



MERIT MALTA

Automotive Parts

AFTERMARKET CATALOGUE

**RELAYS, FLASHERS AND
CONTACTORS.**

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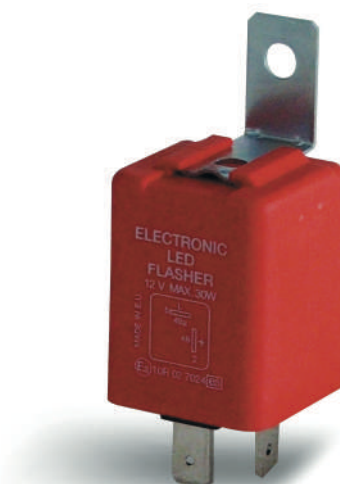
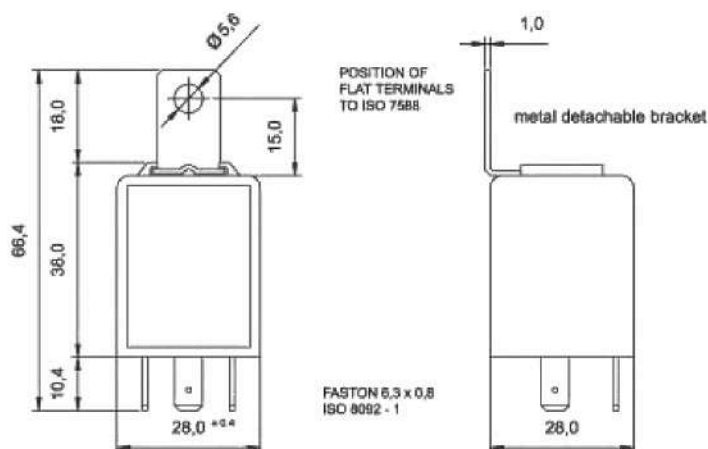
LED Flasher Unit

HOMOLOGATION



Our led flasher units work in ultra low wattage circuits using only LED clusters.

The use of LEDs instead of traditional bulbs is spreading quickly in the automotive market because LEDs have a long lifespan and are also energy saving devices. Traditional flasher Units cannot work in LED circuits therefore a complete range of ultra low wattage LED flasher Units have been introduced covering a range from 0.02W up to 60W.



MERIT No.	DESCRIPTION	VOLTAGE. (VOLT)	WATT	PINS	APPLICATIONS	PIN CONFIGURATION	TECHNICAL CONFIGURATION
MT20-022123	LED FLASHER UNIT	12	0-30W	2			
MT20-022333	LED FLASHER UNIT	12	0-30W	3			
MT20-022433	LED FLASHER UNIT	12	0-30W	3			
MT20-022243	LED FLASHER UNIT	12	0-30W	4			
MT20-024434	LED FLASHER UNIT	24	0-40W	3			
MT20-024244	LED FLASHER UNIT	24	0-40W	4			

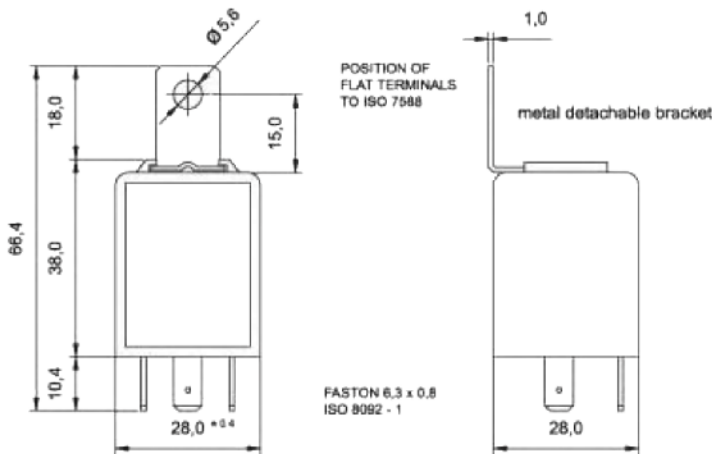


LED Flasher Unit whit Diagnostic

HOMOLOGATION



Regulations require that the vehicle warns the driver when an indicator lamp has failed by increasing the frequency of the flashing indication. This is known as “Bulb failure Warning” and because of this we have introduced a complete range of LED flasher Units with diagnostics that work not only in LED circuits but also in hybrid circuits (bulbs + LEDs).



LET FLASH UNIT WITH DIAGNOSTIC (FOR LED CIRCUITS ONLY)

MERIT No.	V	DESCRIPTION	VOLTAGE (VOLT)	WATT	PINS	APPLICATIONS	CONFIGURATION	PIN CONFIGURATION	TECHNICAL CONFIGURATION
MT20-032431		LED FLASHER UNIT WITH DIAGNOSTIC	12	MAX 10W	3		LED CLUSTER 1W LED PILOT MAX 0.5W		
MT20-032541		LED FLASHER UNIT WITH DIAGNOSTIC	12	MAX 10W	4		LED CLUSTER 1W PILOT: LAD 0.1...4W LAMP 0.5...5W BUZER		

HIBRID LET FLASH UNIT WITH DIAGNOSTIC FOR CIRCUITS WITH BUBLS AND LED CLUSTERS

MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	WATT	PINS	APPLICATIONS	CONFIGURATION	PIN CONFIGURATION	TECHNICAL CONFIGURATION
MT20-032446	HYBRID LED FLASHER UNIT WITH DIAGNOSTIC	12	MAX 60W	4		LED CLUSTER 4W &/or 21W BULBS PILOT 5W		

LEGENT



CONTROL LAMP 12V 0...1W



BULB 12V 21W



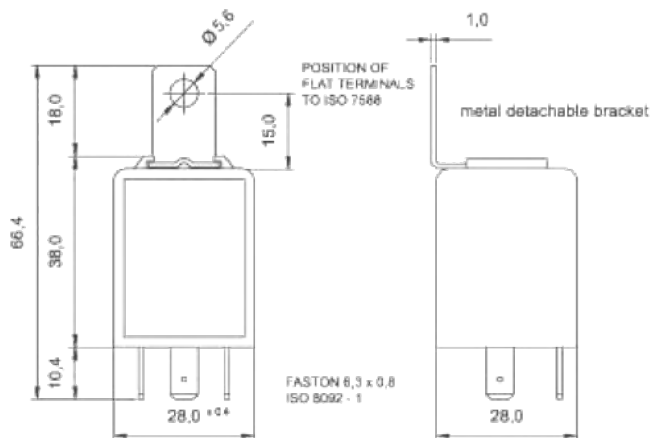
LED CLUSTER 1...5W



Electronic Flasher Unit.

This is an electronic device with an electric pulsating output for automotive use with a rated voltage of either 12v or 24v

HOMOLOGATION






















MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	WATT	PINS	BULB FAILURE WARNING	APPLICATION	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-012129	FLASHER UNIT WITHOUT POLARITY	12	180	2	NO			
MT20-012239	FLASHER UNIT WITHOUT POLARITY	12	180	3	NO			
MT20-012540	FLASHER UNIT	12	10-200	4	NO			
MT20-012657	FLASHER UNIT	12	140	5	YES			
MT20-012435	FLASHER UNIT	12	42-92	3	YES			
MT20-012245	FLASHER UNIT	12	42-92	4	YES			
MT20-012642	FLASHER UNIT C2	12	6x21	4	YES			
MT20-014239	FLASHER UNIT WITHOUT POLARITY	24	180	3	NO			
MT20-014435	FLASHER UNIT	24	42-92	3	YES			
MT20-014245	FLASHER UNIT	24	42-92	4	YES			
MT20-014642	FLASHER UNIT C2	24	6x21	4	YES			



Electronic Flasher Unit.

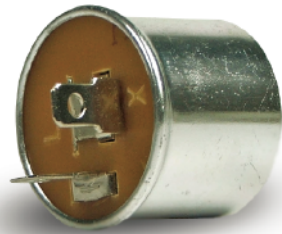
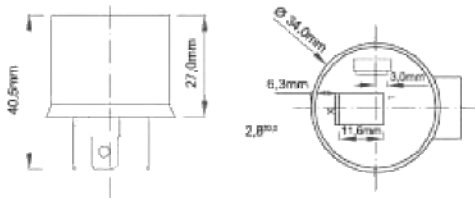
DIAGRAM		
NOMINAL VOLTAGE	12V	24V
VOLTAGE RANGE	11V ÷ 14V	22V ÷ 28V
EXCITATION VOLTAGE	10 V	20 V
CURRENT ABSORPTION	170 mV	80 mV
FREQUENCY WITH BULBS	80-90 PER MINUTE	80-90 PER MINUTE
FREQUENCY WITH DEFECTIVE BULBS	200-220 PER MINUTE	200-220 PER MINUTE
WORKING	CONTINUOS	CONTINUOS
OPERATING TEMPERATURE	-40°C + 85°C	-40°C + 85°C
SERVICE LIFE	> 150 h. continuous > 300 h. with cycles 15"ON 15"OFF	> 150 h. continuous > 300 h. with cycles 15"ON 15"OFF

APPLICATIONS	PINS	DIN	JAPAN.	SAE/BNA
	2			
	3			
	4			
	4			

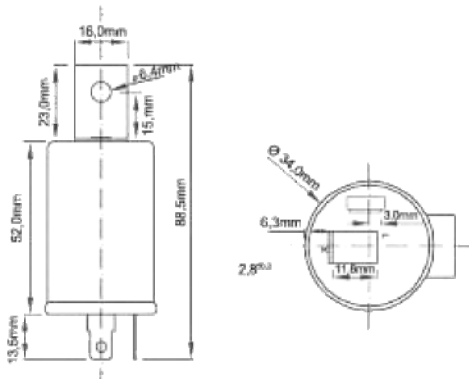
APPLICATIONS		DIN	JAPAN.	SAE/BNA
	 Battery	49 +49 +15	B	+ + + 1
	 Lamps (Switch)	49a L49a S54	L	L C COM 2
	 Vehicle control lamp	C K	P	R REP 5
	 Earth	31 -31 -31	E	(-) (-) (-) 4
	 Trailer control lamp	C2 C2 K1		C2 C2 R2 3

Thermic Flasher Unit.

A thermic flasher unit is a non- electronic device that is used mainly in other vehicle applications. Thermic Flasher Units use a bi-metallic contact to create a flashing on-off circuit thermic flasher units are available in 2 or 3 terminal variation.



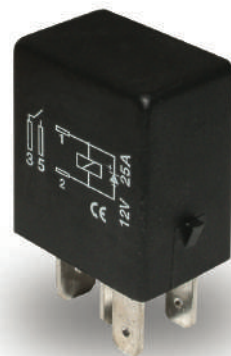
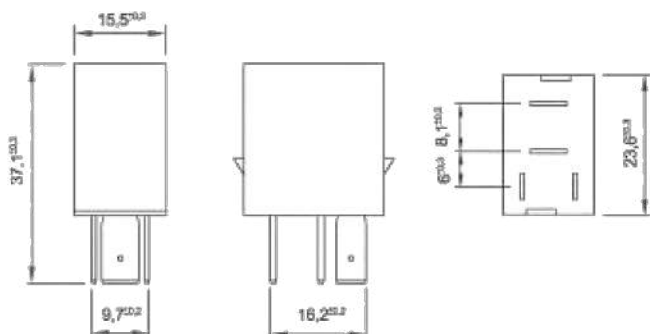
MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	WATT	PINS	BULB FAILURE WARNING	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-042128	THERMIC FLASHER UNIT TYPE A	12	150	2	NO		
MT20-042238	THERMIC FLASHER UNIT TYPE A	12	150	3	NO		
MT20-044128	THERMIC FLASHER UNIT TYPE A	24	150	2	NO		
MT20-044238	THERMIC FLASHER UNIT TYPE A	24	150	3	NO		



MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	WATT	PINS	BULB FAILURE WARNING	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-052128	THERMIC FLASHER UNIT TYPE B	12	150	2	NO		
MT20-052238	THERMIC FLASHER UNIT TYPE B	12	150	3	NO		
MT20-054128	THERMIC FLASHER UNIT TYPE B	24	150	2	NO		
MT20-054238	THERMIC FLASHER UNIT TYPE B	24	150	3	NO		

Micro Relay

This is a remote control device for automotive applications. Control voltage can be 12V or 24V. This device is smaller in dimensions than a Mini Relay and can handle nominal currents ranging from 10A to 25A.



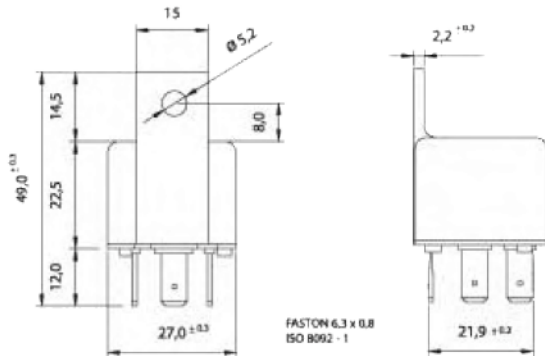
MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	APPLICATION	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-702244	NORMALLY OPEN	12	25	4				
MT20-712244	NORMALLY OPEN	12	25	4	With resistor			
MT20-722244	NORMALLY OPEN	12	25	4	With diode			
MT20-802254	CHANGE OVER	12	20/10	5				
MT20-812254	CHANGE OVER	12	20/10	5	With resistor			
MT20-822254	CHANGE OVER	12	20/10	5	With diode			
MT20-704144	NORMALLY OPEN	24	10	4				
MT20-714144	NORMALLY OPEN	24	10	4	With resistor			
MT20-724144	NORMALLY OPEN	24	10	4	With diode			
MT20-804154	CHANGE OVER	24	15/10	5				
MT20-814154	CHANGE OVER	24	15/10	5	With resistor			
MT20-824154	CHANGE OVER	24	15/10	5	With diode			

Micro Relay

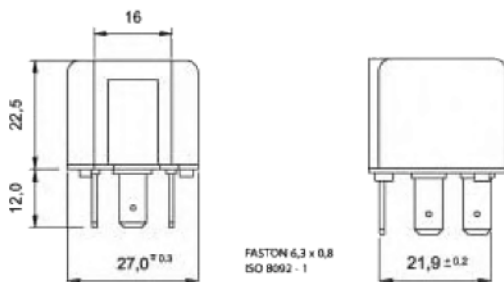
HOMOLOGATION



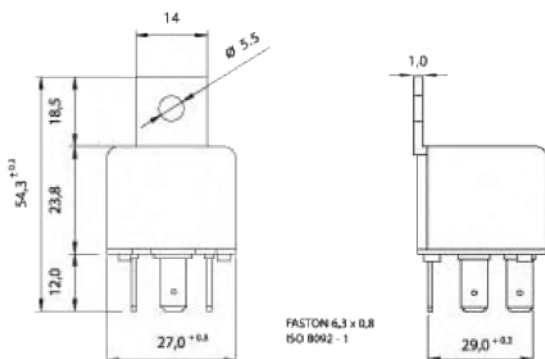
This is a remote control device for automotive application. Control voltage can be 12V or 24V. Every Relay can be supplied whit an optional resistor or diode on request. Every relay is supplied whitout a metal bracket that can be supplied on request (code: MT20-1S0012).



Relay Whit Plastic Bracket

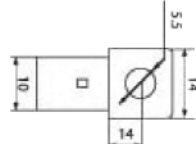


Relay Whitout Plastic Bracket



Relay Whit Metal Detachable Bracket

metal detachable bracket
(code: MT20-1S0012)

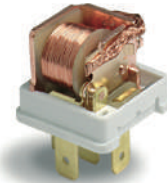




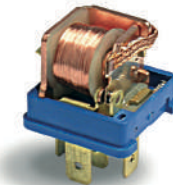
Mini Relay

CHARACTERISTICS

NOMINAL VOLTAGE	6V	12V	24V	Change Over 12V	Change Over 24V
VOLTAGE DROP	100 mV	100 mV	100 mV	100 mV	100 mV
PRESSURE ON CONTACTS	100 g	100 g	100 g	100 g	100 g
EXCITATION VOLTAGE	4,5 V	9 V	18 V	10 V	20 V
TENSION OF MIS-EXCITATION	1,5 V	2,5 V	5 V	2,5 V	5 V
COIL RESISTANCE	25±5%	70±5%	320±5%	70±5%	300±5%
WORKING	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS
OPERATING TEMPERATURE	-40°C + 85°C	-40°C + 85°C	-40°C + 85°C	-40°C + 85°C	-40°C + 85°C
CONNECTION BOARD	DIN ISO 7588 ISO 7880	DIN ISO 7588 ISO 7880	DIN ISO 7588 ISO 7880	DIN ISO 7588 ISO 7880	DIN ISO 7588 ISO 7880
DUTY CYCLES	500.000 cycles	500.000 cycles	500.000 cycles	500.000 cycles	500.000 cycles



CHANGE
OVER RELAY



NORMALLY
OPEN RELAY
TYPE A



NORMALLY
OPEN RELAY
TYPE B

PIN CONFIGURATION TYPE A	PIN CONFIGURATION TYPE B	TECHNICAL DIAGRAM	WITH RESISTOR	WITH DIODE
 NORMALLY OPENED	 NORMALLY OPENED	 A normally opened Relay closes the circuit between the Energy source and Switched on.	 RESISTOR CARBON FILM 560Ω ±5%	 DIODE IN4007 1000V 1A
 NORMALLY OPENED	 NORMALLY OPENED	 A normally opened Relay closes the circuit between the Energy source and Switched on.	 RESISTOR CARBON FILM 560Ω ±5%	 DIODE IN4007 1000V 1A
 CHANGE OVER	 CHANGE OVER	 A change-over relay Switches the power Supply from one load To another	 RESISTOR CARBON FILM 560Ω ±5%	 DIODE IN4007 1000V 1A
 NORMALLY CLOSED	 NORMALLY CLOSED	 A normally closed Relay opens the circuit Between the energy Source and the load Is switched off.	MATERIAL Base: Nylon PA 6,6 + 30% GF White/Blue/Black Fixed contact: Ag Ni 90/10 Cup: Nylon PA 6,6 + 15% GF Black or 30% Colour Moving contact: Ag Ni 90/10 Bracket: CK67 hardness 490±525 HV1 phosphated Spring: Cu Be or Cu Sn Fastons 86 85 & 30: Cu Zn	
Pin configuration A. Normally- open relay a.g. BMW,FORD OPEL VOLVO CAR, JAGUAR	pin configuration b. normally- open relay a.g. austin rover group, audi, citroen, db-lkw, deutz-fahr, hhf, jaguar, man, peugeot, porsche,renault,saab ,simca,volvo,vw,fiat	APPLICATIONS: Radiator fan switch Electric Windows, air Conditioner, horns, rear Screen heater, radio, air Horns, universal Accessories, etc...		



Mini Relay (homologated)

12 V CAR

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-102343	NORMALLY OPEN	B	12	30	4	WHIT PLASTIC BRACKET		
MT20-102344	NORMALLY OPEN	B	12	30	4	WHITOUT BRACKET		
MT20-102353	NORMALLY OPEN	B	12	30	5	WHIT PLASTIC BRACKET		
MT20-102354	NORMALLY OPEN	B	12	30	5	WHITOUT BRACKET		
MT20-502343	NORMALLY OPEN	A	12	30	4	WHIT PLASTIC BRACKET		
MT20-502344	NORMALLY OPEN	A	12	30	4	WHITOUT BRACKET		
MT20-502353	NORMALLY OPEN	A	12	30	5	WHIT PLASTIC BRACKET		
MT20-502354	NORMALLY OPEN	A	12	30	5	WHITOUT BRACKET		
MT20-202353	CHANGE OVER	B	12	20/30	5	WHIT PLASTIC BRACKET		
MT20-202354	CHANGE OVER	B	12	20/30	5	WHITOUT BRACKET		
MT20-602354	CHANGE OVER	A	12	20/30	5	WHIT PLASTIC BRACKET		

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-102453	NORMALLY OPEN	B	12	40	5	WHIT PLASTIC BRACKET		
MT20-102454	NORMALLY OPEN	B	12	40	5	WHITOUT BRACKET		
MT20-102553	NORMALLY OPEN	B	12	50	5	WHIT PLASTIC BRACKET		
MT20-102554	NORMALLY OPEN	B	12	50	5	WHITOUT BRACKET		

PINS n.30 and n.87 are 6.35mm



Mini Relay (homologated)

24 V TRUCK

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-102343	NORMALLY OPEN	B	12	30	4	WHIT PLASTIC BRACKET		
MT20-102344	NORMALLY OPEN	B	12	30	4	WHITOUT BRACKET		
MT20-102353	NORMALLY OPEN	B	12	30	5	WHIT PLASTIC BRACKET		
MT20-102354	NORMALLY OPEN	B	12	30	5	WHITOUT BRACKET		
MT20-502343	NORMALLY OPEN	A	12	30	4	WHIT PLASTIC BRACKET		
MT20-502344	NORMALLY OPEN	A	12	30	4	WHITOUT BRACKET		
MT20-502353	NORMALLY OPEN	A	12	30	5	WHIT PLASTIC BRACKET		
MT20-502354	NORMALLY OPEN	A	12	30	5	WHITOUT BRACKET		
MT20-202353	CHANGE OVER	B	12	20/30	5	WHIT PLASTIC BRACKET		
MT20-202354	CHANGE OVER	B	12	20/30	5	WHITOUT BRACKET		
MT20-602354	CHANGE OVER	A	12	20/30	5	WHIT PLASTIC BRACKET		

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-102453	NORMALLY OPEN	B	12	40	5	WHIT PLASTIC BRACKET		
MT20-102454	NORMALLY OPEN	B	12	40	5	WHITOUT BRACKET		
MT20-102553	NORMALLY OPEN	B	12	50	5	WHIT PLASTIC BRACKET		
MT20-102554	NORMALLY OPEN	B	12	50	5	WHITOUT BRACKET		

PINS n.30 and n.87 are 6.35mm



Mini Relay (un-homologated)

16 V CAR

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-106341	NORMALLY OPEN	B	6	30	4	WHIT PLASTIC BRACKET		
MT20-106351	NORMALLY OPEN	B	6	30	5	WHITOUT BRACKET		

12 V CAR

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-102341	NORMALLY OPEN	B	12	30	4	WHIT PLASTIC BRACKET		
MT20-102342	NORMALLY OPEN	B	12	30	4	WHITOUT BRACKET		
MT20-102351	NORMALLY OPEN	B	12	30	5	WHIT PLASTIC BRACKET		
MT20-102352	NORMALLY OPEN	B	12	30	5	WHITOUT BRACKET		
MT20-502341	NORMALLY OPEN	A	12	30	4	WHIT PLASTIC BRACKET		
MT20-502342	NORMALLY OPEN	A	12	30	4	WHITOUT BRACKET		
MT20-502351	NORMALLY OPEN	A	12	30	5	WHIT PLASTIC BRACKET		
MT20-502352	NORMALLY OPEN	A	12	30	5	WHITOUT BRACKET		
MT20-202351	CHANGE OVER	B	12	20/30	5	WHIT PLASTIC BRACKET		
MT20-202352	CHANGE OVER	B	12	20/30	5	WHITOUT BRACKET		
MT20-602352	CHANGE OVER	A	12	20/30	5	WHIT PLASTIC BRACKET		



Mini Relay (un-homologated)

24 V TRUCK

MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-104241	NORMALLY OPEN	B	24	20	4	WHIT PLASTIC BRACKET		
MT20-104242	NORMALLY OPEN	B	24	20	4	WHITOUT BRACKET		
MT20-104251	NORMALLY OPEN	B	24	20	5	WHIT PLASTIC BRACKET		
MT20-104252	NORMALLY OPEN	B	24	20	5	WHIT PLASTIC BRACKET		
MT20-504241	NORMALLY OPEN	A	24	20	4	WHITOUT BRACKET		
MT20-504242	NORMALLY OPEN	A	24	20	4	WHIT PLASTIC BRACKET		
MT20-504251	NORMALLY OPEN	A	24	20	5	WHIT PLASTIC BRACKET		
MT20-504252	NORMALLY OPEN	A	24	20	5	WHITOUT BRACKET		
MT20-204251	CHANGE OVER	B	24	10/20	5	WHIT PLASTIC BRACKET		
MT20-204252	CHANGE OVER	B	24	10/20	5	WHITOUT BRACKET		
MT20-604252	CHANGE OVER	A	24	10/20	5	WHIT PLASTIC BRACKET		

Merit Standart Packaging

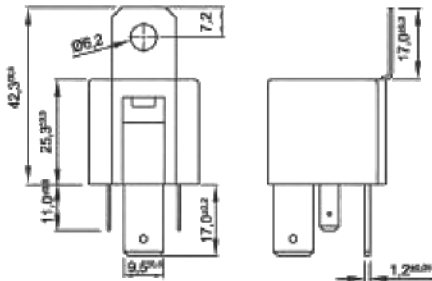
Products can be supplied either in bulk packaging or in merit standart boxes, minimum quality ordered should correspond to the quantity of one merit Standart Box or a multiple of these quantities Any other quantity ordered will be changed accordingly.



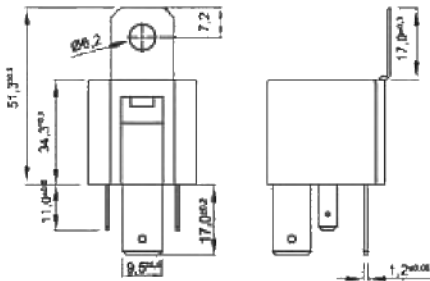


Heavy Duty Relay

This is a remote control device for automotive applications. Control voltage can be 12V or 24V. The heavy duty relay can control larger nominal currents than a standard mini relay ranging from 30A to 80A. Every relay can be supplied with an optional resistor or diode on request. Every relay is supplied without a metal bracket that can be supplied on request (code: MT20-1S0012)



MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-402544 [®]	NORMALLY OPEN	B	12	50	4	WHITOUT BRACKET		
MT20-402744 [®]	NORMALLY OPEN	B	12	70	4	WHITOUT BRACKET		
MT20-402844 [®]	NORMALLY OPEN	B	12	80	4	WHITOUT BRACKET		
MT20-202454	CHANGE OVER	B	12	30/40	5	WHITOUT BRACKET		



MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFO	PIN CONFIG.	TECHNICAL DIAGRAM
MT20-404544 [®]	NORMALLY OPEN	B	24	50	4	WHITOUT BRACKET		
MT20-404744 [®]	NORMALLY OPEN	B	24	70	4	WHITOUT BRACKET		
MT20-204454	CHANGE OVER	B	24	30/40	5	WHITOUT BRACKET		

■ PINS: n.30 and n.87are 9.5mm
■ PINS for MT20-204454 and MT20-202454: n.30 and n.87 are 6.35mm

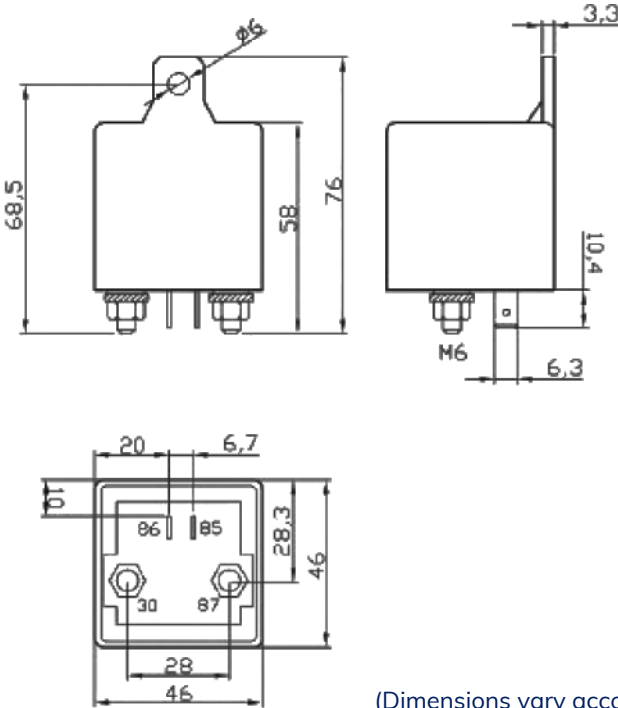


Extra Heavy Duty Relay

HOMOLOGATION



This is a remote control device for automotive applications. Control voltage can be 12V or 24V. The Extra heavy duty relay can control larger nominal currents than a Standard heavy duty relay ranging from 100A to 200A.



(Dimensions vary according to the nominal current of the relay)

MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL	PIN	TECHNICAL
MT20-404843	NORMALLY OPEN	24	80	4	WHIT PLASTIC BRACKET		
MT20-404043	NORMALLY OPEN	24	100	4	WHIT PLASTIC BRACKET		
MT20-402643	NORMALLY OPEN	12	140	4	WHIT PLASTIC BRACKET		
MT20-402943	NORMALLY OPEN	12	200	4	WHIT PLASTIC BRACKET		



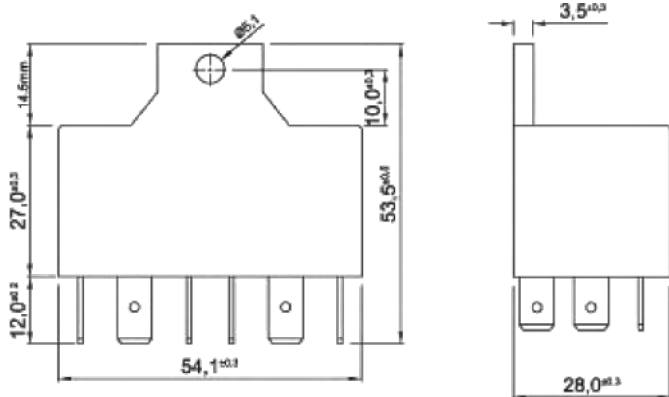
Double Relay

This is a double remote control device for automotive applications. Control voltage can be 12V or 24V. Every relay can be supplied with an optional resistor or a diode on request

HOMOLOGATION



POSITION OF FLAT TERMINALS
TO ISO 7599



FASTON 6.3X 0.8
ISO 8092-1



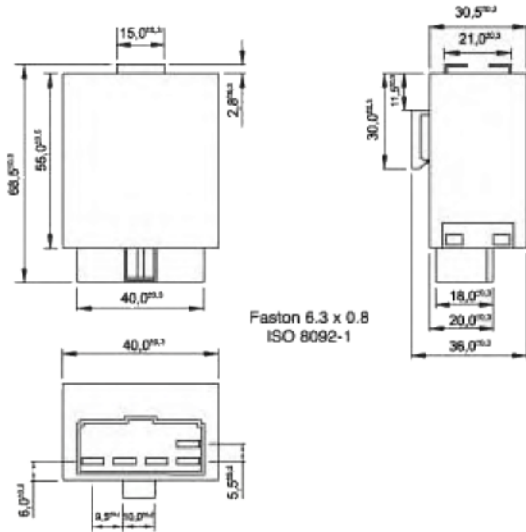
MERIT No.	DESCRIPTION	TYPE	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFORMATION	PIN CONFIGURATION	TECHNICAL DIAGRAM
MT20-142383	NORMALLY OPEN	B	12	2x30	2x4	WHIT PLASTIC BRACKET		
MT20-142303	NORMALLY OPEN	B	12	2x30	2x5	WHIT PLASTIC BRACKET		
MT20-144283	NORMALLY OPEN	B	24	2x20	2x4	WHIT PLASTIC BRACKET		
MT20-144203	NORMALLY OPEN	B	24	2x20	2x5	WHIT PLASTIC BRACKET		
MT20-142483	NORMALLY OPEN	B	12	2x40	2x4	WHIT PLASTIC BRACKET		
MT20-142403	NORMALLY OPEN	B	12	2x40	2x5	WHIT PLASTIC BRACKET		
MT20-144383	NORMALLY OPEN	B	24	2x30	2x4	WHIT PLASTIC BRACKET		
MT20-144303	NORMALLY OPEN	B	24	2x30	2x5	WHIT PLASTIC BRACKET		



Reverse Hazard Relay (BHR)

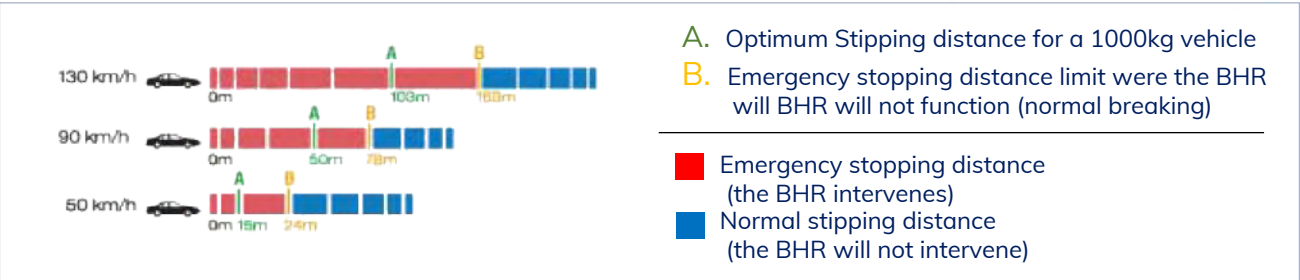
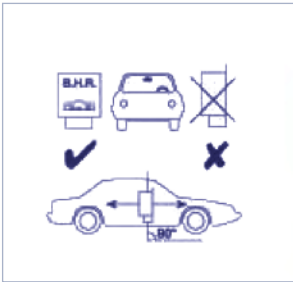
A safety device that measures the deceleration of a vehicle under braking. In the event of severe or emergency braking conditions the BHR will activate the vehicle Hazard Warning Lights, warning other vehicles approaching from behind of a potential collision hazard.

HOMOLOGATION



MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	PINS	APPLICATIONS	CONFIGURATION PIN	TECHNICAL DIAGRAM FOR 12V & 24V
MT20-070112	BRAKE HAZARD RELAY	12	5			
MT20-070124	BRAKE HAZARD RELAY	24	5			

The BHR Works by automatically switching on the Hazard Warning Lights when the vehicle has braked severely in an emergency situation. The Hazard Warning Lights then continue to flash after the driver has released the brake pedal. This will warn approaching vehicles from behind of an impending danger of a stationary or slow moving vehicle in front and help prevent a rear collision. The BHR will turn off the Hazard Warning Lights and revert back to its normal state after 10 seconds. Normal functioning of the Hazard Warning Lights is not affected by the BHR.

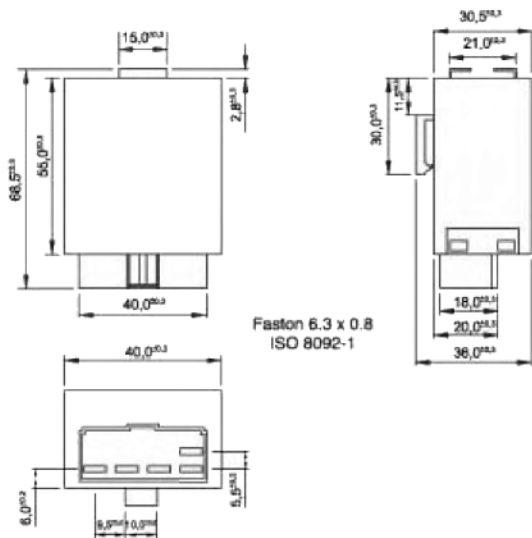


Reverse Hazard Relay (RHR)

HOMOLOGATION



This is an electronic device that operates the vehicles Hazard Warning Lights When reverse gear is selected. it is the perfect safety device for trucks and busses. It provides a highly effective visual warning that may be combined with the audible back – up alarm unit.
(Codes MT20-070412 or MT20-070424).



MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	PINS	APPLICATIONS	CONFIGURATION PIN	TECHNICAL DIAGRAM FOR 12V & 24V
MT20-070212	REVERSE HAZARD RELAY	12	5			
MT20-070224	REVERSE HAZARD RELAY	24	5			

Reverse tail lights.

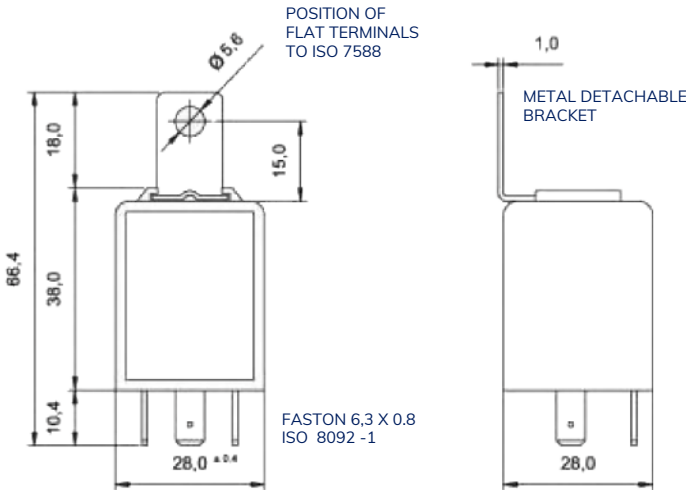


Reverse Alarm Relay (RHR)

HOMOLOGATION



This is an electronic device whit electronic pulsating output for signal alarm used when reversing. Control voltage car be either 12V or 24V



MERIT No.	DESCRIPTION	PINS	VOLTAGE (VOLT)	ADDITIONAL INFORMATION	CONFIGURATION PIN	TECHNICAL DIAGRAM
MT20-070412	RELAY For back up alarm	4	12	Metal detachable bracket		
MT20-070424	RELAY For back up alarm	4	24	Metal detachable bracket		

TECHNICAL CHARACTERISTICS					
NOMINAL VOLTAGE	12V	24 V	CYCLE FREQUENCY	80±5 PER MINUTE	80±5 PER MINUTE
NOMINAL CURRENT	30 Amp	30 Amp	WORKING	INTERMITTANCE	INTERMITTANCE
EXCITATION VOLTAGE	9 V	18 V	IPERATING TEMPERATURE	-40°C + 85°C	-40°C + 85°C
TENSION OF MISEXCITATION	2.5 mV	5 mV	CONNECTION BOARD	DIN ISO 7588 ISO 7880	DIN ISO 7588 ISO 7880
CURRENT ABSORPTION	170 mV	80 mV	SOUND LEVEL	> 98 dB - 30 cm	> 98 dB - 30 cm



66,4

18,0

38,0

10,4

Ø 5,6

15,0

28,0

8

POSITION OF
FLAT TERMINALS
TO ISO 7588


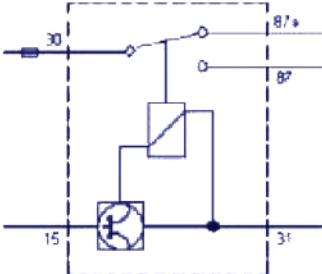





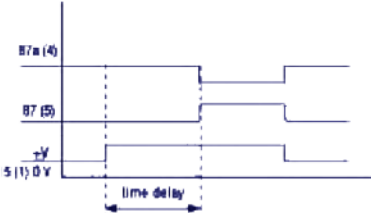



FASTON 6,3 X 0,8
ISO 8092 -1

1,0

28,0

METAL DETACHABLE
BRACKET



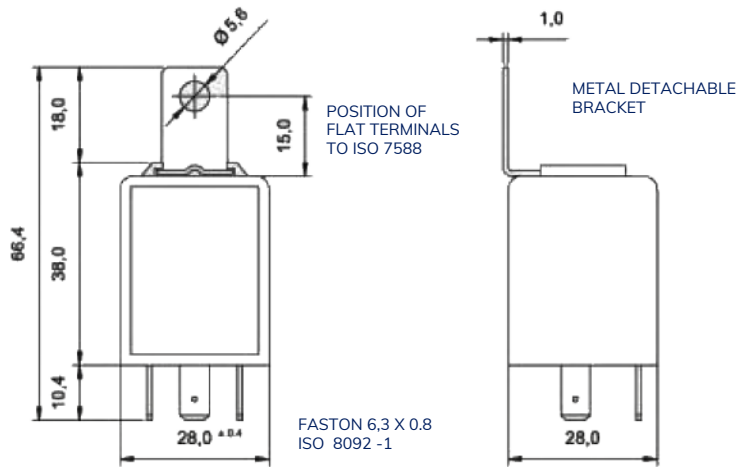
MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	TIME DELAY	CONFIGURATION PIN	TECHNICAL DIAGRAM
MT20-902002	TIMER RELAY	12	2,5 sec		
MT20-902004	TIMER RELAY	12	4 sec		
MT20-90200F	TIMER RELAY	12	15 sec		
MT20-902019	TIMER RELAY	12	25 sec		
MT20-902000	TIMER RELAY	12	ON REQUEST		
MT20-904004	TIMER RELAY	24	4 sec		
MT20-90400F	TIMER RELAY	24	15 sec		
MT20-90403C	TIMER RELAY	24	60 sec		
MT20-904000	TIMER RELAY	24	ON REQUEST		

21



Timer Relay (on-delay)

This is an electronic device that operates in the same way as a standard relay with the difference that it changes state immediately when energized and returns to its original state after a pre determined time delay. The range of the time delay is set by the Factory to customers specifications.

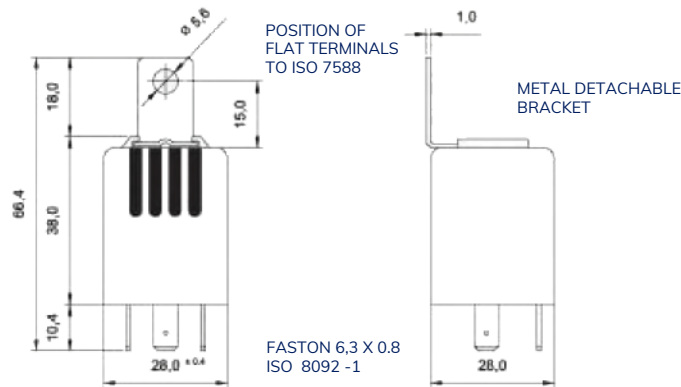


MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	TIME DELAY	CONFIGURATION PIN	TECHNICAL DIAGRAM
MT20-912000	DROP-OUT RELAY	12	ON REQUEST		
MT20-914000	DROP-OUT RELAY	24	ON REQUEST		



Lights Warning Relay

This is an electronic device that gives an acoustic warning signal when the lights are on and the car doors are open. Control voltage is 12V



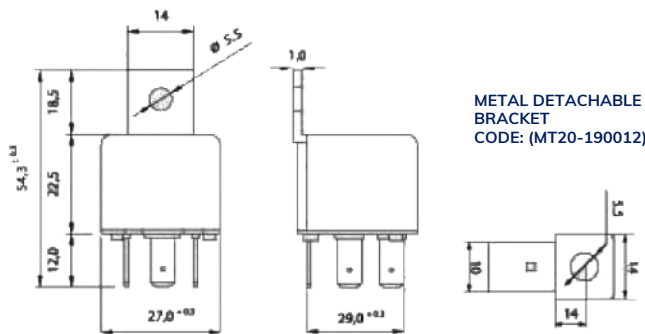
HOMOLOGATION



MERIT No.	DESCRIPTION	PINS	VOLTAGE (VOLT)	SOUND LEVEL	APPLICATION	CONFIGURATION PIN	TECHNICAL DIAGRAM
MT20-070321	LIGHTS WARNING	3	12	>85 dB - 30 cm			
MT20-070322	LIGHTS WARNING	3	12	>85 dB - 30 cm			

Switch off Relay

This is an electronic device for automotive applications. Control voltage is 12V only. This device is placed in line with the vehicles high beam supply, and changes the state of the contact when a voltage is present. The contact of this device is used to opened the circuit that controls the rear fog lamps.



HOMOLOGATION



MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	INTENSITY (MAX-AMP)	PINS	ADDITIONAL INFO	CONFIGURATION PIN	TECHNICAL DIAGRAM
MT20-302334	SWITCH OFF RELAY FOR REAR FOG LIGHT	12	30	3	Without Bracket		

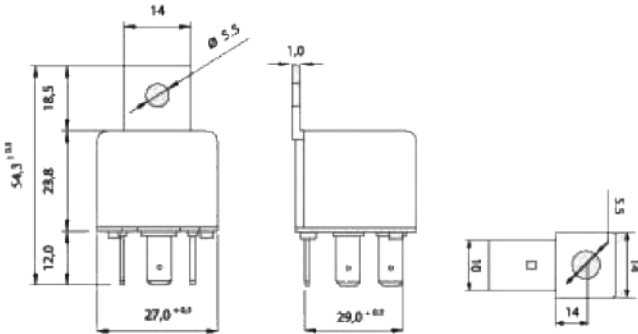


Double Contact Relay

HOMOLOGATION



These are remote control devices for automotive use. Control voltage can be 12V or 24V. Pin configuration is according to ISO 7588. Every relay can be supplied with an optional reistor or diode on request. Every relay is supplied without a metal bracket that can be supplied on request (Code: MT20-1S0012)

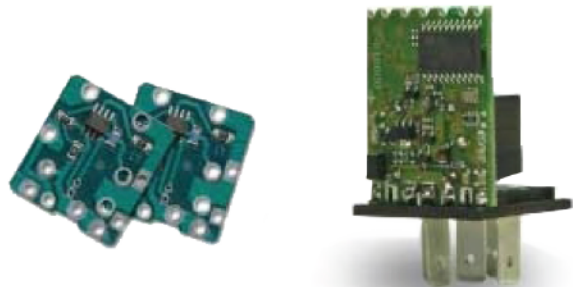


MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFORMATION	PIN CONFIG	TECHNICAL DIAGRAM
MT20-152354	DOUBLE CONTACT RELAY	12	2x15	5	Without Bracket		
MT20-152454	DOUBLE CONTACT RELAY	12	2x20	5	Without Bracket		
MT20-154254	DOUBLE CONTACT RELAY	24	2x10	5	Without Bracket		
MT20-154354	DOUBLE CONTACT RELAY	24	2x15	5	Without Bracket		

Electronic Solid State Relay

Electronic relays offer many advantages such as;

- More efficient and improved performance.
- Increased lifespan.
- Smaller Dimensions.
- Reduce weight
- Reduction in Noise
- No Electromagnetic field and negligible influence.



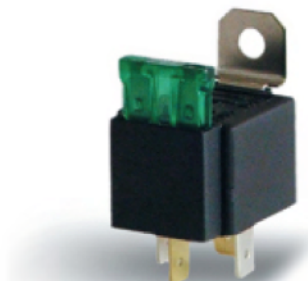
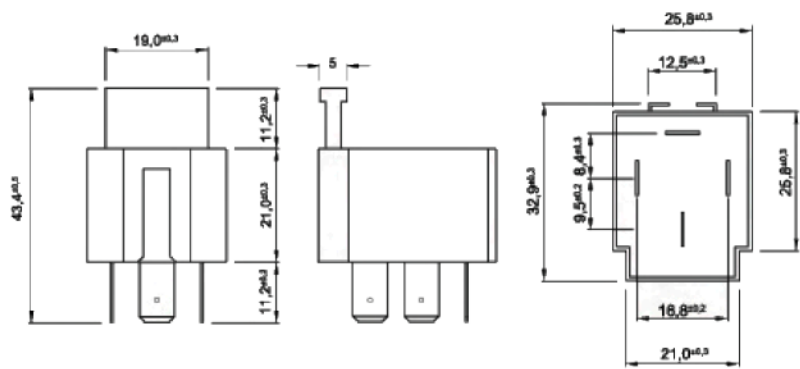


Relay With Fuse

HOMOLOGATION












This is a remote control device for automotive applications. Control voltage can be 12V or 24V. This device has an in-built protection fuse that in line with the main cotacts.



MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	INTENSITY MAX AMP	PINS	ADDITIONAL INFORMATION	PIN CONFIG	TECHNICAL DIAGRAM
MT20-132144	WITH FUSE	12	15	4	Without Bracket		
MT20-132344	WITH FUSE	12	30	4	Without Bracket		
MT20-134144	WITH FUSE	24	15	4	Without Bracket		
MT20-134244	WITH FUSE	24	20	4	Without Bracket		

Relay Holder (Socket)

This is a remote control device for automotive applications. Control voltage can be 12V or 24V. This device has an in-built protection fuse that in line with the main cotacts.

MERIT NO.	DESCRIPTION	DIMENSIONS	MERIT NO.	AVAILABLE FASTONS	DIMENSIONS
 MT20-N00.001	RELAY HOLDER	4x2,8mm 5x6,3mm	 MT20-FAS.10 MT20-FAS.30		6,3mm 4,8mm
 MT20-M00.001	MICRO-RELAY HOLDER	2x6,3mm 3x4,8mm	 MT20-FAS.10 MT20-FAS.30		6,3mm 4,8mm
 MT20-S00.001	STARTER-RELAY HOLDER	2x9,5mm 3x6,3mm 4x2,8mm	 MT20-FAS.20 MT20-FAS.10 MT20-FAS.30		9,5mm 6,3mm 4,8mm



Contactors

Main differences between contactors (100A up to 1000A) and traditional heavy duty relays



A contactor is an electromagnetic device with an effective working load ranging from 100A to 600A. Typical applications would be:

- Lift
- Construction vehicles
- Boats, Yachts and other Marine Vessels
- Electrically Powered Vehicles
- Trucks
- Industrial Vehicles
- Hybrid Dual Fuel Vehicles

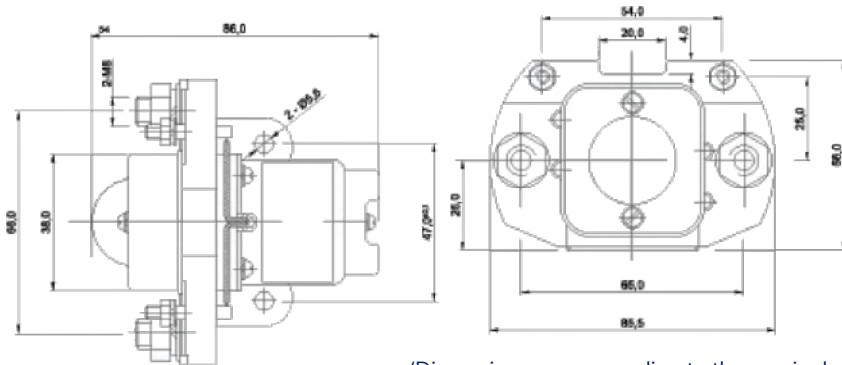
A contactor works by closing/making or opening/braking an electric circuit. The control voltage is typically 12V, 24V or 48V, Compared to traditional heavy duty relays. Contactors have superior performance, are safer and more reliable and consume much less energy.

Primary differences

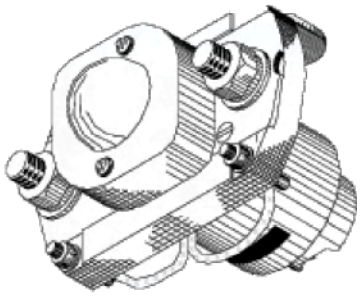
- Both contactors and traditional heavy-duty relays work according to the same electromagnetic principle. However they are very different in design. Traditional relays have a spring, connected to a contact with a small surface and cross sectional area, linked to an armature and copper bobbin. In this way the bobbin attracts the iron armature when a current flows. In comparison the Contactor has a spring connected to contacts with a large surface and cross sectional area and also a blogger core inside the copper bobbin. When current flows through he bobbin, it moves and either closes or opens the contacts.
- Contactors use a double section copper bobbin, so the closing and opening speed is much faster than a traditional heavy-duty relay. This reduces electrical arcing and also reduces overheating of the contacts. This helps reliability by reducing the wear and tear of the contacts and increases the lifespan of the contacts considerably.
- When the contacts of a contactor are closed, the first section of the copper bobbin is disconnected, and only the second section is active, therefore the power consumption is greatly reduced in comparison to the heavy-duty relay.
- Contactors are less prone to interruption caused by voltage fluctuations in the supply line. When the contactor is in the energised state the col requires much less current . In the event of a fluctuating supply voltage the contactor will tolerate a reduction of the operating voltage going down to 22V for 48V version, 13V for 24V version and 5,6 for 12V version, without interruption of the closed circuit.
- When compared to the traditional heavy duty relay, the contactor makes contact by means of a large strong metal section attached to two contacts with a large surface and
- Cross sectional area. Whereas in a heavy-duty relay, the making or braking is concentrated on one unique point, therefore having a much smaller contact area.
- The voltage drop of a contactor is smaller than that in a traditional heavy-duty relay. It can be measured as less than 60mV at very high currents .
- Contactors can make or break the electric circuit at a very high speed. This reduces the risk of contacts welding together, in traditional heavy-duty relays contact welding is a primary cause of premature relay failure.
- Contactors can withstand a current 30 times greater then the nominal value during making and/or braking of the circuit.
- Contactors can withstand voltags up to 1000V AC 50HZ, with no risk of failure. This is because the housing is made from a material that has high insulation properties called Bakelite.
- Contactors are designed and tested to perform over 1.000.000 cycles in nominal conditions.
- Contactors have a high resistance against humidity (up to 98%) and dust, and can operate in temperatures ranging between 25^o C to + 140^o C.
- Contactors are designed to resist huge shocks, of over 30m/s.
- Contactors conform to the following standards:
 - STANDARD JB2286-78 (for electric vehicles).
 - STANDARD JB3974-85 (for vehicles charged by batteries).



Contactor series MZJ



(Dimensions vary according to the nominal current capacity of the contactor)

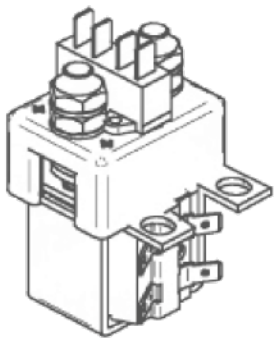
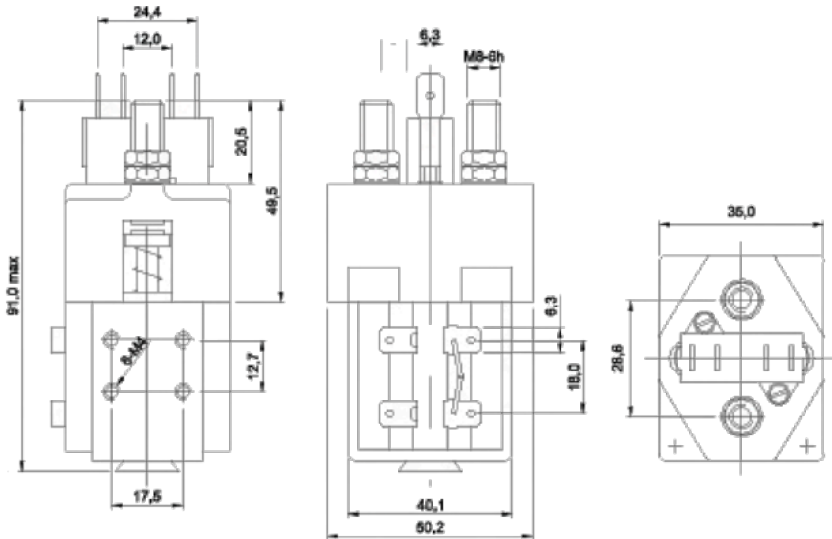


Series MZJ

MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	MAX INTENSITY AMP	PINS	IP RATING	TECHNICAL DIAGRAM
MT20-932100	NORMALLY OPEN	12	100	4	IP00	
MT20-932200	NORMALLY OPEN	12	200	4	IP00	
MT20-932600	NORMALLY OPEN	12	600	4	IP00	
MT20-934100	NORMALLY OPEN	24	100	4	IP00	
MT20-934200	NORMALLY OPEN	24	200	4	IP00	
MT20-934600	NORMALLY OPEN	24	600	4	IP00	
MT20-938050	NORMALLY OPEN	48	50	4	IP00	
MT20-938100	NORMALLY OPEN	48	100	4	IP00	
MT20-938200	NORMALLY OPEN	48	200	4	IP00	
MT20-938400	NORMALLY OPEN	48	400	4	IP00	
MT20-938600	NORMALLY OPEN	48	600	4	IP00	

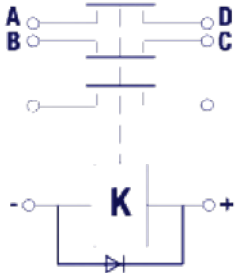


Contactor series JCA



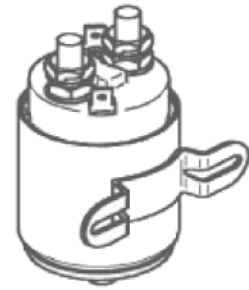
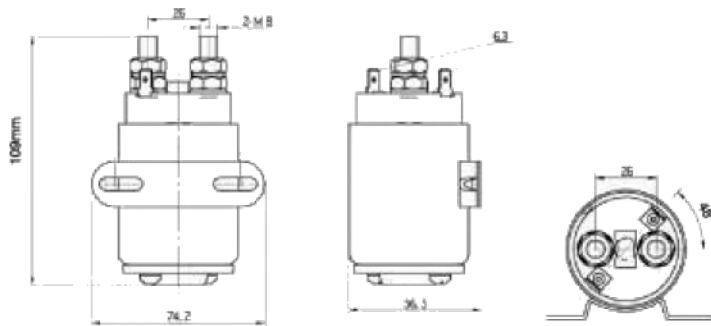
Series JCA

(Dimensions vary according to the nominal current capacity of the contactor)

MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	MAX INTENSITY AMP	PINS	IP RATING	TECHNICAL DIAGRAM
MT20-924100	Normally open	24	100	8	IP00	
MT20-924200	Normally open	24	200	8	IP00	
MT20-928100	Normally open	48	100	8	IP00	
MT20-928200	Normally open	48	200	8	IP00	
MT20-928400	Normally open	48	400	8	IP00	



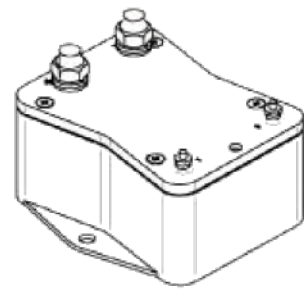
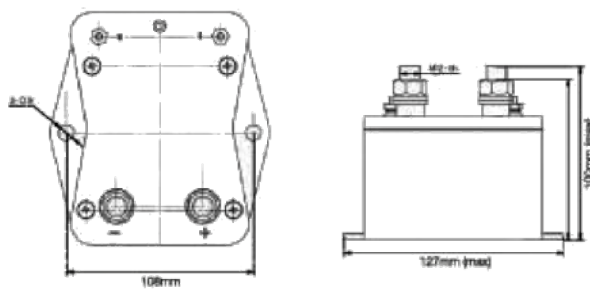
Contactor series JCD



Series JCA

MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	MAX INTENSITY AMP	PINS	IP RATING	TECHNICAL DIAGRAM
MT20-944120	Normally open	24	120	4	IP53	
MT20-942140	Normally open	12	140	4	IP53	
MT20-942141	Normally open	12	140	4	IP66	

Contactor series JCC



Series JCC

MERIT No.	DESCRIPTION	VOLTAGE (VOLT)	MAX INTENSITY AMP	PINS	IP RATING	TECHNICAL DIAGRAM
MT20-954600	Normally open	24	600	4	IP00	

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MERIT No.	DESCRIPTION	PAGE	MERIT No.	DESCRIPTION	PAGE
MT20-012129	Electronic Flasher Unit	6	MT20-102353	Relay 12V (homologated)	12
MT20-012239	Electronic Flasher Unit	6	MT20-102354	Relay 12V (homologated)	12
MT20-012245	Electronic Flasher Unit	6	MT20-102453	Relay 12V (homologated)	12
MT20-012435	Electronic Flasher Unit	6	MT20-102454	Relay 12V (homologated)	12
MT20-012540	Electronic Flasher Unit	6	MT20-102553	Relay 12V (homologated)	12
MT20-012642	Electronic Flasher Unit	6	MT20-102554	Relay 12V (homologated)	12
MT20-012657	Electronic Flasher Unit	6	MT20-104241	Relay 24V (un-homologated)	15
MT20-014239	Electronic Flasher Unit	6	MT20-104242	Relay 24V (un-homologated)	15
MT20-014245	Electronic Flasher Unit	6	MT20-104243	Relay 24V (homologated)	13
MT20-014435	Electronic Flasher Unit	6	MT20-104244	Relay 24V (homologated)	13
MT20-014642	Electronic Flasher Unit	6	MT20-104251	Relay 24V (un-homologated)	15
MT20-022123	LED Flasher Unit	4	MT20-104252	Relay 24V (un-homologated)	15
MT20-022243	LED Flasher Unit	4	MT20-104253	Relay 24V (homologated)	13
MT20-022333	LED Flasher Unit	4	MT20-104254	Relay 24V (homologated)	13
MT20-022433	LED Flasher Unit	4	MT20-104353	Relay 24V (homologated)	13
MT20-024244	LED Flasher Unit	4	MT20-104354	Relay 24V (homologated)	13
MT20-024434	LED Flasher Unit	4	MT20-104453	Relay 24V (homologated)	13
MT20-032431	LED Flasher Unit with Diagnostic	6	MT20-104454	Relay 24V (homologated)	13
MT20-032446	LED Flasher Unit with Diagnostic	6	MT20-106341	Relay 6V (un-homologated)	14
MT20-032541	LED Flasher Unit with Diagnostic	6	MT20-106351	Relay 6V (un-homologated)	14
MT20-042128	Thermic Flasher Unit (Type A)	8	MT20-132144	Relay with Fuse	26
MT20-042238	Thermic Flasher Unit (Type A)	8	MT20-132344	Relay with Fuse	26
MT20-044128	Thermic Flasher Unit (Type A)	8	MT20-134144	Relay with Fuse	26
MT20-044238	Thermic Flasher Unit (Type A)	8	MT20-134244	Relay with Fuse	26
MT20-052128	Thermic Flasher Unit (Type B)	8	MT20-142303	Double Relay	18
MT20-052238	Thermic Flasher Unit (Type B)	8	MT20-142383	Double Relay	18
MT20-054128	Thermic Flasher Unit (Type B)	8	MT20-142403	Double Relay	18
MT20-054238	Thermic Flasher Unit (Type B)	8	MT20-142483	Double Relay	18
MT20-070112	Brake Hazard Relay (BHR)	19	MT20-144203	Double Relay	18
MT20-070124	Brake Hazard Relay (BHR)	19	MT20-144283	Double Relay	18
MT20-070212	Reverse Hazard Relay (RHR)	20	MT20-144303	Double Relay	18
MT20-070224	Reverse Hazard Relay (RHR)	20	MT20-144383	Double Relay	18
MT20-070321	Lights Warning Unit	24	MT20-152354	Double Contacts Relay	25
MT20-070322	Lights Warning Unit	24	MT20-152454	Double Contacts Relay	25
MT20-070412	Reverse Alarm Relay (RAR)	21	MT20-154254	Double Contacts Relay	25
MT20-070424	Reverse Alarm Relay (RAR)	21	MT20-154354	Double Contacts Relay	25
MT20-102341	Relay 12V (un-homologated)	14	MT20-202351	Relay 12V (un-homologated)	14
MT20-102342	Relay 12V (un-homologated)	14	MT20-202352	Relay 12V (un-homologated)	14
MT20-102343	Relay 12V (homologated)	12	MT20-202353	Relay 12V (homologated)	12
MT20-102344	Relay 12V (homologated)	12	MT20-202354	Relay 12V (homologated)	12
MT20-102351	Relay 12V (un-homologated)	14	MT20-202454	Heavy Duty Relay	16
MT20-102352	Relay 12V (un-homologated)	14	MT20-204251	Mini Relay (un-homologated)	15

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MERIT No.	DESCRIPTION	PAGE	MERIT No.	DESCRIPTION	PAGE
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MT20-204253	Mini Relay (homologated)	13	MT20-814154	Micro Relay	9
MT20-204254	Mini Relay (homologated)	13	MT20-822254	Micro Relay	9
MT20-204454	Heavy Duty Relay	16	MT20-824154	Micro Relay	9
MT20-302334	Off Relay for Rear Fog Light	24	MT20-902000	Timer Relay (on delay)	22
MT20-402544	Heavy Duty Relay	16	MT20-902002	Timer Relay (on delay)	22
MT20-402643	Extra Heavy Duty Relay	17	MT20-902004	Timer Relay (on delay)	22
MT20-402744	Heavy Duty Relay	16	MT20-90200F	Timer Relay (on delay)	22
MT20-402844	Heavy Duty Relay	16	MT20-902019	Timer Relay (on delay)	22
MT20-402943	Extra Heavy Duty Relay	17	MT20-904000	Timer Relay (on delay)	22
MT20-404043	Extra Heavy Duty Relay	17	MT20-904004	Timer Relay (on delay)	22
MT20-404544	Heavy Duty Relay	16	MT20-90400F	Timer Relay (on delay)	22
MT20-404744	Heavy Duty Relay	16	MT20-90403C	Timer Relay (on delay)	22
MT20-404843	Extra Heavy Duty Relay	17	MT20-912000	Timer relay (drop out)	23
MT20-502341	Relay 12V (un-homologated)	14	MT20-914000	Timer relay (drop out)	23
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MT20-502343	Relay 12V (homologated)	12	MT20-924200	Contactor Series JCA	29
MT20-502344	Relay 12V (homologated)	12	MT20-954600	Contactor Series JCC	30
MT20-502351	Relay 12V (un-homologated)	14	MT20-928100	Contactor Series JCA	29
MT20-502352	Relay 12V (un-homologated)	14	MT20-928200	Contactor Series JCA	29
MT20-502353	Relay 12V (homologated)	12	MT20-928400	Contactor Series JCA	29
MT20-502354	Relay 12V (homologated)	12	MT20-932100	Contactor Series MZJ	28
MT20-504241	Relay 24V (un-homologated)	15	MT20-932200	Contactor Series MZJ	28
MT20-504242	Relay 24V (un-homologated)	15	MT20-932600	Contactor Series MZJ	28
MT20-504243	Relay 24V (homologated)	13	MT20-934100	Contactor Series MZJ	28
MT20-504244	Relay 24V (homologated)	13	MT20-934200	Contactor Series MZJ	28
MT20-504251	Relay 24V (un-homologated)	15	MT20-934600	Contactor Series MZJ	28
MT20-504252	Relay 24V (un-homologated)	15	MT20-936050	Contactor Series MZJ	28
MT20-504253	Relay 24V (homologated)	13	MT20-938100	Contactor Series MZJ	28
MT20-504254	Relay 24V (homologated)	13	MT20-938200	Contactor Series MZJ	28
MT20-602352	Relay 12V (un-homologated)	14	MT20-938400	Contactor Series MZJ	28
MT20-602354	Relay 12V (homologated)	12	MT20-938600	Contactor Series MZJ	28
MT20-604252	Relay 24V (un-homologated)	15	MT20-9421400	Contactor Series JCD	30
MT20-604254	Relay 24V (homologated)	13	MT20-9421410	Contactor Series JCD	30
MT20-702244	Micro Relay	9	MT20-9441200	Contactor Series JCD	30
MT20-704144	Micro Relay	9	MT20-FAS.10	Faston 6.3mm	26
MT20-712244	Micro Relay	9	MT20-FAS.20	Faston 9.5mm	26
MT20-714144	Micro Relay	9	MT20-FAS.30	Faston 4.8mm	26
MT20-722244	Micro Relay	9	MT20-M00.001	Micro Relay Holder	26
MT20-724144	Micro Relay	9	MT20-N00.001	Relay Holder	26
MT20-802254	Micro Relay	9	MT20-S00.001	Starter Relay Holder	26
MT20-804154	Micro Relay	9			

