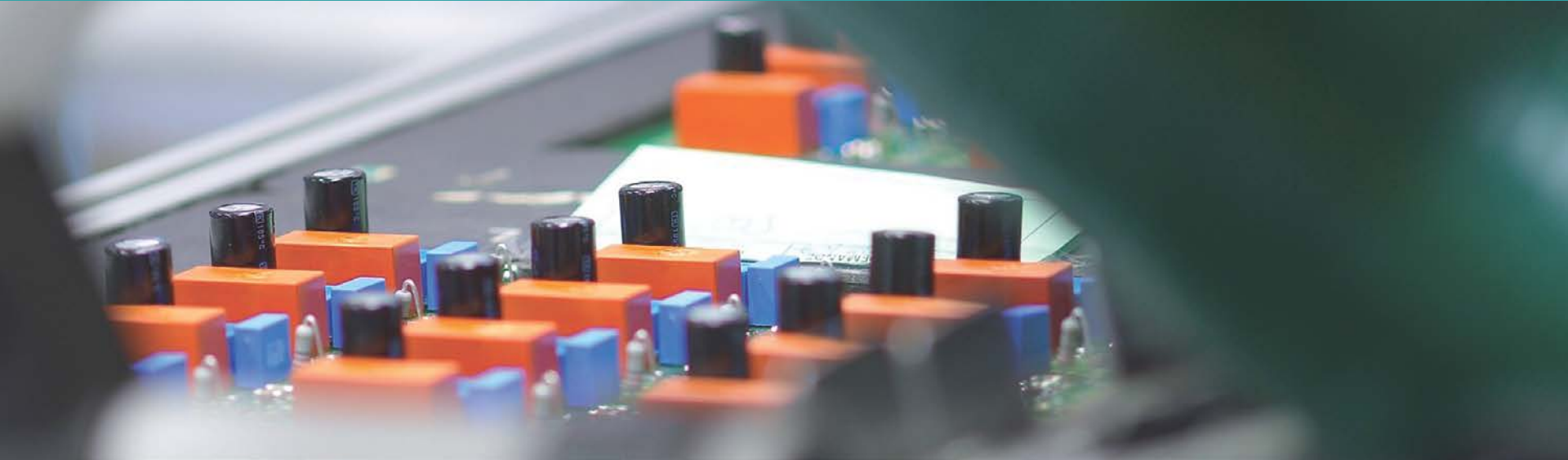


02 / 26 / 2014

LAUNCH NOTE

CHRONOS 2 22.5 MM



SUMMARY

- Introduction
- New Chronos 2 Timers
 - New Models Cross-reference
 - New Chronos 2 Part Numbers
 - Reminder: Other Obsolete 22.5 mm Timers
 - Products dimensions
 - Agency Approvals
 - Good to know
- Applications
- Launch Details

Chronos 2 Timers - 22.5mm

- The new 22.5mm is close to identical to the profile of the 17.5mm Chronos 2:
 - Same position of terminal blocks for a perfect alignment between the 17.5mm and 22.5mm timer versions.
 - Same appearance in design than the 17.5mm versions.
 - A 45mm “nose height” on the front of the product to allow the mounting of the 22.5mm versions in modular panels.
 - Slightly longer than the 17.5mm versions to allow the 2 relays SPDT 8A / 250VAC.



New Models' Cross-reference

Obsolete Models

New Models

22.5 mm

22.5 mm

| Old P/N | Type | New P/N | Type |
|------------|-------|------------|-------|
| 88 865 175 | TQR1 | 88 866 175 | RQR1 |
| 88 865 176 | TQR6 | 88 866 176 | RQR6 |
| 88 865 215 | TA2R1 | 88 866 215 | RA2R1 |
| 88 865 300 | TU2R4 | 88 866 300 | RU2R4 |
| 88 865 303 | TU2R3 | 88 866 303 | RU2R3 |
| 88 865 305 | TU2R1 | 88 866 305 | RU2R1 |
| 88 865 385 | TX2R1 | 88 866 385 | RX2R1 |

- 7 new part numbers directly replace 7 old Chronos 2 22.5 mm models
- The nomenclature is now **88 866** instead of **88 865**

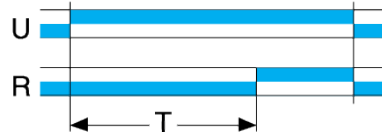
New Chronos 2 Part Numbers

- A total of 7 redesigned timers (22.5 mm) with:
 - Same rated supply voltage as old versions
 - Same electrical specifications as old versions
- **88 865 265** (function K) will not suffer any change in nomenclature and will remain available

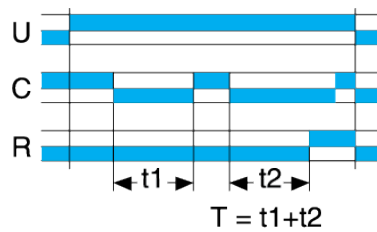
| Part Number | Type | Functions | Output(s) Changeover | Timing | Supply |
|-------------|-------|-----------------------------------|-------------------------|----------------|------------------------|
| 88 866 175 | RQR1 | Q | 1 x 8 A | 0.1 s to 100 h | 24 VDC / 24 to 240 VAC |
| 88 866 176 | RQR6 | Q | 1 x 8 A | 0.1 s to 100 h | 230 to 240 VAC |
| 88 866 215 | RA2R1 | A, At | 2 x 8 A | 0.1 s to 100 h | 24 VDC / 24 to 240 VAC |
| 88 866 300 | RU2R4 | A, At, B, C, H, Ht, Di, D, Ac, Bw | 2 x 8 A | 0.1 s to 100 h | 12 VAC / VDC |
| 88 866 303 | RU2R3 | A, At, H, Ht, B, C, Di, D, Ac, Bw | 2 x 8 A | 0.1 s to 100 h | 12 to 240 VAC / VDC |
| 88 866 305 | RU2R1 | A, At, H, Ht, B, C, Di, D, Ac, Bw | 2 x 8 A | 0.1 s to 100 h | 24 VDC / 24 to 240 VAC |
| 88 866 385 | RX2R1 | Ad, Ah, N, O, P, Pt, TL, Tt, W | 2 x 8 A | 0.1 s to 100 h | 24 VDC / 24 to 240 VAC |

Generic Functions

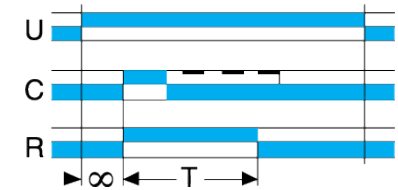
Function A:
Delay on energization



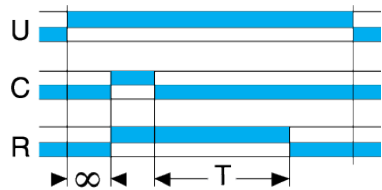
Function At: Timing on energization with memory



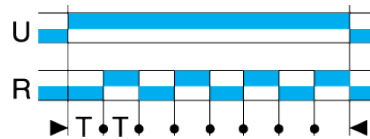
Function B: Timing on impulse (one shot) – Shaping (cannot be reset)



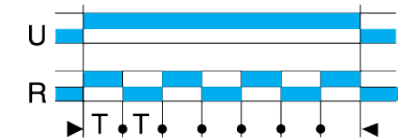
Function C: Timing after impulse. True delay off (with auxiliary power supply)



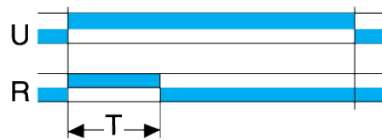
Function D:
Symmetrical flashing



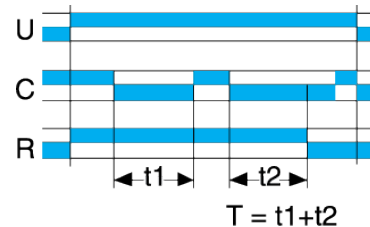
Function Di:
Symmetrical flashing



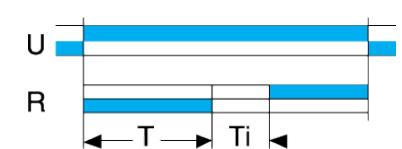
Function H: Timing on energization – Pulse output (adjustable)



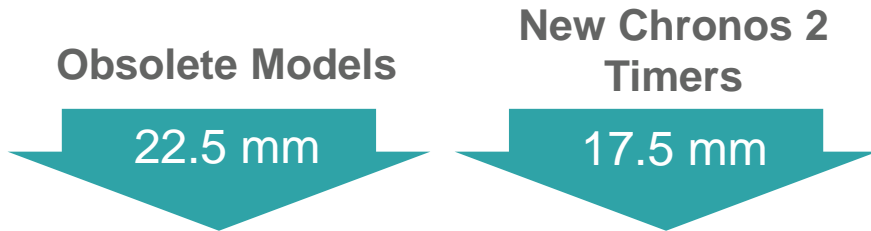
Function Ht: Delay on energization with memory



Function Q:
“Star-delta” starting



Reminder: Other Obsolete 22.5 mm Models



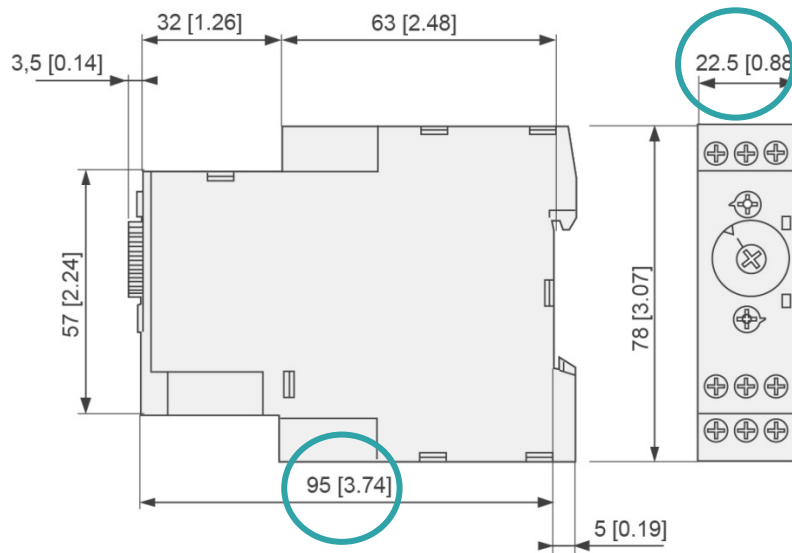
| Old P/N | Type | New P/N | Type | Power supply | Function |
|------------|-------|------------|-------|------------------------|-----------------------------------|
| 88 865 105 | TUR1 | 88 827 105 | MUR1 | 24 VDC / 24 to 240 VAC | A, At, H, Ht, B, C, Di, D, Ac, Bw |
| 88 865 115 | TAR1 | 88 827 115 | MAR1 | 24 VDC / 24 to 240 VAC | A, At |
| 88 865 125 | TBR1 | 88 827 125 | MBR1 | 24 VDC / 24 to 240 VAC | B |
| 88 865 135 | TCR1 | 88 827 135 | MCR1 | 24 VDC / 24 to 240 VAC | C |
| 88 865 145 | THR1 | 88 827 145 | MHR1 | 24 VDC / 24 to 240 VAC | H, Ht |
| 88 865 155 | TLR1 | 88 827 155 | MLR1 | 24 VDC / 24 to 240 VAC | L, Li |
| 88 865 100 | TUR4 | 88 827 103 | MUR3 | 12 to 240 VAC / VDC | A, At, H, Ht, B, C, Di, D, Ac, Bw |
| 88 865 103 | TUR3 | | | | A, At, H, Ht, B, C, Di, D, Ac, Bw |
| 88 865 503 | TURc3 | 88 827 503 | MURc3 | 12 to 240 VAC / VDC | A, At, H, Ht, B, C, Di, D, Ac, Bw |

- These other obsolete 22.5 mm models have already been replaced with more compact Chronos 2 17.5 mm Timers since April 2013.

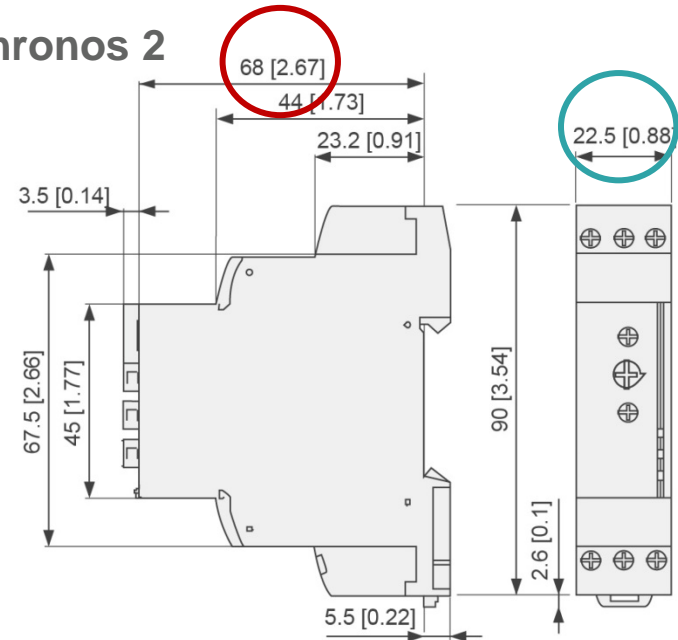
Mechanical Dimensions

- The new 22.5 mm Chronos 2 timers offer a compact and enhanced design with same width (22.5 mm), but 27 mm less depth than the previous version.

Previous Chronos 2



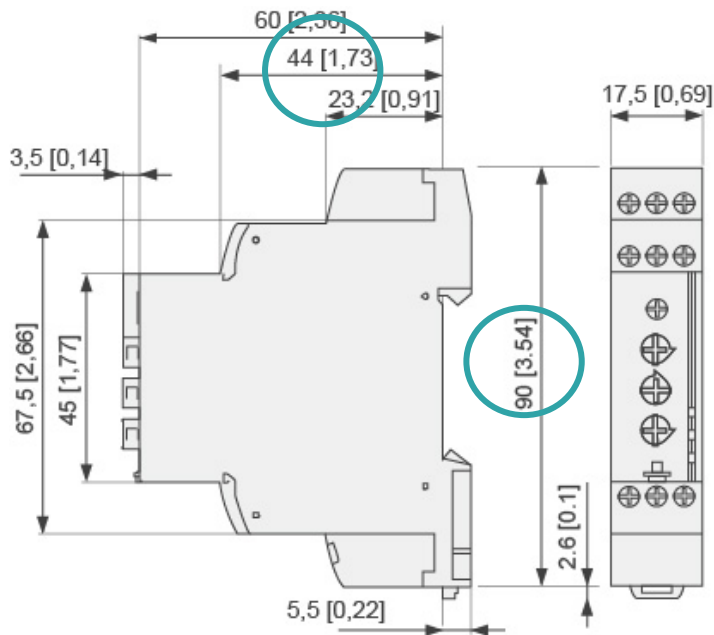
New Chronos 2



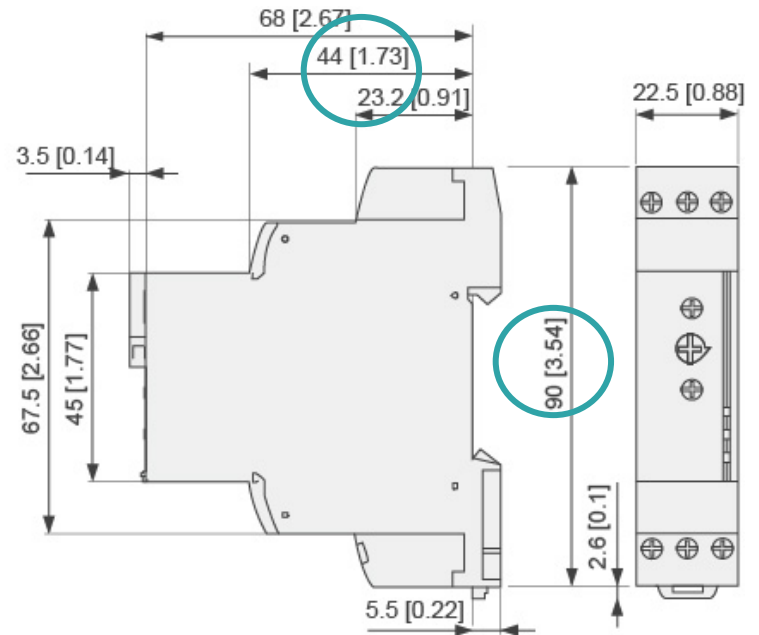
Mechanical Dimensions (cont.)

- Designed for modular use, the new 22.5 mm Chronos 2 timers have a similar profile as the already redesigned 17.5 mm Chronos 2 Timers 88827.

New 17.5 mm Chronos 2



New 22.5 mm Chronos 2



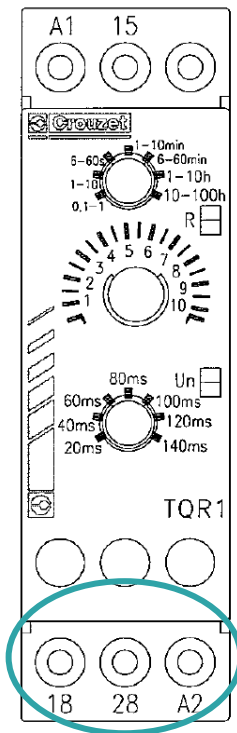
Agency Approvals

- New 22.5 mm Chronos 2 Timers

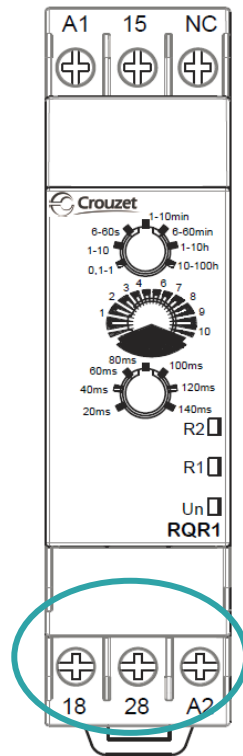
| New Timer Commercial Reference |  |  |  |  |
|--------------------------------------|---|--|---|---|
| 88 866 175 | • | • | • | • |
| 88 866 176 | • | • | | |
| 88 866 215 | • | • | • | • |
| 88 866 300 | • | • | • | • |
| 88 866 303 | • | • | | • |
| 88 866 305 | • | • | • | • |
| 88 866 385 | • | • | | • |

- Input & output terminals are the same for Q function.

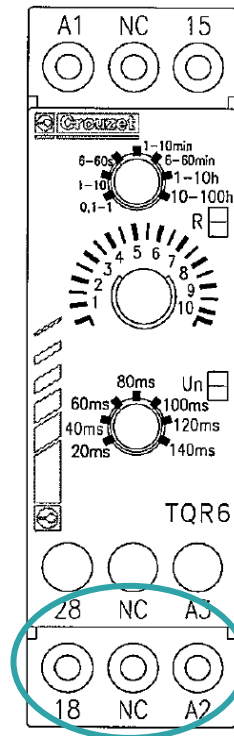
Old P/N
88 865 175



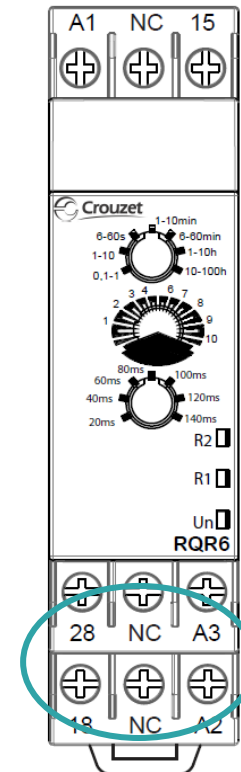
New P/N
88 866 175



Old P/N
88 865 176



New P/N
88 866 176

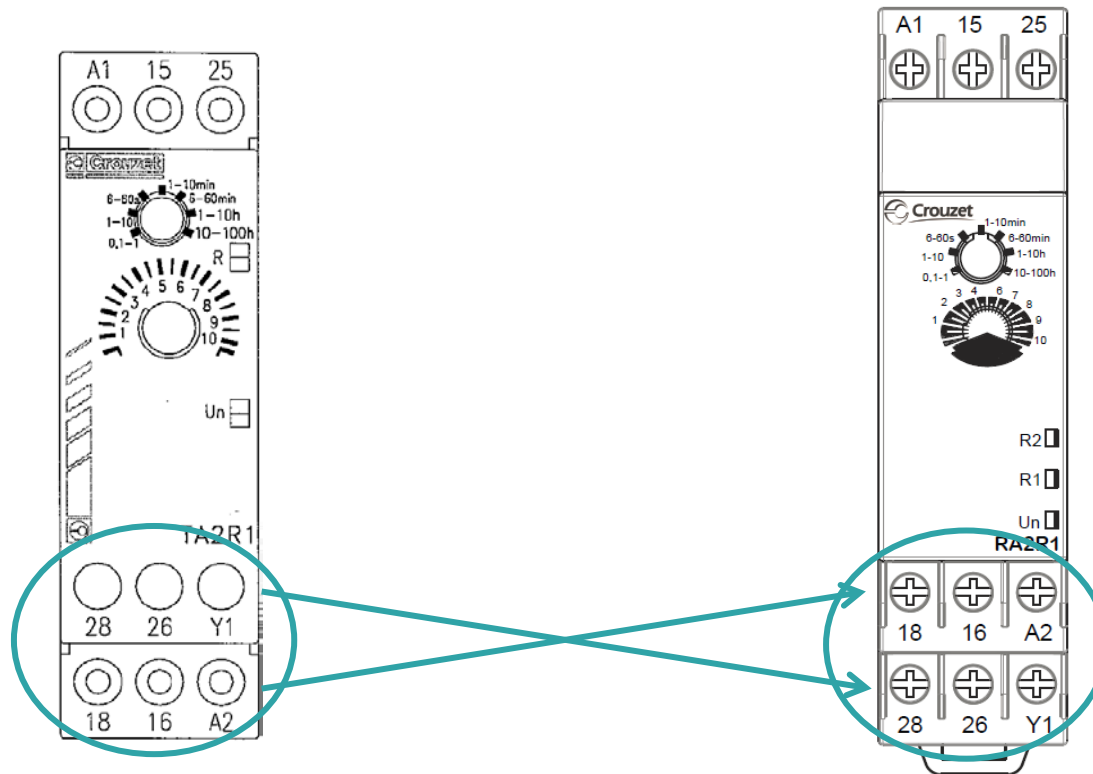


Good to know (cont.)

- For other functions, Input & output terminals have a slight change in position, but remain on the same side of the timer.

Old P/N 88 865 215
/300/303/305/385

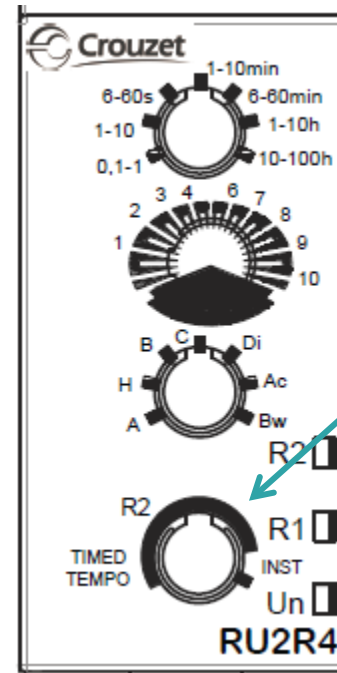
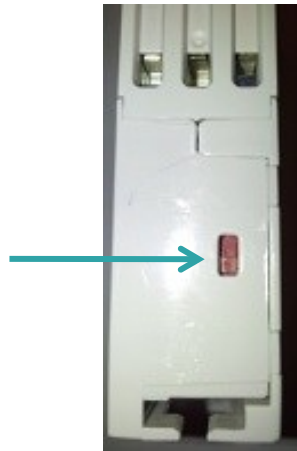
New P/N 88 866 215
/300/303/305/385



Good to know (cont.)

- Instantaneous switch is now on the front face instead of the side

Current
slide
switch on
the side



New **rotary** switch
on front face (same
function as the slide
switch)

Typical applications for Timers are with:

- OEM Industrial
- Industrial ovens
- Ice makers
- HVAC systems
- Compressors
- Plastic machinery
- Packaging equipment
- Trains
- Trucks and Buses
- Oil and Gas

1 NPI First Glance, February 26th

Several marketing materials are made available only to distributors and sales people to support their preparation for the day of the New Product Premiere.

2 New Product Premiere, March 31st

The new Chronos 2 Timers (22.5 mm) will be announced outside of the company. Product information will be available at the Crouzet website.

- Product information will be available in the Crouzet on-line catalog



Micro-control >

DIN Rail Mounted Timers >

New Chronos 2 Timers >

22.5 mm DIN Rail Mounting >



- New datasheets will be available on the website in English, German, Spanish & French

New Chronos 2 timers
→ 22.5 mm

- Relay or solid state output
- Multi-function or mono-function
- Multi-stage
- Remote terminals
- LED status indicator

| Part numbers | Type | Functions | Timing | Output | Special setting | Connections | Supply voltage | Code |
|--------------|------|--|----------------|--------------|-----------------|-----------------|--------------------------------|----------|
| 80001 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 24 V AC / 230 V AC +24 V DC | 80000001 |
| 80002 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 12 V DC / 230 V AC | 80000002 |
| 80003 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 12 V AC | 80000003 |
| 80004 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 24 V DC / 230 V AC | 80000004 |
| 80005 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 230 V AC | 80000005 |
| 80006 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 230 V AC / 24 V DC | 80000006 |
| 80007 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 24 V DC / 230 V AC | 80000007 |
| 80008 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 230 V AC | 80000008 |
| 80009 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 24 V DC / 230 V AC | 80000009 |
| 80010 | 1 | A, C, D, E, H, I, J, K, L, M, N, O, P, R, S, T, U, V, W, X, Y, Z | 0.1 s - 1000 s | 2-pole relay | 23.9 A | Relay terminals | 230 V AC | 80000010 |

General characteristics

| | |
|--|-----------|
| Product range | 80 000 |
| Minimum order quantity | 100 units |
| Minimum order value for international shipping | 100 USD |
| Minimum order value for shipping to Europe | 100 USD |
| Minimum order value for shipping to Africa | 100 USD |
| Minimum order value for shipping to Asia | 100 USD |
| Minimum order value for shipping to Oceania | 100 USD |
| Minimum order value for shipping to South America | 100 USD |
| Minimum order value for shipping to Middle East | 100 USD |
| Minimum order value for shipping to Russia | 100 USD |
| Minimum order value for shipping to Turkey | 100 USD |
| Minimum order value for shipping to Mexico | 100 USD |
| Minimum order value for shipping to Brazil | 100 USD |
| Minimum order value for shipping to Argentina | 100 USD |
| Minimum order value for shipping to Chile | 100 USD |
| Minimum order value for shipping to Peru | 100 USD |
| Minimum order value for shipping to Colombia | 100 USD |
| Minimum order value for shipping to Venezuela | 100 USD |
| Minimum order value for shipping to Ecuador | 100 USD |
| Minimum order value for shipping to Bolivia | 100 USD |
| Minimum order value for shipping to Paraguay | 100 USD |
| Minimum order value for shipping to Uruguay | 100 USD |
| Minimum order value for shipping to Cuba | 100 USD |
| Minimum order value for shipping to Haiti | 100 USD |
| Minimum order value for shipping to Dominican Republic | 100 USD |
| Minimum order value for shipping to Puerto Rico | 100 USD |
| Minimum order value for shipping to Guam | 100 USD |
| Minimum order value for shipping to Northern Mariana Islands | 100 USD |
| Minimum order value for shipping to American Samoa | 100 USD |
| Minimum order value for shipping to French Polynesia | 100 USD |
| Minimum order value for shipping to New Caledonia | 100 USD |
| Minimum order value for shipping to Wallis and Futuna | 100 USD |
| Minimum order value for shipping to French Southern Territories | 100 USD |
| Minimum order value for shipping to Saint Pierre and Miquelon | 100 USD |
| Minimum order value for shipping to Overseas Countries and Territories | 100 USD |
| Minimum order value for shipping to United Kingdom | 100 USD |
| Minimum order value for shipping to Ireland | 100 USD |
| Minimum order value for shipping to France | 100 USD |
| Minimum order value for shipping to Germany | 100 USD |
| Minimum order value for shipping to Italy | 100 USD |
| Minimum order value for shipping to Spain | 100 USD |
| Minimum order value for shipping to Portugal | 100 USD |
| Minimum order value for shipping to Belgium | 100 USD |
| Minimum order value for shipping to Netherlands | 100 USD |
| Minimum order value for shipping to Luxembourg | 100 USD |
| Minimum order value for shipping to Austria | 100 USD |
| Minimum order value for shipping to Switzerland | 100 USD |
| Minimum order value for shipping to Liechtenstein | 100 USD |
| Minimum order value for shipping to Germany | 100 USD |
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| Minimum order value for shipping to Portugal | 100 USD |
| Minimum order value for shipping to Belgium | 100 USD |
| Minimum order value for shipping to Netherlands | 100 USD |
| Minimum order value for shipping to Luxembourg | 100 USD |
| Minimum order value for shipping to Austria | 100 USD |
| Minimum order value for shipping to Switzerland | 100 USD |
| Minimum order value for shipping to Liechtenstein | 100 USD |

Dimensions (mm)

Connections

1 changeover relay output

2 changeover relay outputs

3 changeover relay outputs

Curves

Function A: Delay on energization

Function B: Timing on regular one shot

Function C: Timing after regular delay (OFF)

Function D: Flip-Flop Pulse start

Function E: Delay on energization with memory

Function F: Side-gate

Function G: Delay on energization with memory

Function H: Delay on energization with memory

Function I: Delay on energization with memory

Function J: Delay on energization with memory

Function K: Delay on energization with memory

Function L: Delay on energization with memory

Function M: Delay on energization with memory

Function N: Delay on energization with memory

Function O: Delay on energization with memory

Function P: Delay on energization with memory

- Previous Chronos 2 datasheets will remain available on the website in a new « Legacy & Obsolete » section in the on-line catalog.
- A cross-reference between previous and new part numbers will also be available.

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THANK YOU

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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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