ECM 13-10/T TYPE

Protection rate: IP30
Insulation class: B $\left(130^{\circ} \mathrm{C}\right)$
Reference cycle: 2 minutes
Standard stroke (s): 10 mm
Temperature rise " $\Delta \mathrm{V}_{31}$ ": 70 ${ }^{\circ} \mathrm{C}$
Working temperature: -10 to $\mathbf{4 5}^{\circ} \mathrm{C}$
Work: Pull
Release spring NOT incorporated in standard product.

| (ED) Duty-cycle ED(\%) | $\mathbf{1 0 0}$ | $\mathbf{4 0}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{5}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| (P20) Power at 20${ }^{\circ}$ (W) | 3.3 | 10 | 16 | 26 | 80 |
| (Fm) Solenoid force (N) 1) | 0.15 | 0.3 | 0.4 | 0.7 | 1.7 |
| Max time under voltage(s) | Inf | 48 | 30 | 18 | 6 |
| Opening time (ms) 2) | 40 | 34 | 32 | 29 | 27 |
| Release time (ms) 3) | 29 | 28 | 27 | 26 | 26 |
| Plunger weight (Kg) | 0.010 |  |  |  |  |
| Solenoid weight (Kg) | 0.040 |  |  |  |  |

1) Fm Solenoid force is given acording to VDE 0580 without deducting the spring force or the plunger weight if vertical mounting.
2) Time is given on these conditions: Coil supplied under nominal voltage ; Stabilized in it's working temperature ; Load 70\% of the solenoid force ; Horizontal assembly ; Standard stroke initial position; $20^{\circ} \mathrm{C}$ ambient temperature.
3) Time is given on these conditions: without load on shaft ; Horizontal assembly ; Standard stroke initial position.

| Duty-cycleED\% | Standard voltages |  |  |  |  |  |  |  |  | Under demandVDC VAC |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | VDC |  |  |  |  |  |  | VAC |  |  |  |  |  |
|  | 6 | 12 | 24 | 48 | 100 | 125 | 205 | 110 | 230 | Min | Max | Min | Max |
| 100 | 0 | 0 | 0 | 0 | X | X | X | X | x | 1.5 | 48 | X | x |
| 40 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | X | 3 | 125 | X | X |
| 25 | 0 | 0 | 0 | $\bigcirc$ | 0 | 0 | X | X | X | 3 | 125 | X | X |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | X | X | 5 | 205 | X | X |
| 5 | 0 | 0 | - | $\bigcirc$ | 0 | $\bigcirc$ | 0 | X | x | 6 | 250 | x | x |

Layout: $\quad \mathrm{o}=$ Available ; $\mathrm{x}=$ Unavailable

- Voltage under demand:

They can be manufactured at voltages between the maximum and minimum voltage values shown in the chart.

- The duty cycles described in the chart are standard, they can be manufactured in any intermediate value.
- If any customization from the original is needed, please ask us.
- Earthing is recommended if the metallic parts are accessible.

```
Ordering code: ECM13-10/T --V ED---%
    Voltage: 24Vdc; Duty cycle: ED100%:
    ECM13-10/T 24Vdc ED100%
    Voltage: 12Vdc; Duty cycle: ED15%:
    ECM13-10/T 12Vdc ED15%
```

Solenoid under voltage ( $\mathrm{s}=0 \mathrm{~mm}$ position)


Force-stroke curve


For fixation and mounting positions: see page 59

