ATTENTION READER:
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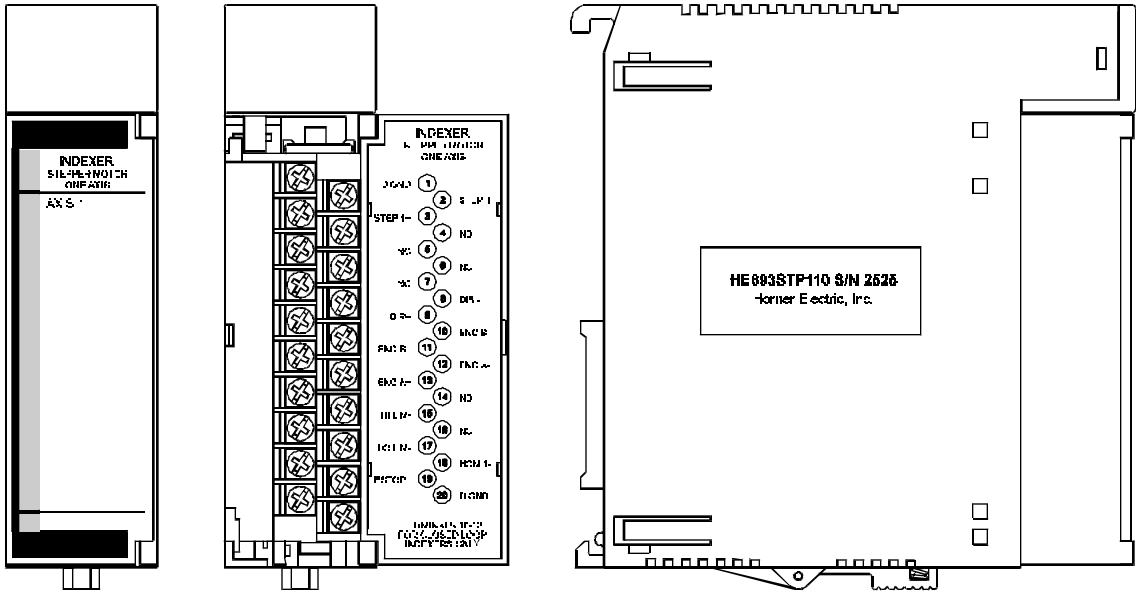
HORNER ELECTRIC
ADVANCED PRODUCTS GROUP

Horner Electric's Stepper Positioning Module

for models **HE693STPxx0 Revision G or later**
AND
models **HE693STPxx1 Revision A or later**
User's Manual



Horner Electric Advanced Products Group

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To obtain warranty service, return the product to your distributor after obtaining a "Return Material Authorization" (RMA) number. Send the module with a description of the problem, proof of purchase, post paid, insured, in a suitable package.

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PREFACE

This manual explains how to use the Horner Electric Stepper Positioning Modules, model numbers HE693STPxx0, revision G or later, and HE693STPxx1, revision A or later for use with GE Fanuc Series 90 and CEGELEC Alspa 8000 family of Programmable Logic Controllers

ABOUT THE PROGRAMMING EXAMPLES

Any example programs and program segments in this manual are included solely for illustrative purposes. Due to the many variables and requirements associated with any particular installation, Horner Electric cannot assume responsiblity or liability for actual use based on the examples and diagrams. It is the sole responsibility of the system designer utilizing the Stepper Positioning Module to appropriately design the end system, to appropriately integrate the Stepper Positioning Module and to make safety provisions for the end equipment as is usual and customary in industrial applications as defined in any codes or standards which apply.

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This manual is for use with the Horner Electric Stepper Indexer for GE Fanuc Series 90 and CEGELEC Alspa 8000 family of Programmable Logic Controllers.

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Alspa 8000 and P8 are Trademarks of CEGELEC

MODULE SPECIFICATIONS

I/O Connector Specifications

PARAMETER	MIN	MAX	UNITS
+5V Power Output (Step/Direction)	-	300	mA
Step Outputs Frequency	DC	245	KHz
Step Outputs High (-20mA)	2.5	-	Vdc
Step Outputs Low (+20mA)	-	0.5	Vdc
Direction Output Setup Time	2	-	mS
Direction Output High (-20mA)	2.5	-	Vdc
Direction Output Low (+20mA)	-	0.5	Vdc
Direction Output High (-60mA, Rev A)	2.5	-	Vdc
Direction Output Low (+60mA, Rev A)	-	0.5	Vdc
Encoder Input Frequency	DC	1.0	MHz
Encoder Single-Ended Threshold	1.2	1.6	Vdc
Encoder Differential Threshold High	-	0.2	Vdc
Encoder Differential Threshold Low	-.2	-	Vdc
Home Inputs Off	12	-	Vdc
Home Inputs On (+1mA)	-	9	Vdc
End Limits Inputs Off	12	-	Vdc
End Limits Inputs On (+1mA)	-	9	Vdc
Emergency Stop Input On	12	-	Vdc
Emergency Stop Input Off (+1mA)	-	9	Vdc

Power Load Specifications

PARAMETER	MIN	MAX	UNITS
+5Vdc (Logic)	200	500	mA
+24Vdc (Relay)	-	0	mA
+24Vdc (Isolated)	-	0	mA

Environmental Specifications

PARAMETER	MIN	MAX	UNITS
Operating Temperature	0	60	°C
Storage Temperature	-40	85	°C
Humidity	5	95	%RH