

# Technical Data

## Application and basic function

Controlled switch-ON/OFF of the on-board power supply in commercial vehicles.  
 This device integrates the basic of a monostable two coil featuring for a strong pull in and an economical holding.  
 The electronic-unit takes over the relay-control, the evaluation for current monitoring, the main-contact-control and other control-functions.

## General Data

Temperature range ..... -40°C to +85°C  
 Storage temperature.....-46°C to +95°C (95°C for 2h)  
 Interior protection ..... IP67(0,2 bar-1 min) and IP6K9K after IEC529 and DIN 40 050 T9  
 Terminal protection..... IPP00/ IEC529 and DIN 40 050 T9  
 Vibration ..... 4 g/ 50-2000 Hz  
 Shock ..... 6 g/ 11 msec after ISO 16750 for road vehicles  
 Resistance ..... against most oils, hydraulic fluids, fuels, alcohol, fire-extinguishing agents, battery acid, salt spray, injurious gas, cleaning agents, humidity, alternating temperature  
 Mounting position ..... optional  
 Weight ..... approx. 890 gr

## Electrical Data

Nominal voltage ..... 12 VDC  
 Voltage range..... 9-16 VDC  
 Spikes ..... 70 VDC for 2 msec  
 Min. operational voltage ..... 9 VDC  
 Overvoltage..... 36 VDC bei 40°C / 1h  
 Min. Insulation resistance ..... 100 MOhm  
 After live or environmental..... 50 MOhm  
 Dielectric withstanding voltage ..... 1050 VAC/ 1 min

## Relay Data

Duty rating ..... 300A continuous  
 Overload..... 3000A for 1 sec, 750A for 20 sec  
 Contact life, 300A resistive load..... 200 000 cycles  
 Mechanical life..... 300 000 cycles  
 Contact drop (at 300A duty rating)..... 150 mVDC  
 Contact drop after life test..... 175 mVDC  
 Resistance Pull in coil..... approx. 1,9 Ohms ±10%  
 Pull in current max..... 6A for 20 msec  
 Resistance Holding coil..... approx. 40 Ohms ±10%  
 Holding current max..... max. 0,4A

## Operational Characteristics

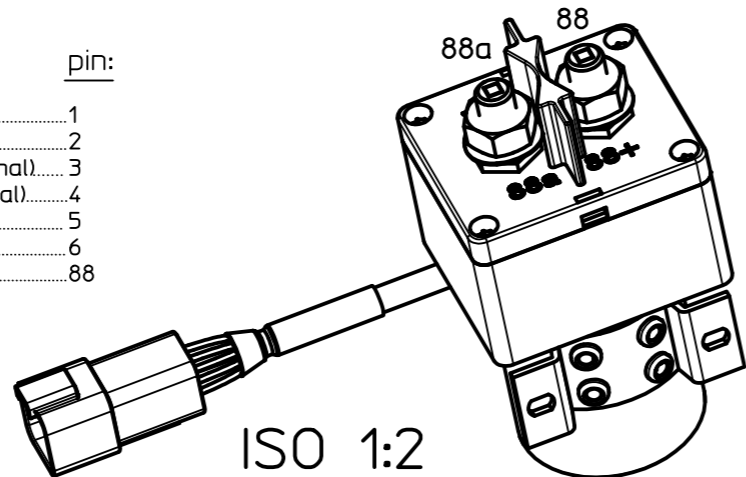
### Overcurrent:

When the starter signal input is HIGH the current monitoring should be ignored for 12sec then if still HIGH dropout, irrelevant of the current load.  
 Without starter signal and current level >300A and >100msec then dropout.

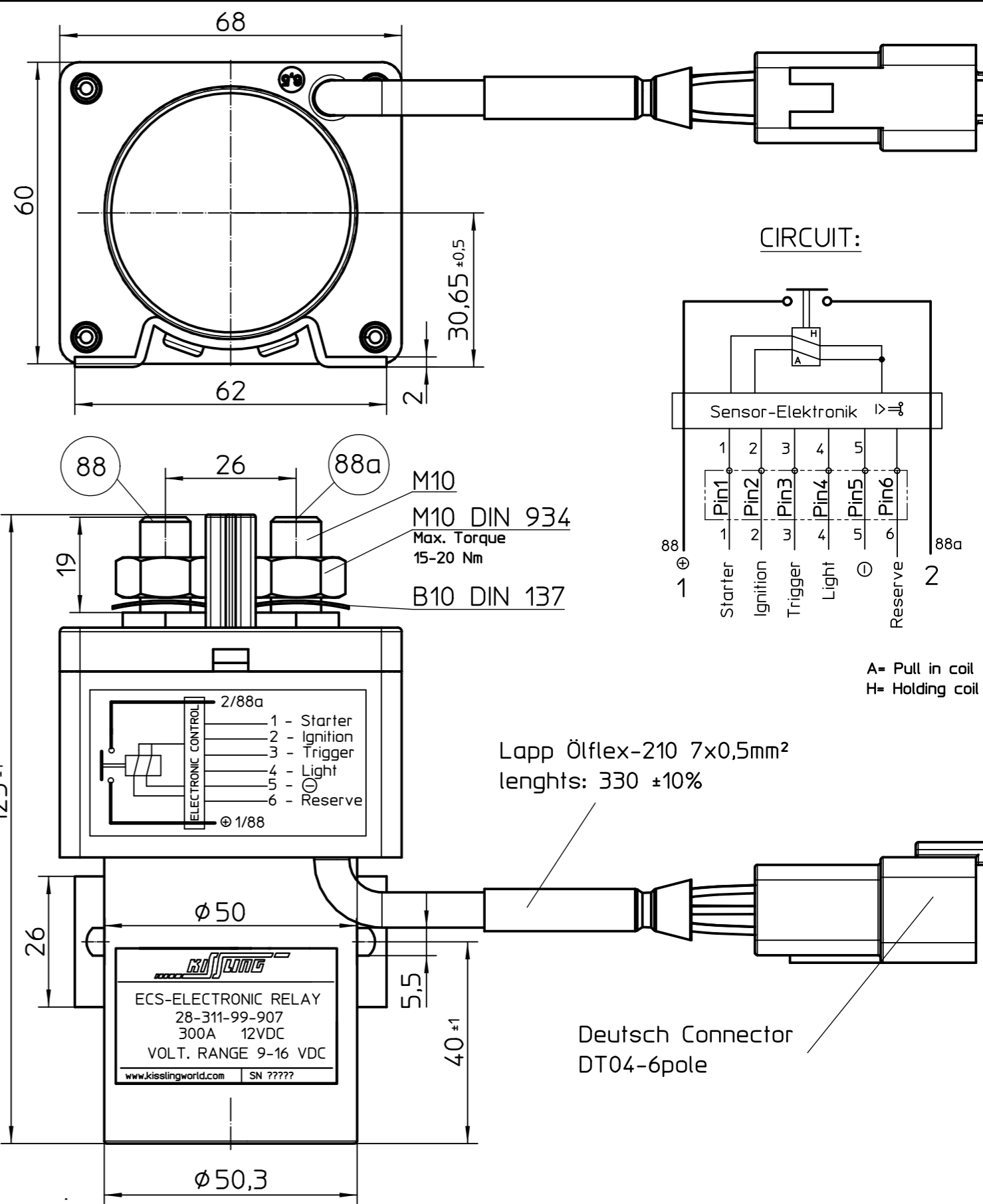
### Undervoltage:

No relay ON switching is possible in undervoltage condition:  
 @12VDC: UNDERVOLTAGE\_BARRIER\_9V  
 NO relay OFF-switching in undervoltage condition from the electronic side is programmed.

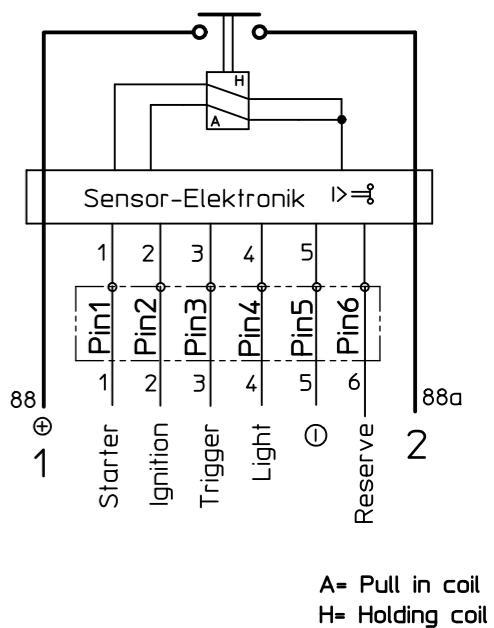
Signals:	potential (function):	pin:
Input starter signal.....	Highside (ignore current).....	1
Input ignition supply.....	Highside (ON-OFF-switching).....	2
Output negative trigger.....	Lowside (switching a minus signal).....	3
Output warning light.....	Highside (switching a plus signal).....	4
Battery negative.....	B-.....	5
Reserve.....	.....	6
Battery positive.....	B+.....	88



ISO 1:2



### CIRCUIT:



# ECS-Power Relay 300AMP (12VDC) Page 1 of 1

Date	Name	mm	Scale		Drawing No.:
09.10.2015	Hamar	↔	1:1		28-311-99-907
Check	12.04.2016	Kaise	General Tolerances DIN ISO 2768 cL		NSN: