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# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 1092

NUMERIC SECTION OF TEN-KEY KEYBOARDS  
FOR ADDING MACHINES AND CALCULATING MACHINES

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## NUMERIC SECTION OF TEN-KEY KEYBOARDS FOR ADDING MACHINES AND CALCULATING MACHINES

### 1. SCOPE

This ISO Recommendation establishes the composition and layout of ten-key keyboards for adding and calculating machines, as well as the shape of keys, the slope of the keyboard plane, the maximum key stroke and the spacing of keys.

It applies only to numerical keys which constitute ten-key keyboards, and not to function keys employed with such a keyboard, which may be the subject of a separate ISO Recommendation.

### 2. COMPOSITION AND LAYOUT

The numeric section of a ten-key keyboard should contain the ten keys corresponding to the numbers 0 to 9, arranged according to the layout illustrated in Figure 1.

In addition, keys for the double zero (00), the triple zero (000), the decimal symbol (, or .) and the minus symbol (–) may be provided.

All zero keys should be included in the zero zone indicated by the reference “Z” in Figure 1; when multiple zero keys are provided they should be arranged from left to right in the following sequence :

0, 00, 000.

### 3. SHAPE OF KEYS

The top surface of all keys should be such as to minimize the possibility of fingers slipping off them during operation. The key numbered 5 of the keys of the row 4, 5 and 6 may differ perceptibly in top surface from the other keys, to facilitate touch operation.

### 4. SLOPE OF KEYBOARD PLANE

In order to facilitate operation, the plane P – P containing points corresponding to the keytop surfaces should have an angle  $\alpha$  preferably between 10 and 20° with reference to the horizontal plane H – H (see Figure 2).

### 5. KEY STROKE

The depth of depression required to operate the keys should not exceed 7 mm (9/32 in).

### 6. SPACING OF KEYS

The distances  $a$  and  $b$  between the centres of adjacent keys (see Figure 1) should be :

$$\begin{array}{l} 19 + 1.5 \\ - 1.0 \end{array} \text{ mm} \quad \left( \begin{array}{l} 3/4 + 1/16 \\ - 3/64 \end{array} \text{ in} \right)$$