



KISSLING HIGH VOLTAGE CONTACTOR

Series 60 - from TE Connectivity (TE)

Power Switching in KISSLING Quality

The ongoing electrification in the automotive and special vehicle industry leads to new requirements for manufacturers of electric components. To achieve power levels similar to modern combustion engines in an electric vehicle, high voltage drive systems are unavoidable. Unfortunately, high voltages also cause switching arc problems when separating electric loads – which, if not handled properly can destroy switching contacts and shorten the switch life or even cause safety critical failures.

Maximum Safety

The high voltage contactor is optimized to meet the needs of the electric vehicle market and TE Connectivity - under its KISSLING brand offers relays and manual switches based on a non-gas-filled ceramic contact chamber. By avoiding the use of special gases in the contact chamber, we also avoid the risk of gas leaks, which would jeopardize the safe operational functionality of the switch. The biggest challenge for manufacturers is to minimize the burn time of the switching arc.

TE Connectivity has met this challenge with unique combination of blow out magnet positioning and ceramic chamber geometry coupled with a highly dynamic and efficient propulsion system, this combination of innovative design characteristics ensures a first-class product lifecycle.

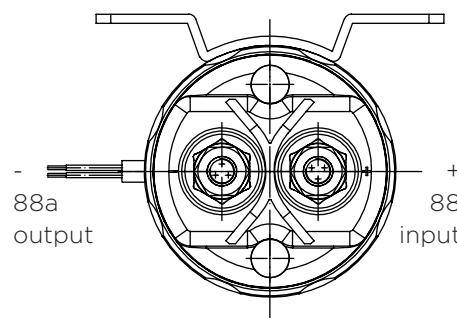
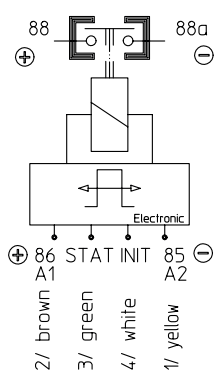
Features

- Without gas filling
- Overload up to 500 Amp
- Integrated PWM electronic controlling
- Contact voltage \leq 800 VDC
- EMC E1 approval

Applications

- Electric vehicles
- Industrial vehicles
- Military vehicles

Circuits



* for bidirektional application please contact engineering

INIT (control input)

Function relay ON/OFF (active high)

Control signal

LOW < 5VDC

HIGH > 9VDC

Debouncing approx. 25ms

STATUS (High-Side-Output)

Switches main power from 86 (bypass)

HIGH = Contactor ON

LOW = Contactor OFF

Max. 2A

KISSLING HIGH VOLTAGE CONTACTOR

Series 60

Ordering Information

Description	Part Number
Series 60 /// 9-16 VDC	60-311-11
Series 60 /// 18-32 VDC	60-311-12

Specification

Technical Data

Temperature range	-40°C to +85°C
Shock	6g / 11msec
Vibration	4g / 50 - 2000Hz
Thread sizes / Torque	M8 = 12 - 13Nm

Electrical Characteristics

Min. Insulation resistance	100MΩ						
After live or environment	50MΩ						
Dielectric withstanding voltage	2250V / 1min						
Max. contact drop, initial	150mV						
Max. voltage range	≤ 800VDC						
Contact drop after life test	175mV						
Continuous current	300A						
Carrying overload	3500A, 2sec / 700A, 30sec						
Rated contact load (resistive load 300) Make & Break						Break only	Extreme overload
Voltage range up to	24VDC	250VDC	400VDC	500VDC	600VDC	up to 750VDC	500A @ 600VDC = 2x
Endurance	200.000	20.000	10.000	5.000	1.000	10	400A @ 750VDC = 1x
Mechanical endurance	2.000.000 switching cycles						

Coil data and Operating Characteristics

	12V	24V
Voltage range	9 - 16VDC	18 - 32VDC
Nominal voltage	24VDC	
Pick up voltage max.	9VDC	
Drop out voltage min.	≤ 2VDC	
Coil current approx.	2A	
Coil power approx.	6W	
Quiescent current	approx. 1.5mA	

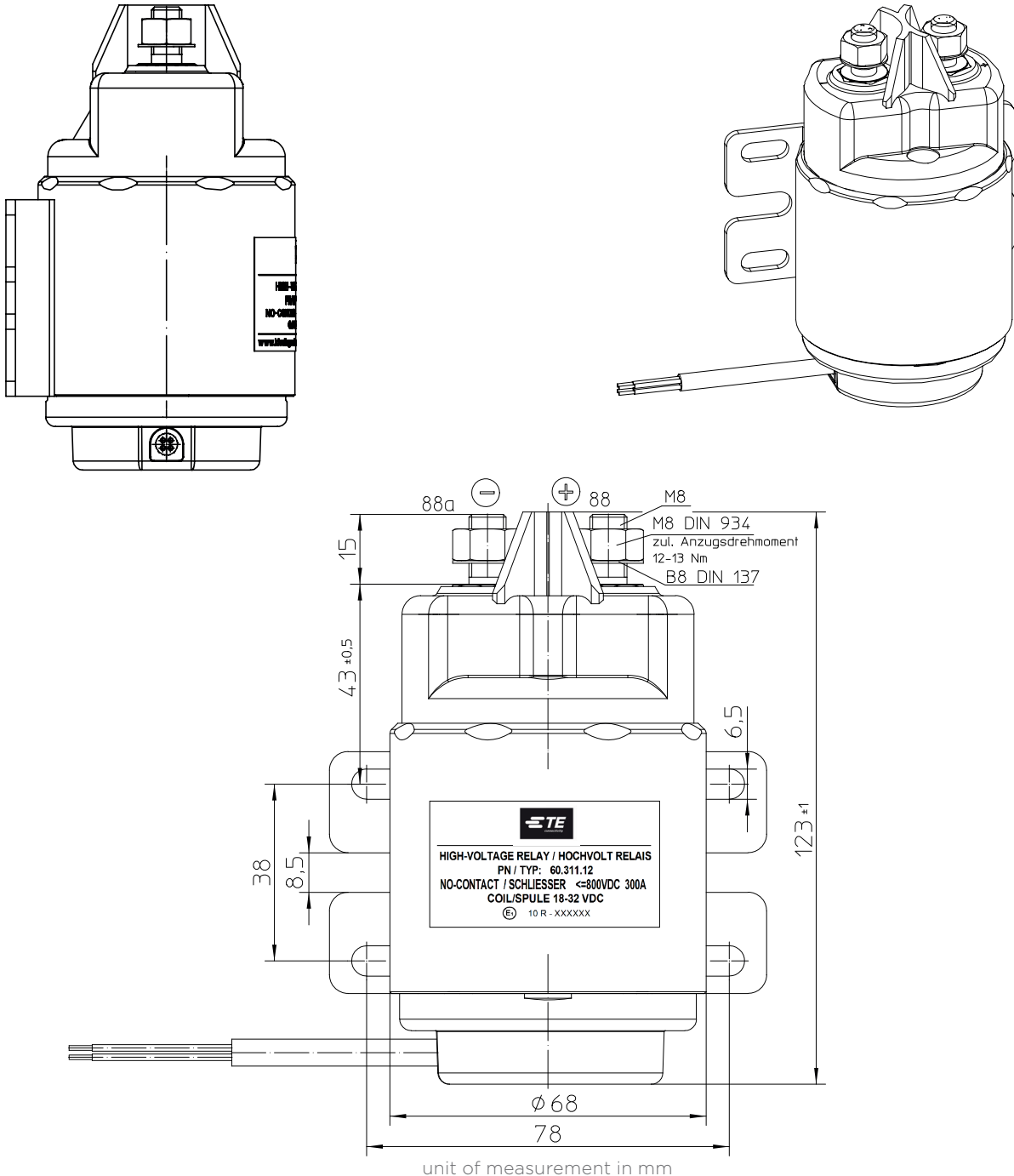
Operating times NO-Contact relay

Operate	max. 75msec
Bounce	max. 5msec
Release	max. 50msec
Wire section	min. 95mm ² / 0.147 sq.inch / AWG 4-0

KISSLING HIGH VOLTAGE CONTACTOR

Series 60

Technical drawings



te.com

TE Connectivity, TE, TE connectivity (logo) and KISSLING (word) are trademarks owned or licensed by the TE Connectivity family of companies. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2020 TE Connectivity | All Rights Reserved.

K1166723 | Version 08/2020