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# CODE SWITCH COMMUTATORI A CODICE

# CBS

## Commutatore rotativo a codice Binario e codice Gray



Multi-purpose code switch with 1 to 3 wafers.

- Binary or Gray code also complementary.
- Flexible due to many detent angles: T 10 (36°); T 12 (30°); T 16 (22,5°) T 20 (18°); T 24 (15°); T 32 (11,25°)
- Available with integrated diodes.
- Two-point mounting available.
- Version V with adjustable stops.
- Various types of connection:
  - Standard, combined solder or plug connection, A.
  - Pins for PC board, B.
  - Pins for Mini Wire Wrap, C.
  - Connector for flat-ribbon cable, D.
  - Screw on terminals, E.
  - Double flat-pin connectors, F.
  - Long vertical pins for PC boards, G.

| 1.0 Construction                     |  |
|--------------------------------------|--|
| 1.1 Number of wafers max.            | 3 wafers                                     |
| 1.2 Switching combinations per wafer | Code 51, BCD · Code 52, BCD-Complement       |
| Design D, detent angle 36°           | Code 41, Binary · Code 42, Binary-Complement |
| Design E, detent angle 30°           | Code 75, Gray · Code 77, Gray-Complement     |
| Design H, detent angle 22,5°         | Code 41, Binary · Code 42, Binary-Complement |
| Design N, detent angle 18°           | Code 75, Gray · Code 77, Gray-Complement     |
| Design P, detent angle 15°           | Code 41, Binary · Code 42, Binary-Complement |
| Design S, detent angle 11,25°        | Code 75, Gray · Code 77, Gray-Complement     |
| 1.3 Contacts                         | Solder and plug connectors (standard)        |
| 1.4 Mounting                         | Central mounting                             |

| 2.0 Electrical Data                         |                           |
|---|---------------------------|
| 2.1 Switching power max.                    | 3 VA / W                  |
| 2.2 Switching voltage max.                  | 60 V–                     |
| 2.3 Switching current max.                  | 0,1 A                     |
| 2.4 Rest current max. at $\Delta u$ 20°C    | 1 A                       |
| 2.5 Test voltage                            | 500 V                     |
| between contacts                            |                           |
| at 50 Hz                                    | 700 V                     |
| contact / ground                            |                           |
| 2.6 Life expectancy without electrical load | $\geq 25000$ cycles       |
| 2.7 Contact resistance initial value        | $< 110$ m $\Omega$        |
| 2.8 Insulation resistance                   | $5 \times 10^{10} \Omega$ |

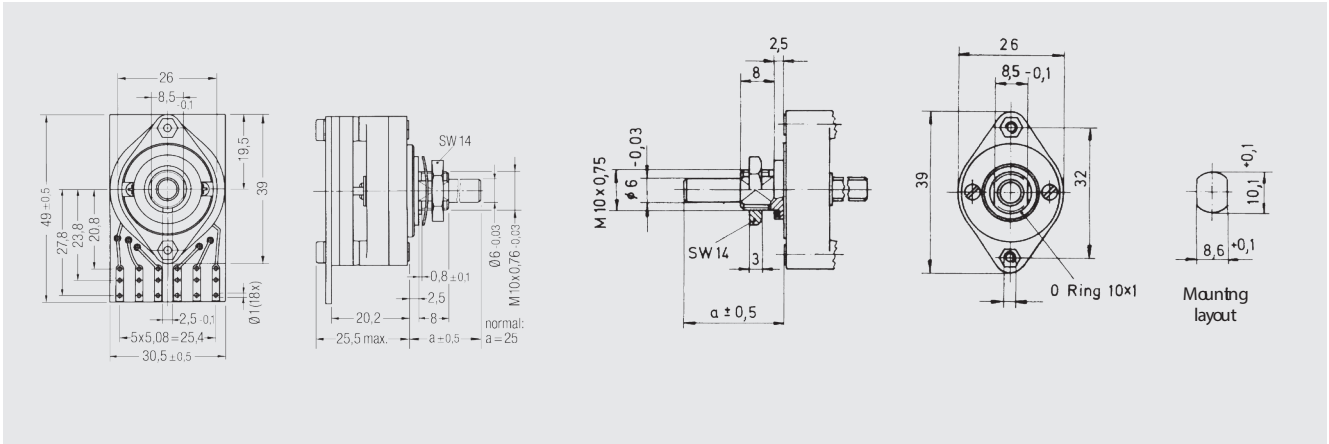
| 3.0 Mechanical Data                 |                                    |
|-------------------------------------|------------------------------------|
| 3.1 Stops                           | Fixed or without stop              |
|                                     | Stop adjustable: special version V |
| 3.2 Operating torque acc. to design | $\geq 9$ Ncm                       |
| 3.3 Stop strength                   | $\geq 150$ Ncm                     |
| 3.4 Fastening torque max.           | $\geq 300$ Ncm                     |
| 3.5 Dust protection                 | Sealed wafers                      |

| 4.0 Other Data                          |                               |
|---|-------------------------------|
| 4.1 Contact material                    | Au over Ni barrier layer      |
| 4.2 Insulating material                 | Epoxide glass laminate, EP    |
| Wafer                                   |                               |
| Rotor                                   | Polycarbonate, PC             |
| 4.3 Soldering time and temperature max. | 5s at 260°C                   |
|   | 3s at 350°C, manual soldering |

### Ordering Codes

|                           |   |
|---------------------------|---|
| Designation of type       | CBS   |
| 1. Number of wafers       | 1   |
| 2. Code                   | 41, 42, 51, 52, 76, 77                              |
| 3. Distribution over 360° | 10, 12, 16, 20, 24 or 32                            |
| 4. Shaft length           | in mm   |
| 5. Shaft design           | A = standard, special versions page 6               |
| 6. Switching limit        | 00 = without stop (switching limit to XX positions) |
| 7. Contact versions       | A, B, C, D, E, F, G                                 |
| 8. Stop                   | V = stop adjustable                                 |
| 13. Watertight            | WD  |

Dimensiona | Drawing s · Dimensions in mm



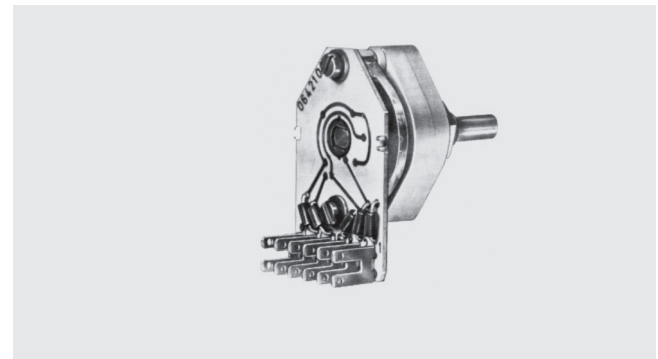
CBS-A · Standard

CBS · Watertight version



CBS-B · Pins for PC board

CBS-E · Screw-on terminals



CBS-C · Pins for Mini Wire Wrap

CBS-F · Double flat-pin connectors



CBS-D · Connector for flat-ribbon cable

CBS-G · Long vertical pins for PC boards



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