Tough PLC Selection Guide and Specifications

Tough PLC Model Specifications						
Part Number	***Director 1050 Nano***		***Director 1050 Junior***		***Director 1050 Standard***	
Power Input	110 - 230 VAC (95-240VAC)	24VDC (20-28VDC)	110 - 230 VAC (95-240VAC)	24VDC (20-28VDC)	110 - 230 VAC (95-240VAC)	24VDC (20-28VDC)
Maximum Power Consumption	15W for AC, 12W for DC		12W for AC, 10W for DC - 32 I/O Base 4 slot only		12W for AC, 10W for DC - 32 I/O Base, 4 slot 13W for AC, 11W for DC - 48 I/O Base, 6 slot 15W for AC, 12W for DC - 64 I/O Base, 8 slot 20W for AC, 15W for DC - 96 I/O Base, 12 slot	
Maximum I/O Capacity	16 DC In, 8 Relay Out		4 Slot Base (32I/O Max)		4, 6, 8, 12 Slot Base (96I/O Max) Expandable to 2048 I/O	
CPU Processor	32 Bit Processor				32 Bit, 40 MHz RISC Processor	
Total Memory	64 KB (Ladder)					
Total # of Registers	8192 16Bit					
Typical Scan Time	5ms (1K Boolean)				3ms (1K Boolean)	
Real Time Clock/Calendar	NA				Built-in	
Battery Backup	NA				Yes, Lithium coin cell battery with 5 year life expectancy, with a low battery indicator	
LED Indicators	Input Power, CPU Status (Run, Program & Run/Program), Low Battery and RS232 Programming Port active indicators when applicable					
I/O Supported	16 DC In (10-28V Sourcing Input), 8 Relay Out 10Amp@250VAC		UTI/O modules with status LEDs and Removable Terminal Block DC / AC / Analog / Relay / Thermocouple / PWM / High Speed Counter / DeviceNet / Profibus			
Operating Temperature	-20°C to 60°C					
Storage Temp.	-40°C to 70°C					
Humidity	10-95% Non-Condensing					
NEMA/IP Rating	NEMA 2, IP11, All Circuit boards Conformal Coated					
Optical/Electromagentical Isolation	No Isolation, it is recomended to use isolated power supply, Noise depression devices in the control panel and proper grounding & sheilding techniques				Power Input, I/O and communication ports all are Optically or Electromagnetically Isolated	
Electrical Noise	Nema ICS 2-230 Showering arc; ANSI C37.90a SWC; Level C Chattering Relay Test					
Agency Approval	UL, CUL, CE					
Withstand Voltage	1000VDC (1 minute) between power supply input terminal and protective ground)					
Insulation Resistance	Over 20M Ohm between power supply input and terminal and protective ground					
Vibration	5 to 55Hz 2G's for 2 hours in X,Y,and Z axis					
Shock	10G for under 12ms in the X,Y, and Z axis					
Protocols Supported	UT Protocol on RS232				UT, Modbus on serial ports, TCP/IP, Modbus TCP/IP, Ethernet IP on Ethernet ports	
Communication Ports	RS232				Port 1: RS232 (Programming and HMI Port Only with UT Protocol) Port 2: RS422/485 (up to 38.4K Baud Rates) ASCII In/Out, UT, Modbus RTU Port 3: 10MB Ethernet	
External Dimensions	5.94" x 4.74" x 1.02" (151.01 x 120.45 x 25.98mm)		5.94" x 4.62" x 2.75" (151.01 x 117.45 x 56.27mm)		**32I/O Base** - 5.94" x 4.62" x 2.75" (151.01 x 117.45 x 69.90mm) **48I/O Base** - 8.54" x 4.65" x 2.75" (217.05 x 117.42 x 69.90mm) **64I/O Base** - 9.44" x 5.55" x 2.75" (239.78 x 141.09 x 69.90mm) **96I/O Base** - 15.04" x 4.92" x 2.75" (382.04 x 125.08 x 69.90mm)	