



Drive System Modernization



metals

cranes

mining

testing

oil & gas

enewable energy power generation

cement



Retrofitting drives? Work with the experts.

TMdrive®-DC

A complete new DC drive with or without a cabinet



Inside the TMdrive-DC

The new power bridge is under the electronic controls module (DFE)



TMdrive-DC DFE module

The digital front end module (DFE) - a set of new drive electronics suitable for mounting on the old DC power bridge



TMEIC Drive Retrofit Procedure

A choice of retrofit levels to meet your needs:

- Upgrade legacy DC drives with the new TMdrive-DC DFE control board module and
 - Keep the original power bridge and cabinet
 - Keep the DC motor
- Keep the cabinet and motor, replace the original DC drive with a new TMdrive-DC drive (see above center)
- Replace the original DC main drive and motor with a new AC main drive and motor

The Drive Retrofit brings many benefits:

- Reduce the upgrade and installation costs with the DFE module by keeping the original power bridge, cabinet, wiring, and DC motor
- Reduce the maintenance cost of the older drive equipment
- Obtain high performance digital control and high-speed communications

Legacy DC Drives





Siltron 1980

Silco 1985



DC300 1985

DC2000 1990

New features available with the TMdrive-DC Retrofit

Features Benefits



LAN Interface Options

- ISBus 5 MpsProfibus-DP 9.6K-12 MbsDeviceNet 125-500 kbs
- TOSLINE-S20 2 Mbs

High-speed communications between the drives and stand controller with choice of the Innovation controller or the V-series controller for the plant floor control.



Graphic Keypad

- Four configurable backlit variable bar graphs with descriptive legends
- Status icons reflecting health of drive at a glance
- Dedicated drive control keys for manual operation
- Full access to all parameters and variables

Bar graphs, icons, menus, and numeric values provide concise status information, often eliminating the need for traditional analog meters.

Drive can be operated right from the keypad.



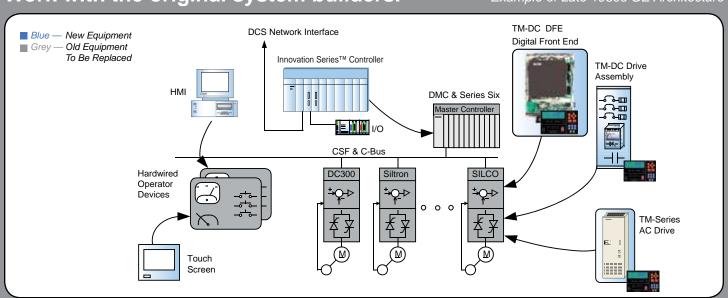
Toolbox for Configuring & Monitoring

- Drive configuration and tuning
- Animated graphical display of drive sequencing and regulation
- Outline view functionally organizes variables and functions for quick access
- Integrated trend window for real time or captured high-speed historical drive data
- Fast Fourier Transform (FFT) trend analysis

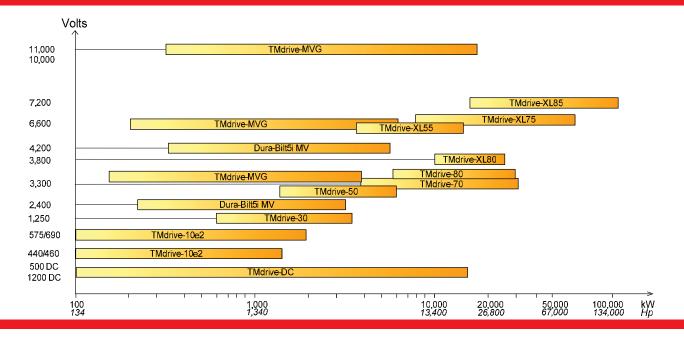
Comprehensive and powerful configuring, monitoring, and analysis capability brings productivity to your commissioning and maitenance activities.

Retrofitting your drive system? Work with the original system builders.

Example of Late 1980s GE Architecture



TMEIC AC Drives Offer Complete Coverage





TMEIC Corporation

Office: 1325 Electric Road, Roanoke, VA, 24018, USA Mailing: 2060 Cook Drive, Salem, VA, 24153, USA Tel.: +1-540-283-2000; Fax: +1-540-283-2001 Email: info@tmeic.com: Web: www.tmeic.com

TMEIC Corporation - Houston Branch

2901 Wilcrest Dr., Houston, TX 77042, USA Tel.: +1-713-784-2163; Fax.: +1-713-784-2842 Email: OilGas@tmeic.com; Web: www.tmeic.com

TMEIC Power Electronic Products Corporation

13131 W. Little York Road, Houston, Texas 77041, USA

Toshiba Mitsubishi-Electric Industrial Systems Corporation

Tokyo Square Garden

3-1-1 Kyobashi, Chuo-kyo, Tokyo, 104-0031, Japan

Tel.: +81-0-3327-5511 Web: www.tmeic.co.jp

TMEIC Europe Limited

6-9The Square, Stockley Park, Uxbridge, Middlesex, United Kingdom, UB7 7LT

Tel.: +44 870 950 7220; Fax: +44 870 950 7221

Email: info@tmeic.eu; Web: www.tmeic.com/Europe

TMEIC Industrial Systems India Private Limited

Unit # 03-04, Third Floor,

Block 2, Cyber Pearl, HITEC City, Madhapur, Hyderabad, 500081, Andhra Pradesh, India Tel.: +91-40-44434-0000; Fax: +91-40-4434-0034

Email: inquiry_india@tmeic.com; Web: www.tmeic.in

Toshiba Mitsubishi-Electric Industrial Systems Corp (Beijing)

21/F., Building B, In.do Mansion, 48 Zhichunlu A, Haidian

District, Beijing 100098, PRC

Tel.: +86 10 5873-2277; Fax: +86 10 5873-2208

Email: sales@tmeic-cn.com

TMEIC - Sistemas Industriais da América do Sul Ltda.

Av.Paulista, 1439 cj72 Bela Vista, CEP:01311-200 São Paulo/SP. Brasil

Tel: +55-11-3266-6161; Fax: +55-11-3253-0697

Innovation Series is a trademark of General Electric Company.

TMdrive is a registered trademark of TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION.

TMEIC is a registered trademark of TOSHIBA MITSUBISHI-ELECTRIC INDUSTRIAL SYSTEMS CORPORATION.

All other products mentioned are registered trademarks and/or trademarks of their respective companies.

All specifications in this document are subject to change without notice. The above brochure is provided free of charge and without obligation to the reader or to TMEIC Corporation. TMEIC Corporation does not accept, nor imply, the acceptance of any liability with regard to the use of the information provided. TMEIC Corporation provides the information included herein as is and without warranty of any kind, express or implied, including but not limited to any implied statutory warranty of merchantability or fitness for particular purposes. The information is provided solely as a general reference to the potential benefits that may be attributable to the technology discussed. Individual results may vary. Independent analysis and testing of each application is required to determine the results and benefits to be achieved from the technology discussed.

If you have any questions regarding your project requirements, please contact TMEIC Corporation at 540-283-2000.