

## Incremental rotary encoders IRC520, 521, 523, 524 and 525

IRC520-5 is a manual incremental hand wheel with locking, **dedicated for manual control and entering of information into control systems of CNC machines, where high mechanical endurance is requested for the locking mechanism** and for high radial and axial loading on the output shaft. It is possible to place any control hand wheel on the output shaft with diameter of 10 mm. IRC520 – 5 with LED in the illuminator and in standard industrial configuration converts rotary movement of the shaft, which generates sequence of output signals. For division of 100 pulses, the signal 1 is at level H and signal 2 at level L in the locked position. Each position is locked. Other setting according to agreement with producer. IRC520 – 5 can be equipped by producer with a control hand wheel with scale.

### Assembly

The encoders IRC520 – 5 are mounted to the respective equipment using three screws M4 on diameter of 42 mm or using a groove. Centering of the encoder is performed with fitted diameter 50h7. Connection should be of such design, that maximum permissible radial and axial load of the shaft are not exceeded. It is not recommended to place the encoder IRC520 – 5 with its shaft upward in wet environment with trickling or spraying fluid. Electrical connection can be done only with device switched off and at compliance with rules for handling with electrostatic sensitive equipment!

When temperature is less then  $-5^{\circ}\text{C}$  cable must be fixed.

### TECHNICAL DATA

Maximum speed	200 min. <sup>-1</sup>
Maximum IRC900-5 shaft load – axial	100 N
– radial	100 N
Maximum vibration per FCČSN345791	10gn (10 to 2000 Hz)
Maximum surge of current	50gn (100 ms)
Protection	IP65
Weight	0,9 kg max.

### WORKING CONDITIONS

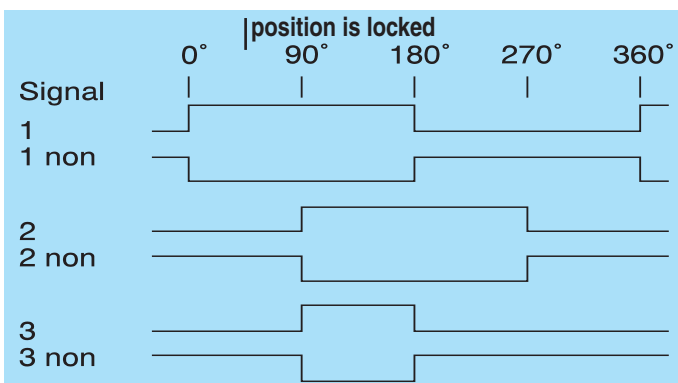
Standard operational temperature	0° to + 60°C
– model M	- 25° to + 60°C
Relative humidity	max. 95 %
Absolute humidity	max. 40g.m <sup>-3</sup>
Air pressure	73,3 to 126,6 kPa
Operational environment without aggressive substances and gases.	

### Output signals of the encoders

2 basic signals (1, 2) shifted 90° electrical

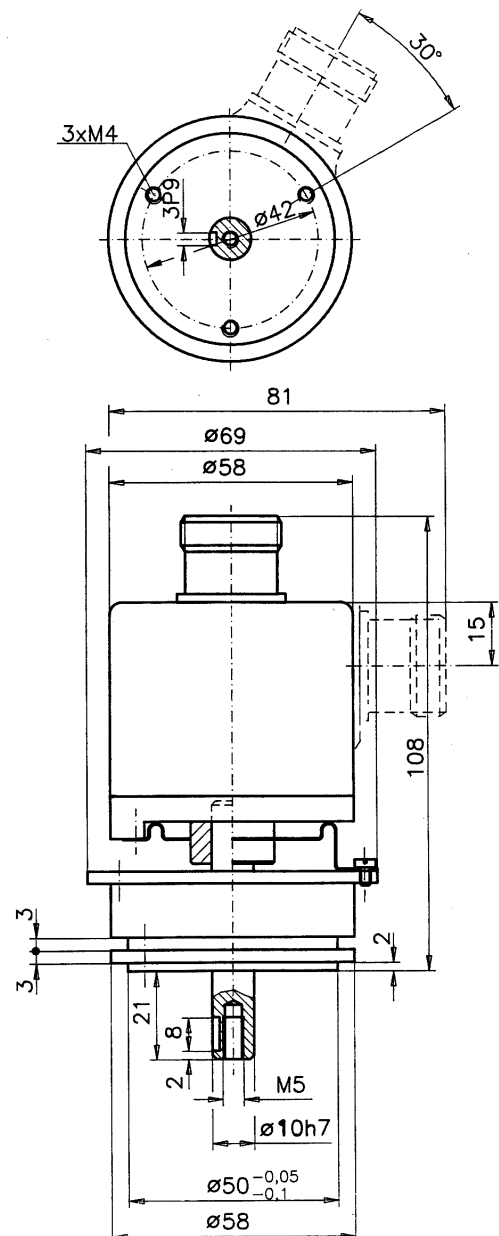
1 zero pulse (3) and their negations.

The zero pulse is not guaranteed above 100 kHz.



Electric data	IRC 520	IRC 521	IRC 522	IRC 523	IRC 524	IRC 525
Supply voltage $U_N$ [V]	10-30	10-30	10-30	5±5%	5±5%	5±5%
Supply voltage $OC U_O$ [V]	-	5-30	$U_N$	5-30	$U_N$	-
Max. consumption $I_N$ [mA]	50/30V	50/30V	50/30V	100	100	100
Max. output frekv. $F_o$ [kHz]	150	100	100	100	100	200
Max. load of outputs $I_o$ [mA]	±25	25	-25	25	-25	±20
<b>Electric signal output levels</b>						
$U_{OH}$ [V] $U_N=30V, I_{OH}=10mA$	$U_N-3$	-	$>U_N-1$	-	$>U_N-1$	$>2.5$
$U_{OL}$ [V] $U_N=U_o=30V, I_{OL}=-10mA$	$<1,2$	$<1$	-	$<1$	-	$<0,4$
$I_{OH}$ [mA] $U_N=U_o=30V$	-	$<6$	-	$<6$	-	-
$I_{OL}$ [mA] $U_N=U_o=30V$	-	-	$<6$	-	$<6$	-
Max. connecting cable length [m]	100	20	20	20	20	50

### Dimensions for IRC520 – 525



Changes in technical parameters reserved