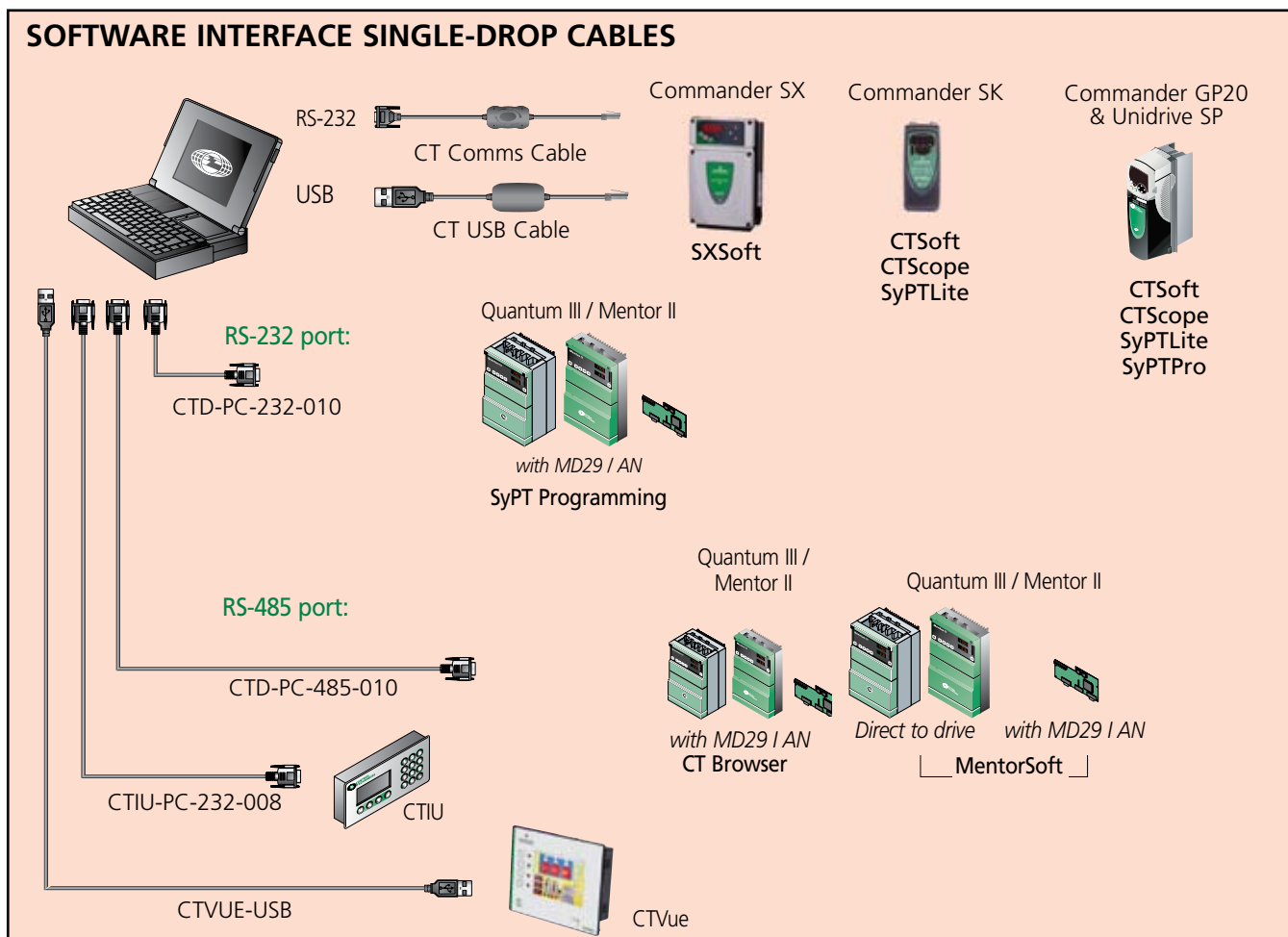


# Interconnect Components

## AC and DC Drives



**CT Comms Cable** RS-232/485 serial interface cable; 6 ft.; DB9 female connector on computer end; RJ45 connector on drive end.

**CT USB Cable** Connects the Modbus port on the drive directly to the USB port of your PC. USB to RS-485 conversion.

**CTD-PC-232-010** RS-232 serial interface cable; DB9 female connector on computer end; DB9-P male connector on drive end, 10 ft.

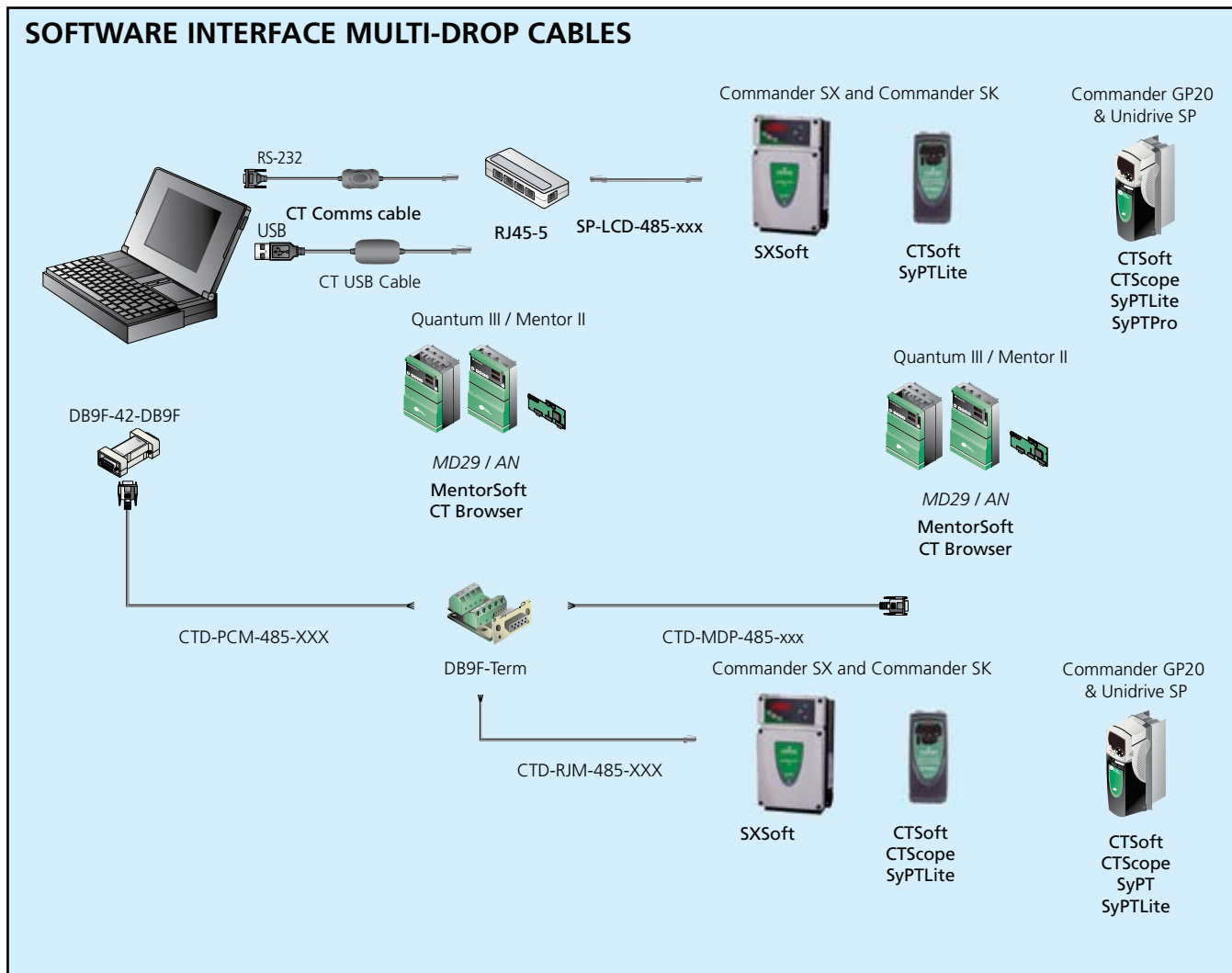
**CTD-PC-485-010** Pseudo RS-232/485 serial interface cable; labeled DB9 female connectors on both ends, 10 ft.

**CTIU-PC-232-005** RS-232 serial interface cable, DB9 female connector on computer end, DB9 male connector on CTIU end. 5 ft.


**CTVue-USB** CTVue USB programming cable. USB connectors on both ends.


# Interconnect Components

## AC and DC Drives




**SP-LCD-485-xxx**   
RS-485 multi-drop cable with RJ45 connectors on both ends.

**CTD-PCM-485-xxx**   
RS-485 cable for PC to DB9F-Terminal . Connects to DB9F-42-DB9F at PC end.

**CT Comms Cable**   
RS-232/485 serial interface cable; 6 ft.; DB9 female connector on computer end; RJ45 connector on drive end.

**CT USB Cable**   
Connects the Modbus port on the drive directly to the USB port of your PC. USB to RS-485 conversion.

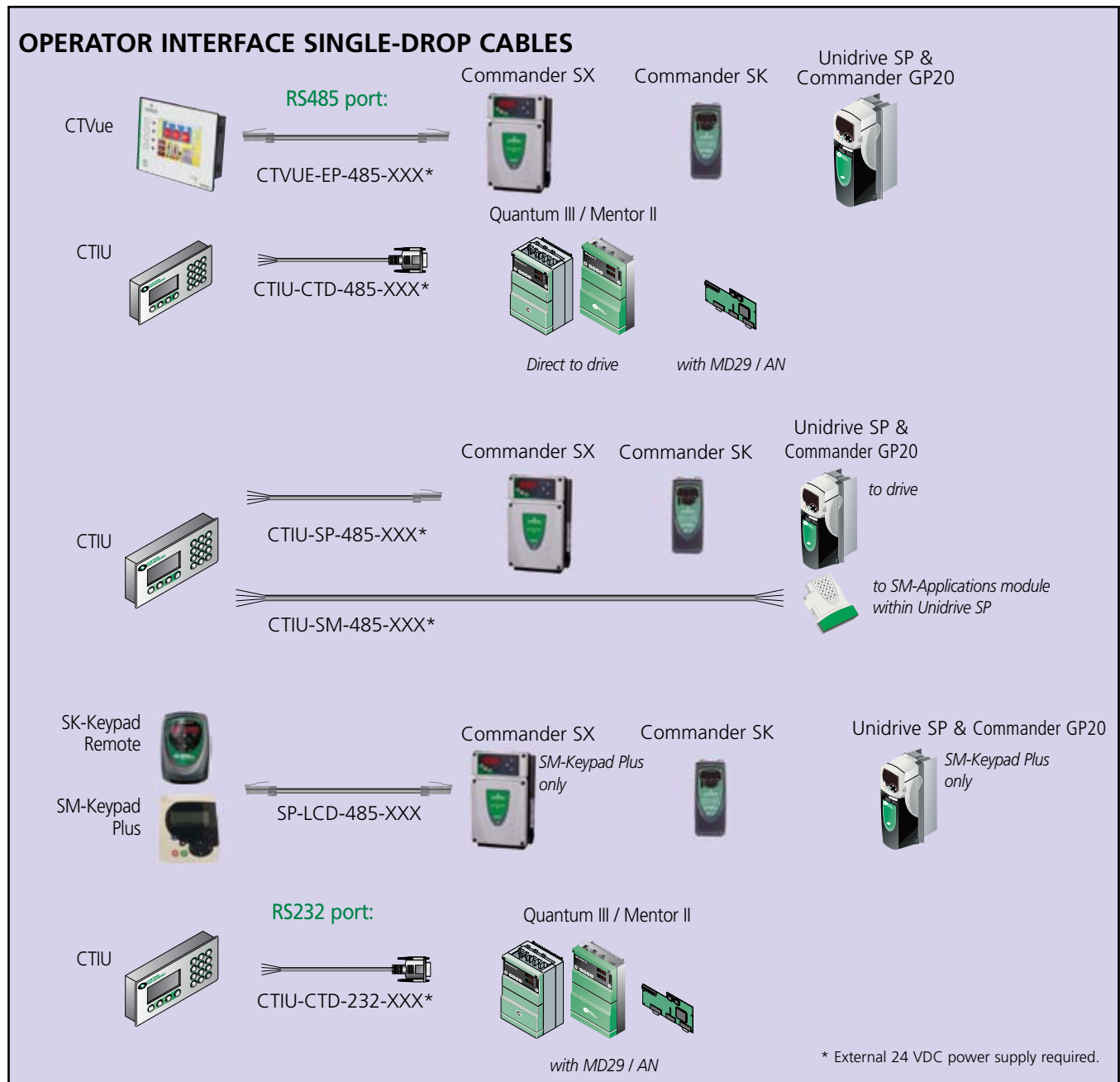
**CTD-MDP-485-xxx**   
RS-485 cable for DB9F-Term to CTD connection.

**CTD-RJM-485-xxx**   
RS-485 cable for DB9F-Term to RJ45 connection.

XXX = length in feet  
-005 = 5 ft.; -010 = 10 ft.; -015 = 15 ft.; -025 = 25 ft.

# Interconnect Components

## AC and DC Drives



**CTVUE-EP-485-XXX** RS-485 cable, RJ45 to RJ45

**CTIU-SE-485-XXX** RS485 cable; RJ45 connector on CSE end; wires dressed on CTIU end.

**CTIU-CTD-232-010** RS-232 cable; DB9 male connector on drive end; wires dressed on CTIU end, 10 feet.

**CTIU-CTD-485-XXX** RS485 cable; DB9 female on drive end; wires dressed on CTIU end.

**CTIU-SP-485-XXX** RS-485 cable; RJ45 connector on drive end; wires dressed on CTIU end.

**CTIU-SM-485-XXX** RS-485 cable; wires dressed on CTIU end and SM-Applications end.

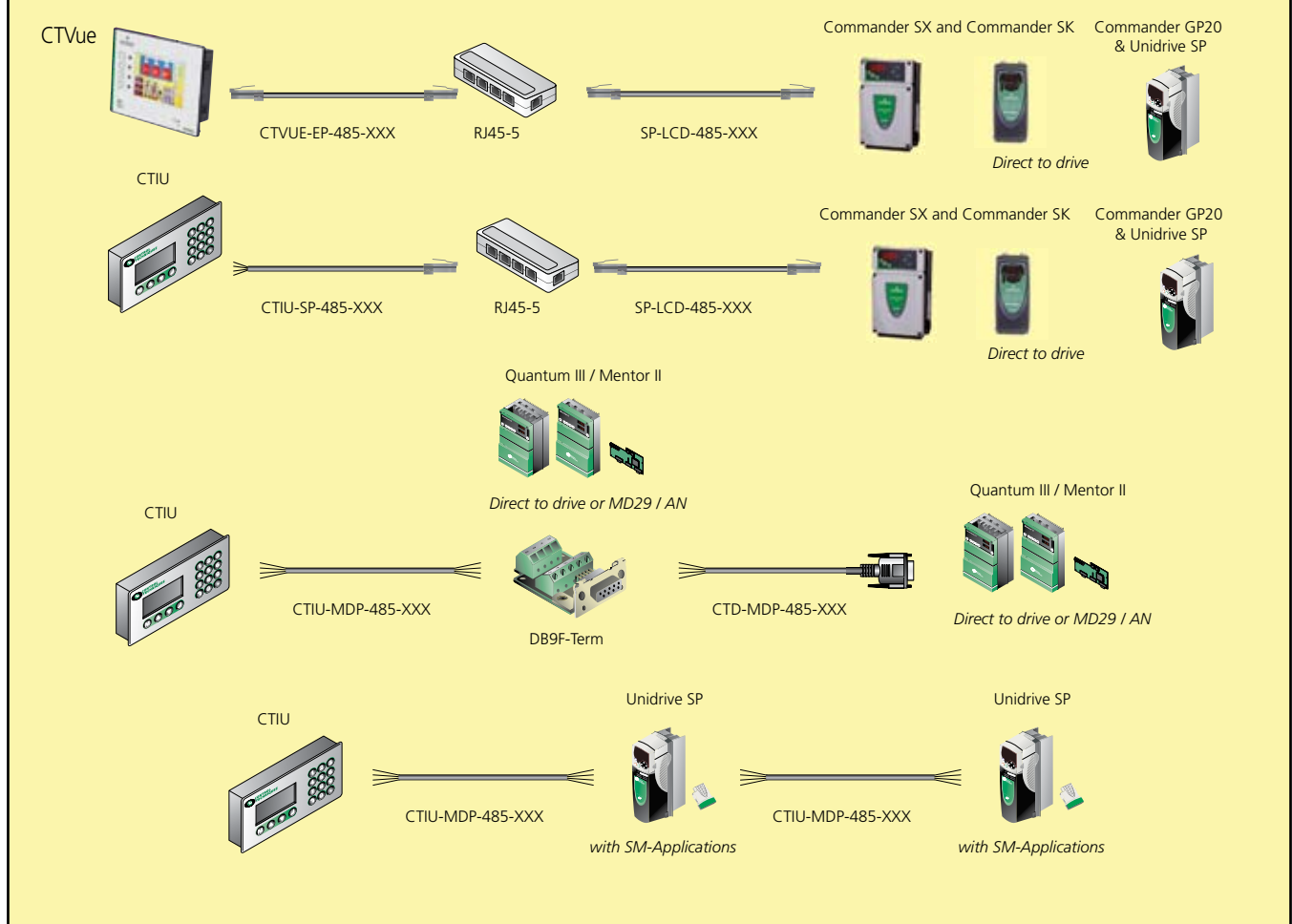
**SP-LCD-485-XXX** RS-485 cable with RJ45 connector on both ends for LCD Keypad and Unidrive SP. Available in 5ft., 10ft. and 15ft. lengths.

XXX = length in feet  
 -005 = 5 ft.; -010 = 10 ft.; -015 = 15 ft.; -025 = 25 ft.

# Interconnect Components

## AC and DC Drives

### OPERATOR INTERFACE MULTI-DROP CABLES



**SP-LCD-485-XXX**  
RS-485 cable for multidrop. RJ45 connector on both ends.

**CTVUE-EP-485-XXX**  
RJ45 to RJ45, RS-485 cable

**CTD-MDP-485-XXX**  
RS-485 multidrop cable. Wires dressed at both ends.

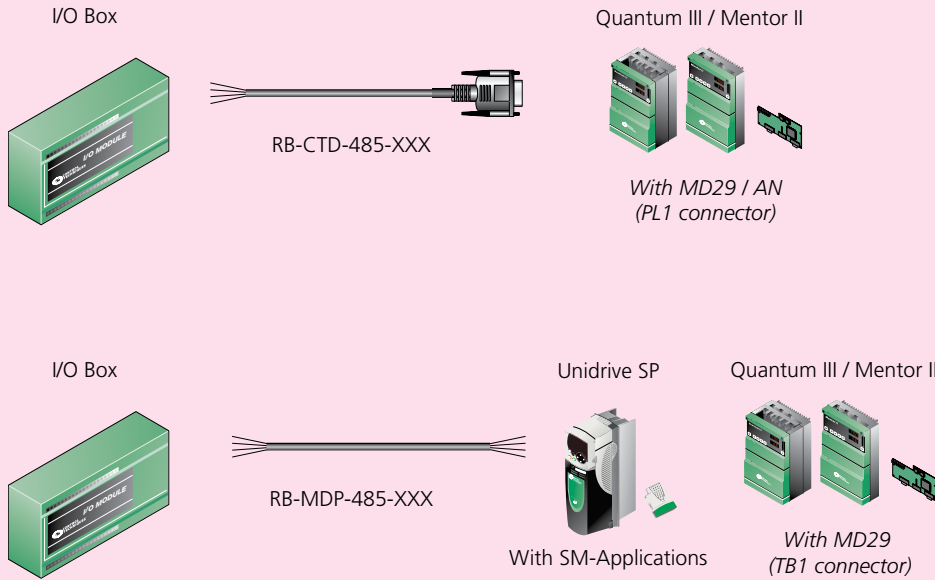
**CTIU-MDP-485-XXX**  
RS-485 multidrop cable. Wires dressed on both ends.

XXX = length in feet  
-005 = 5 ft.; -010 = 10 ft.; -015 = 15 ft.; -025 = 25 ft.

# Interconnect Components

## AC and DC Drives

### I/O BOX CABLES



**RB-CTD-485-XXX**



RS485 cable dressed at I/O Box end, DB9-D male connector at drive end.

**RB-MDP-485-XXX**



RS485 multidrop cable dressed at I/O Box end and drive end.

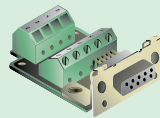
XXX = length in feet

-005 = 5 ft.; -010 = 10 ft.; -015 = 15 ft.; -025 = 25 ft.

### CONNECTORS

**DB9F-Term**

RS485 network connector; DB9 female connector with terminal strip on cable end.



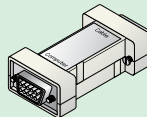
**DB9M-2I-DB9F**

RS-232 optical isolator; DB9 female connector on computer end; DB9 male connector on cable end. No power supply needed in most applications.



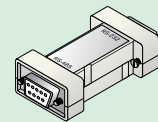
**DB9M-2I-DB9F-D**

For Desktop computers only, the RS-232 optical isolator; DB9 female connector on computer end; DB9 male connector on cable end.



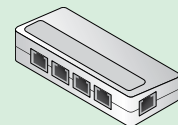
**DB9F-42-DB9F**

RS-232/485 adaptor; DB9 female connector on RS485 end; DB9 female connector on RS232 end.



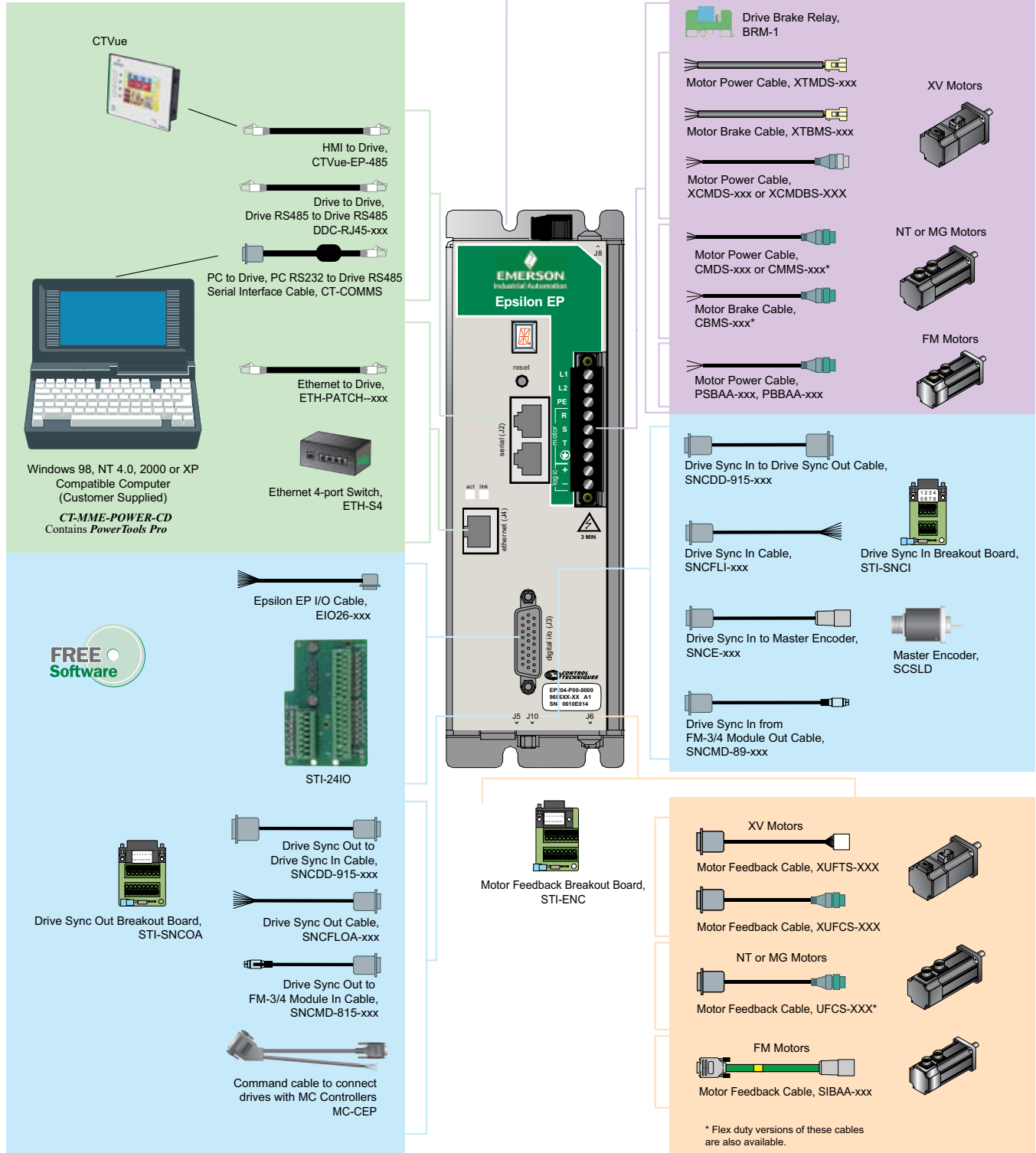
**RJ45-5**

RJ45 Splitter; accepts one RJ45 connector of input and 4 RJ45 connectors for output.



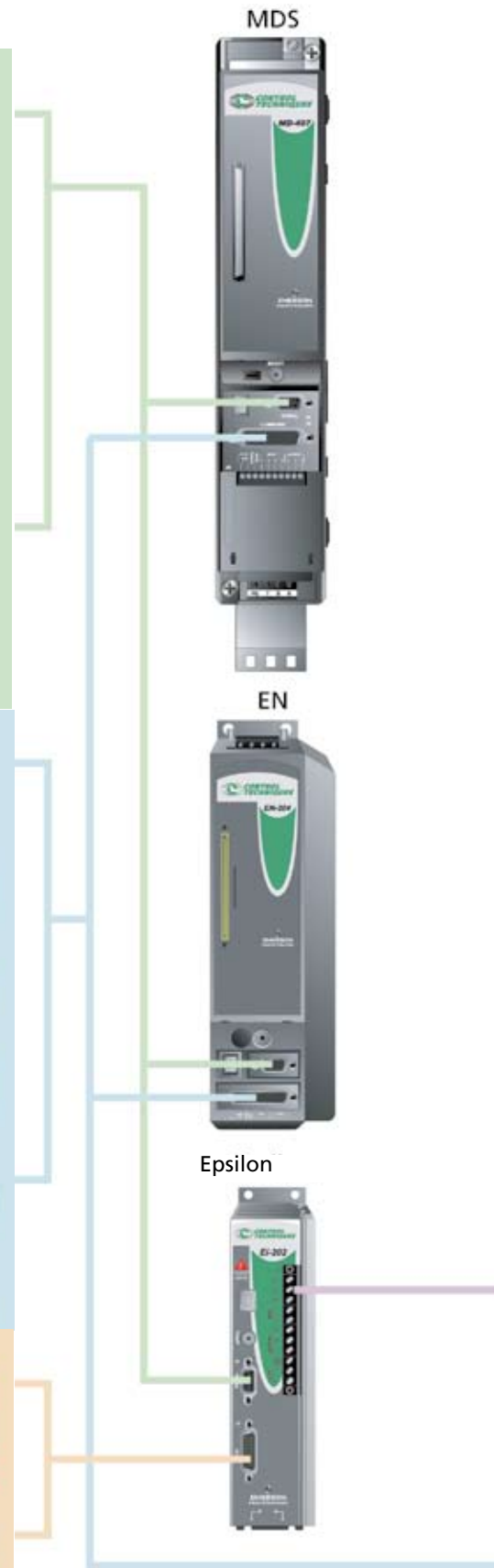
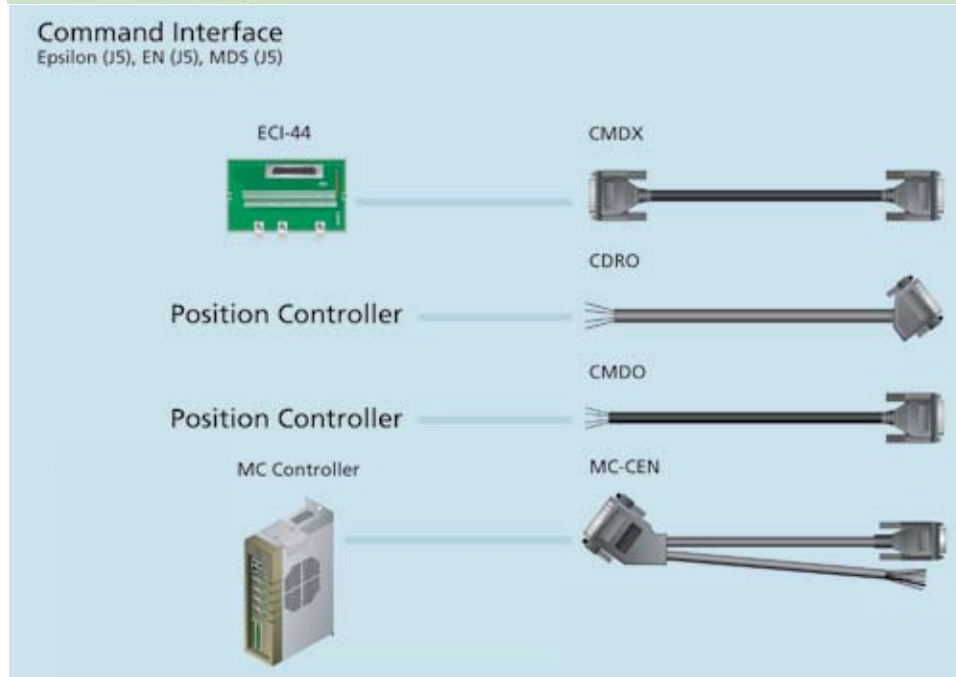
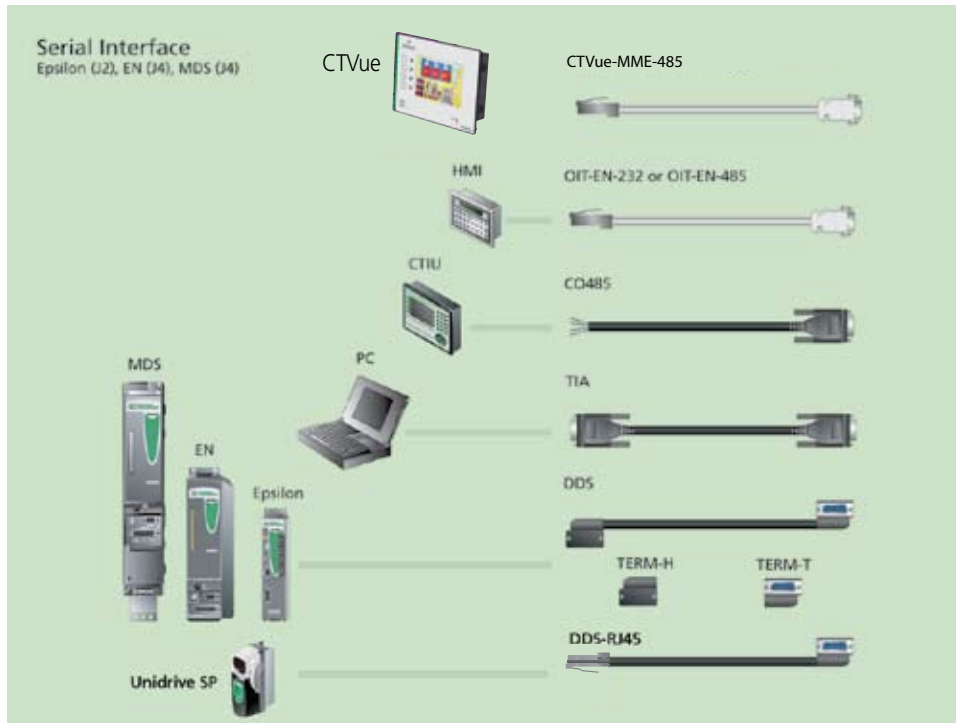
# Interconnect Components

## Epsilon EP



# Interconnect Components

## Motion Control





# Interconnect Components

## Motion Control

Bottom View



Bottom View



Bottom View



**Motor Feedback**  
Epsilon (J6), EN (J7), MDS (J7)  
★ Flex cable

CFCS, PTB-16-23, CFCOS, CFCO, CFOS, CFCS, PT06A-16-23SSR, DB26-SS or DB26-SA, MGFS, PT06A-16-23SSR, CFCO, ★CFOF, CFCO, ★CFEF, CFCO, PTB-16-23, ★CFCF, CFCO, PT01E-16-23PWSF, ★MGFF, PT06A-16-23SSR, XCFTS, ★XUFTEF, XCFCS, ★XUFCEF, SIBAH

NT, MG, MH, XV, FM, UM or EZ Unimotor

**Motor Power**  
Epsilon (J1), EN (J8), MDS (Back Plane)  
★ Flex cable

CMDS or CMMS or CMLS, PTB-16-8, CMDCS, CMDS, PT06A-16-8SSR, MS3106A-20-15SSR, MS3106A-24-10S, 2", 3" 4X16SS, 4", 6" 4X12SS, 8" 4X08SS, ★CMDF, CMMF, or CMLF, CMDS, ★CMDEF, For 2" and 3" motor only, ★CMMEF, CMDS, PTB-16-8, ★CMDCF, CMDS, PT06A-16-8SSR, MS3106A-20-15PWSF, MS3106A-24-10PWSF, 2", 3" ★4X16SF, 4", 6" ★4X12SF, 8" ★4X08FF, ★PSBAA, PSBBK, or PSBCK, ★PBBAA, PBBBK, or PBBCK (Motor Power/Brake Cables), XTMDs, ★XTMDEF, XTBMS, ★XTBMEF, XCMDS or XCMDBS, ★XCMDEF or XCMDBEF

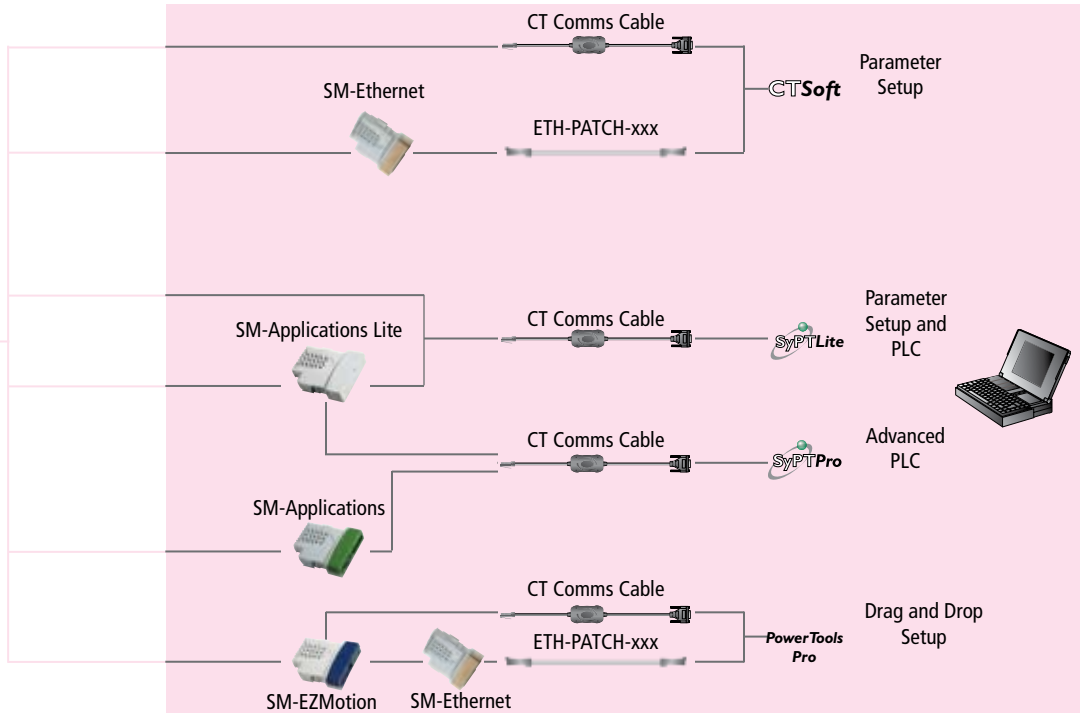
NT, MG, MH, CBMS or ★CBMF, FM, UM or EZ Unimotor, XV

For brake motors a CBMS or CBMF is required

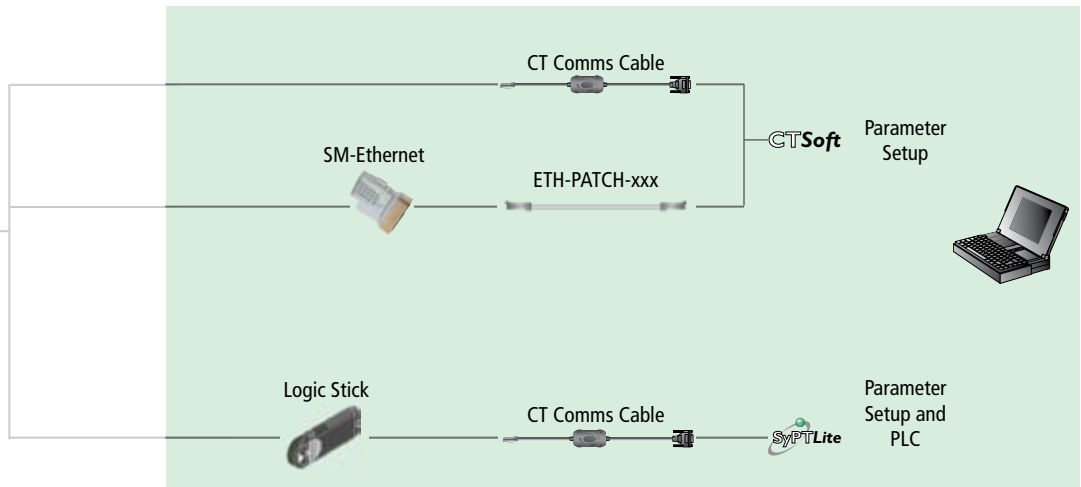


# Set Up & Configuration Software

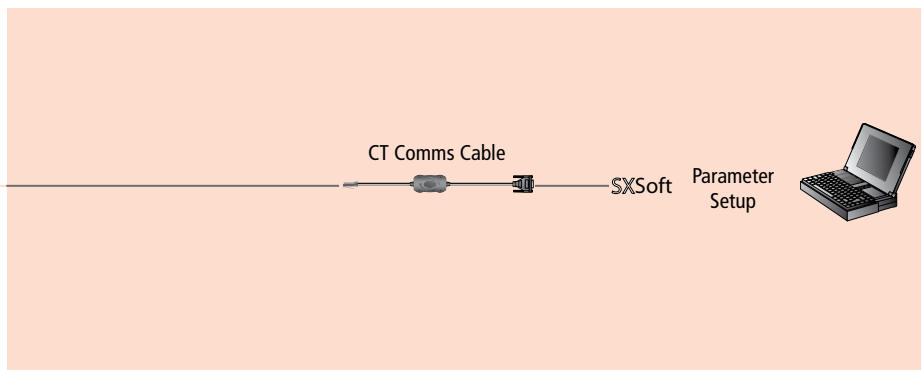
Unidrive SP



Commander SK

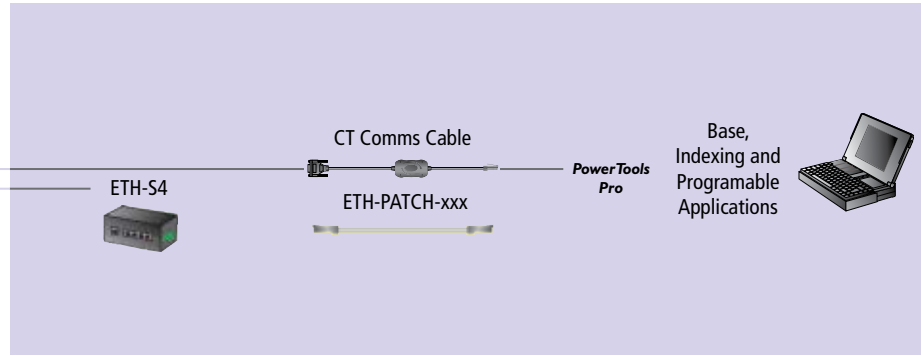
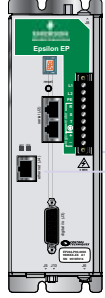


Commander SX

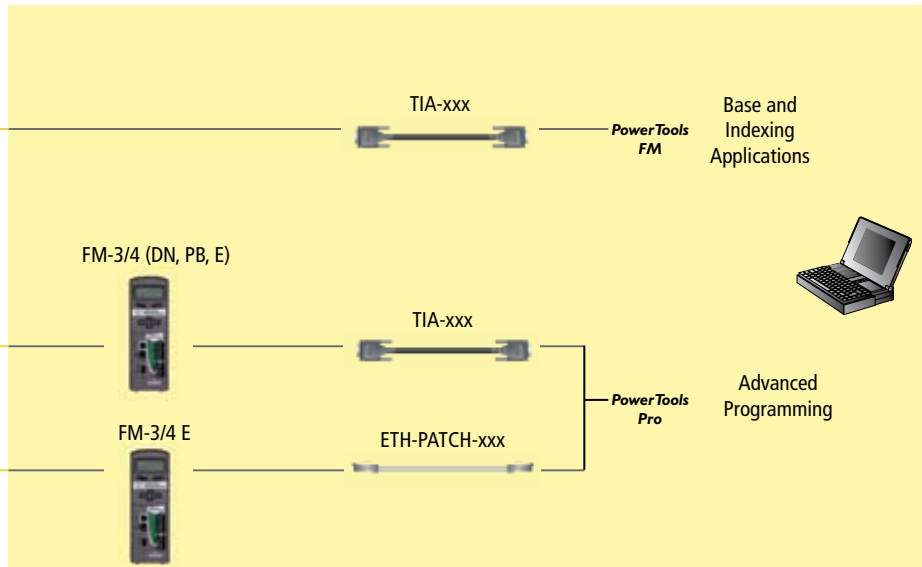


Set-up & Configuration

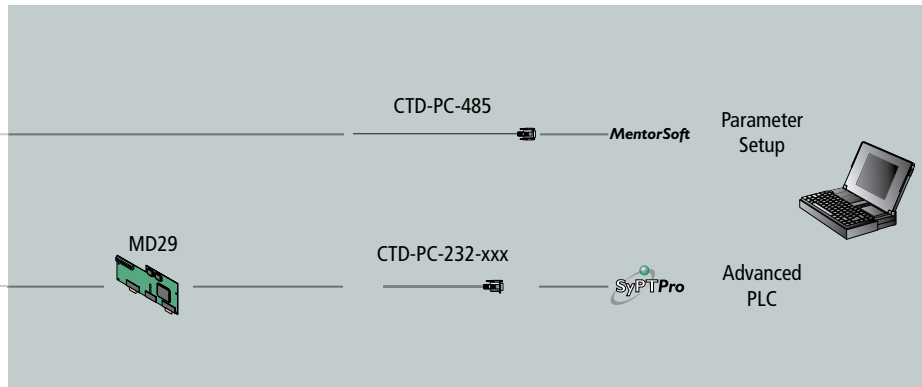
Epsilon EP



Epsilon



Mentor II





# Cables & Accessories

## Motion Control

Control Techniques builds its cables to the highest standards. Drives are engineered so that connections are easily accessible and, in many cases, no wiring is involved, simply plug and play.

### Command Cables

#### CMDX



-003, -005, -015 ★

Command cable; 18 pair; DB44M straight connectors on both ends.

**EN, Epsilon, MDS to ECI-44**

#### CMDO



-005, -015 ★

Command cable to position controller; 18 pair; DB44M straight connector on drive end; pigtails on other end for screw terminals.

**EN, Epsilon, MDS to Position Controller, PLC**

#### CDRO



-005, -010, -015 ★

Command cable to position controller; 13 pair; 45° angle connector at drive (DB44M) pigtails on other end for screw terminals.

**EN, Epsilon, MDS to Position Controller, PLC**

#### MC-CEN



-002, -004, -010 ★

Command cable required to connect drives with MC Controllers. 45° angle connectors on drive end.

**EN, Epsilon, MDS to MC Controllers**

### Legend to Cable/Accessory Descriptions:

Cable (or Accessory Name)

#### CABLE OR ACCESSORY ILLUSTRATION

Cable length in feet, ★ = Custom Lengths

Text description of cable or accessory

**Product that uses Cable or Accessory in Green.**

**Connections are read left to right based on illustration.**

#### MC-CEP



-002, -004, -010 ★

Command cable required to connect Epsilon EP with MC Controllers. 45° angle connectors on drive end.

**Epsilon EP, Unidrive SP to MC Controllers**

### Bulk Command Cables



#### 13PX26SS

Command cable 13 pair, ;26 AWG w/shield; 0.380" (9.7 mm) diameter. ★

#### DB44P-SA

#### 18PX26SS

Command cable 18 pair, ;26 AWG w/shield; 0.410" (10.4 mm) diameter. ★

#### DB44P-SA

### Serial Interface Cables

#### TIA



-010, -025, -050 ★

RS-232 serial interface cable; DB9-S straight molded connector on computer end; DB9-P straight molded connector on drive end.

**EN, Epsilon, MDS to PC, HMI, PLC (Modbus Master)**

#### CO485



-010, -025, -050

RS-485 serial interface cable; DB9-P straight, molded connector on drive end and flying leads on computer end. Black PVC outer jacket.

**EN, Epsilon, MDS to PC, HMI, PLC (Modbus Master)**

**Serial Interface Cables (continued)**

**CT-COMMS**



Connects the 9 pin RS-232 serial port of a PC to the RJ45 port of the drive. RS-232 to RS-485 conversion.

**Epsilon EP, Unidrive SP to PC**

**CT-USB**



Connects the Modbus port on the drive directly to the USB port of your PC. USB to RS-485 conversion.

**Epsilon EP, Unidrive SP to PC**

**DDS**



-001, -005, -010, -020 ★

Standard multi-drop drive to drive serial interface cable. Use with TERM-H and TERM-T termination plugs at both ends if total multi-drop serial cable length is greater than 50 feet.

**EN, Epsilon, MDS to EN, MDS**

**TERM H**



Terminator block for head of serial string.

**EN, Epsilon, MDS**

**TERM T**



Terminator block for tail of serial string.

**EN, Epsilon, MDS**

**Digital I/O Interface Cable**

**EIO26-xxx**



-005, -010, -015

I/O interface cable provides access to all digital I/O points while maintaining 6" drive installation depth.

**Epsilon, Epsilon EP to Position Controller, PLC**

**Connectors for Command Cables**

**DB44P-SA**

★ For command cable; DB44 pin male; 45° cable outlet; metallized plastic backshell.



**DB26P-SS**

For feedback cable; DB26 pin male; straight cable outlet; metallized plastic backshell.



**DB26P-SA**

For feedback cable; DB26 pin male; 45° cable outlet; metallized plastic backshell.



**Connectors for Serial Interface**

**DB9P-SS**

For serial cable; DB9 pin male; straight cable outlet; metallized plastic backshell.



**DB9P-SA**

For serial cable; DB9 pin male; 45° cable outlet; metallized plastic backshell.



**Motor Power Cables (NT, MG, MH)**

**CMDS**



-005, -015, -025, -050, -100 ★

16 AWG for 2" and 3" motors, connector on motor end, ferrules on drive end. Fully shielded with IP-65 molded connector.

**NT, MG, MH Motor Connector**

**CMMS**



-005, -015, -025, -050, -100 ★

12 AWG for 4" and 6" motors, connector on motor end, ferrules on drive end. Fully shielded with IP-65 molded connector.

**MG, MH Motor Connector**

**CMLS**



-015, 025, -050, -100 ★

8 AWG for 8" motors, connector on motor end, ferrules on drive end. Fully shielded with IP-65 molded connector.

**MDS to MH Motor Connector**

**Motor Power Extension Cable**

**CMDCS**



Cable to be connected to bulkhead connector on one end and motor connector on the other end for 2" and 3" motors.

**PTB-16-8 to NT, MG, MH**

**Bulk Power Cables & Connectors**

**4X16SS**



Motor power cable for 2" and 3" motors, 4-wire, 16 AWG w/shield; 0.380" (9.7 mm) diameter.

**EN, Epsilon, MDS to PT06A-16-8SSR**

**4X12SS**

Motor power cable for 4" and 6" motors, 4-wire 12AWG w/shield; 0.440" (11.2mm) diameter.

**EN, MDS to MS3106A-20-15SSR**

**PT06A-16-8SSR**

Motor power connector for 2" & 3" NT, MG, MH motors, female, not IP-65, not shielded.



**MS3106A-20-15SSR**

Motor power connector for 4" & 6" NT, MG, MH motors, female, not IP-65, not shielded.



**Consult Factory for options regarding Bulk Power Cable and connectors for 8" motors.**

**PTB-16-8**

Motor bulkhead connector for 2" and 3" motors.



**Feedback Cables (NT, MG, MH)**

**UFCS**



-005, -015, -025, -050, -100 ★

Motor feedback cable, connector both ends.

**Epsilon EP, Unidrive SP to NT, MG, MH**

**CFCS**



-005, -015, -025, -050, -100 ★

Motor feedback cable, connector both ends.

**EN, Epsilon, MDS to NT, MG, MH, PTB-16-23**

**CFCO**



-005, -015, -025, -050, -100 ★

Motor feedback cable, connector at drive only (use PT06A-16-23SSR for motor feedback).

**EN, Epsilon, MDS to PT06A-16-23SSR**

**CFOS**



-005, -015, -025, -050, -100 ★

Motor feedback cable, connector at motor only.

**DB26P-SS, DB26P-SA, PT06E-16-23PWS to NT, MG, MH**

**Feedback Extension Cable (NT, MG, MH)**

**CFOCS**



★

Cable to be connected to bulkhead connector on end and motor connector on the other end (2", 3", 4", 6" and 8" motors).

**PTB-16-23 to NT, MG, MH**

**Bulk Feedback Cables & Connectors (NT, MG, MH)**

**MGFS**



★

Standard duty motor feedback cable for 2" and 3" motors, 8 pair w/shield.

**DB26P-SS, DB26P-SA to PT06A-16-23-SSR**

**PT06A-16-23SSR**

Female connector for motor feedback cable, not IP-65, not shielded.

**NT, MG, MH Feedback Connector**



**PT06E-16-23PWS**

Male connector for standard motor feedback cable, use at enclosure end w/PTB-16-23, IP-65, shielded.

**NT, MG, MH Feedback Connector**



**PTB-16-23**

Through the wall bulkhead connector for feedback cables.



**Brake Cables (NT, MG, MH)**

**CBMS**



-005, -015, -025, -050, -100 ★

Motor brake cable, molded standard duty, connector at motor only.

**BRM-1 to NT, MG, MH**

**Brake Extension Cable (NT, MG, MH)**

**CBMCS**



Cable to be connected to bulkhead connector on one end and motor connector on the other end.

**PTB-8-3 to NT, MG, MH**

**Motor Connectors for Brake Cables (NT, MG, MH)**

**PT06A-8-3SSR**

Motor brake connector kit.

**Bulkhead Connectors for Brake Cables**

**PTB-8-3**

Brake bulkhead connector.



**Flex Power Cables (NT, MG, MH)**

**Note: All Flex Cables are rated for 9,000,000 cycles when installation recommendations are followed. See Flex Cable Installation Manual.**

**C MDF**



-005, -015, -025 ★

Molded flex motor power cable, connector at motor end for 2" and 3" motors. Min. Bend radius 4.5 in.

**NT, MG, MH Motor Connector**

**CMMF**



-005, -015, -025 ★

Molded flex motor power cable, connector at motor end for 4" and 6" motors. Min. Bend radius 9.0 in. for flexing, 6" for stationary.

**NT, MG, MH Motor Connector**

**CMLF**



-005, -015, -025 ★

Molded flex motor power cable, connector at motor end for 8" motors. Min. Bend radius 9 in. for flexing, 6" for stationary. Min. Bend radius 9.2 in. for flexing, 6" for stationary.

**MH Motor Connector**

**Flex Power Extension Cables (NT, MG, MH)**

**CMDEF**



-005, -015, -025 ★

Molded flex motor power extension cable, connectors at both ends for 2" & 3" motors. Min. Bend radius 4.5in.

**CMDS to NT, MG, MH**

**CMMEF**



-005, -015, -025 ★

Molded flex motor power extension cable, connectors at both ends for 4" and 6" motors. Min. Bend radius 9.0 in. for flexing, 6" for stationary.

**CMMS to MG, MH**

**CMDCF**



-005, -015, -025 ★

Molded flex motor power cable to be connected to bulkhead on one end and motor connector on the other end for 2" and 3" motors. Min. Bend radius 4.5 in.

**PTB-16-8 to NT, MG, MH**

**Bulk Flex Power Cables & Connectors (NT, MG, MH)**



**4X16SF** ★ 20 ft. min.

Flex duty motor power cable for 2" and 3" motors, 4 wire, 16AWG, w/shield. Min. Bend radius 4.5 in.

**EN, Epsilon, MDS to PT06A-16-8SWSF**

**4X12SF** ★ 20 ft. min.

Flex duty motor power cable for 4" and 6" motors, 4 wire, 12AWG, w/shield. Min. Bend radius 9.0 in.

**EN, MDS to MS3106A-20-15PWSF**

**4X08SF** ★ 20 ft. min.

Flex duty motor power cable for 8" motors, 4 wire, 8AWG, w/shield. Min. Bend radius 9.2 in. for flexing

**MDS to MH**



**Bulk Flex Power Cables & Connectors (NT, MG, MH) (continued)**

**PT06E-16-8SWSF**

Motor end power cable, female, w/backshell, IP-65, shielded for 2" and 3" motors.



**PT01E-16-8PWSF**

Power Cable extension, male, mates with motor end of motor cable, IP-65, shielded, for 2" and 3" motors.



**MS3106A-20-15SWSF**

4" motor power connector, female, not IP-65, not shielded.



**MS3101A-20-15PWSF**

Power cable extension plug for 4" motors, male. Mates with motor end of motor cable



**Flex Feedback Extension Cables (NT, MG, MH)**

**CFEF**



-005, -015, -025 ★

Molded flex motor feedback extension cable for all encoder feedback motors w/circular connectors at both ends. Min. Bend radius 9 in. for flexing, 6" for stationary.

**CFCS, CFOS to NT, MG, MH**

**CFOF**



5 ft. min. ★

Motor feedback cable, connector at motor only. Min. Bend radius 9 in. for flexing, 6" for stationary.

**DB26P-SS, DB26P-SA, PT06E-16-23PWS to NT, MG, MH**

**CFCF**



-005, -015, -025 ★

Molded flex motor feedback cable for mating w/ through the wall bulkhead connector for all encoder feedback motors. Min. Bend radius 9 in. for flexing, 6" for stationary.

**PTB-16-23 to NT, MG, MH**

**Bulk Flex Feedback Cable**

**MGFF**



20 ft. min. ★

Flex duty motor feedback cable for 2" and 3" motors, 8 pair w/shield. Min. Bend radius 9 in. for flexing, 6" for stationary.

**PT01A-16-23SSR to NT, MG, MH**

**Flex Brake Cable (NT, MG, MH)**

**CBMF**



-005, -015, -025, -050, -100 ★

Motor brake cable, flex duty, connector at drive, leads at motor, IP-65 for 3", 4", 6" motors. Min. bend radius 3 in.

**BRM-1 to NT, MG, MH Brake Motor Connector**

**Connectors for Brake Cables**

**PT06E-16-23PWSF**

Enclosure end feedback plug, male, w/ backshell and lock ring, IP-65, shielded.



**PT01E-16-23PWSF**

Feedback cable extension, female, mates w/motor end of the motor feedback cable, IP-65, shielded.

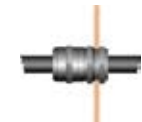


**Through Wall Grommets with Shield**

**CGS-047**

Cable grommet, 0.197-0.472 ID.

**ENCO, CMDS, CFDS, MGFS, CMDF, 4X16SF/SS**



**CGS-069**

Cable grommet, 0.433-0.689 ID.

**4X12SF/SS, CMMS, CMDO, CMDX, MGFS, CDRO, CMMF, CFCF, CFOF-A, MGFF**

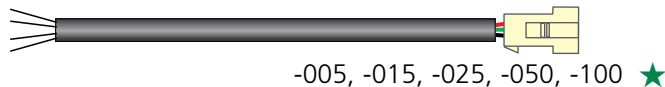
**CGS-098**

Cable grommet, 0.630-0.984 ID.

**CMLS**

**XV Motor Cables**

**XTMDS**



Motor power cable.  
**XV, 40, 60, 80 brake motors**

**XCMDS**



Motor power cable.  
**XV 130 mm motors**

**XCMDBS**



Motor power and brake cable.  
**XV 130 mm brake motors**

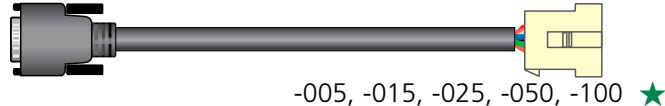
**XTBMS**



Motor brake cable, standard duty, connector at motor only.  
**BRM-1 to XV 40, 60, 80 mm brake motors**

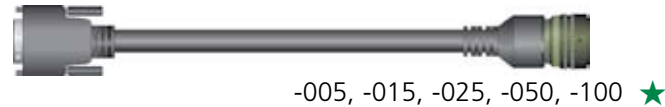
**XV Motor Feedback Cables**

**XUFTS**



XV 40, 60, 80 mm motor to DSUB connector on drive end. Feedback cable, 15 pin high density socket.  
**Epsilon EP, Unidrive SP to 40, 60, 80 mm XV motors**

**XUFCS**



XV Motor Feedback cable.  
**Epsilon EP, Unidrive SP to XV 130 mm motor**

**XV Flex Cables**

**XTMDEF**



Flex motor power cable extension. For use with XTMDS.  
 Min. Bend radius 4.5 in.  
**XV 40, 60, 80 mm motors**

**XCMDEF**



Flex motor power cable extension. For use with XCMDS.  
 Min. Bend radius 4.5 in.  
**XV 130 mm motors**

**XCMBDEF**



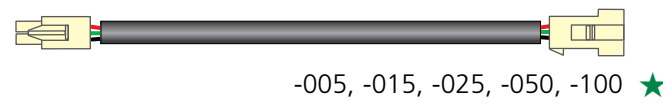
Flex motor brake cable extension. For use with XCMBDS.  
 Min. Bend radius 4.5 in.  
**XV 130 mm brake motors**

**XUFTEF**



Flex motor feedback extension cable for use with XEFTS cable.  
**XV 40, 60, 80 mm motors**

**XTBMEF**



Flex duty motor brake cable for use with XTMBS cable.  
 Min. bend radius 3 in.  
**XV, 40, 60, 80 mm brake motors**

**XUFCEF**



Molded flex motor feedback extension cable for use with XEFCS cable.  
**XV 130 mm motors**

**Motor Power Cables (FM, EZ, UM)**

**PSBAA (75 to 142 Frame Size)**  
**PSBAK, PSBBK and PSBCK (190 Frame Size)**



(meters) -003, -005, -010, -015, -020 ★

**Power and Brake Cable (FM, EZ, UM)**

**PBBAA (75 to 142 Frame Size)**  
**PBBAK, PBBBK and PBBCK (190 Frame Size)**



(meters) -003, -005, -010, -015, -020 ★

**Feedback Cable (FM, EZ, UM)**

**SIBAH**



(meters) -003, -005, -010, -015, -020 ★

**EN, MDS**

**SIBAA**



(meters) -003, -005, -010, -015, -020 ★

**Epsilon EP, Unidrive SP**

**Master Synchronization Cable**

**SNCDD-915-xxx**



-003

Drive Sync Out to Drive Sync In Cable.

**Epsilon EP to Epsilon EP**

**SNCFLOA-xxx**



-003

Drive Sync Out Cable to Flying Leads.

**Epsilon EP**

**SNCMD-815-xxx**



-001.5

Drive Sync Out to FM-3/4 Module Sync In Cable.

**Epsilon EP to FM-3/4**

**SNCFLI-xxx**



-003

Drive Sync In Cable.

**Epsilon EP, STI-SNCOA Breakout Board**

**SNCMD-89-xxx**



-001.5

Drive Sync In from FM-3/4 Module Sync Out Cable.

**Epsilon EP to FM-3/4**

**SNCI**

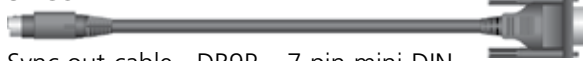


-003

Sync in cable, DB9S – 8 pin mini-DIN.

**FM-3/4 to SNCE, SNCO**

**SNCO**



-003

Sync out cable, DB9P – 7 pin mini-DIN.

**FM-3/4 to SNCI**

**SNCDD**



-001.5

Sync in/out cable, 7 pin mini-DIN, 8 pin mini-DIN, for use between to FM-3/4 modules.

**FM-3/4 to FM-3/4**

**SNCI**



-003

Sync in cable, Bare leads to 8 pin mini-DIN for use from ECI-44 terminal block to the FM-3/4 sync in.

**FM-3/4 to PLC, Master Encoder, User Device**

**SNCLO**



-003

Sync out cable, 7 pin mini-DIN.

**FM-3/4 to PLC, User Device**

**SNCE**



-015, -025, -050 ★

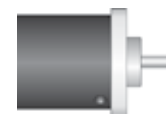
Sync cable to SNCI, Encoder connector to D9P connector.

**SCSLD-4, SCSLD-4R to SNCI, or Epsilon EP Sync In**

**Encoders**

**SCSLD-4**

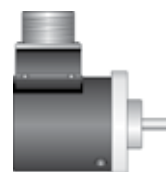
Master Synchronization Encoder, 3000 Line (12,000 counts per line) with right angle connection. Other line count encoders are available: SCSLD-3R (2,500 line) and SCSLD-2R (1,000 line)



**SNCE**

**SCSLD-4R**

Same SCSLD-4 with right angle connector.



**SNCE**

### Brake Relay

#### BRM-1

Brake relay module, 24V 1 contact, 6 Amp, DIN rail mounting.

**EP, EN, Epsilon, MDS to Motor/Brake Cable Brake Leads**

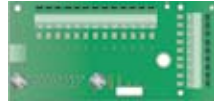


### Interface Terminals

#### STI-EIO

Screw Terminal Interface, breakout board plugs directly into Epsilon drive I/O connector (J3), 13 input and 7 output lines are labeled and LEDs for easy field wiring and troubleshooting.

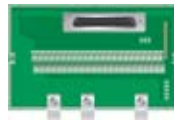
**Epsilon, Epsilon EP**



#### ECI-44

External connection interface terminal strip; provides a convenient field wire screw terminal strip for all connections available on the drive's command connector. Requires a CMDX to connect to the drive. Includes labeled terminals and provisions for DIN rail mounting.

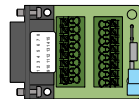
**EN, Epsilon, MDS**



#### STI-SNCOA

Drive Sync Out and Analog In/Out Breakout Board. DB9S 15

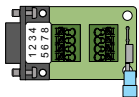
**Epsilon EP**



#### STI-SNCI

Drive Sync In Breakout Board. DB9S

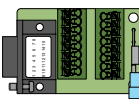
**Epsilon EP**



#### STI-ENC

Motor Feedback Breakout Board. DB15s

**Epsilon EP**



#### STI-24IO

Screw Terminal Interface, breakout board plugs directly into Epsilon EP drive I/O connector (J3), 16 input and 8 output lines are labeled and LEDs for easy field wiring and troubleshooting.

**Epsilon EP**

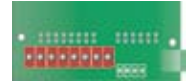


### Digital I/O Boards

#### DEMO-FMIO-000

Demo board to plug on FM-3/FM-4 to use digital I/O.

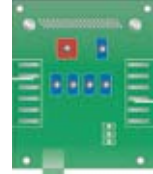
**FM-3/4**



#### DEMO-DRIO-000

Demo board to plug on EN or MDS to use digital I/O.

**EN, MDS**



### Diagnostic Cable

#### DGNE



Diagnostic analog output connection cable provides a convenient method of connecting test equipment such as an oscilloscope to the diagnostic analog outputs on the drive.

**EN, MDS Epsilon to Oscilloscope, Meter**

### Logic and I/O Power Supplies

#### MLP-002-00

2.1 Amp, +24VDC, universal input 90 to 264 VAC.

**EN, Epsilon, MDS**



#### MLP-005-00

5 Amp, +24VDC, universal input 90 to 264 VAC.

**EN, Epsilon, MDS, Unidrive SP size 6**

#### MLP-010-00

10 Amp, +24VDC, universal input 90 to 264 VAC.

**EN, Epsilon, MDS, Unidrive SP size 6**

#### ALP-130

30 Watt auxiliary logic backup power supply, supports one drive. (140VDC output, 120-240VAC input.)

**EN**



#### ALP-430

#### MP-5000

4x20 Watt auxiliary logic backup power supply, supports four drives. (140VDC output, 120-240VAC input.)

**EN**

**External Shunts/Resistors**

**ES-14-3K**

14 Ohm, 3kW

**MP-5000**

**ES-20-500**

20 Ohm, 0.5kW

**Epsilon, EN, MP-5000**

**ES-20-1K**

20 Ohm, 1kW

**Epsilon, EN, MP-5000**

**ES-20-2K**

20 Ohm, 2kW

**Epsilon, EN, MP-5000**

**ES-30-1K**

30 Ohm, 1kW

**Epsilon, EN, MP 1250, MP2500**

**ES-30-2K**

30 Ohm, 2kW

**Epsilon, EN, MP1250, MP2500**



**MS-510-00-000**

10 Ohm, 500W



**MS-530-00-000**

30 Ohm, 500W

**EN, Epsilon, MP 1250, 2500**

**RSR-2**

2kW regeneration shunt regulator, 120-230 VAC, stackable. One RSR-2 with an appropriately sized shunt resistor can increase the regeneration capacity of a drive to 2kW.



**Epsilon, EN**

**DBR1**

75 Ohm, 50W mounts to heat sink on drive.

**Epsilon EP**



**AC Line Filters**

**960304-01**

3Ø, 16 Amp, 240 VAC.

**EN-214**

**960305-01**

1Ø, 16 Amp, 240 VAC.

**EN-204, EN-208**



**AC Line Filters (continued)**

**960307-01**

1Ø, 10 Amp, 240 VAC.

**MF-1250-20**

3Ø, 20 Amp, 480 VAC

**MP-1250**

**MF-2500-35**

3Ø, 35 Amp, 480 VAC

**MP-2500**

**MF-5000-65**

3Ø, 65 Amp, 480 VAC

**MP-5000**

**AC Line Reactor**

(See page 281 for AC and DC Line Reactors)



**MLR-2580-00**

0.25 mH, 80 amp, 3Ø

**MP-5000** (Consult Factory for AC Line Reactors for the MP-1250 and MP-2500)

**Motor Power Filter**

For long lead lengths.

**MPF-002-00** Used with 2", 3", 4" and 6" motors

**MPF-003-00**-Used with 8" motors

