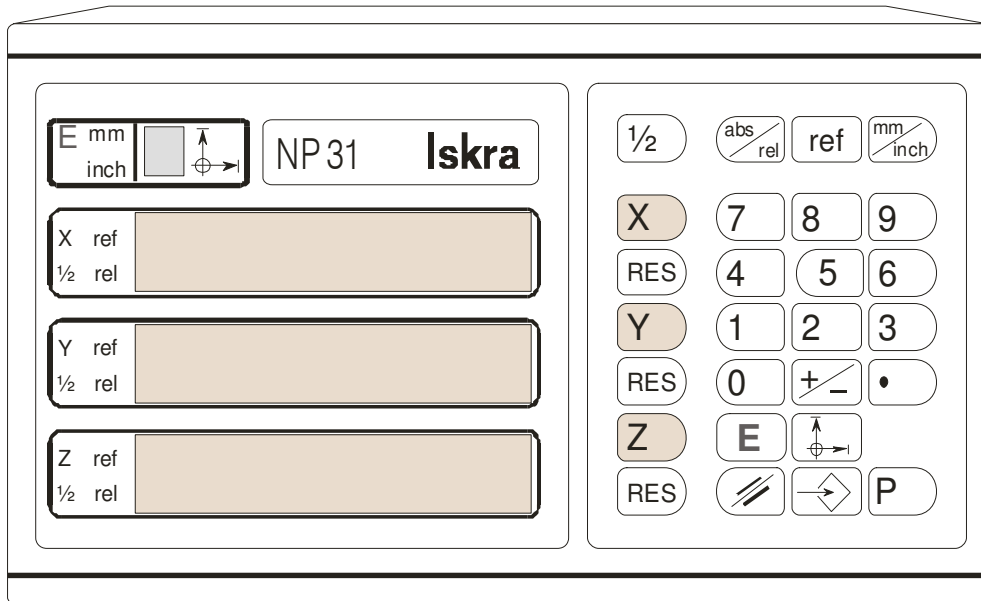
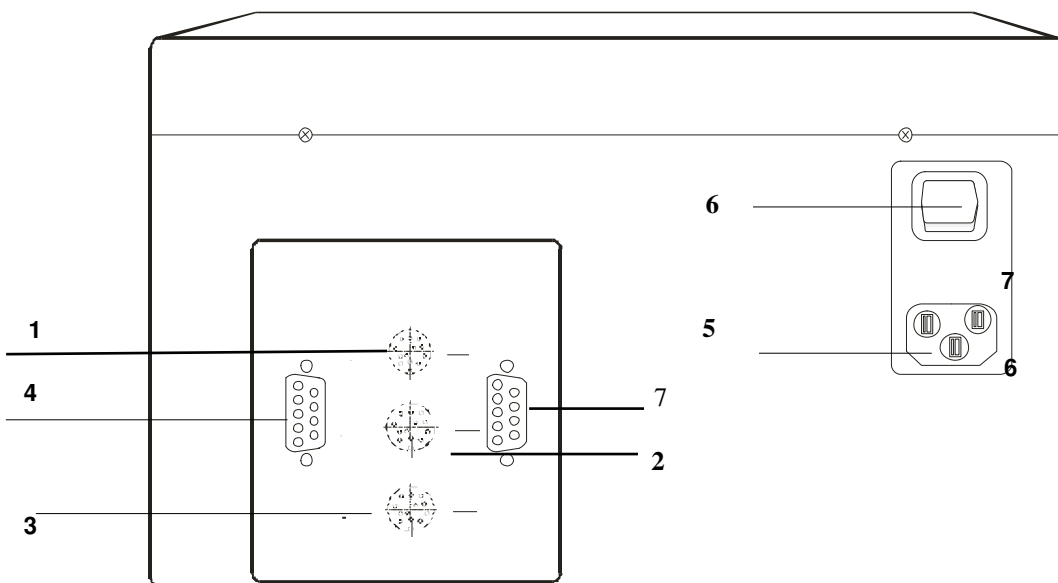


## Basic version for EDM machine tools



<b>X</b> <b>Y</b> <b>Z</b>	axis selection keys	<b>ref</b>	reference point mode
<b>RES</b>	reset key of absolute position		measuring relative to datum points
	measuring of relative position		delete
	mm/inch measuring		enter
<b>1/2</b>	halving of positioning value	<b>0</b> ... <b>9</b>	numeric value selection keys
<b>P</b>	parameter entry	<b>E</b>	EDM mode of operation



The drawing refers to "S" (box) and "P" (panel) version.  
For "C" (console) and "T" (table-top) see pages: 109-110.

1	connector for X axis
2	connector for Y axis
3	connector for Z axis
4	Connector for EDM relay outputs
5	plug for main supply voltage
6	power ON/OFF switch
7	RS232C

## Basic version for EDM machine tools

### GENERAL DESCRIPTION AND FUNCTIONS:

The position readout device NP31 is used in conjunction with different incremental transducers (linear scales, rotary encoders) as a system for measuring position and length on EDM machine tools.

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.

#### FUNCTIONS:

q Reset	q abs/rel measuring	q 9 Datum points
q Preset	q Inch/mm measuring	q Machine tool error compensation
q Reference pont	q Halving of positioning value	q Parameter entry and display
q EDM mode of operation	q Velocity measuring	q Bolt hole positioning

#### OPTIONS:

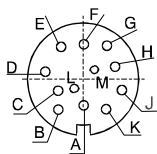
q Battery back-up	□ RS 232C
-------------------	-----------

### TECHNICAL DATA:

<b>Supply voltage</b>	220 V +10% -15%
special order:	110 V +10% -15%
<b>Supply voltage frequency</b>	48 Hz - 62 Hz
<b>Power consumption</b>	cca 20 VA
<b>Operating temperature</b>	0 - 45°C
<b>Relative humidity</b>	5 - 75%
<b>Mechanical protection</b>	IP 42
<b>Vibrations</b>	1 g from 10 to 150 Hz
<b>Shocks</b>	15 g
<b>EMC:</b>	
<b>Immunity</b>	EN 50 082/2
<b>Emission</b>	EN 50 081/1
<b>Dimensions</b>	W x H x D = 250 x 150 x 101 mm
<b>Weight</b>	1.5 kg

### MEASURING SIGNALS:

Input signals - square-wave inverted signals (DI, DS):



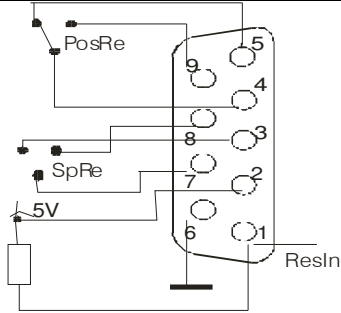
Axis X, Y, Z

<b>Supply voltage</b>	5 V (from device)
<b>Max. frequency</b>	1 Mhz
<b>Connector</b>	12 pole, Amphenol

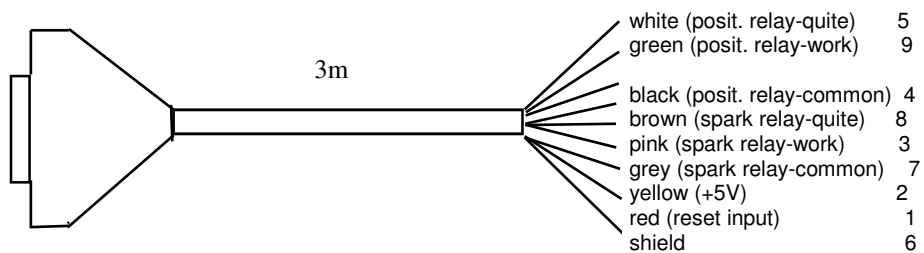
contact	A	B	C	D	E	G	H	K	L
signal	shield	0V	A	$\bar{A}$	B	RI	$\bar{RI}$	+V	$\bar{B}$

### CONNECTOR FOR EDM OUTPUT SIGNALS

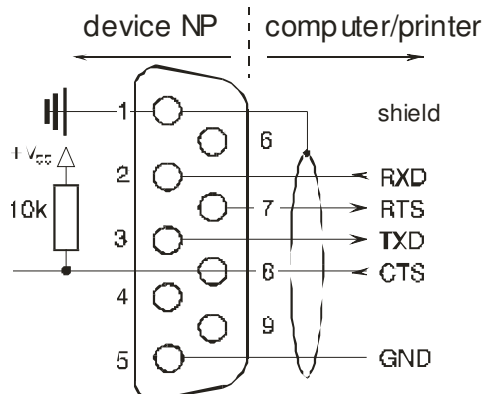
pin	1	2	3	4	5	6	7	8	9
signal	Res Input	+5V	Spark Relay (work contact)	Posit. Relay (Common)	Posit. Relay (quite contact)	0V	Spark Relay (common)	Spark Relay (Quite conntact)	Posit. Relay (work conntact)
color	red	yellow	pink	black	white	shealth	grey	brown	green



### EXTERNAL CABLE CONNECTION FOR EDM OUTPUT SIGNALS:



### CONNECTOR FOR RS 232 C (Option):



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

# DIGITAL POSITION READOUT SYSTEM

# NP31

## Basic version for EDM machine tools

### STANDARD DELIVERY:

Digital readout system NP 31.

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

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

### DIMENSIONS:

For dimensions of different housing types see :

**"HOUSING TYPES S, P, C and T"**

pages 109-110.

### OPTIONS:

All devices can be delivered with the following options:

<b>B</b>	Battery back-up
<b>K</b>	RS232C serial interface

### ACCESSORIES:

For "S" - box version: stand D  
For "C" - console version: console from 15 cm to 45 cm  
For details see pages: 109-110

### ORDERING DATA:

Standard delivery:				Options:	
NP 31	Housing	Input measuring signals	Power supply	B	K
	<b>S</b> = Box <b>C*</b> = Console <b>T</b> = Table top <b>P</b> = Panel  <b>C*</b> = In case of console DRO's ordering it is required to order separately Console itself (available lengths from 15 cm to 45	<b>DS</b> = 5V TTL (standard RS422A) <b>SI</b> = 11 $\mu$ A (option on request)	<b>SM</b> = Switch Mode: universal power supply 85-250V (standard for <b>C, T</b> and <b>P</b> version)  <b>LM</b> = Linear Mode: standard for <b>S</b> version)  <b>LM1</b> : 110VAC <b>LM2</b> : 220VAC	Battery back up	Communication interface RS232C

#### Iskra TELA — SEM d.o.o.

Cesta dveh cesarjev 403, 1102 Ljubljana, SLOVENIA  
Phone: ++386-1-47 69 824, Fax: +386-1-47 69 882  
E-Mail: info@iskra-tela.si, www.iskra-tela.si