Claims

1. A flat key (1) for a cylinder lock, comprising
at least one encoded surface (2), which extends along the longitudinal extension of the flat key (1), wherein,
for encoding, control points (3, 3', 3"), which are connected by a control groove (6), are provided at sensing positions (5) on the surface (2), and wherein encoding features to be read in the cylinder lock are provided at the control points (3, 3', 3"),
wherein
the encoding feature, at a first control point (3'), forms an angle with the central longitudinal plane (8) of the flat key (1) which differs from that of the encoding feature at a second control point (3"), characterized in that the control groove (6) has a torsion section (11) at least between the first control point (3') and the second control point (3").

2. The flat key according to claim 1, characterized in that the control groove (6) has a cross section in the torsion section (11), which is rotated by an angle in the range of -45° to +45°, preferably -30° to +30°, relative to the cross section of the control groove (6) outside the torsion section (11).

3. The flat key according to claim 1 or 2, characterized in that the angle of the encoding feature to the central longitudinal plane (8) changes in the torsion section (11) along the longitudinal extension in a preferably linear manner from a first angle value in the area of the first control point (3') to a second angle value in the area of the second control point (3").

4. The flat key according to claim 3, characterized in that the first angle value is in the range of -45° to 0°, preferably in the range of -30° to 0°, and in that the second angle value is in the range of 0° to 45°, preferably in the range of 0° to 30°, measured with respect to the central longitudinal plane (8).

5. The flat key according to any one of claims 1 to 4, characterized in that at least one further control groove (9) with control points (3) is provided on the encoded surface (2) next to the control groove (6) and its encoding features form substantially the same angle with the central longitudinal plane (8) of the flat key (1) at all control points (3).

6. The flat key according to claim 5, characterized in that the control grooves (6, 9) have different depths and/or different widths.

7. The flat key according to any one of claims 1 to 6, characterized in that the encoding feature is configured as groove bottom (7) of the control groove (6).

8. The flat key according to claim 7, characterized in that the lateral surfaces (10) of the control grooves (6, 9) always form a substantially right angle with the groove bottom (7) of the control grooves (6, 9).

9. The flat key according to any one of claims 1 to 6, characterized in that the encoding feature is configured as a material ridge (4), which extends in the control groove (6) along the longitudinal extension of the flat key.

10. The flat key according to claim 9, characterized in that the material ridge (4) is arranged substantially centrally in the control groove (6) and has a width, which substantially corresponds to a third of the width of the control groove (6).

11. The flat key according to claim 9 or 10, characterized in that the material ridge (4) extends beyond the cross section of the key profile.

12. The flat key according to any one of claims 9 to 11, characterized in that the lateral surfaces (16) of the material ridge (4) always form a substantially right angle with the groove bottom (7) of the control grooves (6).

13. A cylinder lock for a flat key (1) according to any one of claims 1 to 12, comprising a keyway (12) with at least one side and sensing positions (5) provided along the longitudinal extension of the keyway (12),
wherein at least one control slide (13) is provided at each sensing position (5),
wherein each control slide (13) comprises at least one reading element for reading an encoding feature of a control groove (6, 9) at a control point (3, 3', 3") of the flat key (1),
wherein at least two control slides (13, 13') are provided, each of which comprise a first reading element and a second reading element, wherein the first reading element forms an angle with the central longitudinal plane (15) of the keyway (12) which differs from that of the second reading element,

characterized in that a first control slide (13) and a second control slide (13') are provided, the reading elements of which are different.

14. The cylinder lock according to claim 13, characterized in that the first reading element is configured as a first reading surface (14) and in that the second reading element is configured as a second reading surface (14') on a sensing cam (17) of the control slide (13).

15. The cylinder lock according to claim 14, characterized in that the first reading surface (14) and the second reading surface (14') are configured as end surfaces of the sensing cam (17) for engaging the groove bottom (7) of the control groove (6, 6', 6") of the flat key (1).

16. The cylinder lock according to claim 14, characterized in that the first reading surface (14) and the second reading surface (14') are configured as lateral surfaces of a sensing groove (18) of the sensing cam (17) for engaging a material ridge (16) of the control groove (6, 6', 6") of the flat key (1).

17. The cylinder lock according to any one of claims 13 to 16, characterized in that at least one further control slide (13) is provided, which comprises a first reading element, but no second reading element.

18. The cylinder lock according to any one of claims 14 to 17, characterized in that the first reading surface (14) extends substantially parallel to the central longitudinal plane (15).

19. The cylinder lock according to any one of claims 14 to 18, characterized in that the second reading surface (14') forms an angle in the range of -45° to +45°, preferably in the range of -30° to +30°, with the central longitudinal plane (15).

20. The cylinder lock according to any one of claims 13 to 19, characterized in that the cylinder lock comprises a cylinder core, in which cut-outs with preferably circular cross section are provided parallel to the central longitudinal plane (15) and at a distance to it at the sensing positions (5), wherein the control slides (13, 13') are movably mounted in the cut-outs.

21. The cylinder lock according to claim 20, characterized in that the control slides (13, 13') are mounted in the cut-outs without being pretensioned so that, upon inserting the flat key (1), they may be actively curve-guided into a release position by positively engaging the control grooves (6, 9) of the flat key (1).

22. A system comprising a key according to any one of claims 1 to 12 and a cylinder lock according to any one of claims 13 to 21.