

## M2 DIN rail mounted electronic timers (22.5 mm)

### Relay outputs

- Multi-function or mono-function
- Multi-range (8 ranges)
- Dual-voltage
- 1 changeover 8 A / 250 V
- Display of output states by 2 LEDs
- Wide choice of functions
- Front terminals

### Characteristics

#### Accuracy

|                                                   |         |
|---------------------------------------------------|---------|
| Repetition accuracy<br>(with constant parameters) | ± 0.5 % |
| Variation according to 0 • 40 °C                  | ± 3 %   |
| VDE 0435 -20 • 60 °C                              | ± 5 %   |
| Min. control pulse                                | 0.02 s  |
| Maximum reset time by<br>de-energisation          | 0.100 s |
| Immunity from micro power cuts                    | <0.02 s |

#### Output specification

|                                                     |                       |
|-----------------------------------------------------|-----------------------|
| Nominal current                                     | 8 A ~ 1 A ~           |
| Nominal voltage                                     | 250 V ~               |
| Rated power                                         | 2000 VA - 30 W        |
| Maximum admissible current                          | 15 A < 0.01 s         |
| Minimum current                                     | 50 mA ~               |
| Electrical life at I max 250 V ~ resistive (cycles) | 1.5 • 10 <sup>5</sup> |

Max. permitted number of operations per hour at  
I max 250 V ~ resistive

360

Mechanical life (operations)

2 x 10<sup>7</sup>

#### Function and use

|                                      |                     |           |
|--------------------------------------|---------------------|-----------|
| Display of<br>output state by<br>LED | output in operation | Green LED |
|                                      | power on            | Red LED   |

Voltage variation ± 15 % Un  
127 V-10% 240 V+10%

Maximum absorbed power  
1.5 W / 24 V  
5 VA / 110-127 V  
10 VA / 220-240 V

Temperature limits Use -20 °C + 60 °C  
Stored -30 °C + 70 °C

Insulation according to standard VDE 0110 -  
IEC 255 Group C 250 V ~

Protection class according to NFC 20010 -  
IEC 529 - DIN 40050 IP40

Conformity to standards  
IEC 255 VDE 0435-2021 •

Protection from voltage surge  
(in joules) 2

Connection: by terminal blocks with cable guide  
and front-access captive screws •

Terminal capacity : multi or single wire 1 or 2  
leads 2.5 mm<sup>2</sup>

Mounting on symmetrical DIN rail  
35 mm EN 50022 •

Weight (g) 110

Products currently being replaced by the TR range

### Timing

#### Types

#### Part numbers (and voltages)

|                                         |
|-----------------------------------------|
| 24 V ~ / 110 • 127 V 50 • 60Hz          |
| 24 V ~ / 220 • 240 V 50 • 60Hz          |
| 24 V ~ / 50 • 60Hz                      |
| 110 • 127 V 50 • 60Hz                   |
| 220 • 240 V 50 • 60Hz                   |
| N.B. : For 48 V ~ supply                |
| Additional resistor : 560 Ω 2W / 24 V ~ |

#### Functions

### Relay outputs

#### Nominal current

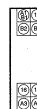
#### Timing ranges (8 available options)

|              |                  |             |
|--------------|------------------|-------------|
| 0.1 s to 1 s | 0.4 min to 4 min | 1 h to 10 h |
| 1 s to 10 s  | 1 min to 10 min  | 6 h to 60 h |
| 6 s to 60 s  | 6 min to 60 min  |             |

#### Function diagrams

### Terminal connections

|                                      |
|--------------------------------------|
| A1 - A2 : Supply                     |
| A3 : Bridge (A2 - A3) for 24V supply |
| B1 - B2 : Control contact            |
| 15 - 16 - 18 : Timed output contact  |
| Galvanic insulation Input-Output     |



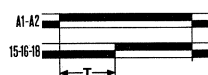
### Accessories

#### Panel adaptor

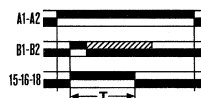
79 237 806

### Function diagrams

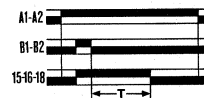
Function A  
Delay on energisation



Function B  
Timing on impulse  
(one shot)



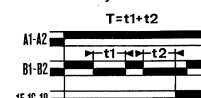
Function C  
Timing after impulse  
(delay off)



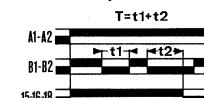
Function H  
Timing on energisation  
Interval timer - one shot



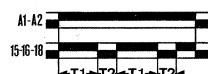
Function At  
Timing on energisation  
with memory

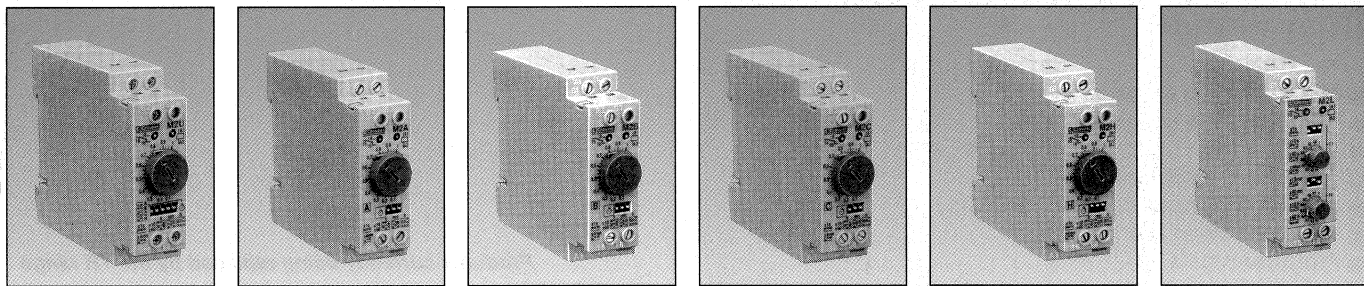


Function Ht  
Timing on energisation  
with memory



Function L  
Cyclic timing





|              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.1 s • 60 h | 0.1 s • 60 h | 0.1 s • 60 h | 0.1 s • 60 h | 0.1 s • 60 h | 0.1 s • 60 h |
| <b>M2 U</b>  | <b>M2 A</b>  | <b>M2 B</b>  | <b>M2 C</b>  | <b>M2 H</b>  | <b>M2 L</b>  |
| 88 881 005   | —            | —            | —            | —            | 88 881 505   |
| 88 881 006   | —            | —            | —            | —            | 88 881 506   |
| —            | 88 881 100   | 88 881 200   | 88 881 300   | 88 881 400   | —            |
| —            | 88 881 102   | 88 881 202   | 88 881 302   | 88 881 402   | —            |
| —            | 88 881 104   | 88 881 204   | 88 881 304   | 88 881 404   | —            |
| •            | •            | •            | •            | •            | •            |

|                                  |                    |                    |                    |                    |                    |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Multi-function<br>with selection | Mono-function      | Mono-function      | Mono-function      | Mono-function      | Mono-function      |
| A B C H At Ht                    | A                  | B                  | C                  | H                  | L                  |
| 1 timed changeover               | 1 timed changeover | 1 timed changeover | 1 timed changeover | 1 timed changeover | 1 timed changeover |
| 8 A ~ 1 A ≡                      | 8 A ~ 1 A ≡        | 8 A ~ 1 A ≡        | 8 A ~ 1 A ≡        | 8 A ~ 1 A ≡        | 8 A ~ 1 A ≡        |
| •                                | •                  | •                  | •                  | •                  | •                  |

|  |
|--|
|  |
|--|

## M2 DIN rail mounted electronic timers (22.5 mm)

### Relay outputs

- Multi-function or mono-function
- Multi-range (8 ranges)
- Dual-voltage
- 1 changeover 8 A / 250 V
- Display of output states by 2 LEDs
- Wide choice of functions
- Front terminals

### Characteristics

#### Accuracy

|                                                   |                                  |
|---------------------------------------------------|----------------------------------|
| Repetition accuracy<br>(with constant parameters) | ± 0.5 %                          |
| Variation according to 0 • 40 °C                  | ± 3 %                            |
| VDE 0435 -20 • 60 °C                              | ± 5 %                            |
| Min. control pulse                                | 0.02 s                           |
| Maximum reset time by<br>de-energisation          | 0.100 s                          |
| Immunity from micro power cuts                    | <0.02 s                          |
| Minimum time on energisation                      | Ma - Mb - Mc K<br>1s 1s 1s 0.30s |
| Minimum time on de-energisation                   | Ma - Mb - Mc<br>0.2s 1s 1s       |

#### Output specification

|                                                                            |                 |                       |
|----------------------------------------------------------------------------|-----------------|-----------------------|
| Nominal current                                                            | Functions K - R | 5 A ~ 1 A ~           |
|                                                                            | Other functions | 8 A ~ 1 A ~           |
| Nominal voltage                                                            |                 | 250 V ~               |
| Rated power                                                                | Functions K - R | 1250 VA - 30 W        |
|                                                                            | Other functions | 2000 VA - 30 W        |
| Maximum admissible current                                                 |                 | 15 A < 0.01 s         |
| Minimum current                                                            |                 | 50 mA ~               |
| Electrical life at I<br>max 250 V ~<br>resistive (cycles)                  | Function K      | 10 <sup>5</sup>       |
|                                                                            | Other functions | 1.5 • 10 <sup>5</sup> |
| Max. permitted number of operations per hour<br>at I max 250 V ~ resistive |                 | 360                   |
| Mechanical life (operations)                                               |                 | 2 x 10 <sup>7</sup>   |

#### Function and use

|                                                                                    |                     |                                                       |
|------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------|
| Display of<br>output state by<br>LED                                               | output in operation | Green LED                                             |
|                                                                                    | power on            | Red LED                                               |
| Voltage variation                                                                  |                     | ± 15 % Un<br>127 V-10% 240 V+10%                      |
| Maximum absorbed power                                                             |                     | 1.5 W / 24 V<br>5 VA / 110-127 V<br>10 VA / 220-240 V |
| Temperature limits                                                                 | Use<br>Stored       | -20 °C + 60 °C<br>-30 °C + 70 °C                      |
| Insulation according to the standard VDE 0110 -<br>IEC 255 Group C                 |                     | 250 V ~                                               |
| Protection class according to UTE C 20010 -<br>IEC 529 - DIN 40050                 |                     | IP40                                                  |
| Conformity to standards<br>IEC 255 VDE 0435-2021                                   |                     | •                                                     |
| Protection from voltage surge<br>(in joules)                                       |                     | 2                                                     |
| Connection: by terminal blocks with cable guide<br>and front-access captive screws |                     | •                                                     |
| Terminal capacity : multi or single wire 1 or 2<br>leads                           |                     | 2.5 mm <sup>2</sup>                                   |
| Mounting on symmetrical DIN rail<br>35 mm EN 50022                                 |                     | •                                                     |
| Weight (g)                                                                         |                     | 110                                                   |

Products currently being replaced by the TR range

### Timing

#### Types

#### Part numbers (and voltages)

|                                        |
|----------------------------------------|
| 24 V ~ / 110 • 127 V 50 • 60Hz         |
| 24 V ~ / 220 • 240 V 50 • 60Hz         |
| 24 V ~ / 50 • 60Hz                     |
| 110 • 127 V 50 • 60Hz                  |
| 220 • 240 V 50 • 60Hz                  |
| 24 • 240 V ~ 50 • 60Hz                 |
| N.B. : For 48 V ~ supply               |
| Additional resistor : 560 Ω 2W / 24V ~ |

#### Functions

#### Relay output

#### Nominal current

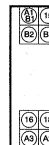
#### Timing ranges (8 available options)

|              |                  |             |
|--------------|------------------|-------------|
| 0.1 s to 1 s | 0.4 min to 4 min | 1 h to 10 h |
| 1 s to 10 s  | 1 min to 10 min  | 6 h to 60 h |
| 6 s to 60 s  | 6 min to 60 min  |             |
| Fixed pulse  |                  |             |

#### Function diagrams

### Terminal connections

- A1 - A2 : Supply
- A3 : Bridge (A2 - A3) for 24V supply
- 15 - 16 - 18 : Timed output contact
- B1 - B2 : Control contact
- 15 - 16 - 18 : Instantaneous contact 1
- B2 - B3 - A3 : Instantaneous contact 2
- Galvanic insulation Input-Output

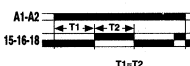


### Accessories

|               |            |
|---------------|------------|
| Panel adaptor | 79 237 806 |
|---------------|------------|

### Function diagrams

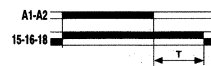
#### Function D Flip-flop



#### Function E Flip-flop



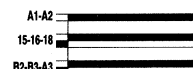
#### Function K Delay on de-energisation



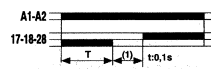
#### Function O Delayed safe-guard



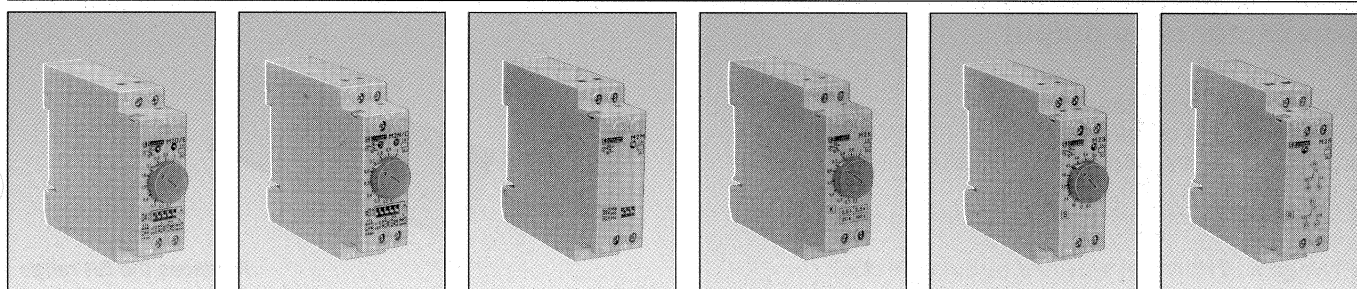
#### Function R Instantaneous relay



#### Function S Star-delta



(1) B2 B3  
• 0.1s  
→ 0.035s

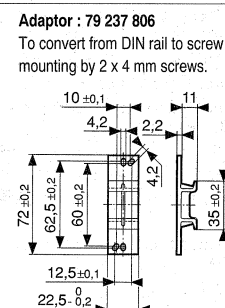
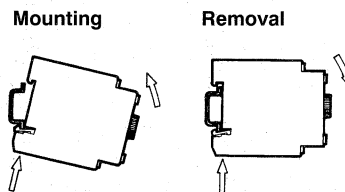
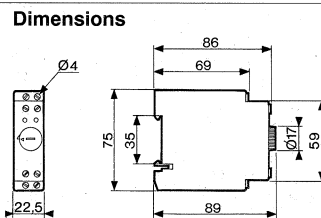
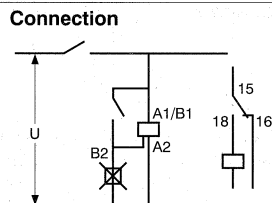
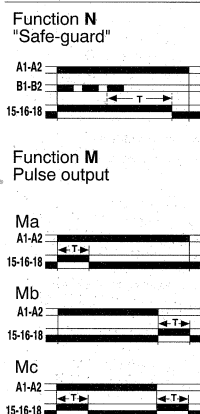


|               |               |             |                |             |             |
|---------------|---------------|-------------|----------------|-------------|-------------|
| 0.1 s • 60 h  | 0.1 s • 60 h  | —           | 0.06 s • 160 s | 3 s • 60 s  | —           |
| <b>M2 D/E</b> | <b>M2 N/O</b> | <b>M2 M</b> | <b>M2 K</b>    | <b>M2 S</b> | <b>M2 R</b> |
| 88 883 105    | 88 883 205    | 88 883 305  | —              | 88 883 505  | —           |
| 88 883 106    | 88 883 206    | 88 883 306  | —              | 88 883 506  | —           |
| —             | —             | —           | —              | —           | 88 883 600  |
| —             | —             | —           | —              | —           | 88 883 602  |
| —             | —             | —           | 88 883 408     | —           | 88 883 604  |
| •             | •             | •           | —              | •           | •           |

|                                         |                                         |                                              |                    |                    |                    |
|-----------------------------------------|-----------------------------------------|----------------------------------------------|--------------------|--------------------|--------------------|
| Multi-function<br>with selection<br>D/E | Multi-function<br>with selection<br>N/O | Multi-function<br>with selection<br>Ma/Mb/Mc | Mono-function<br>K | Mono-function<br>S | Mono-function<br>R |
| 1 changeover                            | 1 changeover                            | 1 changeover                                 | 1 changeover       | 1 changeover       | 2 changeover       |
| 8 A ~ 1A ~                              | 8 A ~ 1A ~                              | 8 A ~ 1A ~                                   | 8 A ~ 1A ~         | 8 A ~ 1A ~         | 8 A ~ 1A ~         |

|             |   |   |                              |                                |            |
|-------------|---|---|------------------------------|--------------------------------|------------|
| •           | • | — | 0.06 s • 0.6 s<br>2 s • 20 s | 0.25 s • 2.5 s<br>16 s • 160 s | 3 s • 60 s |
| 0.5 s ± 0.2 |   |   |                              |                                |            |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|   |   |   |   |   |   |
| • | • | • | • | • | • |
| • | • | • | • | • | • |
| • | • | • | • | • | • |
| • | • | • | • | • | • |
| • | • | • | • | • | • |
| • | • | • | • | • | • |
| • | • | • | • | • | • |



To order, specify :

Standard products,  
non stocked

1 Type

2 Part number

3 Accessory

Example : M2 D/E electronic timer - 88 883 105 - Panel adaptor 79 237 806

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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