





# CTAN Directory of Application Notes

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\* not yet released

## Quantum MP / Mentor MP Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN 132</a>	1.5	All	Line Reactors
<a href="#">CTAN 144</a>	1.4	All	Line Reactors & Isolation Transformers
<a href="#">CTAN 160</a>	1.3	All	4-20ma Current Loop Control
<a href="#">CTAN 176</a>	1.1	General	Power Factor of AC & DC Drives
<a href="#">CTAN 242</a>	1.0	All	Driving Analog Meters
<a href="#">CTAN275</a>	1.0	All	Need another Digital Input ?
<a href="#">CTAN282</a>	1.2	SP/GP20/SK/MP	Selecting 1 of 2 Values
<a href="#">CTAN283</a>	1.2	Unidrive SP/MP	Using Beckhoff Remote I/O
<a href="#">CTAN288</a>	1.2	SM-Ethernet	Establishing PC Connection to SM-Ethernet Module
<a href="#">CTAN292</a>	1.0	SP/GP20/SK/MP	Process Line Speed plus Trim
<a href="#">CTAN295</a>	1.1	CTNet Options	Supported Beckhoff I/O Modules
<a href="#">CTAN297</a>	1.2	SP/GP20/SK/MP	SM-Ethernet Save, Restore & Re-Init
<a href="#">CTAN305</a>	1.2	SP/GP20/Affinity/MP	Creating a Custom Motor Overtemperature Trip
<a href="#">CTAN306</a>	1.3	SP/GP20/SK/MP	SM-DeviceNet Save, Restore & Re-Init
<a href="#">CTAN308</a>	1.0	CTNet	The Basics of Setting-up CTNet Cyclic Links
<a href="#">CTAN313</a>	1.0	SP/GP20/SK/MP	Using Keypad Plus as Startup Tool
<a href="#">CTAN316</a>	1.1	SP/GP20/SK/MP	Drive Parameter Menu Structure
<a href="#">CTAN320</a>	1.9	All	Rudiments of Fieldbus Communications
<a href="#">CTAN321</a>	1.1	SP/GP20/SK/MP	Obtaining the Greater or Lesser of Two Signals
<a href="#">CTAN331</a>	1.2	SP, Classic, MP	Creating a UniPolar Analog Speed Output
<a href="#">CTAN332</a>	1.1	SP, MP, SK, Affinity	Time of Day/Day of Week Applications
<a href="#">CTAN336</a>	1.3	Our Drive Families	Using the Drives +24vdc Supply
<a href="#">CTAN343</a>	1.2	SM-IO Timer	Setting the Real Time Clock
<a href="#">CTAN345</a>	1.1	All Our Drives	Stabilizing Erratic Signals
<a href="#">CTAN349</a>	1.1	SK,SP,MP,Affinity	Inverting the Sense of Speed Command Signals
<a href="#">CTAN350</a>	1.3	Mentor MP	Quick Start-Up Guide
<a href="#">CTAN351</a>	1.2	Mentor MP	Adding a DC Loop Contactor
<a href="#">CTAN352</a>	1.1	SP, MP, GP20	Backing Up Critical Drive Setup w/SmartCard
<a href="#">CTAN353</a>	1.1	SP, MP, Affinity	Backing Up Critical Drive Setup using CTSOft
<a href="#">CTAN354</a>	1.0	SP, SK,MP, Affinity	Eliminating Low Speed Creep w/Analog Inputs
<a href="#">CTAN361</a>	1.0	Mentor/Quantum MP	Field Weakening
<a href="#">CTAN362</a>	1.0	Mentor/Quantum MP	Using the Quantum MP with 24vdc PLC Control
<a href="#">CTAN364</a>	1.0	Quantum MP	Quantum MP with Motorized Potentiometer
<a href="#">CTAN365</a> 	1.0	Mentor/Quantum MP	Masking Faults and Stopping on Trips
<a href="#">CTAN366</a>	1.0	Mentor/Quantum MP	Mentor/Quantum MP Security
<a href="#">CTAN369</a>	1.0	Quantum MP	Quantum MP Default Files
<a href="#">CTAN375</a>	1.1	Quantum MP	Quantum III-> Quantum MP Conversion Guide
<a href="#">CTAN376</a>	1.0	Quantum MP	Configuring for Ramp Stop & DB Stop
<a href="#">CTAN377</a>	1.0	FXMP25	FXM5 to FXMP25 Conversion Guide



## Quantum III / Mentor II Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN 110</a> 	1.3	Mentor II/Quantum III	Mentor II / Quantum III Security
<a href="#">CTAN 111</a>	1.4	Mentor II/Quantum III	Programmable Analog I/O
<a href="#">CTAN 112</a>	1.2	Quantum III	Independent Jog Rates
<a href="#">CTAN 113</a>	1.2	Mentor II/Quantum III	Simple Ratio Scheme
<a href="#">CTAN 121</a>	1.6	Mentor II/Quantum III	Pseudo S-Ramp
<a href="#">CTAN 122</a>	1.3	MII/QIII/Unidrive/SE	Programmable Time Delays
<a href="#">CTAN 123</a>	1.2	Mentor II/Quantum III	Current Loop Tuning ( Manual/Scope method)
<a href="#">CTAN 124</a>	1.4	MII/QIII/Unidrive/SE	Filtering for Digital Displays
<a href="#">CTAN 126</a>	1.0	Mentor	Cooling Fan Data
<a href="#">CTAN 133</a>	1.0	Mentor I/Quantum II	MD21 BASIC Support today
<a href="#">CTAN 138</a>	1.0	Quantum III	Remote On/Off Control
<a href="#">CTAN 139</a>	1.3	Quantum III/Mentor II	Contactor-less ( Machine Gun ) Jog
<a href="#">CTAN 140</a>	1.3	MII/QIII/Unidrive/SE	Programmable Logic Gates
<a href="#">CTAN 141</a>	1.1	MII/QIII/Unidrive	Combinatorial Logic
<a href="#">CTAN 142</a>	1.1	Unidrive /MII/QIII	Comparators and Decoder Applications
<a href="#">CTAN 152</a>	1.4	Quantum/Mentor	Hi Hp Drives Field Selection-Size 2 & 3
<a href="#">CTAN 154</a>	1.5	All	Driving External Relays
<a href="#">CTAN 155</a>	1.5	Quantum III/ Mentor II	Thread/Run Speeds
<a href="#">CTAN 156</a>	1.3	Quantum III/ Mentor II	Auto (4-20mA ) /Manual Operation
<a href="#">CTAN 157</a>	1.1	Quantum III	Quantum III Factory Default Files
<a href="#">CTAN 158</a>	1.3	Quantum III/ Mentor II	Load Sharing Applications
<a href="#">CTAN 159</a>	1.10	All	Creating Custom & Power-Up Displays
<a href="#">CTAN 160</a>	1.3	All	4-20ma Current Loop Control
<a href="#">CTAN 163</a>	1.3	Quantum III/Mentor II	Dual Stopping Rates
<a href="#">CTAN 166</a>	1.2	Quantum III/ Mentor II	MD21 to MD29 Migration
<a href="#">CTAN 167</a>	1.0	Quantum III/ Mentor II	Timed Starting Current
<a href="#">CTAN 172</a>	1.1	Quantum III	Universal Spares
<a href="#">CTAN 175</a>	1.6	Quantum III/Mentor II ( Size 2-3)	Field Economy w/ Time Delay
<a href="#">CTAN 186</a>	1.3	Unidrive/QIII/Mentor II	Saving all Drive & Coprocessor Data
<a href="#">CTAN 188</a>	1.3	Quantum III/ Mentor II	%Load Meter Outputs
<a href="#">CTAN 190</a>	1.1	Quantum III/ Mentor II	Tension Follower-Torque w/Spd Override
<a href="#">CTAN 193</a>	1.6	Quantum III / Mentor II	Data Replacement Instructions
<a href="#">CTAN 196</a>	1.0	Mentor II	Quick Setup for DeviceNet MD25
<a href="#">CTAN 197</a>	1.0	Quantum III	Quick Setup for DeviceNet MD25
<a href="#">CTAN 198</a>	1.0	Quantum III/ Mentor II	Creating an "About to Start" Warning
<a href="#">CTAN 199</a>	1.2	Quantum III	How to Specify Quantum III Drives
<a href="#">CTAN 201</a>	1.5	Unidrive Classic/SP, GP20,Quantum III, Mentor II	Creating a Pulsing Output for Blinking Light/Audible Alarm
<a href="#">CTAN 203</a>	1.2	Quantum III / Mentor II	DC Motors w/ 240VDC Field Voltage
<a href="#">CTAN 205</a>	1.3	Quantum III Family	Spectrum Drive Replacement
<a href="#">CTAN 212</a>	1.4	Quantum III/ Mentor II	Creating UniPolar %Speed Meter O/P
<a href="#">CTAN 214</a>	1.3	Quantum III/ Mentor II	Mentor II vs Quantum III

## Quantum III / Mentor II Application Notes-con't

[illegible]


## Unidrive Classic Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN 114</a>	1.5	Unidrive	MOP Applications
<a href="#">CTAN 115</a>	1.4	Unidrive	Analog Ratio Applications
<a href="#">CTAN 116</a>	1.1	Unidrive	UniSoft & Option Modules
<a href="#">CTAN 117</a>	1.5	Unidrive	Unidrive Classic Security
<a href="#">CTAN 118</a>	1.6	Unidrive	Digital Locking Basics
<a href="#">CTAN 119</a>	1.4	Unidrive	Parameter Restoration/Cloning
<a href="#">CTAN 120</a>	1.3	All	S-Ramp Accel/Decel Ramps
<a href="#">CTAN 122</a>	1.3	MII/QIII/Unidrive/SE	Programmable Time Delays
<a href="#">CTAN 124</a>	1.4	MII/QIII/Unidrive/SE	Filtering for Digital Displays
<a href="#">CTAN 127</a>	1.1	AC Drives	Common Bussing Guidelines
<a href="#">CTAN 131</a>	1.2	All	Modem Communications
<a href="#">CTAN 132</a>	1.3	All	Line Reactors
<a href="#">CTAN 140</a>	1.3	MII/QIII/Unidrive/SE	Programmable Logic Gates
<a href="#">CTAN 141</a>	1.1	MII/QIII/Unidrive	Combinatorial Logic
<a href="#">CTAN 142</a>	1.1	Unidrive /MII/QIII	Comparators and Decoder Applications
<a href="#">CTAN 144</a>	1.3	All	Line Reactors & Isolation Transformers
<a href="#">CTAN 145</a>	A	Unidrive and Commander SE	Analog Input/Output Scaling
<a href="#">CTAN 146</a>	1.1	Unidrive Servo	Thermal Protection Set-up
<a href="#">CTAN 153</a>	1.0	Unidrive	Cabinet Cooling Fan Optimization
<a href="#">CTAN 154</a>	1.5	All	Driving External Relays
<a href="#">CTAN 159</a>	1.10	All	Creating Custom & Power-Up Displays
<a href="#">CTAN 160</a>	1.3	All	4-20ma Current Loop Control
<a href="#">CTAN 161</a>	1.2	Unidrive Family	Dual Stopping Rates
<a href="#">CTAN 164</a>	1.1	Unidrive Family	Remote Keypad Control using CTIU
<a href="#">CTAN 169</a>	1.0	Unidrive Family	UD78 Precision Analog Input Module
<a href="#">CTAN 170</a>	1.0	Unidrive Family	Shaft Orientation
<a href="#">CTAN 173</a>	1.1	Unidrive Size 1 & 2	Operating from DC Power Supplies
<a href="#">CTAN 178</a>	1.0	Unidrive	Speed Loop Tuning
<a href="#">CTAN 179</a>	1.1	General	Dynamic Braking Resistor Nomograph
<a href="#">CTAN 181*</a>		Unidrive	Torque Mode/Torque Follower
<a href="#">CTAN 182</a>	1.8	Unidrive	Data Replacement Instructions
<a href="#">CTAN 183</a>	1.0	Unidrive	Line Speed plus %Trim
<a href="#">CTAN 186</a>	1.3	Unidrive/QIII/Mentor II	Saving all Drive & Coprocessor Data
<a href="#">CTAN 194</a>	1.4	AC Drives	AC Motor Condensation Elimination
<a href="#">CTAN 200</a>	1.0	Unidrive	Selecting 1 of 2 Values
<a href="#">CTAN 201</a>	1.5	Unidrive Classic/SP, GP20, Quantum III, Mentor II	Creating a Pulsing Output for Blinking Light/Audible Alarm

## Unidrive Classic Application Notes-con't

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN 208</a>	1.0	Unidrive ExpressPak	AS5100 Series Drive Replacement
<a href="#">CTAN 209</a>	1.1	CTKP	Security Code & Set-Up
<a href="#">CTAN 211</a>	1.0	Unidrive	UD7x Co-Processor Replacement
<a href="#">CTAN 230</a>	1.0	Unidrive	Zero Speed Reference Start Interlock
<a href="#">CTAN 242</a>	1.0	All	Driving Analog Meters
<a href="#">CTAN 246</a>	1.0	Unidrive & CTIU HMI's	Creating a Unidrive Fault Screen
<a href="#">CTAN 247</a>	1.0	Unidrive & CTIU HMI's	Creating a Fault History Screen
<a href="#">CTAN 251</a>	1.0	Unidrive Classic	4-20mA Control Guidelines
<a href="#">CTAN 258</a>	1.0	Unidrive Classic	Creating Proper Drive Documentation
<a href="#">CTAN 265</a>	1.0	Unidrive Classic	DigitAx Replacement Solution
<a href="#">CTAN 266</a>	1.0	All	Relay Suppression
<a href="#">CTAN275</a>	1.0	All	Need another Digital Input ?
<a href="#">CTAN277</a>	1.4	Unidrive	Unidrive Classic to Unidrive SP Considerations
<a href="#">CTAN278</a>	1.1	Unidrive	Converting from Unidrive Classic to Unidrive SP
<a href="#">CTAN310</a>	1.0	Unidrive Classic	Extracting all Drive and CoProcessor Data w/CTSoft
<a href="#">CTAN318</a>	1.0	All	Determining the Hardware and Firmware Levels
<a href="#">CTAN328</a>	1.0	Co Processors	Using SyPT Pro Demo as a Code Extraction Tool
<a href="#">CTAN331</a>	1.1	Unidrive SP, Classic	Creating a UniPolar Analog Speed Output
<a href="#">CTAN372</a>	1.0	AC Drives	Capacitor Bank Reformation Guidance

## Unidrive SP and Commander GP20 Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN 149</a>	1.4	Unidrive SP/GP20	Laser Replacement Options
<a href="#">CTAN 150</a>	1.3	Unidrive SP/GP20	Eclipse Replacement Options
<a href="#">CTAN 159</a>	1.10	All	Creating Custom & Power-Up Displays
<a href="#">CTAN 192</a>	1.0	AC Drives	E-Stop Duty DB Resistor Protection
<a href="#">CTAN 194</a>	1.4	AC Drives	AC Motor Condensation Elimination
<a href="#">CTAN 201</a>	1.5	Unidrive Classic/SP, GP20, Quantum III, Mentor II	Creating a Pulsing Output for Blinking Light/Audible Alarm
<a href="#">CTAN 227</a>	1.1	Unidrive SP/GP20	Understanding Heavy vs Normal Duty
<a href="#">CTAN 232</a>	1.3	Unidrive SP	Non-Standard UnidriveSP Keypad Variations
<a href="#">CTAN 233</a>	1.2	Unidrive SP/GP20	Using the MOP with the UnidriveSP
<a href="#">CTAN 234</a>	1.0	Unidrive SP	A Guide to Tuning the UnidriveSP
<a href="#">CTAN 238</a>	1.0	Unidrive SP	Unidrive SP Feedback Modules
<a href="#">CTAN 242</a>	1.0	All	Driving Analog Meters
<a href="#">CTAN 250</a>	1.0	Unidrive SP/GP20	Customizing the LCD Keypad Unit
<a href="#">CTAN 256</a>	1.2	Unidrive SP	Stegmann Encoder w/Hiperface
<a href="#">CTAN 259</a>	1.1	Unidrive SP	Quick Setup Guide w/CTNet
<a href="#">CTAN 262</a>	1.0	Unidrive SP/GP20	Accessing 32 bit Data via Modbus RTU
<a href="#">CTAN 266</a>	1.0	Unidrive SP/GP20	Relay Suppression
<a href="#">CTAN 270</a>	1.0	Unidrive SP	UnidriveSP Tuning Guide for Winder Apps
<a href="#">CTAN 275</a>	1.0	Unidrive SP/GP20	Need another Digital Input ?
<a href="#">CTAN 277</a>	1.4	Unidrive	Unidrive Classic to Unidrive SP Considerations
<a href="#">CTAN 278</a>	1.1	Unidrive	Converting from Unidrive Classic to Unidrive SP
<a href="#">CTAN 279</a>	1.0		
<a href="#">CTAN 280</a>	1.0	Unidrive SP/GP20	VT Terminal Quickstart for the Unidrive SP
<a href="#">CTAN 282</a>	1.2	Unidrive SP/GP20/SK	Selecting 1 of 2 Values
<a href="#">CTAN 288</a>	1.2	SM-Ethernet	Establishing PC Connection to SM-Ethernet
<a href="#">CTAN289</a> 	1.3	Commander SK/GP20	SM-Keypad Plus Customized Displays
<a href="#">CTAN290</a>	1.2	Unidrive SP/GP20	4-20mA Current Loop Extensions
<a href="#">CTAN291</a>	1.1	All AC Drives	Dynamic Braking Sizing & Protection Methods
<a href="#">CTAN292</a>	1.0	Unidrive SP/GP20/SK	Process Line Speed plus Trim
<a href="#">CTAN294</a>	1.0	Unidrive SP/GP20	Parameter Security Details
<a href="#">CTAN296</a>	1.0	Unidrive SP/GP20	RFC (Rotor Flux Control)
<a href="#">CTAN297</a>	1.2	Unidrive SP/GP20/SK	SM-Ethernet Save, Restore & Re-Init
<a href="#">CTAN302</a>	1.0	Unidrive SP/GP20/SK	AC Motor De-Icing/Condensation Elimination
<a href="#">CTAN305</a>	1.2	Unidrive SP/GP20/Affinity	Creating a Custom Motor Overtemperature Trip
<a href="#">CTAN306</a>	1.3	Unidrive SP/GP20/SK	SM-DeviceNet Save, Restore & Re-Init
<a href="#">CTAN307</a>	1.0	Unidrive SP	Commissioning Sine-Cosine Encoder Setups
<a href="#">CTAN308</a>	1.0	CTNet	The Basics of Setting-up CTNet Cyclic Links
<a href="#">CTAN312</a>	1.0	Unidrive SP/GP20/SK	Creating a Broken Belt/Ruptured Pipe Alarm
<a href="#">CTAN313</a>	1.1	Unidrive SP/GP20/SK	Using Keypad Plus as Startup Tool
<a href="#">CTAN318</a>	1.0	All	Determining the Hardware and Firmware Levels
<a href="#">CTAN319</a>	1.1	AC Drives	Squeezing a Bit More from your DB Resistor
<a href="#">CTAN320</a>	1.9	All	Rudiments of Fieldbus Communications




## Unidrive SP and Commander GP20 Application Notes- con't

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN321</a>	1.1	Unidrive SP/GP20/SK	Obtaining the Greater or Lesser of Two Signals
<a href="#">CTAN323</a>	1.0	Unidrive SP/GP20/SK	Scaling & Filtering Drive Registers for HMI Displays
<a href="#">CTAN326</a>	1.0	UnidriveSP, GP20, Affinity	Analog Output Scaling of Common Values
<a href="#">CTAN330</a>	1.1	Unidrive SP, Affinity	Dual Stopping Rates
<a href="#">CTAN331</a>	1.2	Unidrive SP, Classic	Creating a UniPolar Analog Speed Output
<a href="#">CTAN332</a>	1.1	Unidrive SP, CommSK, Affinity	Time of Day/Day of Week Applications
<a href="#">CTAN335</a>	1.0	Unidrive SP	CTNet Basic Practices and Checkout
<a href="#">CTAN336</a>	1.3	Our AC Drive Families	Using the Drives +24vdc Supply
<a href="#">CTAN339</a>	1.0	Unidrive SP	Maintenance Due Reminder Alarms
<a href="#">CTAN343</a>	1.2	SM-IO Timer Module	Setting the Real Time Clock
<a href="#">CTAN344</a>	1.4	Our AC Drive Families	Single Drive Running Multiple Motors
<a href="#">CTAN345</a>	1.1	All Our Drives	Stabilizing Erratic Signals
<a href="#">CTAN347</a>	1.0	Unidrive SP, Affinity	120vac Start/Stop Control
<a href="#">CTAN349</a>	1.1	SK,SP,MP,Affinity	Inverting the Sense of Speed Command Signals
<a href="#">CTAN352</a>	1.1	SP, MP, Affinity	Backing Up Critical Drive Setup w/SmartCard
<a href="#">CTAN353</a>	1.1	SP, MP, Affinity	Backing Up Critical Drive Setup using CTSoft
<a href="#">CTAN354</a>	1.0	SP, SK,MP, Affinity	Eliminating Low Speed Creep w/Analog Inputs
<a href="#">CTAN367 *</a>	1.0	Unidrive SP	Speed Loop Tuning in Vector Mode
<a href="#">CTAN372</a>	1.0	AC Drives	Capacitor Bank Reformation Guidance




## **Commander SE Application Notes**

<b>Application Note #</b>	<b>Rev</b>	<b>Drive Family</b>	<b>Topic</b>
<a href="#">CTAN 122</a>	1.3	MII/QIII/Unidrive/SE	Programmable Time Delays
<a href="#">CTAN 124</a>	1.4	MII/QIII/Unidrive/SE	Filtering for Digital Displays
<a href="#">CTAN 140</a>	1.3	MII/QIII/Unidrive/SE	Programmable Logic Gates
<a href="#">CTAN 142</a>	1.1	Unidrive /MII/QIII	Comparators and Decoder Applications
<a href="#">CTAN 143</a>	1.1	Commander SE	Indexing Methods
<a href="#">CTAN 144</a>	1.3	All	Line Reactors & Isolation Transformers
<a href="#">CTAN 145</a>	A	Unidrive and Commander SE	Analog Input/Output Scaling
<a href="#">CTAN 147</a>	1.2	AC Drives	Horizon Replacement w/ Comm SE
<a href="#">CTAN 148</a>	1.4	AC Drives	Prism Replacement w/ Comm SE
<a href="#">CTAN 149</a>	1.4	AC Drives	Laser Replacement Options
<a href="#">CTAN 150</a>	1.3	AC Drives	Eclipse Replacement Options
<a href="#">CTAN 151</a>	1.0	Commander SE	Security Code
<a href="#">CTAN 154</a>	1.5	All	Driving External Relays
<a href="#">CTAN 159</a>	1.10	All	Creating Custom & Power-Up Displays
<a href="#">CTAN 160</a>	1.3	All	4-20ma Current Loop Control
<a href="#">CTAN 162</a>	1.2	Commander SE	Dual Stopping Rates
<a href="#">CTAN 165</a>	1.1	Commander SE	Modbus Protocol Setup
<a href="#">CTAN 168</a>	1.3	Commander SE	Pushbutton Jog with 3 Wire Start-Stop
<a href="#">CTAN 173</a>	1.1	Commander SE	Operating from DC Power Supplies
<a href="#">CTAN 174</a>	1.0	Commander SE	Line Speed plus %Trim
<a href="#">CTAN 180</a>	1.3	Commander SE	Advanced CTKP Control for Comm SE
<a href="#">CTAN 185*</a>		Commander SE	Start/Stop Configurations
<a href="#">CTAN 187</a>	1.2	Commander SE	Simple Commander SE Torque Winder
<a href="#">CTAN 191</a>	1.3	Commander SE	Non-Standard Commander SE Keypad Control Variations
<a href="#">CTAN 195</a>	1.1	Commander SE	HVAC Local/Remote Control
<a href="#">CTAN 209</a>	1.1	CTKP	Security Code & Set-Up
<a href="#">CTAN 222</a>	1.2	Commander SE	Automatic Water Pressure Regulator
<a href="#">CTAN 225</a>	1.3	Commander SE	Use of Cloning QuickKey
<a href="#">CTAN 229</a>	1.0	Commander SE	Bi-Directional Speed Pot Applications
<a href="#">CTAN 236</a>	1.3	Commander SE	Data Replacement Instructions
<a href="#">CTAN 239</a>	1.0	Commander SE	Analog Input Configurations
<a href="#">CTAN 244</a>	1.0	Focus 1, Focus 3, CommSE	Focus Isolated Master Reference Board
<a href="#">CTAN 253</a>	1.0	Commander SE	Line Speed plus Trim using Inc/Dec
<a href="#">CTAN 254</a>	1.2	Commander SE	Fan & Pump Setup Guidelines
<a href="#">CTAN 258</a>	1.0	Commander SE	Creating Proper Drive Documentation
<a href="#">CTAN 260</a>	1.0	Commander SE	Setting up with a CTIU
<a href="#">CTAN 266</a>	1.0	All	Relay Suppression

## Commander SE Application Notes con't

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN267</a>	1.0	SE	Latching External Trip
<a href="#">CTAN268</a> 	1.2	Commander SE and SK	Shear Pin Trip Function
<a href="#">CTAN275</a>	1.0	All	Need another Digital Input ?
<a href="#">CTAN276</a>	1.1	Commander SE, SK	Bi-Polar Analog Speed Control
<a href="#">CTAN372</a>	1.0	AC Drives	Capacitor Bank Reformation Guidance

## Commander SK Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN159</a>	1.10	All	Creating Custom & Power-Up Displays
<a href="#">CTAN160</a>	1.3	All	4-20ma Current Loop Control
<a href="#">CTAN192</a>	1.0	AC Drives	E-Stop Duty DB Resistor Protection
<a href="#">CTAN194</a>	1.4	AC Drives	AC Motor Condensation Elimination
<a href="#">CTAN242</a>	1.0	All	Driving Analog Meters
<a href="#">CTAN268</a> 	1.2	Commander SE & SK	Shear Pin Trip Function
<a href="#">CTAN272</a>	1.0	Commander SK	Accessing Parameters outside Menu 0
<a href="#">CTAN273</a>	1.1	Commander SK	Remote Keypad in the Hand-Off-Auto Mode
<a href="#">CTAN274</a>	1.2	Commander SK	Remote Analog / Local Keypad Control
<a href="#">CTAN275</a>	1.0	All	Need another Digital Input ?
<a href="#">CTAN276</a>	1.1	Commander SE, SK	Bi-Polar Analog Speed Control
<a href="#">CTAN279</a> 	1.2	Commander SK	Commander SK Security
<a href="#">CTAN282</a>	1.2	Unidrive SP/GP20/SK	Selecting 1 of 2 Values
<a href="#">CTAN285</a>	1.2	Commander SK	Enhanced Hand-Off-Auto Control w/Logic Stick
<a href="#">CTAN286</a>	1.2	Commander SK	Enhanced Local/Remote Control w/Logic Stick
<a href="#">CTAN287</a>	1.3	Commander SK	Water Pressure PID Loop Control
<a href="#">CTAN288</a>	1.2	SM-Ethernet	Establishing PC Connection to SM-Ethernet
<a href="#">CTAN289</a> 	1.3	Commander SK/GP20	SM-Keypad Plus Customized Displays
<a href="#">CTAN291</a>	1.1	All AC Drives	Dynamic Braking Sizing & Protection Methods
<a href="#">CTAN292</a>	1.0	Unidrive SP/GP20/SK	Process Line Speed plus Trim
<a href="#">CTAN293</a>	1.2	Commander SK	Fan and Pump Application Setup
<a href="#">CTAN297</a>	1.2	Unidrive SP/GP20/SK	SM-Ethernet Save, Restore & Re-Init
<a href="#">CTAN299</a>	1.2	Commander SK	Simple Commander SK Torque Winder
<a href="#">CTAN300</a>	1.4	Commander SK	Ethernet Quick Start Guide
<a href="#">CTAN302*</a>	1.0	Unidrive SP/GP20/SK	AC Motor De-Icing/Condensation Elimination
<a href="#">CTAN306</a>	1.3	Unidrive SP/GP20/SK	SM-DeviceNet Save, Restore & Re-Init
<a href="#">CTAN309</a>	1.0	Commander SK	Creating a Delayed Start with Warning Capability
<a href="#">CTAN312</a>	1.0	Unidrive SP/GP20/SK	Creating a Broken Belt/Ruptured Pipe Alarm
<a href="#">CTAN313</a>	1.1	Unidrive SP/GP20/SK	Using Keypad Plus as Startup Tool
<a href="#">CTAN318</a>	1.0	All	Determining the Hardware and Firmware Levels
<a href="#">CTAN319</a>	1.0	AC Drives	Squeezing a Bit More from your DB Resistor
<a href="#">CTAN320</a>	1.9	All	Rudiments of Fieldbus Communications
<a href="#">CTAN321</a>	1.1	Unidrive SP/GP20/SK	Obtaining the Greater or Lesser of 2 Signals
<a href="#">CTAN323</a>	1.0	Unidrive SP/GP20/SK	Scaling & Filtering Drive Registers for HMI Displays
<a href="#">CTAN325</a>	1.0	Unidrive SP/GP20/SK	Simple PID Dancer Unwind
<a href="#">CTAN327</a>	1.3	Comm SK	Comm SK and SM-DeviceNet Quick Start Guide
<a href="#">CTAN329</a>	1.1	Comm SK	Dual Stopping Rates
<a href="#">CTAN332</a>	1.2	Unidrive SP, CommSK, Affinity	Time of Day/Day of Week Applications

\* not yet released

<b>Application Note #</b>	<b>Rev</b>	<b>Drive Family</b>	<b>Topic</b>
<a href="#">CTAN334</a>	1.1	Commander SK w/ByPass	Quick Start-up Guide for FPCHSK/FPCBA
<a href="#">CTAN336</a>	1.3	Our AC Drive Families	Using the Drives +24vdc Supply
<a href="#">CTAN340</a>	1.0	Commander SK	Remote Control via Fieldbus/Local via Keypad
<a href="#">CTAN341</a>	1.0	Commander SK	Simple Pump Setup Instruction Sheet
<a href="#">CTAN342</a>	1.0	Commander SK	Water Level Control System
<a href="#">CTAN343</a>	1.2	SM-IO Timer Module	Setting the Real Time Clock
<a href="#">CTAN344</a>	1.4	Our AC Drive Families	Single Drive Running Multiple Motors
<a href="#">CTAN345</a>	1.1	All Our Drives	Stabilizing Erratic Signals
<a href="#">CTAN346</a>	1.0	Commander SK	120vac Start/Stop Control
<a href="#">CTAN349</a>	1.1	SK,SP,MP,Affinity	Inverting the Sense of Speed Command Signals
<a href="#">CTAN354</a>	1.0	SP, SK,MP, Affinity	Eliminating Low Speed Creep w/Analog Inputs
<a href="#">CTAN355</a>	1.0	Commander SK	Backing Up Critical Drive Setup using CTSoft
<a href="#">CTAN357</a>	1.8	Commander SK	Start/Stop and Speed Command Scenarios
<a href="#">CTAN359</a>	1.0	Commander SK	Modification of the Drive Relay Function
<a href="#">CTAN368</a>	1.1	Commander SK	SK Pump Setup Summary
<a href="#">CTAN371</a>	1.0	Commander SK	Modification of the I/O Lite/Timer Relay Function
<a href="#">CTAN372</a>	1.0	AC Drives	Capacitor Bank Reformation Guidance

\* not yet released



## **Focus Family Application Notes**

<b>Application Note #</b>	<b>Rev</b>	<b>Drive Family</b>	<b>Topic</b>
<a href="#">CTAN 125</a>	A	Focus 3	Replacing Focus 2 with Focus 3 Drives
<a href="#">CTAN 130</a>	1.1	Focus 3	Tach Follower Applications
<a href="#">CTAN 184</a>	1.1	Focus 1	Pushbutton Control
<a href="#">CTAN 204</a>	1.0	Focus 3 Drives	Power Wiring Guidelines
<a href="#">CTAN 213</a>	1.1	Focus 3	Eddy Current Controller Retrofit
<a href="#">CTAN 215</a>	1.0	Focus Family	Earth Grounding & Isolation
<a href="#">CTAN 216</a>	1.0	Focus 3 Family	Eddy Current Replacement Solution
<a href="#">CTAN 228</a>	1.0	Focus 1 Family	Achieving Isolation
<a href="#">CTAN 235</a>	1.0	Focus 3	Adjustable Brake / Dynamometer App's
<a href="#">CTAN 240</a>	1.0	Focus 3	Speed Master w/ Torque Slave
<a href="#">CTAN 241</a>	1.1	Focus 3	120vac Remote Control Pushbuttons
<a href="#">CTAN 243</a>	1.0	Focus 3	Controlling Multiple Drives in Tandem
<a href="#">CTAN 244</a>	1.0	Focus 1, Focus 3, CommSE	Focus Isolated Master Reference Board
<a href="#">CTAN 252</a>	1.0	Focus 3	Local/Remote Control Modes
<a href="#">CTAN 281</a>	1.0	Focus 3 Regen	Reversing Focus 3 Regen w/UniPolar Command
<a href="#">CTAN 337</a>	1.1	Single Phase DC	Focus 1 to 2100/2300 Replacement Guidance

## **Fieldbus, Communications & Coprocessor Application Notes**

<b>Application Note #</b>	<b>Rev</b>	<b>Drive Family</b>	<b>Topic</b>
<a href="#">CTAN131</a>	1.2	All	Modem Communications
<a href="#">CTAN133</a>	1.0	Mentor I/Quantum II	MD21 BASIC Support today
<a href="#">CTAN134</a>	1.0	UD77/Unidrive	Local/Remote via Fieldbus
<a href="#">CTAN135</a>	1.4	UD77/Unidrive	DeviceNet Quick Setup
<a href="#">CTAN136</a>	1.0	UD73/Unidrive	Profibus Quick Setup
<a href="#">CTAN137</a>	1.0	UD74/Unidrive	Interbus Quick Setup
<a href="#">CTAN138</a>	1.0	Quantum III	Remote On/Off Control
<a href="#">CTAN164</a>	1.1	Unidrive Family	Remote Keypad Control using CTIU
<a href="#">CTAN165</a>	1.1	Commander SE	Modbus Protocol Setup
<a href="#">CTAN166</a>	1.2	Quantum III/ Mentor II	MD21 to MD29 Migration
<a href="#">CTAN171</a>	1.1	MD29/UD70 and SyPT	Scale & Offset Function Blocks
<a href="#">CTAN186</a>	1.3	Unidrive/QIII/Mentor II	Saving all Drive & Coprocessor Data
<a href="#">CTAN196</a>	1.0	MD25 / Mentor II	Quick Set for DeviceNet MD25
<a href="#">CTAN197</a>	1.0	MD25 / Quantum III	Quick Set for DeviceNet MD25
<a href="#">CTAN202</a>	1.0	CTNet Products	CTNet PCMCIA w/Desktop PC's
<a href="#">CTAN210</a>	1.0	UD76/Unidrive	ModbusPlus Quick Setup
<a href="#">CTAN211</a>	1.0	Unidrive	UD7x Co-Processor Replacement
<a href="#">CTAN219</a>	1.1	MD29 & UD7x CoProcessors	Evaluating Coprocessor Contents
<a href="#">CTAN220</a>	1.0	MD24 / Mentor II	Quick Setup for Profibus MD24
<a href="#">CTAN221</a>	1.0	MD24 / Quantum III	Quick Setup for Profibus MD24
<a href="#">CTAN255</a>	1.0	UD75 & MD29AN	CTNet Revision FAQ's
<a href="#">CTAN259</a>	1.1	Unidrive SP	Quick Setup Guide w/CTNet
<a href="#">CTAN262</a>	1.0	Unidrive SP	Accessing 32 bit Data via Modbus RTU
<a href="#">CTAN283</a>	1.1	Unidrive SP	Using Beckhoff Remote I/O
<a href="#">CTAN288</a>	1.2	SM-Ethernet	Establishing PC Connection to SM-Ethernet Module
<a href="#">CTAN295</a>	1.1	CTNet Options	Supported Beckhoff I/O Modules
<a href="#">CTAN297</a>	1.1	Unidrive SP/GP20/SK	SM-Ethernet Save, Restore & Re-Init
<a href="#">CTAN300</a>	1.5	Commander SK	Ethernet Quick Start Guide
<a href="#">CTAN306</a>	1.3	Unidrive SP/GP20/SK	SM-DeviceNet Save, Restore & Re-Init
<a href="#">CTAN308</a>	1.0	CTNet	The Basics of Setting-up CTNet Cyclic Links
<a href="#">CTAN317</a>	1.0	Unidrive SP/GP20/SK	SM-Profibus Unidrive (UD73) Compatibility Mode
<a href="#">CTAN320</a>	1.9	All	Rudiments of Fieldbus Communications
<a href="#">CTAN327</a>	1.3	Commander SK	SM-DeviceNet Quick Start Guide
<a href="#">CTAN328</a>	1.0	Co Processors	Using SyPT Pro Demo as a Code Extraction Tool
<a href="#">CTAN333</a>	1.1	Commander SK	SM-Profibus Quick Start Guide
<a href="#">CTAN335</a>	1.0	Unidrive SP	CTNet Installation Practices and Checkout
<a href="#">CTAN360</a>	1.0	CTNet	Tripping the Drive upon a CTNet Loss

## General Drive Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN120</a>	1.3	All	S-Ramp Accel/Decel Ramps
<a href="#">CTAN122</a>	1.3	MII/QIII/Unidrive/SE	Programmable Time Delays
<a href="#">CTAN124</a>	1.4	MII/QIII/Unidrive/SE	Filtering for Digital Displays
<a href="#">CTAN131</a>	1.2	All	Modem Communications
<a href="#">CTAN132</a>	1.5	All	Line Reactors
<a href="#">CTAN140</a>	1.3	MII/QIII/Unidrive/SE	Programmable Logic Gates
<a href="#">CTAN144</a>	1.4	All	Line Reactors & Isolation Transformers
<a href="#">CTAN154</a>	1.5	All	Driving External Relays
<a href="#">CTAN159</a>	1.9	All	Creating Custom & Power-Up Displays
<a href="#">CTAN160</a>	1.3	All	4-20ma Current Loop Control
<a href="#">CTAN176</a>	1.1	General	Power Factor of AC & DC Drives
<a href="#">CTAN177</a>	1.2	AC Drive Series	Input & Output Current of AC Drives
<a href="#">CTAN179</a>	1.1	General	Dynamic Braking Resistor Nomograph
<a href="#">CTAN192</a>	1.0	AC Drives	E-Stop Duty DB Resistor Protection
<a href="#">CTAN209</a>	1.1	CTKP	Security Code & Set-Up
<a href="#">CTAN217</a>	1.0	Universal AC Interface	120vac Logic Interface
<a href="#">CTAN 242</a>	1.0	All	Driving Analog Meters
<a href="#">CTAN245</a>	1.1	CTIU HMI's	Creating a Custom Splash Screen
<a href="#">CTAN248</a>	1.0	CTIU HMI's	Custom Splash Screen using Maths
<a href="#">CTAN258</a>	1.0	All	Creating Proper Drive Documentation
<a href="#">CTAN266</a>	1.0	All	Relay Suppression
<a href="#">CTAN275</a>	1.0	All	Need another Digital Input ?
<a href="#">CTAN291</a>	1.1	All AC Drives	Dynamic Braking Sizing & Protection Methods
<a href="#">CTAN313</a>	1.1	Unidrive SP/GP20/SK	Using Keypad Plus as Startup Tool
<a href="#">CTAN318</a>	1.0	All	Determining the Hardware and Firmware Levels
<a href="#">CTAN319</a>	1.0	AC Drives	Squeezing a Bit More from your DB Resistor
<a href="#">CTAN320</a>	1.9	All	Rudiments of Fieldbus Communications
<a href="#">CTAN328</a>	1.0	Co Processors	Using SyPT Pro Demo as a Code Extraction Tool
<a href="#">CTAN336</a>	1.3	Our AC Drive Families	Using the Drives +24vdc Supply
<a href="#">CTAN354</a>	1.0	SP, SK,MP, Affinity	Eliminating Low Speed Creep w/Analog Inputs
<a href="#">CTAN372</a>	1.0	AC Drives	Capacitor Bank Reformation Guidance

## FXM5 Application Notes

Application Note #	Rev	Drive Family	Topic
<a href="#">CTAN284</a>	1.1	Mentor II/Quantum III	FXM5 Field Control via External Voltage
<a href="#">CTAN298</a>	1.2	Mentor II/Quantum III	FXM5 Field Loss Trips w/o Ribbon Control
<a href="#">CTAN303</a>	1.2	Mentor II/Quantum III	FXM5 Field Economy in Standalone Mode
<a href="#">CTAN377</a>	1.0	FXMP25	FXM5 to FXMP25 Conversion Guide
<a href="#">CTTN138</a>	1.1	Mentor II/Quantum III	FXM5 Setup Guide using Ribbon
<a href="#">CTTN151</a>	1.0	Mentor II/ Quantum III	FXM5 Setup for Field Weakening - Stand Alone Mode
<a href="#">CTTN152</a>	1.0	Mentor II/ Quantum III	FXM5 Setup –Stand Alone Mode




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