GIVI MISURE

MEGATRON AG
FERROXCUBE DISTRIBUTOR FOR MAGNETIC COMPONENTS

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Code	Project	Release	
ST02	***A41-A***	***D***	***TECHNICAL DATASHEET***

THESI 320 POSITION CONTROLLER

GENERAL FEATURES

- **THESI 320** position controller can control shifting and positioning of two axes in 3 different operating modes:
  - MANUAL, by keyboard;
  - SEMI-AUTOMATIC, by keyboard;
  - AUTOMATIC, on the basis of a memorized program.
- End of program output.
- Independent axes as for configurations and parameters.
- 3 generic auxiliary inputs.
- Possibility of storing up to 99 PROGRAMS with 20 positions each. Up to 99 repetitions can be matched to each position (the program cycle is composed by the position and its respective repetitions).
- 90 Vac to 230 Vac power supply, or 24 Vac power supply with selector.
- Manufactured with 16 bit microcontroller, 256K FLASH and 8K RAM memory, in single-chip mode.
- 5 Vdc or 12 Vdc encoder input.
- Optoisolated inputs.
  START, STOP, INCREASE CYCLE, DEVIATION, PRESET.
- Voltage-free contact outputs.
  OK POSITION, ENABLING WITH CONTROL INTERLOCK
  FEED / BACK, SLOW / FAST.
- ± 10 Vdc analog output.
  FEED / BACK, SLOW / FAST, with linear ramp.
- Possibility of installation on bench or built in.

MECHANICAL AND ELECTRICAL CHARACTERISTICS

Model	THESI 320
Display	POSITION = 6 high-efficiency digits h = 13 mm and negative sign CYCLES / PROGRAMS = 2+2 high-efficiency digits h = 13 mm
Signals input	2 square waves with phase displacement of 90° ± 10° electrical and zero reference
Encoder power supply	5 Vdc ± 5% or 12 Vdc ± 5% 120 mA_{MAX}
Axes input frequency	20 kHz_{MAX}
Linear resolution	200 - 100 - 50 - 20 - 10 - 5 - 2 - 1 µm
Memory	permanent for configurations and programs
Power supply	90 Vac to 230 Vac ± 10% - 50/60 Hz 24 Vac ± 10% - 50/60 Hz
Power	10 W_{MAX}
Current consumption	50 mA_{MAX} (230 Vac) - 400 mA_{MAX} (24 Vac)
Digital outputs	N.O. relay contacts: 240 Vac_{MAX} - 1 A_{MAX} - 120 VA_{MAX} 60 Vdc_{MAX} - 2 A_{MAX} - 60 W_{MAX} *
Analog output	±10 Vdc optoisolated
Inputs	optoisolated
Connections	by removable terminal block
Dimensions (DIN 43700)	front panel: 193x100 mm - depth: 135.5 mm
Protection class (EN 60529)	keyboard IP 65 rear panel IP 40
Operating temperature	0 °C ÷ 50 °C
Storage temperature	-20 °C ÷ 70 °C
Weight	1250 g

* When using the maximum current, the maximum voltage of the relay contacts is precluded.

ORDERING CODE

MODEL	OUTPUTS	ENCODER POWER SUPPLY
THESI 320	**DI**	**05V**
	DI = relay (digital) **AN** = analog	**05V** = 5 V **12V** = 12 V

Example ☛ **POSITION CONTROLLER THESI 320 DI 05V**

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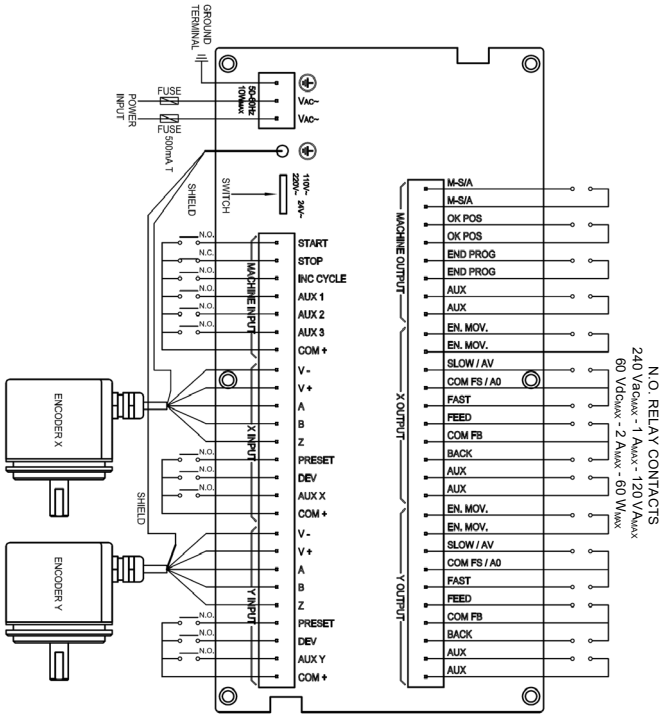
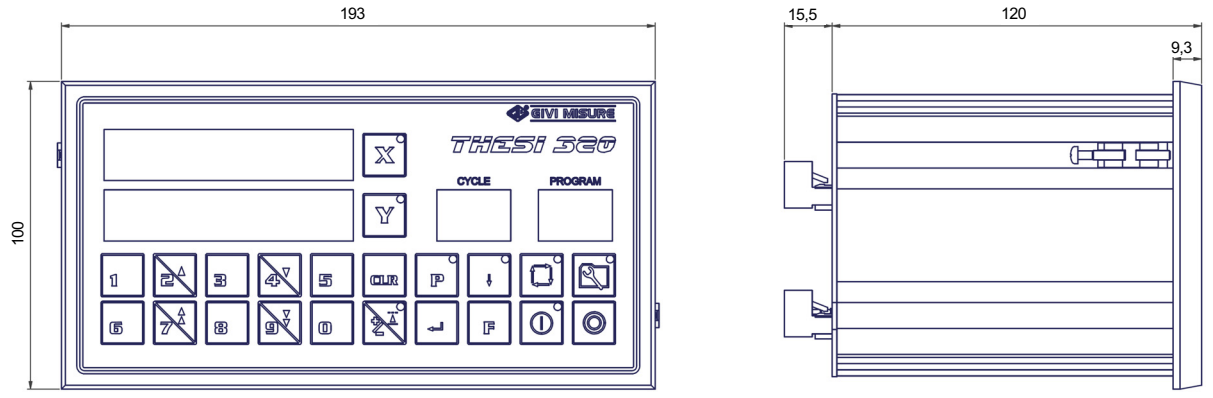
CONNECTIONS

LEGEND

POWER INPUT	= AC voltage power supply (220 Vac, 110 Vac, 24 Vac)
FUSE	= External fuses
GROUND TERMINAL	= Protection ground
SWITCH	= AC voltage power supply selector 110/220 Vac or 24 Vac
V+	= Encoder power supply output (5 V or 12 V)
V-	= Encoder power supply output (0 V)
A	= Encoder channel A input
B	= Encoder channel B input
Z	= Encoder channel Z input (zero reference)
AUX 1	= AUXILIARY input 1
AUX 2	= AUXILIARY input 2
AUX 3	= AUXILIARY input 3
COM+	= Positive inputs common (12 Vdc)
PRESET	= Position PRESET input
START	= START input
STOP	= STOP input
DEV	= DEVIATION input
INC.CYCLE	= INCREASE CYCLE input
EN. MOV.	= MOVEMENT ENABLE contact
M-S/A	= MANUAL-SEMIAUTOMATIC / AUTOMATIC contact
OK POS.	= OK POSITION contact
END PROG	= END PROGRAM contact
COM FS / A0	= FAST/SLOW (DI) contacts common or 0 V analog output (AN)
COM FB	= FEED/BACK contacts common
SLOW/AV	= SLOW contact (DI) or ± 10 V analog output (AN)
FAST	= FAST contact
FEED	= FEED contact
BACK	= BACK contact
AUX	= AUXILIARY contact



DIMENSIONS



DRILLING TEMPLATE: 186 x 92 mm

WARNING

- **The instrument must be installed by specialized personnel in observance of the instructions provided by the Manufacturer.**
- **We recommend the use of a mains power supply provided with an input filter and fuses; the power distribution network to which the instrument is connected must be equipped with a sectioning device in compliance with the regulations in force, positioned closed to the instrument.**
- **In order to prevent fire or explosions, do not use the instrument in the presence of flammable gas, solvents, explosives, etc.**
- **Before installing the instrument, make sure the machine to which it will be applied complies with 2006/42/EC Directive.**
- **All of the equipments connected to the instrument must have insulation characteristics in compliance with the regulations in force.**
- **The instrument cannot be opened by non-specialized personnel. In addition, mains power must not be connected.**
- **The front panel can be cleaned only after disconnecting power supply, using a moist cloth. Do not use solvents.**
- **The optical scale (or encoder) must be installed following the instructions provided by the Manufacturer.**