



88865215-TA2R1



- ✓ 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

Timing

Timing ranges (7 ranges)	1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h TK2R1: 0.6s - 2.5s - 20s - 160 s
Repetition accuracy with constant parameters	± 0.5% (IEC 1812-1)
Drift Temperature	± 0,05% / °C
Drift Voltage	± 0.2% / V
Display accuracy according to IEC 1812-1	± 10% / 25°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 ms

Supply

Multi-voltage power supply	Depending on version
Frequency (Hz)	50 / 60
Operating range	85 to 110% Un (85 to 120% Un for 12V AC/DC)
Operator factor	100%
Max. absorbed power	0,6 W 24 V AC/DC 1,5 W 230 V AC 32 VA 230 V AC

Output specification


1 or 2 changeover relays, AgNi (cadmium-free)	2000 VA/80 W
Rated power	2000 VA/80 W
Maximum breaking current	8 A AC 8A DC
Minimum breaking current	10 mA / 5 V DC
Voltage breaking capacity	250 V AC/ DC
Electrical life (operations)	10 ⁵ operations 8 A 250 V resistive
Mechanical life (operations)	5x10 ⁶
Breakdown voltage acc. to IEC 1812-1	2.5 kV / 1 min / 1 mA / 50 Hz
Impulse voltage acc. to IEC 664-1, IEC 1812-1	5 kV, wave 1.2 / 50 µs

Solid state output

Rated power	0,7 A AC/DC 20 °C (0,5 A UL)
Derating	5 mA / °C
Maximum admissible current	20 A ≤ 10 ms
Minimum breaking current	10 mA
Leakage current	< 5 mA
Voltage breaking capacity	250 V AC/ DC
Maximum voltage drop at terminals	3 wire 4V - 2 wire 8V
Electrical life (operations)	10 ⁸
Mechanical life (operations)	10 ⁸
Breakdown voltage acc. to IEC 664, IEC 255-5	2.5 kV to 1 mA / 1 min
Input type	Volt-free contact 3-wire PNP output control option residual voltage: 0.4V whatever the timer power supply

General characteristics

Conforming to standards IEC 1812-1, EN 50081-1/2, EN 50082-1/2, LV directives (73/23/EEC + 93/68/EEC (CE marking) + EMC (89/336/EEC + IEC 669-2-3 (17,5 mm))	✓
Approvals	UL - CSA - cUL
Temperature limits use (°C)	-20 → +60
Temperature limits stored (°C)	-30 → +60
Installation category (acc. to IEC 664-1)	Voltage surge category

Creepage distance and clearance acc. to IEC 664-1	4 kV / 3
Protection (IEC 529)	IP 20 IP 40
Degree of protection acc. to IEC 529 Front face (except Tk2R1)	IP 50
Vibration resistance acc. to IEC 68-2-6	f = 10  55 Hz A = 0,35 mm
Relative humidity no condensation acc. to IEC 60068-2-3	93% sans condensation
Electromagnetic compatibility - Immunity to electrostatic discharges acc to IEC 1000-42	Level III (Air 8 kV / Contact 6 kV)
Immunity to electrostatic fields acc. ENV 50140/204 (IEC 61000-4-3)	Level III 10V/m (80 MHz to 1 GHz)
Immunity to rapid transient bursts acc. to IEC 61000-4-4	Level III (direct 2kV / Capacitive coupling clamp 1 kV)
Immunity to shock waves on power supply acc. to IEC 61000-4-5	Level III (2 kV / common mode 2 kV/residual current mode 1kV)
Immunity to radio frequency in common mode acc. to ENV (IEC 61000-4-6)	Level III (10V rms: 0.15 MHz to 80 MHz)
Immunity to voltage dips and breaks acc. to IEC 1000-4-11	30%/10 ms 60%/100 ms > 95%/5 s
Mains-borne and radiated emissions acc. to EN 55022 (EN 55011 Group 1)	Class B
Fixing: Symmetrical DIN rail (EN 50022)	35 mm
Connection capacity - without ferrule	2 x 2,5 mm ²
Connection capacity - with ferrule	2 x 1,5 mm ²
Spring terminals, 2 terminals per connection point - flexible wire	1,5 mm ²
Spring terminals, 2 terminals per connection point - rigid wire	2,5 mm ²
Housing material	Self-extinguishing
Weight: casing 17,5 mm	60 g
Weight: casing 22,5 mm	90 g
Weight: plug-in casing	80 g

Display

State displayed by 2 LEDs

- Flashing green when on
- Relay LED yellow during timing

Green LED operation indicator

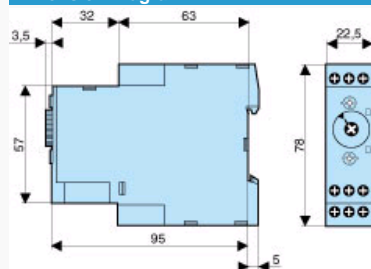
Pulsing :

- Timer on, no timing in process

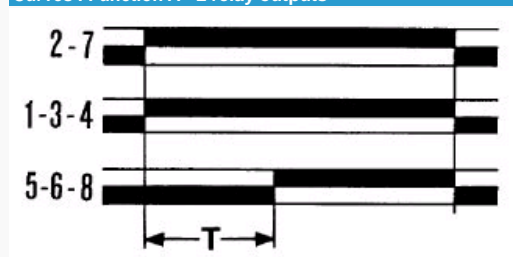
Permanently lit :

- Relay waiting, no timing in process

Dimension Diagram :



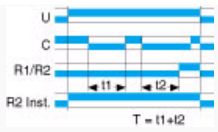
Curves : Function A - 2 relay outputs



Function A

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

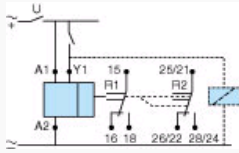
Curves : Function At - 2 relay outputs



Function At

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

: 2 changeover relay outputs



Functions

A - At - B - C - H - Ht - Di - D - Ac - Bw
 Ad - Ah - N - O - P - Pt - TL - Tt - W