



# RELAIS

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**NICE TO KNOW**

## HOW TO USE THIS CATALOGUE

Relays are remote-controlled electrical switches that are controlled by another switch, such as a horn switch or a computer as in a power train control module. Relays allow a low current flow circuit to control a higher current circuit.

### Voltage spikes

When a relay is switched open, the magnetic field around the coil collapses, inducing a voltage into itself and creating a reverse polarity voltage spike of several hundred volts.

High-ohm resistors or diodes are used for this voltage suppression. The presence of a suppression diode or resistor is usually clearly marked on the relay itself.

## Structure of the catalogue

The relays in this catalogue are split up into two chapters:

- 1 Relays
- 2 Flasher units

The chapter 'Relays' is arranged by the type of relays (see below).

The different types of relays are then classified according to below specifications:

- 1 Footprint
- 2 Wiring diagram
- 3 Voltage
- 4 Maximum switching current

All other specifications are placed in random order.

A yellow marking is shown if there is a diode, resistor, bracket or dust cover present.

The chapter 'Flasher units' is arranged according to the shape of the housing. Subsequently, the parts are organised according to voltage and the amount of pins.

## RELAYS

### Footprint and wiring diagram

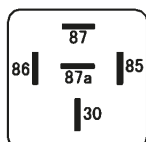
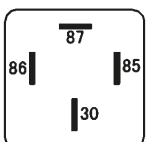
New in our catalogue is that the relays are arranged by footprint. Our footprints are represented as below example. The amount of pins and corresponding pin dimensions are also mentioned:



The wiring diagram is printed on the housing of the automotive relay. If you're not sure how to connect the relay, please contact your responsible contact person for technical assistance.

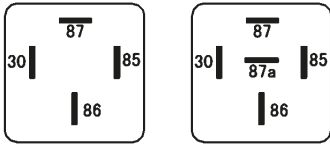
In most cases, the pins of automotive relays have specific codes:

Terminal/Pin number	Connection
85	Coil
86	Coil
87	Normally Open (NO)
87a	Normally Closed (NC) - not present on 4-pin relays
30	Common connection to NO & NC terminals



## HOW TO USE THIS CATALOGUE

In some cases however, pins 86 and 30 have switched places compared to the normal pin layout, as you can see on below diagrams. In those cases, you will see a notification.



### Symbols and contact forms

Please read our wiring diagrams as followed:

coil



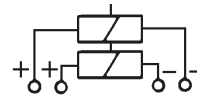
diode



resistor



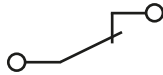
bistable relay



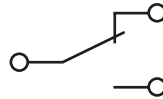
normally open contact (NO)



normally closed contact (NC)



change over contact (CO)



### Voltage

Voltages can occur in 2 different types:

- DC = Direct current
- AC = Alternating current

### Maximum switching current

The maximum switching current is the maximum current that can be switched by the contacts. Contacts may burn if this current is exceeded.

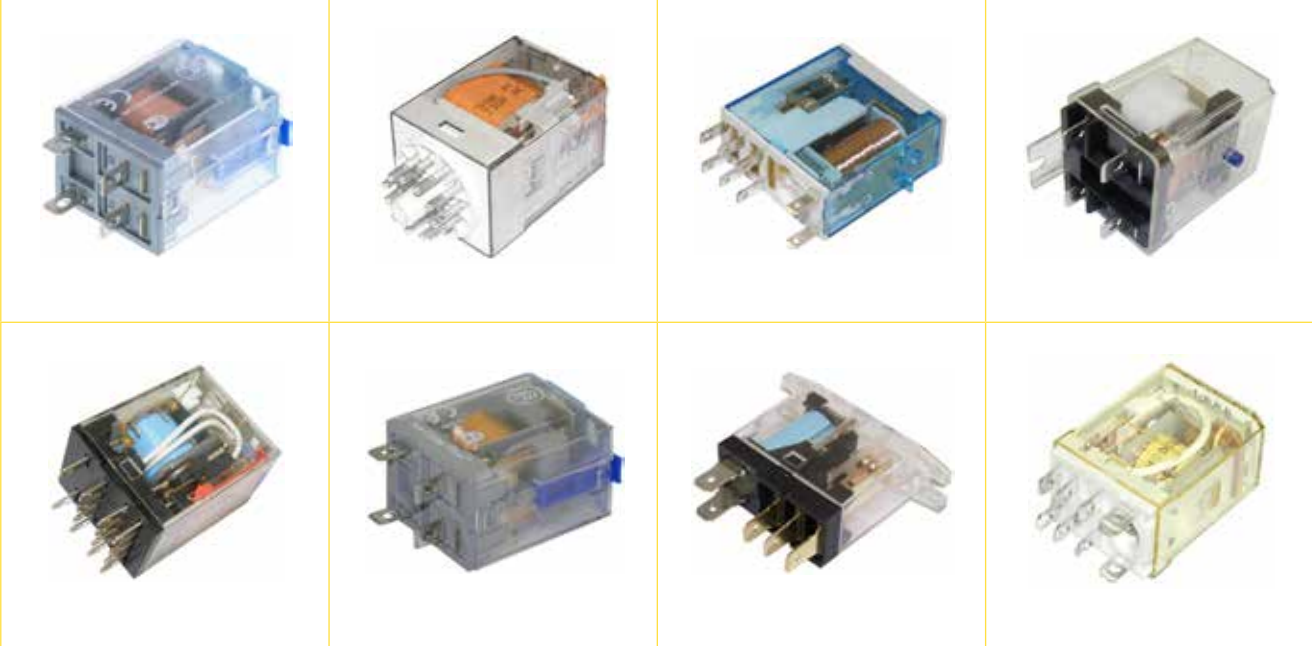
### Types of relays

#### Automotive relays



## HOW TO USE THIS CATALOGUE

### Industrial relays



### Horn relays



## HOW TO USE THIS CATALOGUE

### FLASHER UNITS

#### Function

A flasher unit controls the operation of the indicator lights or hazard lights using an indicator switch. Its main function is to let the lights blink.

There are two basic types of flasher units. One is operated by a piece of wire or a bimetallic strip that expands and contracts as it is heated by the current; the other is relay-operated by a transistor circuit.

The first type is easy to locate as it makes a clicking sound when it is operated. To check whether it is faulty, use a circuit tester or test lamp in the way described below.

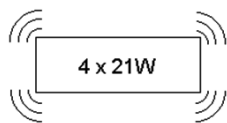
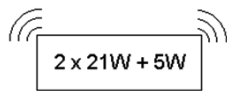
The transistor type produces no clicking sound, and cannot be checked with a circuit tester. It can be damaged by a short circuit.

The only way to determine if a transistor type is faulty is by eliminating all other components in the circuit.

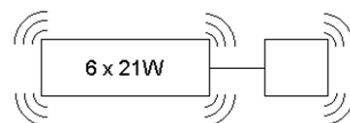
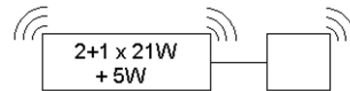
#### Specifications on the part

In this catalogue, the inscription on the flasher unit is mentioned. Each flasher unit has its own specifications. Please find the most common specifications below:

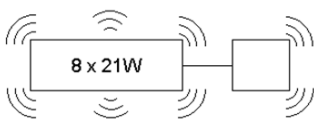
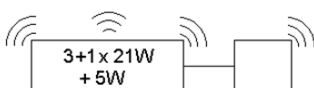
**2(4) x 21W + 0...5W**



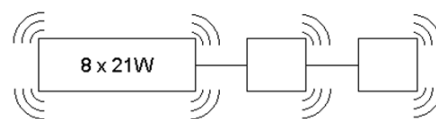
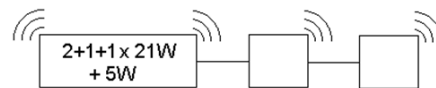
**2+1(6) x 21W + 0...5W**

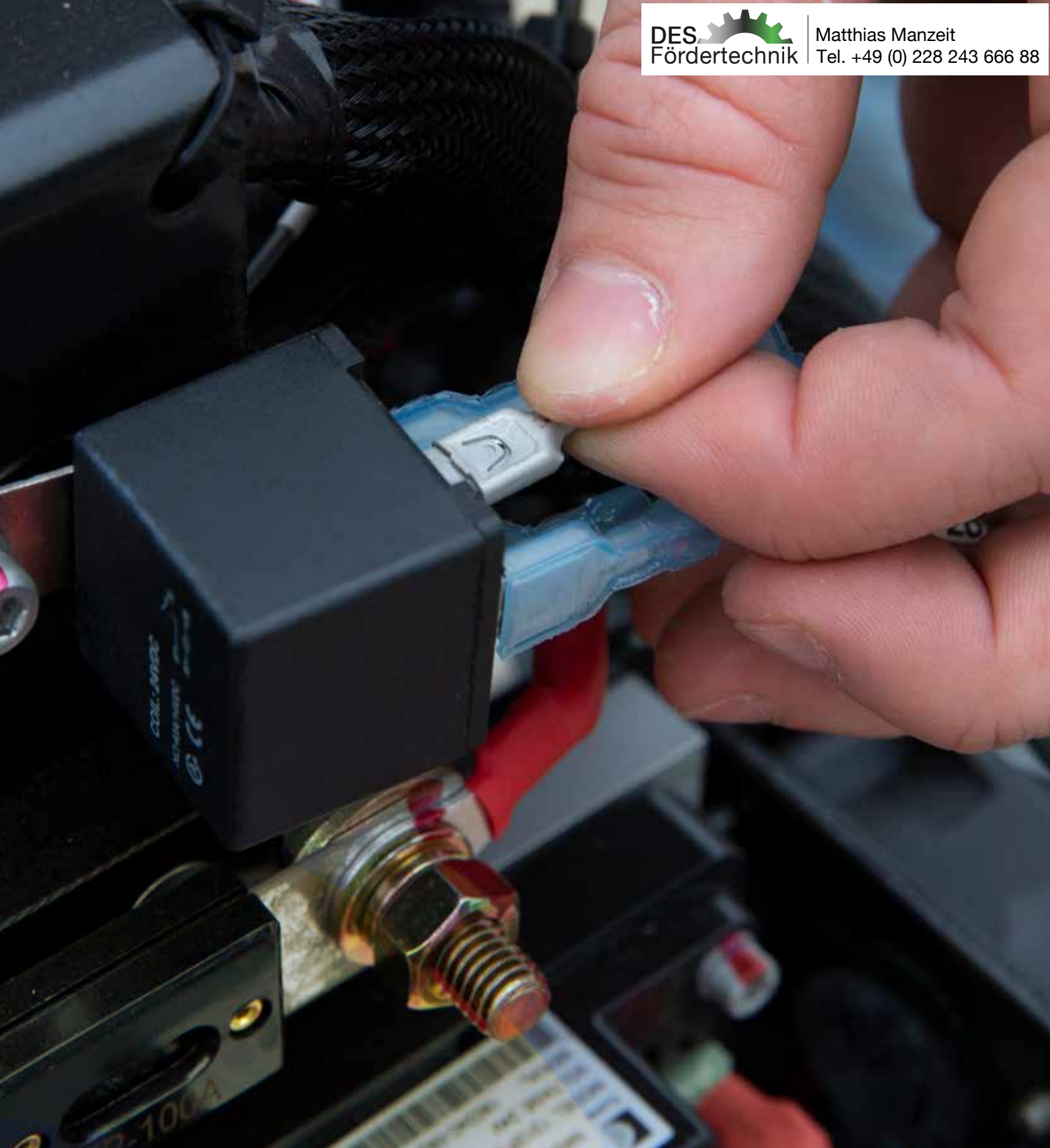


**3+1(8) x 21W + 0...5W**



**2+1+1(8) x 21W + 0...5W**





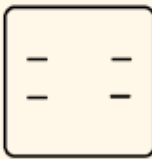
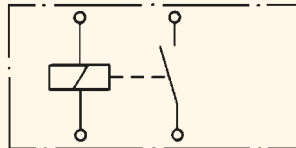


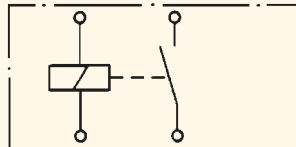



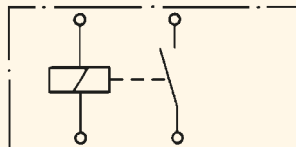










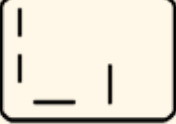
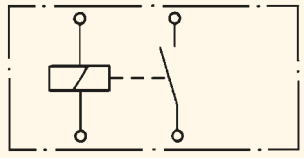

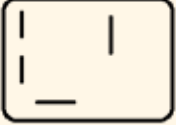
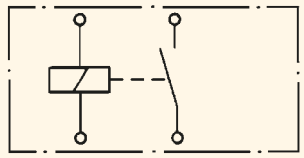

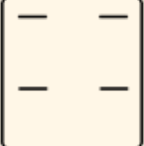
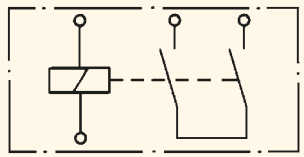

# RELAYS



# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
		12	DC	30		●	●	●		111TA5021
										
		12	DC	20						165TA2488
		24	DC	10						165TA2489
										
		12	DC	25						116TA5657
		12	DC			●				165TA2492
		12	DC	30						165TA2490

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	30		●				129TA6736
	12	DC	35		●				165TA2491
	24	DC	25		●				165TA2493
 2 x 4,8 mm 2 x 6,3 mm									
	24	DC	30			●			165TA2494
 2 x 4,8 mm 2 x 6,3 mm									
	12	DC	30			●			122TA7917
 4 x 4,8 mm									
	48	DC	16	●					124TA4682

# RELAYS


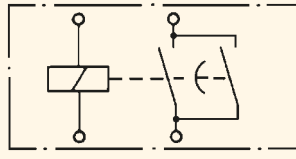




AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 4 x 5,3 mm									
	12	DC	15			●		 Fuse	165TA2496
	12	DC	20				●	Not sealed	111TA4979
	12	DC	30		●		●	Sealed	165TA2501
	12	DC	30			●			111TA4948
	12	DC	40	●					165TA2504
	12	DC	40	●		●			165TA2505
	12	DC	40		●	●			111TA5054
	12	DC	40		●				121TA1130

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	40			●			107TA1626
	12	DC	40						165TA2497
	24	DC	15			●		 Fuse	165TA2498
	24	DC	20			●			111TA5020
	24	DC	20						129TA6676
	24	DC	20						165TA2500
	24	DC	30			●		Fuse	165TA2499
	24	DC	40		●	●			165TA2503

# RELAYS




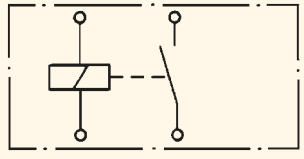


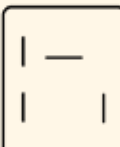
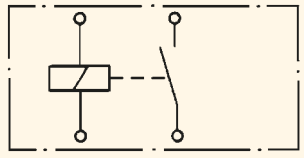


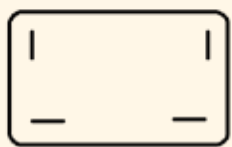
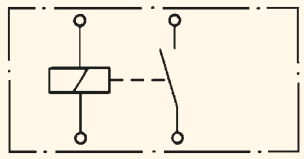


AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
4 x 6,3 mm										
		24	DC	70						165TA2506
										
4 x 6,3 mm										
		12	DC	20		●	●	●		165TA2511
		12	DC	20	●		●	●		125TA3368
		12	DC	22			●	●		111TA4988
		12	DC	22				●		165TA2508
		12	DC	30			●	●		165TA2507
		12	DC	30	●		●	●		165TA2512



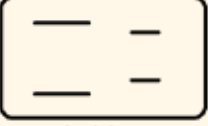
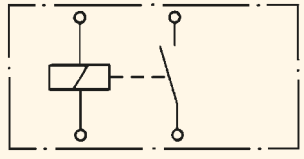



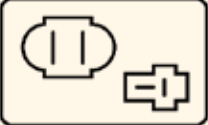
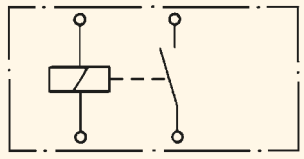



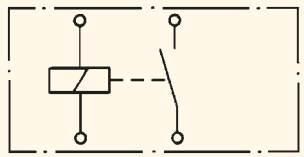

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC				●	●		165TA2509
	24	DC	10			●	●		165TA2510
	24	DC	20	●		●	●		111TA4878
	24	DC	30			●	●		111TA5083
	48	DC	10			●	●		136TA8357
 4 x 6,3 mm									
	12	DC	20			●	●		121TA1121
	24	DC	20			●	●		165TA2513
	48	DC	20			●	●		165TA2514

# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 4 x 6,3 mm									
									
	12	DC	20			●	●		165TA2515
	24	DC					●		112TA1158
 4 x 6,3 mm									
									
	12	DC	25			●			111TA4933
	24	DC	10						111TA5030
 4 x 6,3 mm									
									
	24	DC	30						165TA2519
	240	AC	30						165TA2518

# RELAYS

AUTOMOTIVE RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
		12	DC	30				●	With centre pin	124TA9227
		12	DC	30				●	Without centre pin	165TA2520
		12	DC				●	●		111TA5048
										
		12	DC				●	●		111TA4976
		24	DC				●	●		111TA4993
										
		12	DC	50			●			165TA2525



AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	50		●	●			165TA2526
	12	DC	70			●			111TA4855
	12	DC	70						112TA1159
	12	DC	70		●				165TA2524
	12	DC	70		●	●			165TA2527
	12	DC	70		●	●	●		165TA2528
	12	DC	70	●					165TA2529
	24	DC	40		●				165TA2534
	24	DC	40		●	●			165TA2535

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	40	●					134TA9809
	24	DC	50						165TA2532
	24	DC	50			●			161TA5422
	24	DC	70			●			165TA2530
	24	DC	70						165TA2531
	24	DC	70		●	●			165TA2536
	24	DC	70	●		●			165TA2537
	24	DC				●	●		165TA2533

# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 2 x 6,3 mm 2 x 9,5 mm									
	12	DC				●	●		165TA2538
	24	DC					●		165TA2539
 2 x screw 2 x 6,3 mm									
	12	DC	60			●			165TA2541
	12	DC	60			●			165TA2542
	24	DC	40			●			125TA4573
	24	DC	40			●			165TA2540

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 2 x screw 2 x 6,3 mm									
	12	DC	75			●			165TA2544
	24	DC	50			●			165TA2543
 2 x screw 2 x 6,3 mm									
	12	DC	75			●			111TA5028
	24	DC	50			●			124TA4689
 2 x screw 2 x 6,3 mm									
	12	DC	75			●		Intermittent	165TA2545
	12	DC	75			●		Continuous	111TA5010

# RELAYS

AUTOMOTIVE RELAYS



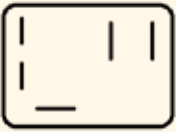
AUTOMOTIVE RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 2 x screw 2 x 6,3 mm										
		12	DC	100			●			165TA2547
		12	DC	200			●			165TA2546
		24	DC	60			●			129TA6764
 2 x screw 2 x 6,3 mm										
		24	DC	100			●			131TA2667
 2 x 1,2 mm 2 x screw										
		12	DC	130		●	●	●	IP54 (not sealed)	165TA2548
		12	DC	130		●	●	●	IP67 (sealed)	165TA2549

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 									
	24	DC	130		●	●	●	IP54 (not sealed)	155TA2135
	24	DC	130		●	●	●	IP67 (sealed)	165TA2550
 									
	12	DC	35/20		●				165TA2551
	12	DC	40/30			●	●		134TA9835
	12	DC	50/30		●				165TA2552
 									
	24	DC	35/20		●				165TA2554

# RELAYS

AUTOMOTIVE RELAYS


AUTOMOTIVE RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 5 x 2,8 mm										
	12	DC	20/10		●					165TA2555
	12	DC	35/20		●					152TA5566
	24	DC	15/10	●						165TA2556
 2 x 6,3 mm 3 x 4,8 mm										
	12	DC	25/20							165TA2557
	12	DC	25/20		●					116TA5658
	12	DC	25/20	●						165TA2559
	12	DC	35/20		●					124TA4702

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC				●			165TA2558
	24	DC	10/5	●					116TA5663
	24	DC	20/10						124TA9225
	24	DC	25/20						165TA2560
	24	DC	30/20		●				165TA2562
	24	DC				●			165TA2561
  <p>2 x 4,8 mm 3 x 6,3 mm</p>									
	12	DC	20/10			●			165TA2563
	24	DC	20/10			●			165TA2565



# RELAYS

AUTOMOTIVE RELAYS


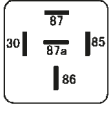


AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	48	DC	20/10			●			165TA2564
 <p>5 x 6,3 mm</p>									
	12	DC	40						106TA1305
	12	DC	40			●			136TA8356
	12	DC	40	●		●			165TA2575
	24	DC	40			●			107TA1625
 <p>5 x 6,3 mm</p>									
	6	DC	30/20			●			165TA2589
	12	DC	30/20		●	●			165TA2592

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	30/20			●			165TA2580
	12	DC	30/20			●	●		165TA2581
	12	DC	30/20			●	●		165TA2582
	12	DC	35/20		●	●			165TA2591
	12	DC	40/15			●			151TA2322
	12	DC	40/30	●		●			165TA2596
	12	DC	40/30	●					116TA5661
	12	DC	40/30		●	●	●		111TA5022
	12	DC	40/30		●				165TA2590

# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	40/30		●				136TA8355
	12	DC	40/30		●	●	●		165TA2593
	12	DC	40/30			●	●		165TA2578
	12	DC	40/30						106TA2681
	12	DC	40/30			●			106TA2682
	12	DC	40/30			●	●		165TA2583
	12	DC					●		165TA2579
	24	DC	20/10			●	●		165TA2584
	24	DC	20/10	●					165TA2597

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	22/10			●			165TA2585
	24	DC	20/15		●	●			121TA1117
	24	DC	30/20		●				165TA2830
	24	DC	30/20		●	●	●		165TA2595
	24	DC	40/30	●					155TA1911
	24	DC	40/30		●				165TA2594
	24	DC	40/30						131TA2695
	24	DC	40/30			●	●		165TA2586
	24	DC	40/30	●		●			124TA4675

# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	36	DC	40/30	●					129TA6655
	48	DC	50/40						165TA2587
	48	DC	50/40			●			165TA2588
  <p>5 x 6,3 mm</p>									
	12	DC	15						165TA2599
	12	DC	20			●			165TA2598
	24	DC	10			●			165TA2600
	24	DC	40/20						165TA2602
	24	DC	50/30			●			165TA2601

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 5 x 6,3 mm 									
	12	DC	10			●	●		165TA2603
	12	DC	20				●		165TA2604
	12	DC	20			●	●		165TA2605
	12	DC	20			●	●		121TA1133
	12	DC	20		●	●	●		165TA2609
	12	DC	30				●		111TA5082
	24	DC	20			●	●		165TA2607
	24	DC				●	●		165TA2606

# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	48	DC	20			●	●		165TA2608
	48	DC	20	●		●	●		165TA2610
 <p>5 x 6,3 mm</p>									
	12	DC	20				●		165TA2612
	12	DC				●	●		121TA1128
	24	DC	20			●			165TA2613
	24	DC	20			●	●		134TA9799
	24	DC				●			165TA2614
	24	DC					●		124TA4681









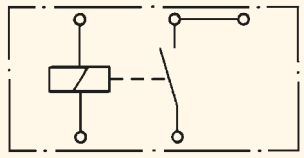

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 <p>6 x 6,3 mm</p>									
	12	DC	20						165TA2616
	12	DC	20				●		165TA2617
	24	DC	20	●					165TA2619
 <p>8 x 6,3 mm</p>									
	12	DC	30/3			●			165TA2646
	24	DC	30/3			●		Sealed	122TA7919
	24	DC	30/3			●		Not sealed	165TA2648
	24	DC	30/10			●			165TA2647



# RELAYS



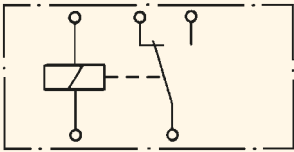
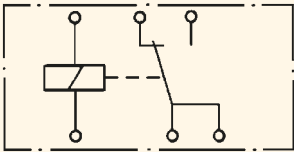

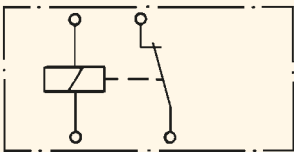




AUTOMOTIVE RELAYS




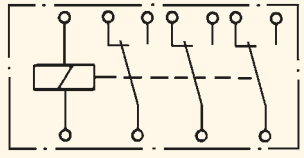

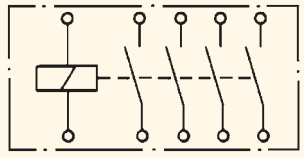

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	30/10			●		35 mm DIN rail bracket	165TA2649
									
	12	DC	200			●			145TA2408
	12	DC				●			111TA4977
	12	DC				●			165TA2657
	12	DC				●			165TA2659
	12	DC				●			131TA2670
	12	DC				●			165TA2661
	12	DC				●			111TA5069

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC				●			165TA2663
	24	DC	100			●			165TA2660
	24	DC				●			111TA4997
	24	DC				●			111TA5074
	24	DC				●			165TA2658
	24	DC				●			165TA2662
									
	24	DC							165TA2664

# RELAYS

AUTOMOTIVE RELAYS

AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
									
	12	DC	40			●			165TA2665
									
	12	DC	20			●			165TA2666
									
	6	DC				●			165TA2667
	12	DC	15				●		111TA4946
	12	DC				●			111TA4957
	24	DC	10			●			111TA5046




AUTOMOTIVE RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC				●			111TA4874
									
	80	DC							165TA2668
									
	24	DC	2						165TA2669

# RELAYS

GLOW PLUG RELAYS

GLOW PLUG RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 <p>2 x 8,0 mm 2 x 6,3 mm</p>									
	12	DC	30			●		3 mm bracket	165TA2521
	12	DC	30			●		5 mm bracket	165TA2522
	12	DC				●			111TA5085
	24	DC	35			●		3 mm bracket	111TA5066
	24	DC				●		5 mm bracket	165TA2523
 <p>2 x 8 mm 2 x 6,3 mm</p>									
	12	DC					●	Sealed	111TA4974
	12	DC					●	Not sealed	111TA5058



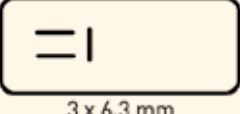
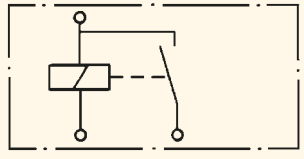




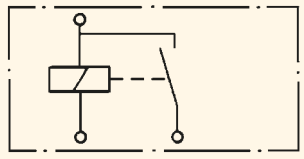




## GLOW PLUG RELAYS









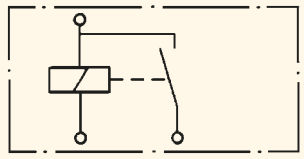


	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC					●		111TA5065

GLOW PLUG RELAYS

# RELAYS

HORN RELAYS



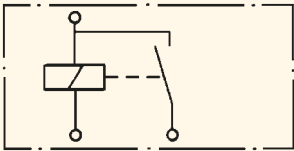

HORN RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 3 x 6,3 mm										
		12	DC	15			●			111TA4920
		24	DC	8			●			165TA2482
		48	DC	2			●			111TA5002
 3 x 6,3 mm										
		12	DC	15				●		111TA4938
		12	DC	15				●		111TA4960
		12	DC	15				●		111TA5076
		12	DC					●		165TA2483



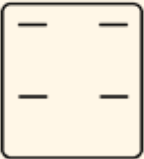
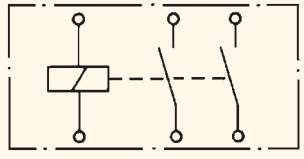

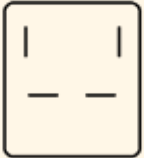
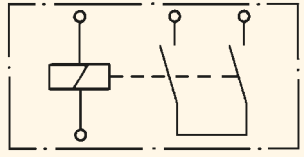


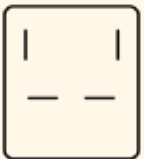
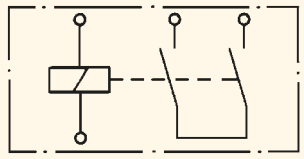


HORN RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	8				●		124TA4679
	24	DC	8				●		165TA2485
	24	DC					●		165TA2484
	48	DC	2			●	●		165TA2486
	48	DC	2			●	●		124TA4683
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;">  3 x screw         </div> <div style="border: 1px solid black; padding: 5px;">  </div> </div>									
	12	DC				●			165TA2487
	24	DC				●			111TA4942



# RELAYS



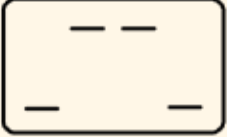
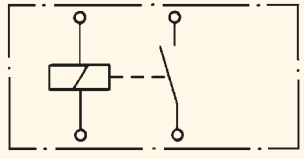



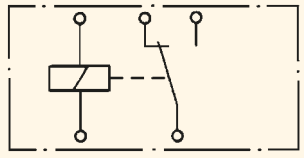




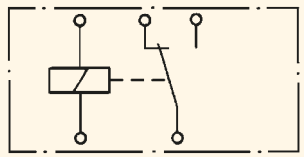

HORN RELAYS

HORN RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
									
	12	DC				●			165TA2656

INDUSTRIAL RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
		48	DC	30			●			135TA3507
										
		24	DC	10	●				Test button	165TA2495
		24	DC	10					Test button	116TA5667
										
		24	DC	30			●			165TA2516
		230	AC	30			●			165TA2517

# RELAYS



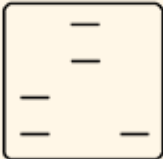
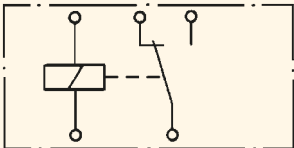



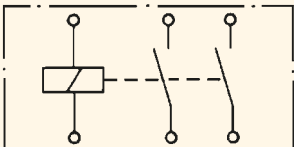



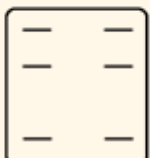
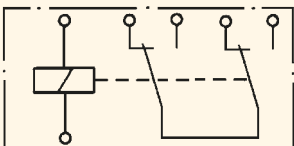

INDUSTRIAL RELAYS




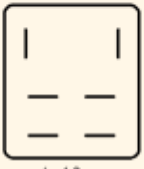
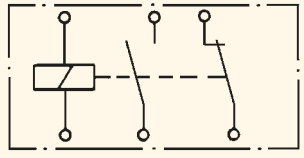

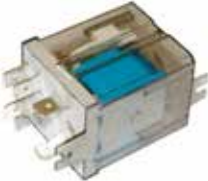




INDUSTRIAL RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 4 x 6,3 mm										
	48	DC	30				●			111TA4900
	48	DC	30							116TA5672
 2 x 2,8 mm 3 x 4,8 mm										
	12	DC	10							165TA2553
	24	DC	10							161TA1496
	48	DC	10							124TA8980
 5 x 4,8 mm										
	12	DC	10	●					LED indicator	165TA2567

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	16					Test button + LED indicator	165TA2566
	24	AC	10					LED indicator	124TA4687
	24	DC	10	●				LED indicator	165TA2571
	24	DC	10			●			165TA2570
	24	DC	10					LED indicator	165TA2572
	24	DC	10						165TA2569
	48	DC	10			●			165TA2573
	48	DC	10						124TA8989
	230	AC	16					Test button	165TA2568

# RELAYS



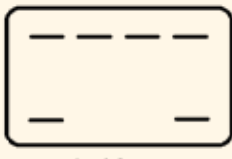
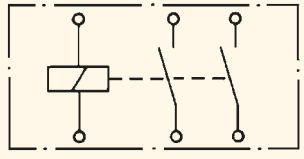



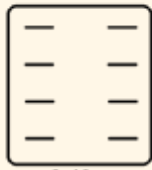
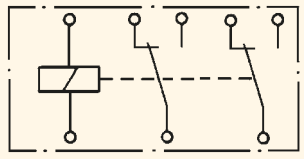




INDUSTRIAL RELAYS









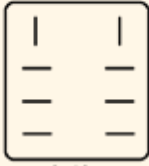
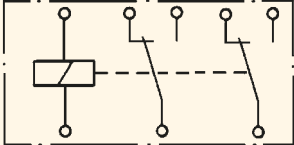


INDUSTRIAL RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
	5 x 4,8 mm									
	12	DC	10				●			122TA7898
	24	DC	10				●			165TA2574
										
	6 x 4,8 mm									
	12	DC	15				●			128TA3022
	36	DC	15				●			131TA2685
	80	DC	16							165TA2615
										
	6 x 4,8 mm									
	36	DC	30				●			124TA4677

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	80	DC	30			●		Test button	135TA3508
  <p>6 x 6,3 mm</p>									
	12	DC	20			●			129TA6737
	24	DC	20			●			134TA9838
	36	DC	20			●			124TA4692
	48	DC	20			●			165TA2620
	60	DC	20			●			165TA2621
	110	DC	20			●			165TA2622

# RELAYS

INDUSTRIAL RELAYS

INDUSTRIAL RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
		24	DC	25						165TA2623
		48	DC	25						124TA9228
		240	AC	25						165TA2624
										
		6	DC	10			●			121TA1127
		12	DC	10					Impulse relay (bi-stable)	122TA7899
		12	DC	10						164TA7502
		24	DC	10			●			165TA2635


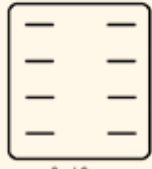


INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	16					Test button	164TA7500
	36	DC	10						129TA6516
	36	DC	15			●			140TA6598
	36	DC	15					Test button	111TA4987
	80	DC	16					LED indicator Test button	111TA5003
	120	AC	10						122TA7895
 									
	12	DC	10			●			164TA7499
	12	DC	10					Test button + LED indicator	165TA2642



# RELAYS

INDUSTRIAL RELAYS










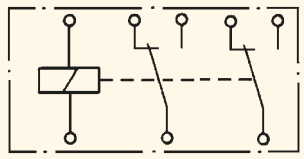

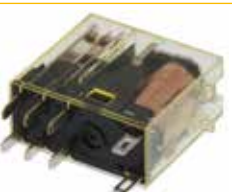
INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	10						128TA3014
	24	DC	10	●				Test button	165TA2641
	24	DC	10			●			139TA5073
	24	DC	10					Test button + LED indicator	165TA2644
	24	DC	10						165TA2637
	48	DC	10			●			165TA2640
	48	DC	10						165TA2639
	230	AC	10			●			165TA2638
	230	AC	10					Test button + LED indicator	165TA2643

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	230	AC	10						165TA2636
 									
	12	DC	16			●			111TA4904
	24	DC	16			●			124TA4695
	48	DC	16			●			129TA6530
	80	DC	16			●			165TA2645
 									
	24	DC	16			●		35 mm DIN rail bracket	165TA2651
	24	DC	16						165TA2650

# RELAYS

INDUSTRIAL RELAYS



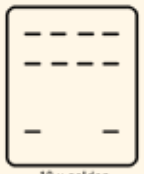
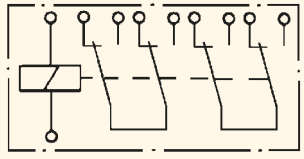


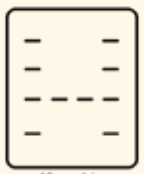
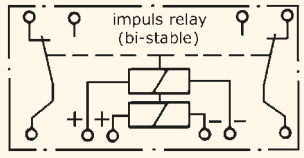



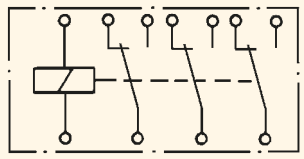


INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
 8 x pin 2,4 mm									
	12	DC	10					Test button	111TA5008
	12	DC	10						165TA2652
	24	DC	10					Test button + LED indicator	165TA2654
	36	DC	10					Test button	111TA3262
	48	DC	10					Test button	165TA2655
	230	AC	10					Test button	165TA2653
 8 x solder									
	12	DC	10						165TA2625






INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	10					Test button	<b>129TA6575</b>
	24	DC	10					Test button + LED indicator	<b>129TA6733</b>
	24	DC	10						<b>165TA2627</b>
	24	DC	12					Test button	<b>165TA2626</b>
	48	DC	10						<b>165TA2628</b>
	120	AC	10					LED indicator	<b>165TA2629</b>
  <p>8 x solder</p>									
	12	DC	5					LED indicator	<b>165TA2631</b>
	24	DC	5					LED indicator	<b>129TA6702</b>



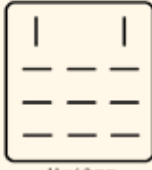
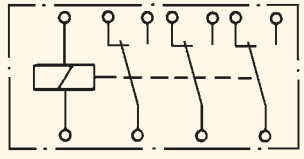




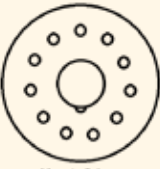
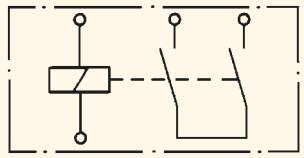


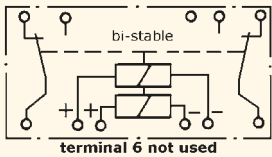

# RELAYS

INDUSTRIAL RELAYS

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	24	DC	5					LED indicator	121TA1126
	24	DC	8					Test button	129TA6773
	48	DC	5					LED indicator Test button	165TA2632
	48	DC	8						165TA2630
 									
	12	DC	3						124TA4693
	24	AC	3						165TA2633
	24	DC	3						165TA2634

INDUSTRIAL RELAYS		Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
										
		12	DC	4						165TA2446
		80	DC							165TA2447
										
		12	DC	3						129TA6752
		24	DC	3						165TA2448
										
		6	DC	10						111TA4922
		12	DC	10			●			165TA2452

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	12	DC	10						121TA1131
	24	DC	10			●			111TA5024
	24	DC	15						165TA2453
	24	DC	16					Test button + LED indicator	121TA1124
	36	DC	5						122TA7907
	36	DC	10			●			165TA2454
	48	DC	16						165TA2455
	240	AC	10			●			124TA4701

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
  <p>11 x 4,8 mm</p>									
	12	DC	10			●			125TA3370
	12	DC	10					LED indicator	165TA2457
	24	DC	10			●			165TA2456
	24	DC	10						165TA2458
  <p>11 x pin 2,4 mm</p>									
	48	DC	10					Test button	165TA2459
  <p>11 x pin 2,4 mm</p> <p>bi-stable</p> <p>terminal 6 not used</p>									
	24	DC	10					Test button	165TA2461



# RELAYS

INDUSTRIAL RELAYS






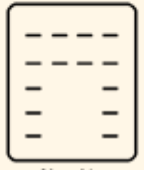
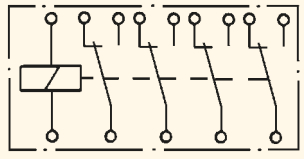

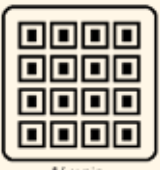
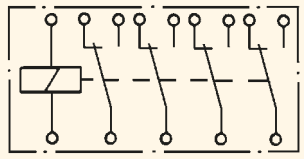


INDUSTRIAL RELAYS										
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF	
 11 x pin 2,4 mm 										
	6	DC	10					Test button	<b>111TA4932</b>	
	12	DC	10					Test button	<b>121TA1123</b>	
	24	DC	10	●				Test button + LED indicator	<b>124TA8985</b>	
	24	DC	10					Test button	<b>165TA2462</b>	
	48	DC	10	●				Test button + LED indicator	<b>165TA2467</b>	
	48	DC	10					Test button	<b>165TA2464</b>	
	48	DC	10						<b>165TA2463</b>	
	60	DC	10	●				Test button + LED indicator	<b>165TA2468</b>	

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	60	DC	10					Test button + LED indicator	165TA2465
	80	DC	10					Test button	165TA2466
	230	AC	10					Test button	129TA6761
  <p>14 x 4,8 mm</p>									
	12	DC	10						124TA4686
	24	DC	10					LED indicator	165TA2479
	48	DC	10						165TA2478
	110	AC	10						165TA2477

# RELAYS

INDUSTRIAL RELAYS

INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
  <p>14 x solder</p>									
	12	DC	5					Test button	<b>165TA2469</b>
	12	DC	5					Test button + LED indicator	<b>165TA2470</b>
	12	DC	5						<b>122TA7897</b>
	24	DC	5	●				13(NEG) /14(POS) + Test button + LED indicator	<b>165TA2474</b>
	24	DC	5					13(POS) /14(NEG) + Test button + LED indicator	<b>151TA1307</b>
	24	DC	5					Test button + LED indicator	<b>165TA2473</b>
	24	DC	6					Test button	<b>165TA2471</b>
	24	DC	7					Test button	<b>165TA2472</b>

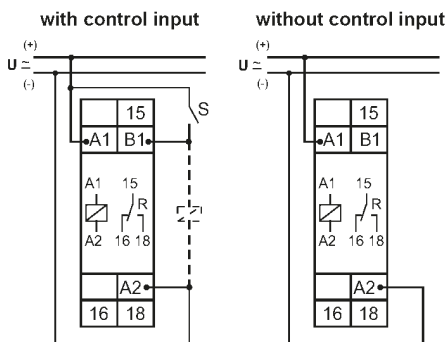
INDUSTRIAL RELAYS									
	Voltage V	AC/DC	Amperage A	Diode 	Resistor 	Bracket	Dust cover	Remarks	REF
	48	DC	5						111TA4917
	60	DC	6					Test button	165TA2475
	240	AC	4						111TA4883
  <p>14 x solder</p>									
	24	DC	10					Test button	165TA2476
  <p>16 x pin</p>									
	24	DC	5					Built-in suppression diode	165TA2481
	24	DC	5						165TA2480

## UNIVERSAL TIMER RELAY



- Multifunctional timer
- Up to 7 functions
- 7 time ranges
- Wide input voltage range
- 1 changeover contact
- Width: 17,5 mm
- Installation design

### Connections



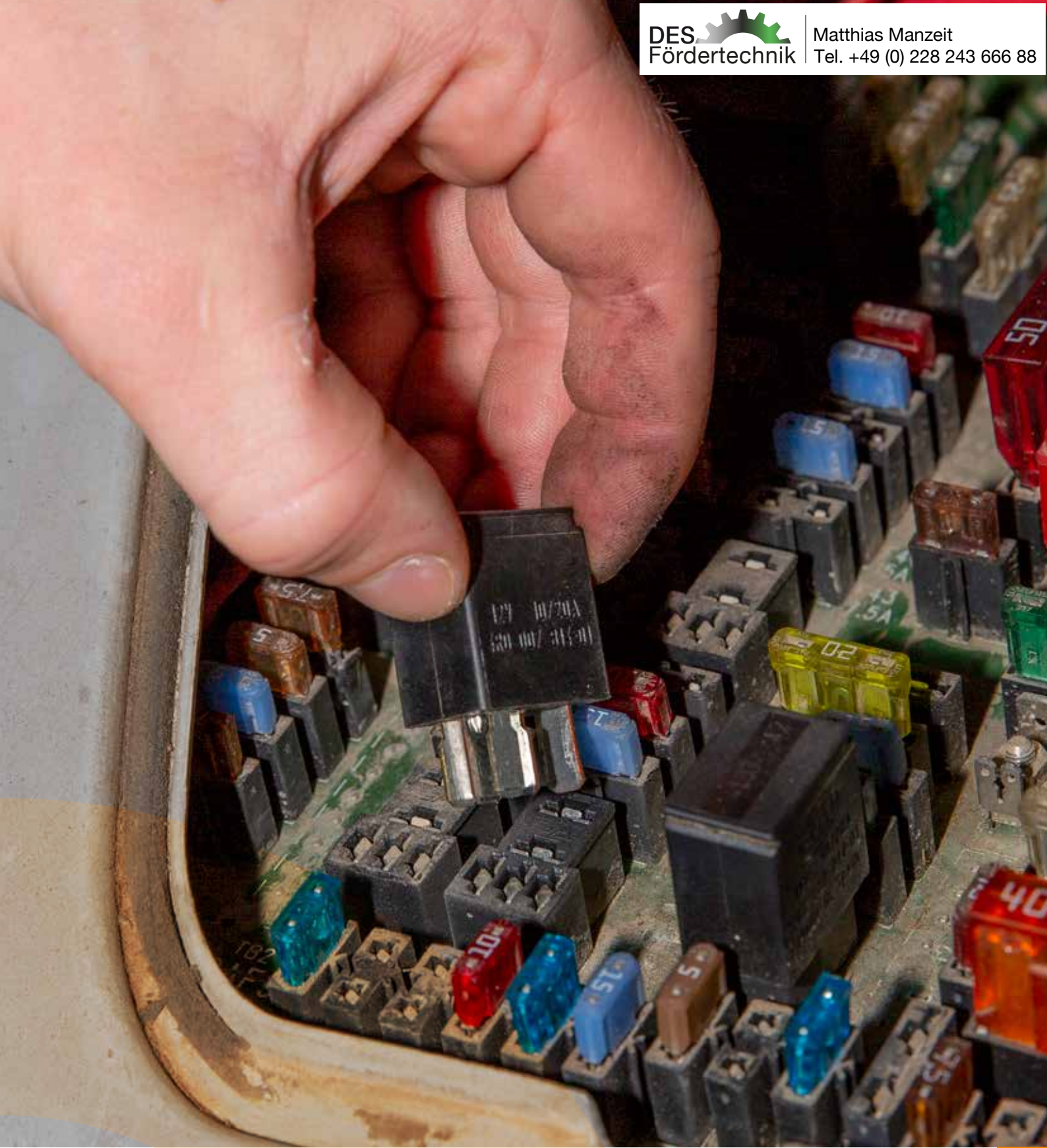
### Functions:

- ON delay
- OFF delay
- Single shot leading edge with control input
- Single shot trailing edge with control input
- ON delay with control input
- Single shot leading edge voltage-controlled
- Flasher pause first

### Standard:

- 12 - 240 V
- AC or DC
- 0,05 s - 10 days

**REF 134TA9158**



# FLASHER UNITS

# FLASHER UNITS

FLASHER UNITS

## TYPE: BEAM



12 V - 2 terminals  
21Wx2+5W  
Bracket: no

**REF 125TA3213**



12 V - 2 terminals  
21Wx2+5W  
Bracket: no

**REF 144TA4929**



12 V - 2 terminals  
Turn: 23(21)W  
Hazard: 23W MAX 2 BULBS  
Bracket: yes

**REF 129TA5842**



12 V - 2 terminals  
Turn:21(23)Wx2  
Hazard: 21W MAX 4 BULBS  
85 c/min  
Bracket: yes

**REF 165TA2717**



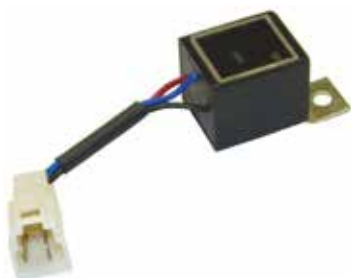
12 V - 3 terminals  
100W  
Bracket: no

**REF 125TA3257**



12 V - 3 terminals  
10W min  
50W max  
85 ± 20 c/min  
Bracket: no

**REF 125TA3299**



12 V - 3 terminals  
130W MAX  
Bracket: yes

**REF 165TA2699**



12 V - 3 terminals  
2(4)x21W+0...4W  
Bracket: yes

**REF 165TA2701**

TYPE: BEAM



12 V - 3 terminals  
42.46.92W  
Bracket: yes

**REF 165TA2702**



12 V - 3 terminals  
2(4)x21W+0...5W  
Bracket: no

**REF 165TA2703**



12 V - 3 terminals  
21(23)Wx2+(0-5)W  
27Wx2  
MAX 4 BULBS  
85 c/min  
Bracket: no

**REF 129TA5841**



12 V - 3 terminals  
21Wx2+2W  
Bracket: yes

**REF 165TA2708**



12 V - 3 terminals  
21Wx2+2W  
Bracket: no

**REF 165TA2709**



12 V - 3 terminals  
23WX2+3.4W  
32CPX2+2CP  
85 c/min  
Bracket: yes

**REF 125TA3177**



12 V - 3 terminals  
2x21W+2W  
Bracket: yes

**REF 106TA1302**



12 V - 3 terminals  
2x21W+5W  
4x21W  
Bracket: no

**REF 165TA2710**



# FLASHER UNITS

FLASHER UNITS

## TYPE: BEAM



12 V - 3 terminals  
47W  
180W MAX  
Bracket: yes

**REF 165TA2712**



12 V - 3 terminals  
54W  
85 c/min  
Bracket: no

**REF 165TA2713**



12 V - 3 terminals  
54W  
85 c/min  
Bracket: no

**REF 144TA5040**



12 V - 3 terminals  
54W  
85 c/min  
Bracket: yes

**REF 129TA5847**



12 V - 3 terminals  
LED FLASHER  
Bracket: no

**REF 144TA5252**



12 V - 3 terminals  
MAX 25 AMPS  
Bracket: no

**REF 144TA5123**



12 V - 3 terminals  
Turn(23+10)+3W  
Hazard:(23+10)x2+3W  
85 ± 20 c/min  
Bracket: yes

**REF 165TA2714**



12 V - 3 terminals  
Turn: 21W  
Hazard: 21W MAX 4 BULBS  
85 c/min  
Bracket: yes

**REF 165TA2715**

**TYPE: BEAM**



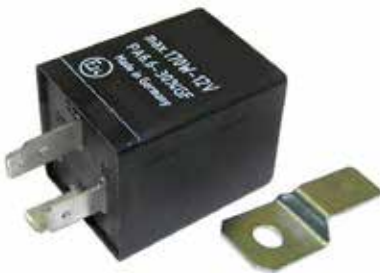
12 V - 3 terminals  
Turn: 60W MAX  
Hazard: 120W MAX  
Bracket: yes

**REF 165TA2716**



12 V - 4 terminals  
10-170W  
Bracket: yes

**REF 125TA3229**



12 V - 4 terminals  
170W MAX  
Bracket: yes

**REF 131TA8969**



12 V - 4 terminals  
2(4)x21W+0...4W  
Bracket: yes

**REF 165TA2700**



12 V - 4 terminals  
2+1(6)x21W+0...5W  
Bracket: yes

**REF 165TA2705**



12 V - 4 terminals  
42/46W (x2)  
Bracket: no

**REF 144TA5240**



12 V - 4 terminals  
42/92W  
Bracket: no

**REF 116TA5346**



12 V - 4 terminals  
42/92W  
Bracket: yes

**REF 165TA2711**

# FLASHER UNITS

FLASHER UNITS

## TYPE: BEAM



12 V - 5 terminals  
2+1(6)x21W  
Bracket: yes

**REF 165TA2704**



12 V - 5 terminals  
2+1(6)x21W+0...4W  
Bracket: no

**REF 131TA2732**



12 V - 6 terminals  
2+1+1(8)x21W  
Bracket: yes

**REF 144TA5158**



12 V - 6 terminals  
2+1+1(8)x21W  
Bracket: yes

**REF 165TA2706**



12 V - 6 terminals  
2+1+1(8)x21W  
Bracket: no

**REF 165TA2707**



12 V - 6 terminals  
2+1+1(8)x21W+5W  
Bracket: yes

**REF 144TA4599**



24 V - 3 terminals  
10-140W  
Bracket: yes

**REF 125TA3219**



24 V - 3 terminals  
10-140W  
Bracket: yes

**REF 144TA5259**

TYPE: BEAM



24 V - 3 terminals  
170W MAX  
Bracket: yes

**REF 165TA2718**



24 V - 3 terminals  
2(4)x21W+0...4W  
Bracket: yes

**REF 107TA1149**



24 V - 3 terminals  
21Wx2+2W  
Bracket: yes

**REF 165TA2721**



24 V - 3 terminals  
21Wx2+2W  
Bracket: yes

**REF 165TA2722**



24 V - 3 terminals  
25W  
85 c/min  
Bracket: yes

**REF 144TA5110**



24 V - 3 terminals  
47W  
220W MAX  
Bracket: yes

**REF 129TA5839**



24 V - 3 terminals  
50W  
Bracket: no

**REF 144TA4906**



24 V - 3 terminals  
84W  
Bracket: yes

**REF 165TA2723**

# FLASHER UNITS

FLASHER UNITS

## TYPE: BEAM



24 V - 3 terminals  
MIN: 10W  
MAX: 50W  
85 ± 20 c/min  
Bracket: no

**REF 144TA5159**



24 V - 3 terminals  
Turn: 25Wx2  
Hazard: 25W MAX 4 BULBS  
Bracket: yes

**REF 144TA5237**



24 V - 3 terminals  
Turn: 63W MAX  
Hazard: 130W MAX  
Bracket: yes

**REF 165TA2724**



24 V - 4 terminals  
170W MAX  
Bracket: yes

**REF 131TA8970**



24 V - 4 terminals  
2(4)x21W+0...4W  
Bracket: yes

**REF 165TA2719**



24 V - 4 terminals  
2/4x21W  
Bracket: yes

**REF 125TA3263**



24 V - 4 terminals  
10-170W  
Bracket: yes

**REF 165TA2728**



24 V - 5 terminals  
2+1(6)x21W+5W  
Bracket: yes

**REF 139TA5968**

**TYPE: BEAM**



24 V - 6 terminals  
(3+1)/8x21W  
Bracket: yes

**REF 144TA4815**



24 V - 6 terminals  
2+1(6)x21W+5W  
Bracket: yes

**REF 144TA5081**



24 V - 6 terminals  
2+1(6)x21W+5W  
Bracket: yes

**REF 165TA2720**



48 V - 3 terminals  
25W  
85 ± 10 c/min  
Bracket: yes

**REF 165TA2725**



48 V - 3 terminals  
25Wx1  
80 c/min  
Bracket: yes

**REF 165TA2726**



48 V - 3 terminals  
25Wx1  
80 c/min  
Bracket: yes

**REF 165TA2727**



48 V - 3 terminals  
25Wx2+3W  
80 c/min  
Bracket: yes

**REF 125TA3236**



9-30 V - 3 terminals  
60W  
Bracket: no

**REF 165TA2729**

# FLASHER UNITS

FLASHER UNITS

## TYPE: BEAM



12-24 V - 4 terminals  
5-30W  
Bracket: no

**REF 144TA5193**



36-48 V - 3 terminals  
Bracket: yes

**REF 129TA5837**

# FLASHER UNITS

## TYPE: CYLINDRICAL



12 V - 2 terminals  
21Wx2+5W  
Bracket: no

**REF 144TA5028**



12 V - 2 terminals  
23W  
85 c/min  
Bracket: yes

**REF 165TA2731**



12 V - 2 terminals  
23Wx1  
85 c/min  
Bracket: yes

**REF 125TA3193**



12 V - 2 terminals  
23Wx2  
85 c/min  
Bracket: yes

**REF 165TA2732**



12 V - 2 terminals  
32CP MAX 4 BULBS  
Bracket: no

**REF 144TA5151**



12 V - 2 terminals  
32CP MAX 6 BULBS  
80 c/min  
Bracket: yes

**REF 165TA2733**



12 V - 2 terminals  
32CP MAX 6 BULBS  
90 c/min  
Bracket: yes

**REF 125TA3173**



12 V - 2 terminals  
552 FLASHER  
Bracket: no

**REF 148TA4060**



# FLASHER UNITS

FLASHER UNITS

## TYPE: CYLINDRICAL



12 V - 3 terminals  
32CP MAX 6 BULBS  
80 c/min  
Bracket: no

**REF 125TA3171**



12 V - 3 terminals  
43W  
Bracket: yes

**REF 144TA4864**



12 V - 3 terminals  
550 FLASHER long  
Bracket: no

**REF 165TA2734**



12 V - 3 terminals  
MAX 20 AMPS  
Bracket: yes

**REF 165TA2735**



12 V - 5 terminals  
(2+1+1)x18W  
Bracket: yes

**REF 144TA5016**



24 V - 2 terminals  
25W  
MAX 7 BULBS  
95 c/min  
Bracket: yes

**REF 165TA2736**



24 V - 2 terminals  
25W  
85 c/min  
Bracket: yes

**REF 125TA3240**



24 V - 2 terminals  
25Wx1  
85 c/min  
Bracket: yes

**REF 125TA3271**

## TYPE: CYLINDRICAL



24 V - 2 terminals  
25Wx2  
85 c/min  
Bracket: yes

**REF 144TA4894**



24 V - 2 terminals  
25Wx2+3W  
85 c/min  
Bracket: yes

**REF 144TA5007**



48 V - 2 terminals  
32CP MAX 2 BULBS  
80 c/min  
Bracket: yes

**REF 136TA8361**



# MAINTENANCE, REPAIR & OPERATIONS

## WORKEASY GLOVES BLACK

**Honeywell**



**Recommendations:**

Fine handling in a dry environment

**Applications:**

- Assembly and electrical components (semi-conductors, microprocessors)
- Separation of small items (household appliances, automotive industry, nuts and bolts)
- Electronics

**Advantages:**

- Exceptional dexterity and breathability
- PU-coated glove without silicone

**Standard:**

- Cat II
- EN 420
- EN 388:3121

**REF 143TA6973** – Size: 6

**REF 143TA6974** – Size: 7

**REF 143TA6975** – Size: 8

**REF 143TA6976** – Size: 9

**REF 143TA6977** – Size: 10

**REF 143TA6978** – Size: 11

## AUTOMATIC WIRE STRIPPER



- For solid cables with section 0,5–4,0 mm<sup>2</sup>
- Scanning system automatically adjusts to the correct diameter
- Integrated side cutter for wires up to 2 mm diameter
- Optical linear measure of 8–12 mm

REF 165TA1330

## INSULATION STRIPPER



Length: 153 mm

REF 165TA2368

## STANDARD CRIMPING PLIERS



Application: for cutting and crimping terminals for cable sizes from 1,5 to 6 mm<sup>2</sup>

REF 106TA9500

## CRIMPING PLIERS



For red, green and yellow cable sockets

REF 165TA2371

## 15-PIECE INSULATED COMBINATION SET



Toolbox suitable for electrical maintenance

- ⊕ 2 Phillips screwdrivers: PH1, PH2
- ⊖ 6 slotted screwdrivers: 2,5; 3; 3,5; 4; 5,5; 6,5 mm
- 1 adjustable wrench: 250 mm
- 1 multifunctional stripping pliers
- 1 combination pliers: 200 mm
- 1 long break pliers: 200 mm
- 1 diagonal cutters: 160 mm
- 1 curved cable knife: 150 mm
- 1 voltage tester screwdriver: 110-250 V AC

REF 165TA3743

## BRAKE CLEANER



Efficient brake cleaner with high dissolving properties

- Contents: 500 ml
- Non-conductive and non-corrosive
- Powerful spray jet for: drum and disc brakes, brake linings, calipers and shoes
- Leaves no residue
- High price/quality ratio

REF 134TA3719

## CLEANING TISSUE



- Floor-mounting dispenser
- Rolls excluded

REF 140TA9060



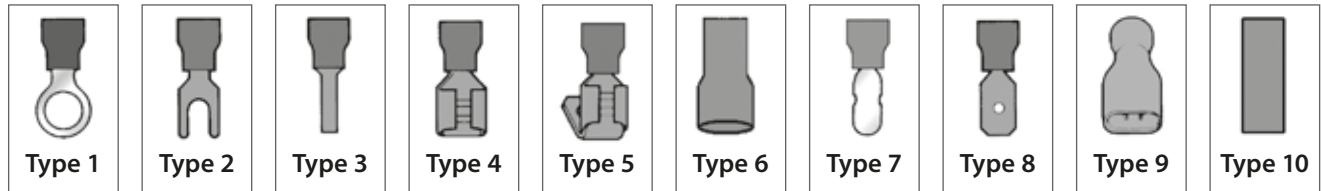
- Wall-mounting dispenser
- Rolls excluded

REF 107TA8503

REF 106TA6744 – 2 white rolls (600 m x 240 mm)

## CRIMPING TERMINALS













All cable terminals are supplied in bags of 100 pieces.  
For example: if you order 3 times REF 106TA9428, you will receive 300 pieces.



Type	Colour	Section mm <sup>2</sup>	Dimensions	REF / 100 pieces	Type	Colour	Section mm <sup>2</sup>	Dimensions	REF / 100 pieces			
1	Red	0,5-1,0	M 3	106TA9427	4	Red	0,5-1	2,8 x 0,5	106TA9462			
			M 4	106TA9428				2,8 x 0,8	106TA9463			
			M 5	106TA9429				4,8 x 0,5	106TA9464			
			M 6	106TA9430				4,8 x 0,8	106TA9465			
			M 8	106TA9431				6,3 x 0,8	106TA9466			
			M 10	106TA9432				7,7 x 0,8	106TA9467			
	Blue	1-2,5	M 3	106TA9433		4,8 x 0,5	106TA9468					
			M 4	106TA9434		4,8 x 0,8	106TA9469					
			M 5	106TA9435		6,3 x 0,8	106TA9470					
			M 6	106TA9436		7,7 x 0,8	106TA9471					
			M 8	106TA9437		6,3 x 0,8	106TA9472					
			M 10	106TA9438		9,5 x 1,2	106TA9473					
	Yellow	4-6	M 4	106TA9439	5	Red	0,5-1	6,3 x 0,8	106TA9474			
			M 5	106TA9440		Blue	1-2,5	6,3 x 0,8	106TA9475			
			M 6	106TA9441	6	Red	0,5-1	Ø 4	106TA9476			
			M 8	106TA9442		Black	0,5-1	Ø 5	106TA9478			
			M 10	106TA9443		Blue	1-2,5	Ø 4	106TA9479			
	2	Red	0,5-1,0	M 3	106TA9444	7	Yellow	4-6	Ø 5	106TA9482		
				M 3,5	106TA9445				Red	0,5-1	Ø 4	106TA9483
				M 4	106TA9446				Blue	1-2,5	Ø 4	123TA5434
				M 5	106TA9447	Ø 5	106TA9485					
M 6				106TA9448	8	Yellow	4-6	6,3 x 0,8	106TA9487			
M 3		106TA9449	Red	0,5-1				6,3 x 0,8	106TA9488			
M 3,5		106TA9450	Blue	1-2,5				6,3 x 0,8	106TA9489			
Blue		1-2,5	M 4	106TA9451	9	Red	0,5-1	6,3 x 0,8	106TA9490			
			M 5	106TA9452				Blue	1-2,5	6,3 x 0,8	106TA9491	
			M 6	106TA9453	10	Red	0,5-1,0			L = 17 mm	106TA9492	
			M 4	106TA9454				Blue	1-2,5	L = 25 mm	106TA9493	
M 5		106TA9455	Yellow	4-6		L = 17 mm	165TA3742					
M 6		106TA9456				L = 25 mm	106TA9495					
3		Red	0,5-1		L = 21 mm	106TA9496						
		Blue	1-2,5		L = 27 mm	106TA9497						
	Yellow	4-6										

## CRIMP TERMINAL KIT















- |  |   |
|--|---|
| 25 x  L: 6,3 x 0,8 mm | 25 x  M8           |
| 25 x  L: 25 mm        | 25 x  L: 25 mm     |
| 25 x  6,3 x 0,8 mm    | 25 x  Ø: 4 mm      |
| 25 x  M4              | 25 x  6,3 x 0,8 mm |
| 25 x  M5              | 25 x  Ø: 4 mm      |
| 25 x  M6              | 25 x  6,3 x 0,8 mm |

With professional crimping tool

**REF 164TA8077**

## CRIMP TERMINAL KIT











- |   |   |
|---|---|
| 50 x  M4        | 25 x  M4            |
| 25 x  M4       | 25 x  M4           |
| 25 x  M5       | 25 x  6,3 x 0,8 mm |
| 25 x  M4       | 25 x  6,3 x 0,8 mm |
| 25 x  L: 25 mm | 25 x  6,3 x 0,8 mm |
| 25 x  L: 25 mm | 25 x  6,3 x 0,8 mm |

With standard crimping tool

**REF 165TA3249**

## CRIMP TERMINAL KIT (WIRES AND SLEEVES)



- |   |                       |
|---|-----------------------|
| 100 x  | 0,50 mm <sup>2</sup>  |
| 400 x  | 0,75 mm <sup>2</sup>  |
| 400 x  | 1,00 mm <sup>2</sup>  |
| 400 x  | 1,50 mm <sup>2</sup>  |
| 200 x  | 2,50 mm <sup>2</sup>  |
| 100 x  | 4,00 mm <sup>2</sup>  |
| 50 x   | 6,00 mm <sup>2</sup>  |
| 50 x   | 10,00 mm <sup>2</sup> |

With crimping pliers

**REF 164TA8078**



## TERMINAL BLOCKS



- 12-way
- Temperature: -25 °C to +100 °C
- Quality polypropylene
- EN 60998

Wire size mm <sup>2</sup>	REF
2,5	<b>112TA4807</b>
6	<b>112TA4808</b>
10	<b>112TA4809</b>
16	<b>112TA4810</b>

## CABLE CONNECTOR



Capacity: 0,25-1,5 mm<sup>2</sup>

**REF 112TA4804**

## CABLE CONNECTOR



Capacity: 1-2,5 mm<sup>2</sup>

























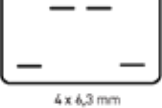
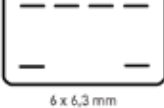












**REF 131TA8491**





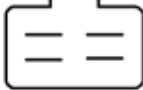









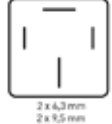





























## INSULATED CRIMP TERMINAL KIT



### REF 129TA9960

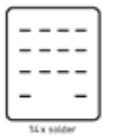

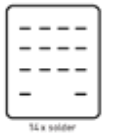



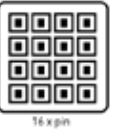

Colour	Description	Quantity
Red	Spade male 6,3 x 0,8 mm	20
Red	Spade female 6,3 x 0,8 mm	20
Red	Spade female full sealed 6,3 x 0,8 mm	20
Red	Spade female + male 6,3 x 0,8 mm	20
Red	Butt male dia 4 mm	20
Red	Butt female dia 4 mm	20
Red	Ring M4	20
Red	Ring M6	20
Red	Ring M8	20
Red	Ring M10	20
Red	Cable connect long	20
Yellow	Spade male 6,3 x 0,8 mm	20
Yellow	Spade female 6,3 x 0,8 mm	20
Yellow	Spade female full sealed 6,3 x 0,8 mm	20
Yellow	Spade female + male 6,3 x 0,8 mm	20
Yellow	Butt male dia 4 mm	20
Yellow	Butt female dia 4 mm	20
Yellow	Ring M4	20
Yellow	Ring M6	20
Yellow	Ring M8	20
Yellow	Ring M10	20
Yellow	Cable connect long	20
Blue	Spade male 6,3 x 0,8 mm	20
Blue	Spade female 6,3 x 0,8 mm	20
Blue	Spade female full sealed 6,3 x 0,8 mm	20
Blue	Spade female + male 6,3 x 0,8 mm	20
Blue	Butt male dia 4 mm	20
Blue	Butt female dia 4 mm	20
Blue	Ring M4	20
Blue	Ring M6	20
Blue	Ring M8	20
Blue	Ring M10	20
Blue	Cable connect long	20

Footprint				Socket	Remarks	REF
 2 x 6,3 mm 2 x 4,8 mm	 2 x 6,3 mm 3 x 4,8 mm					124TA8974
 2 x 6,3 mm 2 x 4,8 mm	 2 x 6,3 mm 3 x 4,8 mm					165TA2683
 4 x 4,8 mm	 9 x 4,8 mm				10 A 250 V	165TA2684
 4 x 6,3 mm	 5 x 6,3 mm					111TA4847
 4 x 6,3 mm	 5 x 6,3 mm					134TA8409
 4 x 6,3 mm	 5 x 6,3 mm					165TA2685
 4 x 6,3 mm	 5 x 6,3 mm					165TA2687
 4 x 6,3 mm	 5 x 6,3 mm					165TA2688
 4 x 6,3 mm	 6 x 6,3 mm				30 A 277 V	165TA2690
 4 x 4,8 mm	 11 x 4,8 mm				16 A 250 V	165TA2670
 10 x solder	 14 x solder				5 A 250 V	124TA8971
 4 x 4,8 mm	 4 x 4,8 mm	 9 x 4,8 mm	 11 x 4,8 mm		15 A 300 V	124TA8967

Footprint	Socket	Remarks	REF	Footprint	Socket	Remarks	REF
 4 x 6,3 mm			165TA2686	 8 x 4,8 mm		10 A 300 V	124TA8968
 4 x 6,3 mm			165TA2689	 8 x 4,8 mm		15 A 240 V	160TA6457
 2 x 6,3 mm 2 x 9,5 mm			165TA2691	 8 x 4,8 mm		10 A 300 V	134TA8412
 2 x 6,3 mm 2 x 9,5 mm			125TA4546	 8 pin 2,4 mm		10 A 250 V	111TA4869
 2 x 6,3 mm 2 x 9,5 mm			165TA2692	 8 pin 2,4 mm		10 A 300 V	165TA2695
 5 x 6,3 mm			165TA3636	 8 x solder		7 A 250 V	165TA2696
 2 x 2,8 mm 3 x 4,8 mm		10 A 300 V	125TA4547	 8 x solder			124TA8972
 5 x 4,8 mm		10 A 250 V	165TA2693	 8 x solder		12 A 300 V	165TA2737
 5 x 4,8 mm		10 A 250 V	134TA8411	 8 x solder		5 A 250 V	124TA8978
 5 x 4,8 mm		10 A 250 V	124TA8969	 8 x solder		7 A 300 V	165TA2698
 8 x 4,8 mm		15 A 300 V	165TA2694	 11 x 4,8 mm		10 A 300 V	134TA8416
 8 x 4,8 mm		10 A 250 V	111TA4887	 11 pin 2,6 mm			125TA4550

# RELAY SOCKETS

Footprint	Socket	Remarks	REF
 11 x pin 2,6 mm		10 A 250 V	<b>165TA2671</b>
 11 x pin 2,6 mm		10 A 300 V	<b>165TA2672</b>
 11 x pin 2,6 mm		10 A 300 V	<b>134TA8414</b>
 11 x pin 2,6 mm		10 A 400 V	<b>165TA2673</b>
 11 x pin 2,6 mm		12 A 300 V	<b>111TA4897</b>
 11 x pin 2,6 mm		10 A 300 V	<b>165TA2674</b>
 11 x pin 2,6 mm		10 A 250 V	<b>165TA2675</b>
 11 x pin 2,6 mm		10 A 300 V	<b>165TA2676</b>
 16 x 4,8 mm		10 A 300 V	<b>165TA2678</b>
 16 x 4,8 mm		10 A 250 V	<b>111TA5079</b>
 16 x solder		10 A 300 V	<b>165TA2679</b>
 16 x solder		10 A 300 V	<b>165TA2680</b>

Footprint	Socket	Remarks	REF
 16 x solder		10 A 250 V	<b>165TA2677</b>
 16 x solder		6 A 250 V	<b>165TA2681</b>
 16 x solder		10 A 250 V	<b>147TA6052</b>
 16 x pin		5 A 250 V	<b>165TA2682</b>