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Practice Section 10301701 Rev A

SIMPLEX REPEAT COIL MODULE

MODEL 10301701 (4423)

TYPE-10 CARD MODULE

Contents:

Section 1. General	1
Section 2. Application	1
Section 3. Features and Benefits	1
Section 4. Specification	1
Section 5. Circuit Descriptions	2
Section 6. Mechanical Outline	2
Section 7. Installation	2
Section 8. Testing and Troubleshooting	2
Section 9. Maintenance	2
Section 10. Warranty	2
Figure 1. Circuit Description	3
Figure 2. Mechanical Outline	4
Table 1. External Connections	2

signals or longitudinal voltages. The dual circuit modules may be applied to either 2-wire circuits, or to both sides of a 4-wire circuit.

2.02 Impedance matching options on each module are switch selectable. The 150, 600 or 1200 -ohm option interfaces loaded cable, while the 600-ohm option interfaces non-loaded cable or terminal equipment.

3. FEATURES AND BENEFITS

- Available in 600 ohm to 150, 600 or 1200 ohm configuration.

- Each impedance option is wired directly to the terminal lugs.

- Mounts horizontally or vertically onto universal relay rack shelving.

- Easy access to standard wire-wrap terminal connections.

- High density - compact design - simple installation.

4. SPECIFICATIONS

4.01 Electrical

Number of Circuits: two (2) 2-wire
 one (1) 4-wire

Facility (line) (customer) (Primary) Impedance:
 150-ohm, 600-ohm, 1200-ohm - balanced

Terminal (drop) (equipment) (Secondary) Impedance: 600 - ohm

Maximum Power Level: + 7 dBm

Insertion Loss: 1.2 dB, MAX at 250Hz-4kHz, 0.0 dBm, DC3 mA
 Frequency Response: +/- 0.5 dB, 250Hz to 4kHz, 0.0dBm, DC3 mA

Return Loss: 20 dB MIN (SRL-LO) at DC3mA
 28 dB MIN (ERL) at DC3mA
 28 dB MIN (SRL-HI) at DC3mA

Dielectric Strength: 700 Vrms, 1 minute
 Primary to Secondary
 Primary to Core, Secondary to Core
 60 dB MIN at 200Hz - 4kHz

4.02 Environmental

Operating Temperature: 0 - 55° C

Humidity: up to 95% R.H. / no condensation

1. GENERAL

1.01 This practice provides application, specification, circuit and mechanical description, maintenance, installation, and warranty information relating to Accurate Electronics' Simplex Repeat Coil Module, Model 10301701.

1.02 The Repeat Coil modules provide transformer isolation and impedance matching for use on either 2-wire or 4-wire transmission facilities. The module provides two independent repeat coils.

1.03 The frequency response of the module is virtually flat throughout the voice band, 300 to 4000Hz.

1.04 Option switches on the module allow independent selection of either 150, 600 or 1200-ohm impedance on the facility sides of each repeat coil.

1.05 The module mounts in one (1) position of a Type-10 Mounting Shelf, versions of which are available for relay rack or apparatus case installation. In relay rack applications, up to twelve (12) modules may be mounted across a 19-inch rack using a Model 101012 Shelf. Six (6) inches of vertical space is required.

2. APPLICATION

2.01 Each module can be used in any standard voice frequency repeat coil application. These modules may be used to provide impedance matching between the station and facility sides of a circuit or to isolate DC metallic



4.03 Physical

Overall Dimensions: 1.428" W x 5.586"H x 6.097"D
3.627cm W x 14.188cm H x 15.486cm D
Mounting: one (1) position of a Type-10 mounting shelf in either a relay rack or apparatus case
Finish: black anodized / white lettering
Weight: 23.0 oz. / 0.652 kg

5. CIRCUIT DESCRIPTION

4.01 See FIGURE 1.

6. MECHANICAL OUTLINE

5.01 See FIGURE 2.

7. INSTALLATION

7.01 Visually inspect the modules upon arrival for damage incurred during shipment. If damage is noted, immediately file a claim with the shipping carrier. If the modules are stored, re-inspect them prior to installation.

7.02 Each module mounts in one (1) position of a Type-10 Mounting Shelf and plugs physically and electrically into a 56-pin connector at the rear of the shelf.

7.03 Before making any connections to the shelf, ensure that power is off and modules are removed. Table 1. lists external connections to the modules. Pin numbers are found on the body of the 56-pin connector. See Figure 2.

8. TESTING AND TROUBLESHOOTING

8.01 A predetermined procedure to test the wiring in an installed Type-10, Type-10 Universal, or Type-10 Connectorized Universal Shelf is impossible because of variance in wiring schemes. The shelf should be thoroughly physically inspected before mounting, however, to ensure that there are no bent or broken connector pins or other visible defects. If trouble is encountered in an operational shelf, ensure that all modules are seated properly and operating correctly and that all wiring is correct. If a shelf is suspected of being defective, a new one should be substituted and the tested conducted again. If the substitute operates correctly, the original should be considered defective and returned to Accurate Electronics for repair or replacement as directed below. We strongly recommend that no internal (component-level) testing or repairs be attempted on Accurate Electronics' equipment. Unauthorized testing or repairs may void its warranty.

Note: If equipment must be marked defective or bad, we recommend that it be done on a piece of tape or on a removable stick-on label.

TECHNICAL ASSISTANCE

8.02 Contact Accurate Electronics, Inc. 503.641.0118, FAX: 503.646.3903; Mail: PO Box 1654, Beaverton OR 97075-1654.

RETURN PROCEDURE (FOR REPAIR)

8.03 To return equipment for repair, first contact Accurate Electronics, Inc. Enclose an explanation of the malfunction, your company's name and address, the name of a person to contact for further information, and the purchase order number for the transaction. Accurate Electronics will inspect, repair, and retest the equipment so that it meets its original performance specifications and then ship the equipment back to you. If the equipment is in warranty, no invoice will be issued.

9. MAINTENANCE

9.01 Verify proper operation of each module by inserting a 1004Hz tone at 0 dBm into one (1) side of the repeat coil; measure the output level on the other side. The output level should be within specifications for insertion loss at 1004Hz and at other frequencies within the specified frequency response range.

9.02 If the specified output is not measured, verify the correct settings of all option switches, and verify wiring. If these points are verified and the module still does not meet the required specifications, substitute a new module and retest.

9.03 If any equipment seems to be defective, substitute new equipment and retest. If the substitute operates correctly, the original should be considered defective and returned to Accurate Electronics Inc. for repair or replacement. It is recommended that no internal testing or repairs be made on the equipment as such activity will void the manufacturer's warranty.

9.04 No preventive maintenance is required. General care is recommended.

10. WARRANTY

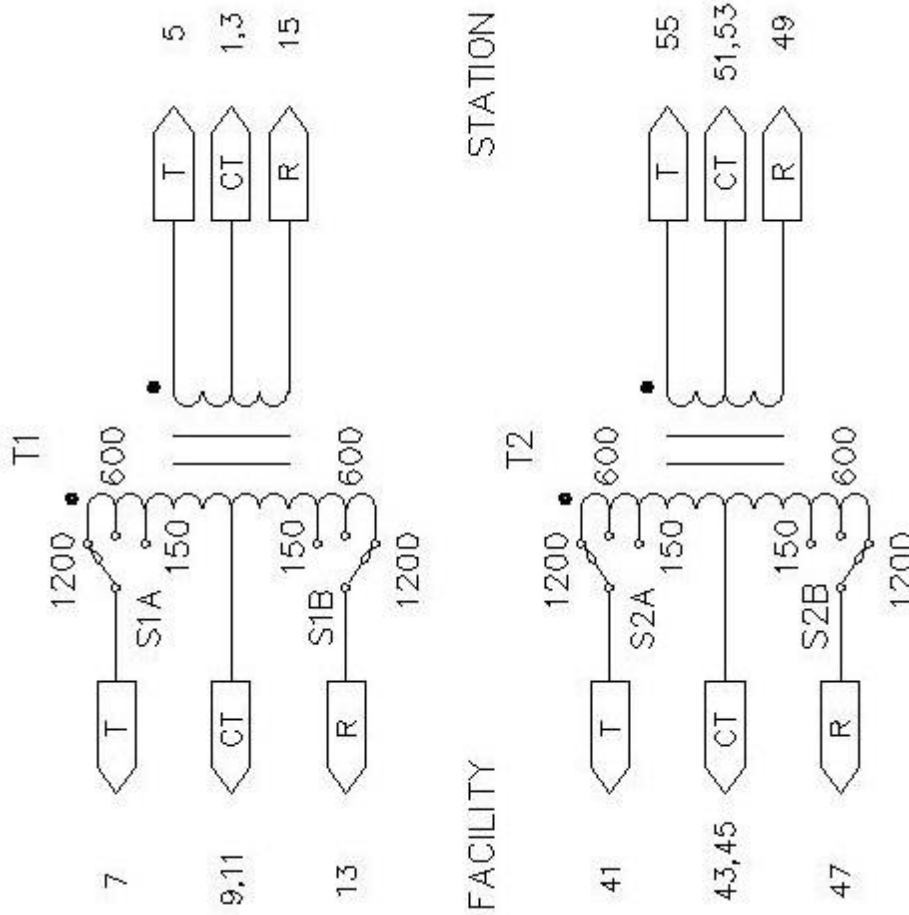
9.01 All Accurate Electronics Inc. products carry a full FIVE (5) YEAR warranty on materials and workmanship. See WARRANTY in front of catalog.

TABLE 1. EXTERNAL CONNECTIONS.

Table with 2 columns: CONNECT and TO PIN. Rows include FT1, FR1, FSX1, ST1, SR1, SSX1, FT2, FR2, FSX2, ST2, SR2, SSX2 with corresponding pin numbers.



FIGURE 1. CIRCUIT DESCRIPTION.





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FIGURE 2. MECHANICAL OUTLINE.

