

# Automation SM Option Modules

## SM-APPS-PLUS



The SM-APPS-PLUS option module meets many demanding automation and high-speed motion application needs. The module transforms Unidrive SP AC/Servo drives and Mentor MP series DC drives into powerful automation controllers that add PLC functionality and can connect to devices via CTNet, our drive-to-drive network. This provides all the benefits of a fully distributed control system including enhanced performance, reduced cost and smaller electrical panel sizes.

- **Performance** - This SM option module contains its own high-performance microprocessor freeing the drive's processor to deliver the best possible motor performance. The module also contains 384 K of user program memory, enough for virtually all drive applications.
- **High-speed serial port** - An RS485 serial communications port supports standard protocols such as Modbus for connection to external devices such as operator interface panels. The port can be configured either as a Modbus "Master" or "Follower." In Master mode, the drive can control other automation devices. This port also supports CTSync drive-to-drive synchronization.
- **Drive-to-drive communications** - Each SM-APPS-PLUS module includes CTNet, our high-speed drive-to-drive network optimized for intelligent drive systems offering flexible peer-to-peer communications. The bus has the capability to connect to remote I/O, operator panels, PLCs and other Nidec AC, DC and servo motor drives.

- **Easy, powerful configuration** - PLC functionality is programmed using SyPTPro (System Programming Tool) allowing the user to tackle automation problems from simple start-and-stop sequencing to more complex machine and motion control applications. The device is programmed within an IEC61131-3 environment with a choice of 3 languages: Ladder Logic, Function Blocks and text-based programming. SyPTPro provides a suite of diagnostic and debugging features to help shorten installation time and simplify maintenance.
- **Real-time control** - The SM-APPS-PLUS option module provides real-time access to all drive parameters as well as access to data from I/O or other drives. The module uses a high-speed multi-tasking operating system with task update times as low as 250  $\mu$ s. Tasks are fully synchronized to the drive's control loop to deliver the best possible performance for drive control and motion.
- **Inputs/Outputs** - This SM option module has two digital inputs and two digital outputs for high-speed I/O operations such as position capture and actuator firing.

SM-APPS-PLUS			
Mentor MP Quantum MP	Unidrive SP	Digitax ST	
✓	✓	✓	

1 2 3 4 5		6 7 8		9 10 11 12 13	
EIA-485	Function	CTNet	Function	Digital I/O	Function
1	Isolated. OV	6	CTNet-	9	Digital OV
2	EIA-485/Rx-	7	CTNet shield	10	Digital input 0
3	EIA-485/Rx+	8	CTNet+	11	Digital input 1
4	EIA-485/Tx-			12	Digital output 0
5	EIA-485/Tx+			13	Digital output 1

### Networks

- Modbus RTU master or follower
- 2-Wire
- 4-Wire
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