.

A general condition of approval is that the supplier remains accredited to ISO 9001 specifically for these products and ARTC is advised on a 12 monthly basis that accreditation is current. ARTC reserves the right to conduct its own audit of the manufacture and supply of these components to AS 19011.

Any subsequent change to the design, materials or manufacturing process is not covered by this approval. The manufacturer should notify ARTC of any modification or changes in order to obtain a valid certificate.

Note/Comments

NIL

Issue date 07/10/2022

Expiry date 6 months after commissioning

Issued by

Manager Signalling Standard ARTC

Approved Item list:

| Part Number | Description | Comments |
|-----------------|--|---|
| ---- | Brodersen RTU32N | Part numbers can be configured as per project requirements in consultation with Brodersen |
| MP32A | CPU – Controller Module | Modules for RTU32M |
| SP04A | 4 Serial Ports (3x232, 1x 232/485) | |
| SP04B | RS232/RS485 Serial Communications Module | |
| PS24A | Power Supply (10-30V) | |
| PS48A | Power Supply (30-60V) | |
| AI08A | 8ch Analog Inputs | |
| AO02A | 2ch Analog Outputs (Current and Voltage) | |
| AO02B | 2ch Analog Output Module (Current) | |
| DI20A, DI20B | 20ch Digital Inputs (12-24V, 30-60V) | |

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

| | | |
|--------------------|-----------------------------------|--|
| DI20C | 20ch Digital/Counter Inputs (24V) | |
| DI12H | 12ch Digital Inputs (90-140V) | |
| DI12B) | 12ch Digital Inputs (30-60V) | |
| DO08R | 8ch Relay Outputs (NC/C/NO) | |
| DO12R | 12ch Relay Outputs (NO) | |
| DO20A | 20ch Digital Outputs | |
| DM20A | Comb. 10ch DI + 10ch DO | |
| DM20C | Comb. 8ch DI + 2ch Ctr + 10ch DO | |
| I/O14A / I/O14B | Comb. 3 AI + 1 AO + 8 DI + 2 DO | |