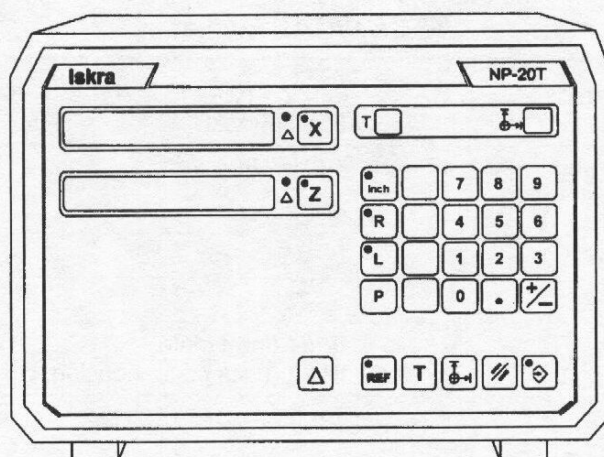


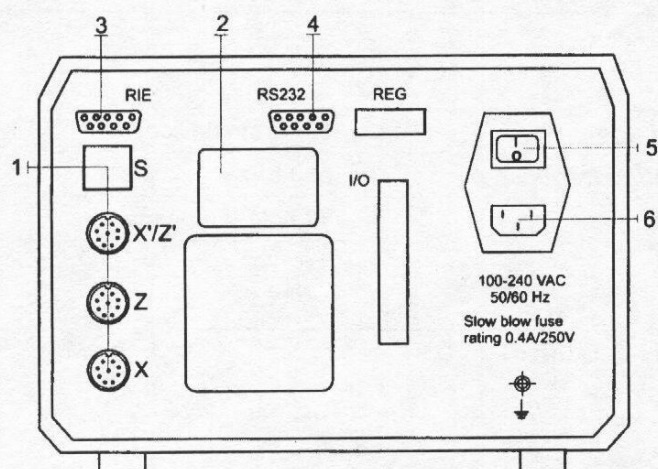
DIGITAL POSITION READOUT SYSTEM

NP20T

Standard version for lathes



X	Z	axis selection keys	REF	reference point mode
Δ		measuring of relative position	T	tool selection
Inc		mm/inch measuring	⊕	datum point selection
R		diameter/radius selection	///	delete
L		special function	⇒	enter
P		parameter selection	0 ... 9	numeric value selection keys



- 1 connectors for axes
- 2 inscription label
- 3 connector for RIE switches
- 4 connector for RS232C interface
- 5 power ON/OFF switch
- 6 plug for main supply voltage

GENERAL DESCRIPTION AND FUNCTIONS:

The position readout device NP20T is used in conjunction with different incremental transducers (linear scales, rotary encoders) as a system for measuring position and length on lathes. The microcomputer based structure guarantees high operating reliability while software enables the introduction of additional new functions in order to simplify operation and to adapt the device to users. Digital readout systems make work with conventional manual controlled lathes easier.

DIGITAL POSITION READOUT SYSTEM

NP20T

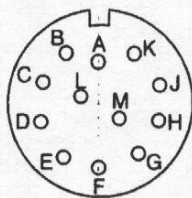
Standard version for lathes

TECHNICAL DATA:

Supply voltage standard: special order:	220 V +10% -15%, 110 V + 10% - 15% 85 - 250 VAC
Supply voltage frequency	48 Hz - 60 Hz
Power consumption	cca 20 VA
Operating temperature	0 - 45°C
Relative humidity	5 - 75%
Mechanical protection	IP 54 (front plate) IP 42 (back plate, housing, connectors, switch)
Vibrations	1 g from 10 to 150 Hz
Shocks	15 g
EMC:	
Immunity	EN 50 082/2
Emission	EN 50 081/1
Dimensions	W x H x D = 294 x 228 x 100 mm
Weight	4.60 kg

MEASURING SIGNALS:

Square-wave inverted signals (DI, DS):

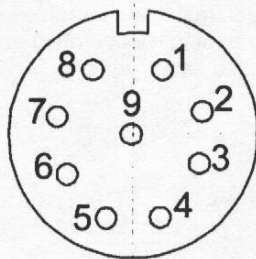


Supply voltage	5 V (from device)
Max. counting frequency	500 KHz
Connector	12 pole, Amphenol

Axis X, Z, X'Z'

pin	A	B	C	D	E	F	G	H	J	K	L	M
signal	shield	0V	A	$\overline{A}$	B	-	RI	$\overline{RI}$	-	+5V	$\overline{B}$	-

Sine-wave current signals (SI- option):



Supply voltage	5 V
Max. frequency	50 KHz
Connector	9 pole, Contact
Amplitude of measuring signals	7 to 16 μ App (1 kOhm)
Amplitude of ref. signal	2 to 8 μ App (1 kOhm)

Axes X, Z, X'Z'

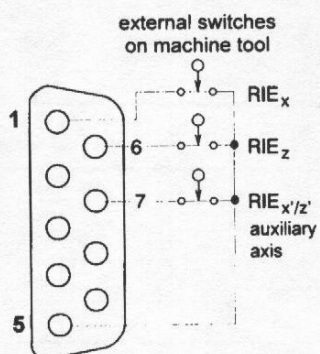
pin	1	2	3	4	5	6	7	8	9
signal	I_a+	I_a-	+5 V	0 V	I_b+	I_b-	I_n+	I_n-	shield

DIGITAL POSITION READOUT SYSTEM

NP20T

Standard version for lathes

CONNECTOR FOR RIE:

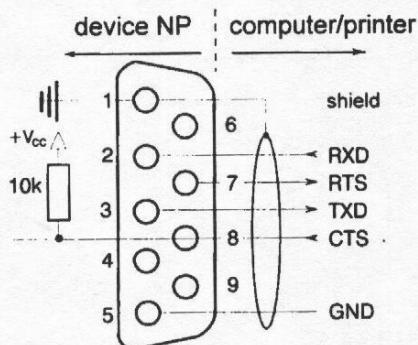


pin	1	2	3	4	5	6	7	8	9
signal	input RIE _x	—	-24 V	+24 V	+24 V	RIE _z	RIE _{x'/z'}	+24 V	+24 V

Remark:

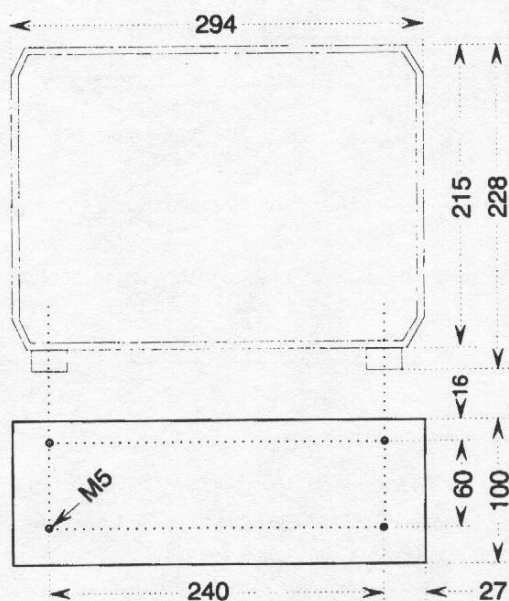
The RIE connector is used in the case of using rotary encoders. A rotary encoder emits one reference pulse at each turn of the axis, therefore, a selection switch RIE has to be mounted on the machine tool for each axis. This switch allows only one of many reference pulses in a whole measuring range to reach the readout device for calibrating purposes. The pulse is enabled when the switch is open.

CONNECTOR FOR RS 232 C:



pin	1	2	3	4	5	6	7	8	9
signal	shield	RXD	TXD	—	GND	—	RTS	CTS	—

DIMENSIONS:



DIGITAL POSITION READOUT SYSTEM

NP20T

Standard version for lathes

STANDARD DELIVERY:

Digital readout system NP 20T

Power supply cable with plug-in connector for 220 VAC, 50 Hz, 3m length

Spare fuse 0.2 AT for 220 VAC, or 0.4 AT for 110 VAC

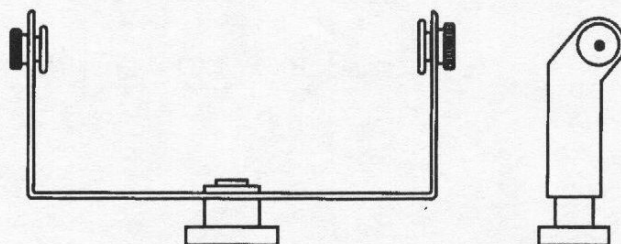
OPTIONS:

All devices can be delivered with the following options:

SI	sine current measuring signals with interpolation electronics
Q	Auxiliary parallel axis to X or Z (selectable with parameters)
R	RIE connector
K	RS232C serial interface

OPTION - ACCESSORIES:

Stand C



ORDERING DATA:

Standard delivery:

Options:

NP 20T

SI

Q

R

K

RS232C serial interface

RIE connector

Auxiliary parallel axis

sine current measuring input signals with interpolation electronics