

Integration of vector control inverter and line drive application

Reliance Electric Limited has cultivated vector control inverter. By integrating the performance of the vector control inverter and the advanced line drive application technology, Reliance Electric Limited has made them evolved into a drive unit.

Decentralized control of system is made possible by the control loop provided inside inverter



for line drive application

MAOCH Technology

MAOCH Technology is to implement outerloop control in inverter.

1. Characteristics

- Highly-accurate speed control and torque control.
- Besides the speed loop, which is the basic function, there are built-in control loops for line drive application, tension control, dancer control, helper control.

2. High Performance

- High performance built-in vector control loop for induction motor and synchronous motor.

3. Usability

- Operation is made easier by the HMI with selected functions, which is mounted on the face plate.
- Motor parameter tuning function is provided.
- AMX network (GV net) is provided as standard, whereas GV3000 in the same product line has it as an option.
- Applicable to various field-networks as the communication options have been added*1.
- The organization, monitor and trouble shooting are all made easier by the drive terminal software.
- Easier access to the control board. Just by opening the face plate, the control board is accessible. Periodical replacement of cooling fan etc. can be implemented easily.

*1: Application to PROFINet planned for March, 2011. Then, later it will become applicable to other protocols as needed.

4. Compact and space-saving

- The bookshelf design has made it more compact by 40% in comparison with GV3000 drive of our company.
- The zero-stacking structure saves space in the controller cabinet. (Direct fixing: No need to have some extra space to fix the inverter.)



5. Flexible communication

- In DriveMulti are provided USB for drive terminal communication, AMX network (GV-NET) as standard.

6. Applications

Most suitable applications: e.g.

- Coater, laminater line
- Printer
- Web carrier line
- Metal process line etc.

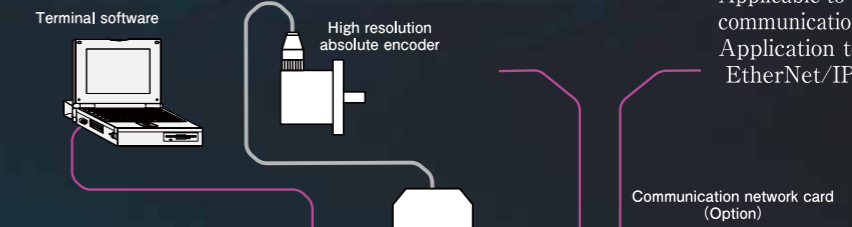
7. Environment-friendly

- Complied with RoHS (Restriction of Hazardous Substances)
- The drive unit is environment-friendly as it restricts use of the 6 hazardous substances.



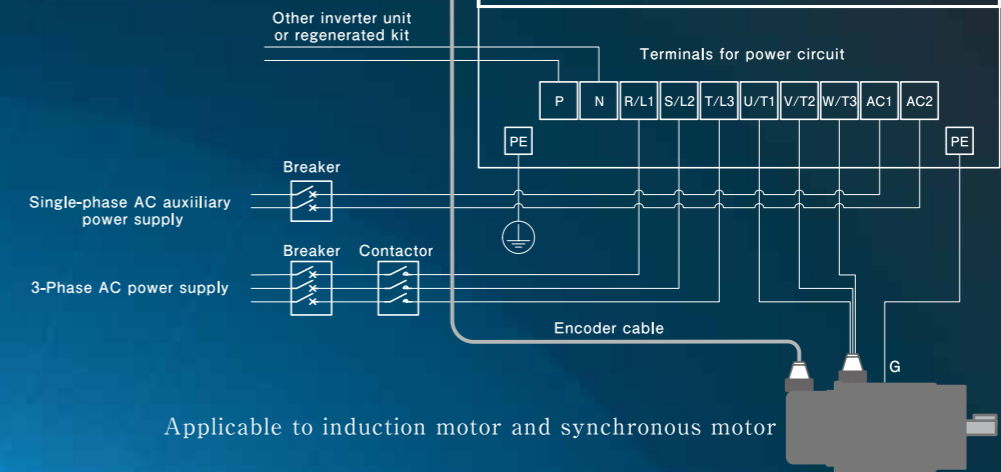
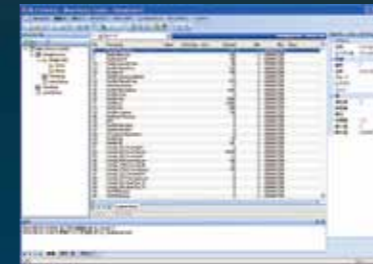
Overview of External Connection

Applicable to high resolution encoder and smart absolute encoder.



Applicable to various field networks by communication network card (option). Application to PROFINet and to EtherNet/IP is planned as needed.

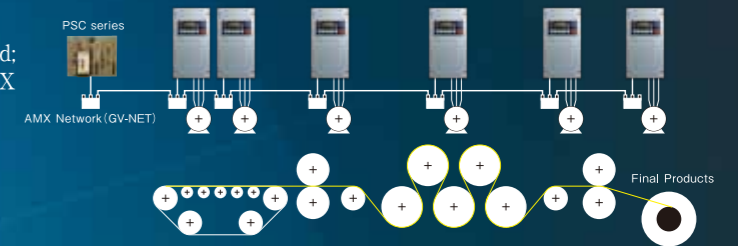
Our diver terminal software makes it possible to monitor and adjust the parameters.



Applicable to induction motor and synchronous motor

System Drive Solution-AMX Network (GV-NET)

AMX Network (GV-NET) is provided as standard; therefore, it can be easily integrated into the AMX Network of the existing system.



System Drive Solution-Communication Option Card PROFINet

Communication network card is available as an option; therefore, it is possible to organize system that uses EtherNet for industrial use.

