

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

Certificate No. S 01-1604-MS210

Approval date 11/04/2018
Approved by GM Technical Standards
Report no. TAR-01-1604-MS210
Report date 10 April 2018

This certificate is issued to

Supplier Wabtec Control Systems Pty Ltd
 Ground Floor, 371 Macarthur Ave
 Hamilton QLD 4007

In respect of

Manufacturer Mors Smitt Pty Ltd
Product description BR930 Spec 'Q' relays
Item identification Refer to Approved Item List in Table 1
Application ARTC Network Wide
Relevant Standards SPS 02 Environmental Conditions
 SPS 04 General Requirements for Labelling of Equipment
 SPS 05 Electrical & Electronic Components (Ratings & Construction Requirements)
 SPS 10 Relays, Plug-in Vital
 SPS 22 Power Supply Units for Signalling Equipment – General Requirements

Conditions of Approval

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|-----------------|--|
| General | 1. There are no field serviceable components within the units, any failed units shall be replaced. Units shall only be repaired and overhauled by certified workshops. |
| | 2. The relays are a replacement for those produced by Siemens (including Westinghouse and Invensys) and SelectRail. |
| Supplier | 3. The supplier or manufacturer must advise ARTC of any changes made to the product or system which may alter its identification, performance characteristics, form, fit, function or processes required for correct usage so that this approval can be revised or reviewed. |
| | 4. The supplier must immediately report to ARTC any relay design or manufacturing defect likely to affect quality, functionality or product performance. |

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| | <p>5. 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 AS19001:2003.</p> |
| | <p>6. 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 updated certificate.</p> |

Note/Comments NIL.

Issue date 13/04/2018

Expiry date N/A

Issued by



John Furness

ARTC Manager Standards

Table 1 - Approved Item List – Mors Smitt BR930 Spec relays

The following lists the individual relay products manufactured by Mors Smitt Pty Ltd which are type approved for use in signalling installations on ARTC infrastructure under Type Approval Certificate **S 01-2804-MS210** subject only to any conditions shown on that Certificate and the Conditions of Use shown against individual types.

| Mors Smitt Part Number | Pin Code (BRB) | Description – Contact & (Coil) Configuration | Conditions of Use |
|------------------------|----------------|--|--|
| TY084/GRP06 | 027 | QBA1 – 12F/4B (50v DC) | |
| TY084/GRP08 | 028 | QBA1 – 8F/8B (50v DC) | |
| TY084/GRP02 | 025 | QBA1 - 8F/4B (24V DC) | |
| TY084/GRP02 | 025 | QBA1 - 8F/4B (24V DC) | |
| TY157/GRP01 | 049 | QBBA1 – 2x6F/2B (50v DC) | |
| TY157/GRP02 | 017 | QBBA1 – 2x4F/4B (50v DC) | |
| TY157/GRP09 | ABDKS | QBBA1 – 2x4F/4B (12v DC) | |
| TY154/GRP03 | 172 | QBCA1 – 2HF/4B (50v DC) | |
| TY154/GRP06 | 160 | QBCA1 – 2HF/4F/4B (50v DC) | |
| TY154/GRP09 | ABCKS | QBCA1 – 2HF/4F/4B (12v DC) | |
| TY133/GRP02 | ABDJK | QEC1 4F/2B (12v DC) | 16W LEDs = 100ms (slow to drop) 24W LEDs = 200ms (slow to drop) |
| TY132/GRP16 | 071 | QECX1 – 4F/2B (180mA) | |
| TY087/GRP02 | 011 | QL1 – 11F/4B (50v DC) | |
| TY087/GRP04 | 008 | QL1 – 8F/6B (50v DC) | |
| TY082/GRP11 | 003 | QN1 – 12F/4B (50v DC) | |
| TY082/GRP15 | 004 | QN1 – 8F/8B (50v DC) | |
| TY082/GRP30 | ABCFX | QN1 – 8F/8B (12v DC) | |
| TY182/GRP26 | ACFJX | QN1 - 12F/4B (12V DC) | |
| TY083/GRP06 | 023 | QNA1 – 12F/4B (50v DC) | |
| TY083/GRP08 | 024 | QNA1 – 8F/8B (50v DC) | |
| TY192/GRP01 | 029 | QNHX1 – 8F/4B (110v AC) | Not immune to DC current. |
| TY156/GRP01 | 212 | QNN1 – 2x6F/2B (50v DC) | |
| TY156/GRP02 | 211 | QNN1 - 2x4F/4B (50v DC) | |
| TY156/GRP04 | 092 | QNN1 - 6F/2B (24V DC) | |
| TY156/GRP05 | 057 | QNN1 - 4F/4B (24V DC) | |
| TY156/GRP15 | BDHKX | QNN1 - 6F/2B (12V DC) | |
| TY160/GRP01 | 209 | QNNA1 – 2x6F/2B (50v DC) | |
| TY160/GRP02 | 210 | QNNA1 - 4F/4B (50V DC) | |
| TY370/GRP21 | CDFKX | QR5 – Capacitor Unit | Use in flashing circuit. |
| TY085/GRP02 | 043 | QSPA1 – 8F/4B (50v DC) | |
| TY086/GRP02 | 063 | QSRA1 – 8F/4B (50v DC) | |
| TY153/GRP05 | 110 | QTA2 – 2F/2B (9Ω) | |
| TY303/GRP01 | ABCDJK | QXR1 – T/J (110v AC/50v DC) | |
| PLUGBOARD | | | |
| TY081-S-xxxx-C | | | xxxx is the relay pin code. For example, TY081-S-004-C is the plugboard for the TY082/GRP15 relay (QN1 – 8F/8B 50v DC) |