

## USA INOMAX 790P

### Digital DC Drives

32 bit-processor 40A~3000A



STEEL

WIRE

PLASTIC

RUBBER

MACHINE TOOL

CONVERTING

PAPER

CRANE

MINE



# Introduction



## 790P Series

Digital DC Drives  
32bit-processor



F1 40A~150A



F2 180A~300A



F3 400A~800A

For more features, please see 790P manuals.

## Predictive current control

- predictive current control
- Built in 30 useful application: open and closed loop winder control, torque control, cascade, annealer;
- Free full function PID blocks;
- 4 analog inputs and 2 analog outputs, fully programmable;
- 8 digital inputs and 6 digital outputs, fully programmable;
- Built in 2 canbus interface, supporting CanOpen;
- Built in 2 RS232 and RS485;
- Optional field bus communication: profibus, Ethernet, DeviceNet;
- Built in field control unit;
- PC software and LCD Panel with both english and chinese display.

# INOMAX 790P PRODUCT LIST&DIMENSIONS

■ Strive for Perfection,  
a Brand-new Solution to the Most Advanced AC&DC Drives

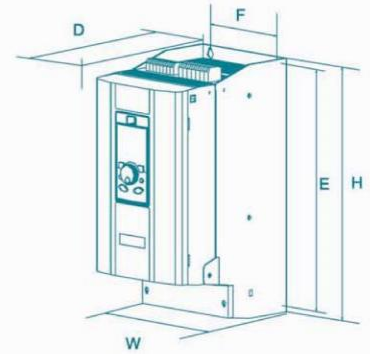


## 1. Infineon Tricore Frame Series Processor

- High performance DSP+RISC+MCU tricore architecture processor
- High speed calculation, built-in floating-point unit, optimized execution efficiency.
- Current loop routines executed within 30us

## 2. Excellent Control Algorithm and Advanced Industrial Application Software

- Predictive current loop control algorithm in DC 790P Drives, excellent current loop dynamic response performance
- Intelligent PID control algorithm for speed loop, excellent dynamic speed loop response and performance
- Abundant built-in application macros: winder, tension control, annealing and active inverter and many more!



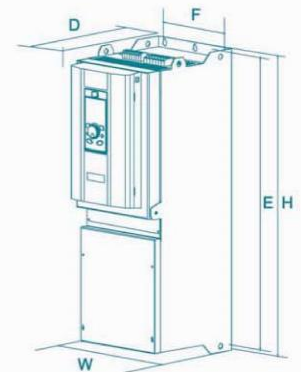
Infineon  
Tricore  
Processor

## 3. New keypad interface and chinese version PC software

- Support Chinese, and Italian Language, others available
- LCD panel, Chinese display, friendly human-machine interface, easier for commissioning and diagnostic's
- Support parameter upload & download and remote control

## 4. Various communication interfaces and intelligent extensible module design

- Communication support: Profibus, Canbus, Canopen, Anybus, Modbus(RS485,RS232)
- Incremental encoder: Sin/cos encoder, Tachometer feedback interface.



790P(791P) 40A~4000A		Digital 4Q Fully regenerative controller with field regulator for field control/weakening Current ratings are for 45°C			
	Model	Motor Current (A)	Field Current Max (A)	External Dimensions H x W x D	Installation Dimensions H x W x D
F1	790P(791P)/400/0040	40	10	435*200*280	140*418
	790P(791P)/400/0080	80	10		
	790P(791P)/400/0110	110	10		
	790P(791P)/400/0150	150	10		
F2	790P(791P)/400/0180	180	20	555*200*282	140*418
	790P(791P)/400/0300	300	20		
F3	790P(791P)/400/0400	400	32	750*255*358	(105\105)*731
	790P(791P)/400/0500	500	32		
	790P(791P)/400/0650	650	32		
	790P(791P)/400/0800	800	32		
F5	790P(791P)/400/1000	1000	60	1245*850*850	810*75
	790P(791P)/400/1250	1250	60		
	790P(791P)/400/1500	1500	60		
	790P(791P)/400/1750	1750	60		
F6	790P(791P)/400/2000	2000	60	1325*970*970	930*70
	790P(791P)/400/2500	2500	60		
	790P(791P)/400/3000	3000	60		

# INOMAX 790P TECHNICAL SPECIFICATION

<b>Power Configuration</b>	790P Four Quadrant Regenerative; 2 Fully Controlled Three Phase Thyristor Bridges 791P Two Quadrant Non-Regenerative ; 1 Fully Controlled Three Phase Thyristor Bridges Thyristor Controlled Variable Field Supply
<b>Armature Current Ratings(Adc)</b>	Fram1: 40A, 80A, 110A, 150A Fram2: 180A, 300A Fram3: 400A, 500A, 650A, 800A
<b>Overload</b>	150% for 30 seconds
<b>Armature Voltage</b>	$V_{armature} = V_{ac} \times 1.15$
<b>AC Supply Voltage (Vac)45-62Hz</b>	Sinusoidal three phase 220-500V、690V (±10%)
<b>Field Current</b>	Maximum Field current for each frame size: 10-60A (see table)
<b>Field Voltage</b>	$V_{field} = V_{ac} \times 0.82$
<b>Ambient</b>	Between 5°C and 45°C for maximum performance Between 45°C and 55°C with 4% downgrade
<b>Storage Temperature</b>	Between -25°C and +55°C
<b>Altitude</b>	Derate 1% per 100m above 1000m
<b>Protection</b>	High Energy MOVs; Heat sink Over temperature Instantaneous Over current; Inverse Time Over current; Interline Snubber Network Field Failure Zero Speed Detection Speed Feedback Failure
<b>Inputs/Outputs</b>	8 digital inputs optically isolated,fully programmable; 6 digital outputs optically isolated,fully programmable; 4 analog inputs,fully programmable(AIN1 and AIN2 can be configured as differential input); 2 analog outputs, fully programmable; 2 encoder inputs for feedback and reference(optically isolated),line driver and single ended built in 2 tachometer feedback inputs armature voltage feedback with I*R compensation status LED's for all inputs and outputs
<b>Reference Supplies</b>	+5V dc (encoder) +10V dc (potentiometer) +24V dc (encoder and digital I/O)
<b>Supported interfaces</b>	Built-in RS232 connector for interfacing with PC Built-in RS485 for creating a drive network CAN bus for managing setpoints, enabled/disabled options and point-to-point and broadcast links without additional electronic cards PROFIBUS fieldbus for parameterizing, enabling, managing setpoints and point-to-point links(optional) software for Siemens S7 PLC for managing PROFIBUS(optional) Optional Ethernet, DeviceNet, Control Net and other fieldbus interface



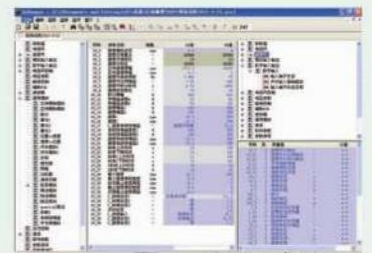
ENCODER CONNECTION BOARD



Profibus



CANBUS CONNECTION BOARD



CHINESE VERSION DriveExplore

# INOMAX 790P New Operator Panel Both In English And Chinese Language

- 128\*64 LCD display, blue or white backlight;
- Plug and play;
- Chinese and English language options, easy to learn and use;
- Very convenient to change parameters by shifting cursors right or left;
- Local control (START,STOP,JOG and REVERSE)or remote control are selectable;
- Parameters copy features--parameters can be upload and memorized in the operator panel and copied to another 790P DC drives;
- Unique oscilloscope features--waveform of speed feedback can be displayed in real time;



REM: Remote or loca FWD: Forward  
 MEN: Reduced Menu REV: Reverse  
 FLT: Fault



Running Status



Main Menu



Parameter Setting



## New Operator Panel Both In English And Chinese Language

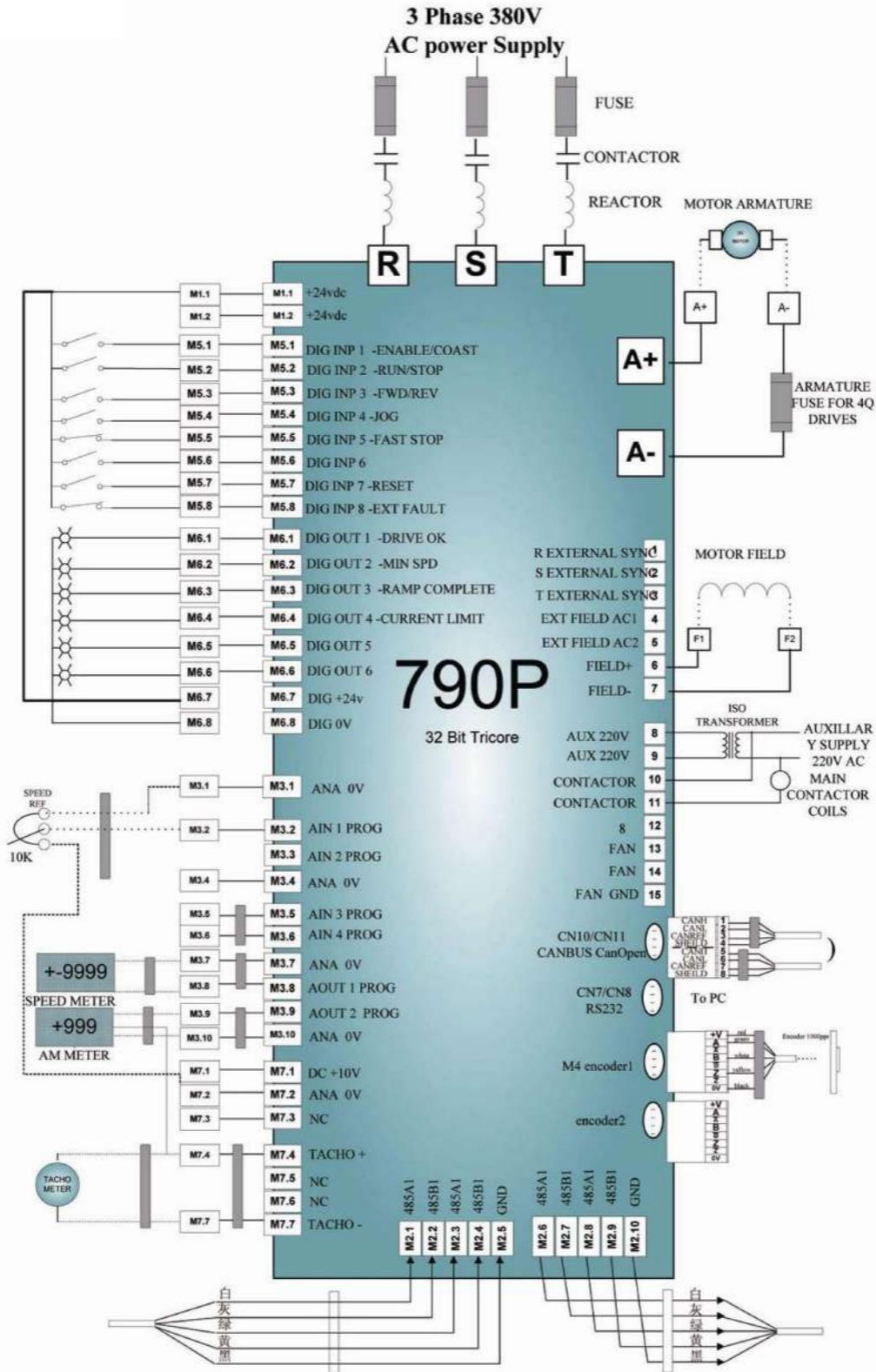


Chinese Language English Language

## The New Standard Of Dc Drives



# INOMAX 790P Basic Connections



# INOMAX

*Build your trust of technology from China*

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