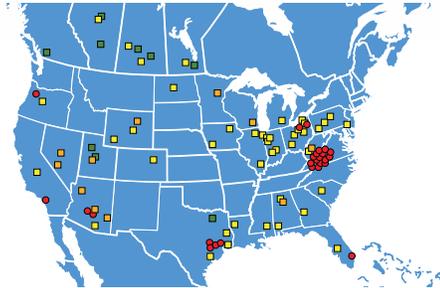


## Top 10 Benefits

### 1 Service & Support.

Live help from TMEiC is a phone call away.

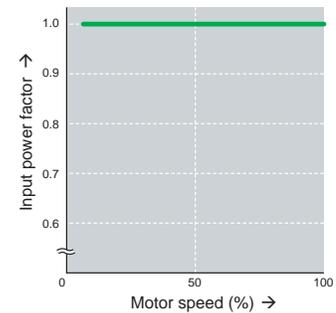
- 77 TMEiC VFD Service Engineers
- 43 Motor service locations
- Authorized VFD service providers
- Authorized MV Motor Repair Technicians



### 2 Minimum of 1.0 line-side power factor.

**High Input Power Factor, Reduced Electricity Charges.**

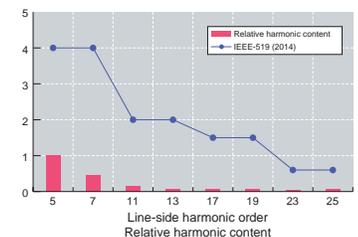
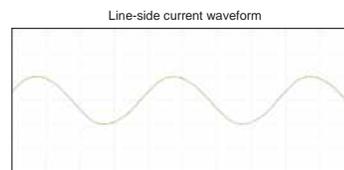
The PWM converter maintains a unity power factor across the entire speed range eliminating the need for correction equipment and utility penalties.



Example of the actual load test result of a standard 4-pole motor

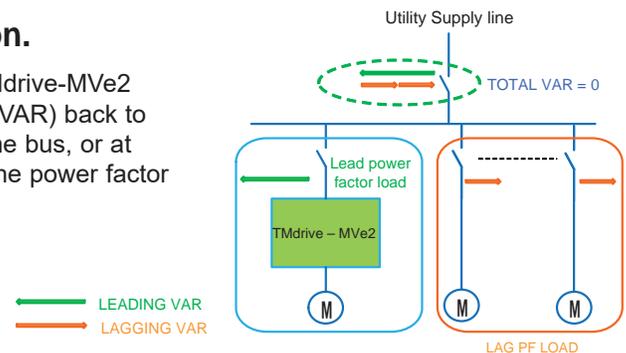
### 3 Extremely Low Harmonics, no line-side filter is required.

The MVe2 line side harmonics are much lower than IEEE 519-2014 requirements. Less than 2% current distortion is seen by utility.



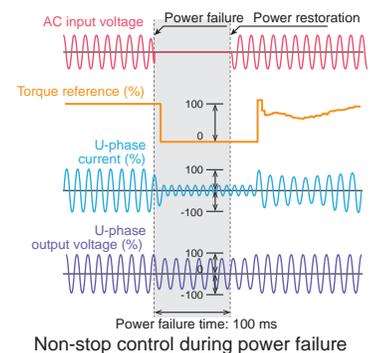
### 4 Active line-side reactive power factor correction.

Due to active front end converter and intelligent control, the TMdrive-MVe2 can be sized and configured to supply leading reactive power (VAR) back to the utility to compensate for the other lagging loads on the same bus, or at the point of common coupling, thereby significantly improving the power factor as seen by the utility.



### 5 Utility Interruption Protection.

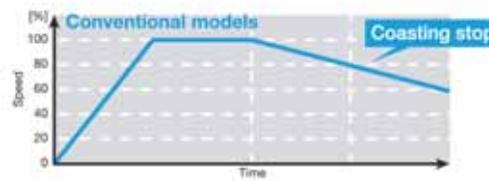
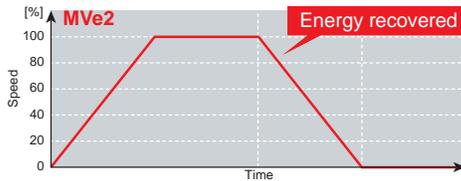
Momentary power loss & voltage unbalances can cause harmful effects to a motor. The MVe2 VFD control remains active during instantaneous power loss for up to 2 seconds. For power outages longer than 2 seconds, the VFD can regain motor control of a spinning load.



# TMdrive-MVe2 Top 10 Benefits

## 6 Utility energy return.

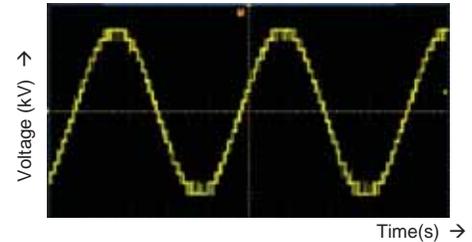
The power regeneration function enables stopping of large inertia loads in a short time. During deceleration the rotational energy is returned to the power supply. This reduces energy consumption and electricity costs versus conventional models that can only provide for a coasting stop.



## 7 Multi-step output voltage waveform (<2% ITHD).

The multilevel PWM output waveform approximates a sine wave, reducing dv/dt. Less than 2%<sub>THD</sub> and V<sub>THD</sub>

- 3-4.16kV: 9 levels (0 to peak) / 17 levels (peak to peak)
- 6-6.6 kV: 13 levels (0 to peak) / 25 levels (peak to peak)
- 10-11 kV: 21 levels (0 to peak) / 41 levels (peak to peak)



\*Example of the actual test result of the standard 4.16 kV VFD

## 8 Extremely low motor thermal loading.

Due to the multistep output waveform (9-levels for 4.16kV), the motor does not experience a significant temperature rise there by running it cool and extending service life.



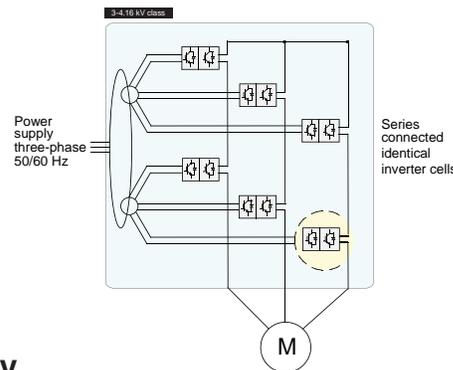
## 9 Modular Assembly with low parts count and over 16-year, field-proven MTBF.

### Inverter/Converter Phase-Leg Assemblies

Each modular phase leg assembly includes:

- Robust IGBTs
- Gate driver circuit board
- DC bus capacitors, dry-film type for long life
- Fiber optic link interface circuit board

A phase leg assembly can be easily racked out and replaced in 30 minutes in case of failure.

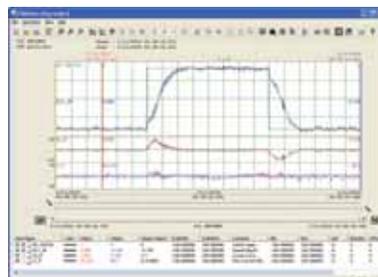


## 10 Monitoring for reliability and maintainability.

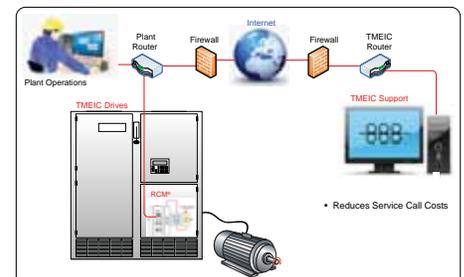
The MVe2 keypad, coupled with the Windows® based TMdrive Navigator brings productivity to your commissioning and maintenance activities. The Remote Connectivity Module (RCM) allows for optional connectivity.



Local Operator Keypad



TMdrive-Navigator tool for configuration, monitoring & trending



TMEIC engineers can quickly connect to the drive and diagnose many issues in minutes.

[WWW.TMEIC.COM](http://WWW.TMEIC.COM)