2 Introduction

2.1 Features for Different Module Variants

Modern variable speed drives offer a multitude of in-built features such as ramp control, PID loops, simple position control, etc. However this functionality is limited. The drive can only do so many things and when it comes to controlling more complex applications, users often have to resort to using external equipment such as PLCs to control the drive from a system point of view.

However the flexibility of certain drives can be substantially increased by using the Second Processors. These Second Processors provide an additional processor for the drive and allow the user to utilise existing, or write their own, application-specific software. They also offer powerful networking capabilities so many drives (and other equipment) can be connected together to communicate process wide information thus offering a complete application solution. The Second Processors are solutions modules that can be fitted to expansion slots in the supported drives or are embedded in the Digitax drives. The Second Processor are powered from the drive's internal power supply

Specifications for SM-Applications

- High speed dedicated microprocessor
- 384 kb Flash memory for user program
- 80 kb user program memory
- EIA-RS485 port offering ANSI, Modbus-RTU slave and master and Modbus-ASCII slave and master protocols
- CTNet high speed network connection offering up to 5 Mbit/s data rate.
- Two 24V digital inputs
- Two 24V digital outputs
- Task based programming system allowing for real-time control of drive and process
- CTSync

Specifications for SM-Applications Lite

- High speed dedicated microprocessor
- SyPTLite 10 kb executable memory
- SyPTPro V2.3.1 or later 384 kb executable memory, 80 kb user memory.
- SyPTPro V2.2.0 150 kb executable memory, 20 kb user memory.
- Versions prior to V2.2.0 100 kb executable memory, 20 kb user memory.
- Task based programming system allowing for real-time control of drive and process.

Please note that SM-Applications Lite, SM-Applications Lite V2 and ST Indexer do not have these terminals.

NOTE Please ensure that the drive is off before removing any modules. Please refer to your installation sheet for more information.

Table 3-1 Module Connectors

Terminal	Function	Description
1	0V SC	0V connection for EIA-RS485 port
2	/RX	EIA-RS485 Receive line (negative). Incoming.
3	RX	EIA-RS485 Receive line (positive). Incoming.
4	/TX	EIA-RS485 Transmit line (negative). Outgoing.
5	TX	EIA-RS485 Transmit line (positive). Outgoing.
6	CTNet A	CTNet data line
7	CTNet Shield	Shield connection for CTNet
8	CTNet B	CTNet data line
9	0V	0V connection for digital I/O
10	DIO	Digital input 0
11	DI1	Digital input 1
12	DO0	Digital output 0
13	DO1	Digital output 1

Table 3-2 Digital Input Specifications

Terminal 10 / Digital Input 0	
Terminal 11 / Digital Input 1	
Type	Positive logic IEC 61131-2
Maximum Input Voltage	+/- 30V
Switching Threshold	9.5 V +/- 0.3 V
Load	2 mA at +15 V

Table 3-3 Digital Output Specifications

Terminal 12 / Digital Output 0	
Terminal 13 / Digital Output 1	
Type	Positive logic when active
Output Voltage	0 / 24V
Nominal max. output	20 mA

NOTE When inactive they are effectively floating.