

# T series

2, 3 and 4 axes

40i TS model

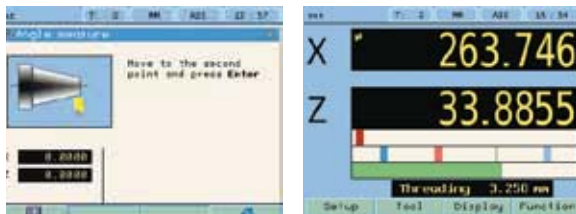


40i model



## Specific characteristics: 40i

**The Innova 40i for lathes offers the operator graphic assistance that no other DRO can offer to program turning operations friendly and intuitively.**



### Graphic programming and operating assistance:

- Part taper calculation
- Axis coupling
- Easy threading even for mixed threads with leadscrews and threads in different units (mm/inch)

## 40i TS model

This dro calculates and automatically varies the spindle speed according to the X axis radius while machining; thus providing optimum part finish, machining time saving and longer tool life.

### Its main characteristics:

- Constant Surface Speed (CSS)
- Spindle orientation with Teach-in
- Override (50-150%) of the programmed RPM without interrupting the machining operation
- Spindle speed control through an external potentiometer
- Display of real RPM



### And for the machine integrator:

- Up to 4 spindle speed ranges (gears)
- Special inputs: Emergency input, analog input for the potentiometer, external push buttons (M3, M4, Stop, etc.)
- Analog and digital outputs
- It admits an encoder at the spindle

30i T model



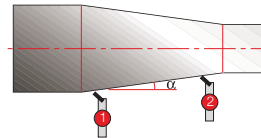
20i T model



## Common characteristics, T series

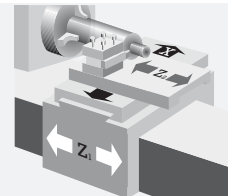
### Taper calculation

The taper of a part may be calculated by entering the value of two points of the travel at the DRO.



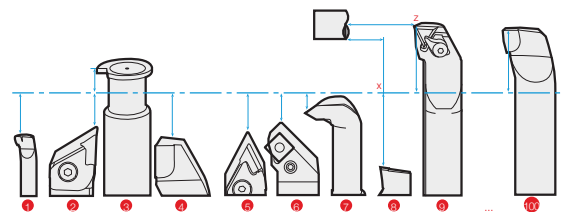
### Z axis coupling

A parallel axis may be coupled with its pair at the same DRO display axis showing the combination of both on the Z axis display.



### Up to 100 tool references

When using more than one tool, each one will have a different origin (offset), these origins may be saved and recalled every time a new tool is changed. At every tool change, it saves a different origin (offset) that may be recalled by the operator.



### Preset in HOLD mode

It is possible to preset on the axis the actual diameter value of the machined part (measured with a caliper or a micrometer).

# Comparison table

	M series milling machines and boring mills				T series lathes				E series EDM and grinders			General series general purpose applications		
	40i P	40i	30i M	20i M	40i TS	40i	30i T	20i T	30i E	20i E	10i E	40i	20i	10i
<b>feedback</b>														
connection to 1 Vpp and SSI encoders	4	3			4	3						3		
connection to TTL encoders	4	3	3	3	4	3	3	2	3	2	1	3	2	1
linear axes	•	•	•	•	•	•	•	•	•	•	•	•	•	•
angular encoders	•	•	•	•					•	•	•	•	•	•
incremental and distance-coded reference marks	•	•	•	•	•	•	•	•	•	•	•	•	•	•
linear axis sag compensation	•	•	•	•	•	•	•	•	•	•	•	•	•	•
multi-point compensation (points per axis)	100	100	40	40	100	100	40	40	40	40	40	100	40	40
1 Vpp signal monitoring	•	•			•	•						•		
travel limit alarm	•	•	•	•	•	•	•	•	•	•	•	•	•	•
<b>display</b>														
5.7" color TFT screen	•	•			•	•						•		
LED display			•	•			•	•	•	•	•		•	•
number of axes	4	3	3	2	4	3	3	2	3	2	1	3	2	1
radius or diameter display	•	•	•	•	•	•	•	•				•	•	•
mm/inch conversion	•	•	•	•	•	•	•	•	•	•	•	•	•	•
fine / coarse resolution	•	•	•	•	•	•	•	•	•	•	•	•	•	•
absolute / incremental feedback	•	•	•	•	•	•	•	•	•	•	•	•	•	•
"display off" mode	•	•	•	•	•	•	•	•	•	•	•	•	•	•
axis coupling	•	•	•	•	•	•	•	•	•	•	•	•	•	
<b>functions</b>														
zero setting of the axes	•	•	•	•	•	•	•	•	•	•	•	•	•	•
buzzer function	•	•	•	•	•	•	•	•	•			•		
number of references - part zeros	100	100	20	20					20	20	20	100		
number of tools	16	16			100	100	20	20				16/100		
axis preset	•	•	•	•	•	•	•	•	•	•	•	•	•	•
tool compensation	•	•	•	•					•	•	•	•		
axis feedrate display	•	•			•	•	•					•		
calculator	•	•	•	•	•	•	•	•	•			•		
easy setup	•	•	•	•	•	•	•	•	•	•	•	•	•	•
electrode length compensation									•	•	•			
hysteresis factor			•	•			•	•	•	•	•		•	•
<b>cycles</b>														
part centering cycles	•	•	•	•					•	•	•	•	•	•
bolt hole drilling (with the most recent data saved in memory)	•	•	•	•					•			•		
linear drilling	•	•	•	•					•			•		
grid pattern drilling	•	•										•		
EDM mode									•	•	•			
corner rounding / machining of arcs			•	•					•					
go to a particular position	•	•				•						•		
angle measuring	•	•	•	•					•			•		
taper calculation					•	•	•	•				•		
turning					•	•						•		
facing					•	•						•		
assisted threading (easy threading)						•						•		
on-screen guided help, with graphics	•	•			•	•						•		
storage of many part-programs	•													
<b>others</b>														
USB connection for copying data	•	•			•	•						•		
auto shut-off after 30-minute idle	•	•	•	•	•	•	•	•	•	•	•	•	•	•
digital inputs / outputs					15/11				4/6	4/6	4/6			
analog inputs / outputs					1/1									
probe	•	•				•						•		

# Accessories

## Support arm



- For mill ARM 300 model, 300 mm long  
ARM 500 model, 500 mm long



- For lathe ARM-V-500 model  
500 mm long

## Adapter plate



- For built-in model

# Operating conditions

## Power supply protected against AC mains outage

universal power supply with an input range between 85 VAC and 264 VAC. Frequency from 45 Hz to 400 Hz

## Operating temperature

from 5 °C to 45 °C (from 41°F to 113 °F)

## Storage temperature

from -25 °C to 70 °C (from -13 °F to 158 °F)

## relative humidity

maximum 95% without condensation at 45 °C (113 °F)

## Sealing

front panel IP54 and rear panel IP4X (DIN 40050)

## Product in compliance with safety and electromagnetic compatibility regulations

EN-60204-1, EN-50081-2, EN 55011, EN-55022, EN-55082, EN- 610004-2, 3,4, 5,6,11. EN-V50140, EN-V50141, ENV 50204 and EC directives 73/23/ECC, 89/392/CEE, 89/336/ECC and 73/23/ECC

## Type of feedback signals

TTL and differential TTL (EIA422).

Plus, 1 Vpp and SSI on the 40i models

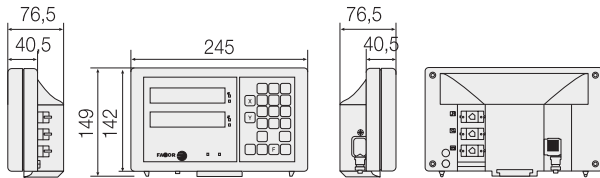
## Maximum feedback frequency

250 KHz

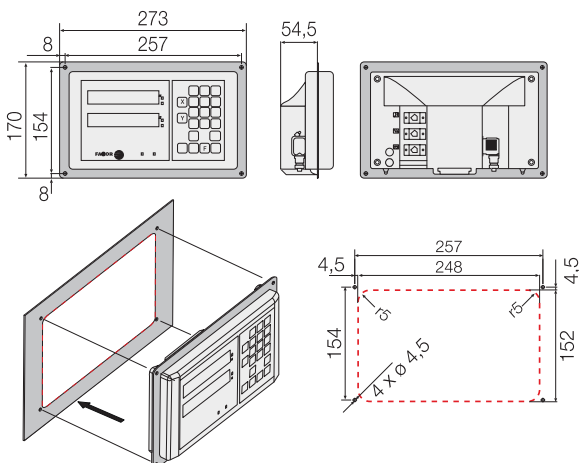
# Dimensions in mm

## 10i, 20i, 30i models

### Tabletop models



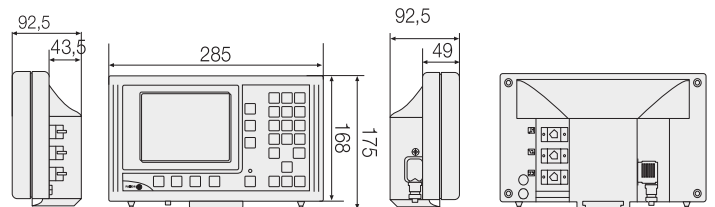
### Built-in models



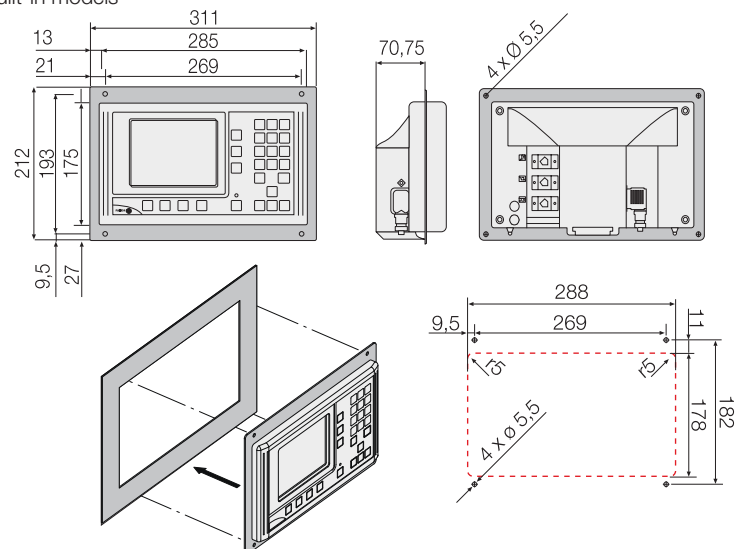
(\*) Built-in option: Add "B" to the model (for example: 20i-B)

## 40i models

### Tabletop models



### Built-in models



(\*) Built-in option: Add "B" to the model (for example: 40i-B)