## © CROUZET

22.5 mm DIN rail mounting TU2R4 Part number 88865300


- Multi-function or mono-function
- Multi-range
- Multi-voltage
- Screw or spring terminals
- LED status indicator
- Option of connecting an external power supply to the control input
- 3-wire sensor control option

| Part numbers |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type | Functions | Timing | Output | Nominal rating | Connections | Supply voltage |
| 88865300 | TU2R4 | A-At-B-C-H-Ht-Di-D-Ac-Bw | 0,1s $\rightarrow$ 100h | 2 timed relays changeover relays | 8 A | Screw terminals | 12 V AC / DC |


| Specifications |  |
| :---: | :---: |
| Timing |  |
| Timing ranges (7 ranges) | $1 \mathrm{~s}-10 \mathrm{~s}-1 \mathrm{~min}-10 \min -1 \mathrm{~h}-10 \mathrm{~h}-100 \mathrm{~h}$ $\text { TK2R1:0.6s }-2.5 \mathrm{~s}-20 \mathrm{~s}-160 \mathrm{~s}$ |
| Repetition accuracy with constant parameters | $\pm 0.5$ \% (IEC/EN 1812-1) |
| Drift Temperature | $\pm 0,05 \% /{ }^{\circ} \mathrm{C}$ |
| Drift Voltage | $\pm 0.2$ \% / V |
| Display accuracy according to IEC/EN 61812-1 | $\pm 10 \% / 25^{\circ} \mathrm{C}$ |
| Minimum pulse duration typically (relay version) | 30 ms |
| Minimum pulse duration typically (solid state version) | 50 ms |
| Minimum pulse duration typically (relay version under load) | 100 ms |
| Maximum reset time by de-energisation typically (relay version) | 100 ms |
| Maximum reset time by de-energisation typically (solid state version) | 350 ms |
| Immunity from micro power cuts : typical | $>10 \mathrm{~ms}$ |
| Supply | *** TRADUCTION MANQUANTE *** |
| Multi-voltage power supply | Depending on version |
| Frequency (Hz) | $50 / 60$ |
| Operating range | 85 to 110 \% Un <br> ( 85 to $120 \%$ Un for 12V AC/DC) |
| Operating factor | 100 \% |
| Max. absorbed power | $0,6 \mathrm{~W} 24 \mathrm{~V} \mathrm{AC} / \mathrm{DC}$ $1,5 \mathrm{~W} 230 \mathrm{~V}$ AC 32 VA 230 V AC |
| Output specification |  |
| 1 or 2 changeover relays, AgNi (cadmium-free) | 2000 VA/80 W |
| Rated power | $2000 \mathrm{VA} / 80 \mathrm{~W}$ |
| Maximum breaking current | 8 A AC 8A DC |
| Minimum breaking current | $10 \mathrm{~mA} / 5 \mathrm{~V}$ DC |
| Voltage breaking capacity | 250 V AC/ DC |
| Electrical life (operations) | $10^{5}$ operations 8 A 250 V resistive |
| Mechanical life (operations) | $5 \times 10^{6}$ |
| Breakdown voltage acc. to IEC/EN 61812-1 | $2.5 \mathrm{kV} / 1 \mathrm{~min} / 1 \mathrm{~mA} / 50 \mathrm{~Hz}$ |
| Impulse voltage acc. to IEC/EN 60664-1, IEC/EN 61812-1 | 5 kV , wave $1.2 / 50 \mu \mathrm{~s}$ |
| Solid state output |  |
| Rated power | $\begin{aligned} & 0,7 \mathrm{~A} \mathrm{AC/DC} \\ & 20^{\circ} \mathrm{C}(0,5 \mathrm{~A} \mathrm{UL}) \end{aligned}$ |
| Derating | $5 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ |
| Maximum admissible current | $20 \mathrm{~A} \leq 10 \mathrm{~ms}$ |
| Minimum breaking current | 10 mA |
| Leakage current | $<5 \mathrm{~mA}$ |
| Voltage breaking capacity | $250 \mathrm{~V} \mathrm{AC/} \mathrm{DC}$ |
| Maximum voltage drop at terminals | 3 wire 4V-2 wire 8 V |
| Electrical life (operations) | $10^{8}$ |
| Mechanical life (operations) | $10^{8}$ |
| Breakdown voltage acc. to IEC/EN 60664-1, IEC/EN 60255-5 | 2.5 kV to $1 \mathrm{~mA} / 1 \mathrm{~min}$ |
| Input type | Volt-free contact <br> 3 -wire PNP output control option residual voltage : 0.4 V whatever the timer power supply |

General characteristics

| Conformity to standards | IEC/EN 61812-1 IEC/EN 61000-6-1 IEC/EN 61000-6-2 IEC/EN 61000-6-3 IEC/EN 61000-6-4 |
| :---: | :---: |
| Certifications | CE, UL, cUL, CSA, GL |
| Temperature limits use ( ${ }^{\circ} \mathrm{C}$ ) | $-20 \rightarrow+60$ |
| Temperature limits stored ( ${ }^{\circ} \mathrm{C}$ ) | $-30 \rightarrow+60$ |
| Installation category (acc. to IEC/EN 60664-1) | Voltage surge category |
| Creepage distance and clearance acc. to IEC/EN 60664-1 | $4 \mathrm{kV} / 3$ |
| Protection (IEC/EN 60529) | IP 20 |
|  | IP 40 |
| Degree of protection acc. to IEC/EN 60529 Front face (except Tk2R1) | IP 50 |
| Vibration resistance acc. to IEC/EN 60068-2-6 | $\begin{aligned} & f=10 \cdot 55 \mathrm{~Hz} \\ & \mathrm{~A}=0,35 \mathrm{~mm} \end{aligned}$ |
| Relative humidity no condensation acc. to IEC/EN 60068- 2-30 | $93 \%$ sans condensation |
| Electromagnetic compatibility - Immunity to electrostatic discharges acc to IEC/EN 61000-4-2 | Level III (Air 8 KV / Contact 6 KV) |
| Immunity to radiated, radio-frequency, electromagnetic field acc. IEC/EN 61000-4-3 | Level III 10V/m (80 M Hz to 1 G Hz ) |
| Immunity to rapid transient bursts acc. to IEC/EN 61000-44 | Level III (direct 2kV / Capacitive coupling clamp 1 KV) |
| Immunity to shock waves on power supply acc. to IEC/EN 61000-4-5 | Level III (2 KV / common mode $2 \mathrm{KV} /$ residual current mode 1KV) |
| Immunity to radio frequency in common mode acc. to IEC/EN 61000-4-6 | Level III ( 10 V rms : 0.15 M Hz to 80 M Hz ) |
| Immunity to voltage dips and breaks acc. to IEC/EN 61000-4-11 | $30 \% / 10 \mathrm{~ms}$ $60 \% / 100 \mathrm{~ms}>$ $95 \% / 5$ s |
| Mains-borne and radiated emissions acc. to EN 55022 (CISPR22), EN55011 (CISPR11) | Class B |
| Fixing : Symmetrical DIN rail | 35 mm |
| Connection capacity - without ferrule | $2 \times 2,5 \mathrm{~mm}^{2}$ |
| Connection capacity - with ferrule | $2 \times 1,5 \mathrm{~mm}^{2}$ |
| Spring terminals, 2 terminals per connection point flexible wire | $1,5 \mathrm{~mm}^{2}$ |
| Spring terminals, 2 terminals per connection point - rigid wire | $2,5 \mathrm{~mm}^{2}$ |
| Housing material | Self-extinguishing |
| Weight : casing $17,5 \mathrm{~mm}$ | 60 g |
| Weight : casing $22,5 \mathrm{~mm}$ | 90 g |
| Weight : plug-in casing | 80 g |

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## Display

State displayed by 2 LEDs

- Flashing green when on
- Relay LED yellow during timing

Green LED operation indicator
Pulsing :

- Timer on, no timing in process

Permanently lit :

- Relay waiting, no timing in process


## Dimensions (mm)



Function A
Delay on energisation with 2 timed outputs or 1 timed and 1 instantaneous


Function Ac
Timing after closing and opening of control contact with 2 timed outputs or 1 timed and 1 instantaneous

## Curves

Function At - 2 relay outputs


| Function At |
| :--- |
| Timing on energisation with memory with 2 timed outputs or 1 timed and 1 instantaneous |

## Curves

## Function B-2 relay outputs



## Function B

Timing on impulse one shot with 2 timed outputs or 1 timed and 1 instantaneous


## Function Bw

Pulse output (adjustable) with 2 timed outputs or 1 timed and 1 instantaneous


## Function C

Timing after impulse with 2 timed outputs or 1 timed and 1 instantaneous


## Function D

Flip-flop Pause start with 2 timed outputs or 1 timed and 1 instantaneous


## Function Di

Flip-flop Pulse start with 2 timed outputs or 1 timed and 1 instantaneous

## Curves



## Function H

Timing on energisation with 2 timed outputs or 1 timed and 1 instantaneous

## Curves



## Function Ht

Delay on energisation with memory with 2 timed outputs or 1 timed and 1 instantaneous

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[^1]
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[^0]:    2 changeover relay outputs

[^1]:    Functions
    A - At - B-C - H-Ht - Di-D - Ac - Bw
    Ad-Ah-N-O-P-Pt-TL-Tt-W

