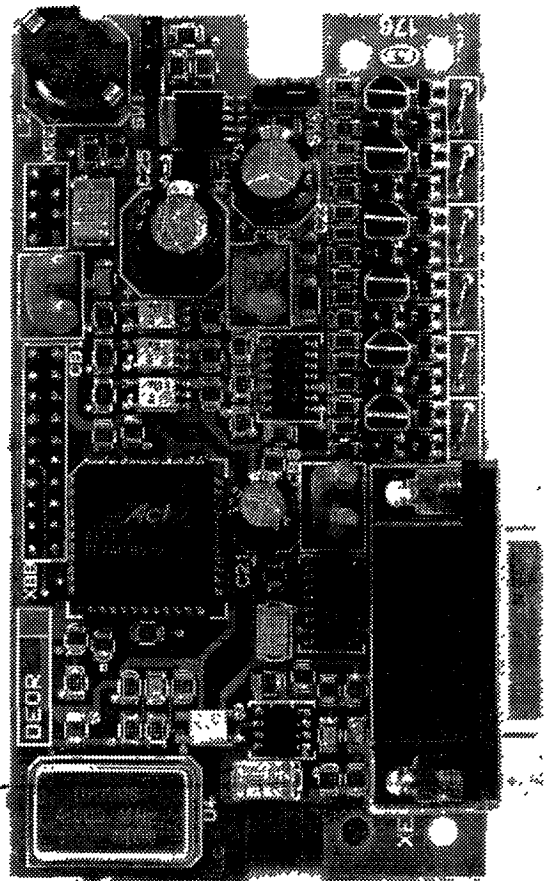




**GE Motors & Industrial Systems**

**6KAV300ESR**

Encoder Signal Repeater

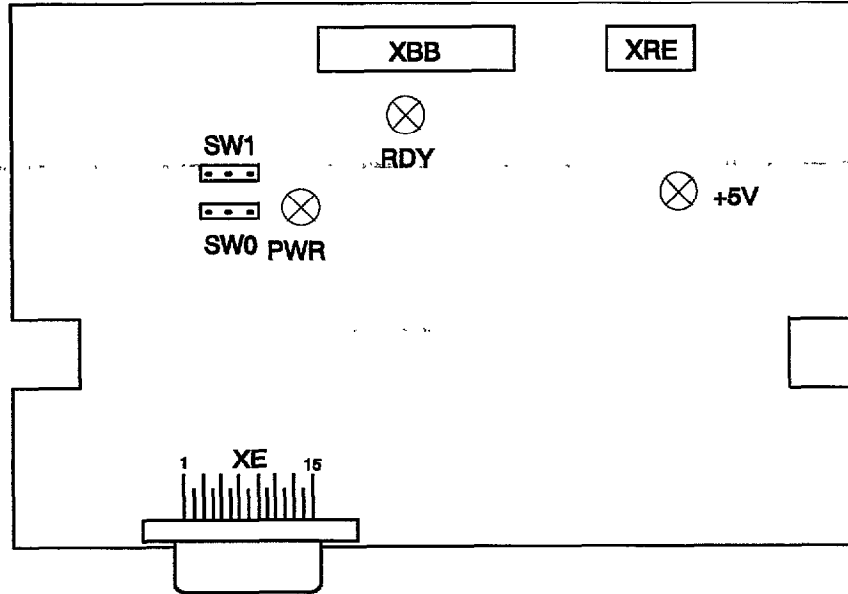


These instructions do not purport to cover all details or variations in equipment, nor to provide every possible contingency to be met during installation, operation, and maintenance. If further information is desired or if particular problems arise that are not covered sufficiently for the purchaser's purpose, the matter should be referred to GE Motors & Industrial Systems. This document contains proprietary information of General Electric Company, USA and is furnished to its customer solely to assist that customer in the installation, testing, operation, and/or maintenance of the equipment described. This document shall not be reproduced in whole or in part nor shall its contents be disclosed to any third party without the written approval of GE Motors & Industrial Systems.

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The 6KAV300ESR Encoder Signal Repeater Card is designed to transmit an encoder signal to a remote user connected to the AV-300 drive. The output signals are electrically isolated.

The card has to be installed on the regulation card of the AV-300 drive, in place of "option B" card assembly on the left-hand side of the regulation card.



Dimensions:

4 x 2.2 inches (102 x 56 mm)

Weight : 0.22 pounds (100 g)

Through XRE connector the Encoder Signal Repeater card detects encoder signals from the drive regulator. Through XBB connector it receives voltage input (+5V) for its synchronization circuit.

XE connector is used to provide the TTL or HTL signals encoder output and to receive an external voltage supply of either +5V or +15 to +24V.

Configuration of SW0 and SW1 Jumper determines external power requirement and output signal levels.

Table 1: Jumpers SW0 and SW1

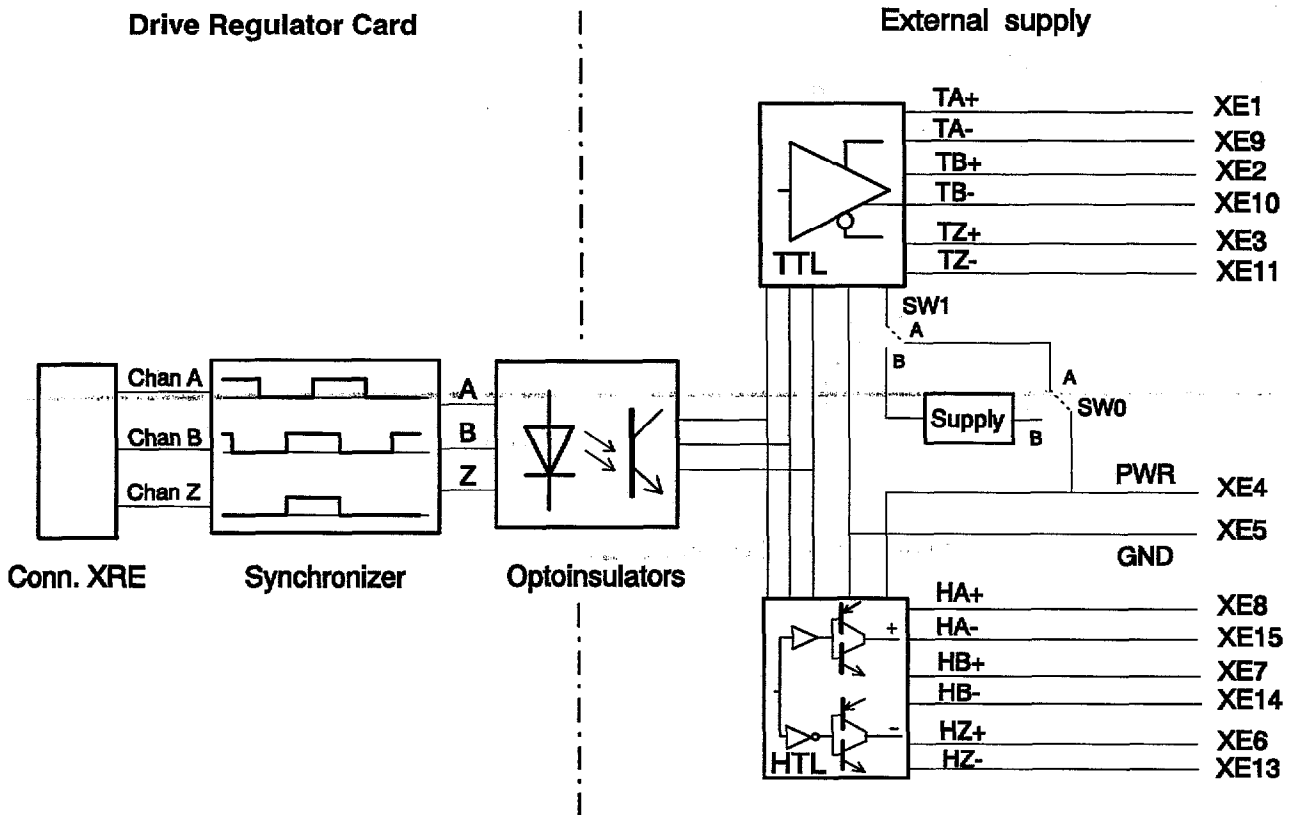
| Switches configuration    | PWR supply | Available output  |
|---------------------------|------------|-------------------|
| SW0 and SW1 in position A | +5V        | TTL logic         |
| SW0 and SW1 in position B | +15...+24V | HTL and TTL logic |

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Two electrical output protocols are available, as shown above; the HTL protocol is not protected against short circuit.

The synchronism assures that the channel C pulse (zero pulse) is in phase with and has the same duration as one channel B pulse.

In case of noise on the encoder signals, connect ground GND with terminal 11 of the regulation card through a capacitor ( 0.47  $\mu$ F 850V ).



Encoder Signal Repeater

D-sub miniature connector of 15 sockets, assembly on the card.

To join the input conductors and output signals use a male connector in accordance with DIN 41 652.

Table 2: Assignment of the Plug Connector XE

| PIN    | Name | Electrical protocol and function | I/Q | max. Voltage      | max. Current |
|--------|------|----------------------------------|-----|-------------------|--------------|
| PIN 1  | TA+  | TTL channel A+                   | Q   | TTL               | 20 mA        |
| PIN 2  | TB+  | TTL channel B+                   | Q   | TTL               | 20 mA        |
| PIN 3  | TZ+  | TTL channel C+ (impulse of zero) | Q   | TTL               | 20 mA        |
| PIN 4  | PWR  | Voltage Supply                   | I   | +15 - +24V or +5V | 150 mA       |
| PIN 5  | GND  | Supply Ground                    | I   | -                 | -            |
| PIN 6  | HZ+  | HTL channel C+ (impulse of zero) | Q   | PWR - 3.5V        | 20 mA        |
| PIN 7  | HB+  | HTL channel B+                   | Q   | PWR - 3.5V        | 20 mA        |
| PIN 8  | HA+  | HTL channel A+                   | Q   | PWR - 3.5V        | 20 mA        |
| PIN 9  | TA-  | TTL channel A-                   | Q   | TTL               | 20 mA        |
| PIN 10 | TB-  | TTL channel B-                   | Q   | TTL               | 20 mA        |
| PIN 11 | TZ-  | TTL channel C- (impulse of zero) | Q   | TTL               | 20 mA        |
| PIN 12 | -    | Not used                         | -   | -                 | -            |
| PIN 13 | HZ-  | HTL channel C- (impulse of zero) | Q   | PWR - 3.5V        | 20 mA        |
| PIN 14 | HB-  | HTL channel B-                   | Q   | PWR - 3.5V        | 20 mA        |
| PIN 15 | HA-  | HTL channel A-                   | Q   | PWR - 3.5V        | 20 mA        |

Table 3: Recommended Cable cross-section area and length for connection

|                     |          |           |           |
|---------------------|----------|-----------|-----------|
| Section [mm ]       | 0.22     | 0.5       | 0.75      |
| max Length feet [m] | 180 [55] | 140 [125] | 500 [150] |

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Table 4: LEDs on the card

| Designation | Color | Function                          |
|-------------|-------|-----------------------------------|
| +5 V        | green | ON when there is power present    |
| PWR         | green | ON when there is external supply  |
| RDY         | red   | ON when external supply is not OK |

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**Notes**

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice G. D. C. O'Connell, Chief Justice of the Supreme Court of the State of New South Wales."

2. The second part of the document is a list of names and titles, including "The Hon. Mr. Justice G. D. C. O'Connell, Chief Justice of the Supreme Court of the State of New South Wales."

3. The third part of the document is a list of names and titles, including "The Hon. Mr. Justice G. D. C. O'Connell, Chief Justice of the Supreme Court of the State of New South Wales."

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