

Single Fire Coil PT

This single fire coil PT is a low cost concept for cylinder head installation with an integrated transistor for use in combination with ECUs without internal ignition power stage.

During the current feed on the primary side of the coil, energy is stored in the magnetic circuit. A quick turn off of the primary supply occurs a reloading on the secondary side. There the stored energy at the spark plug is reduced in the form of a high voltage spark. The spark ignites the fuel-air mixture.



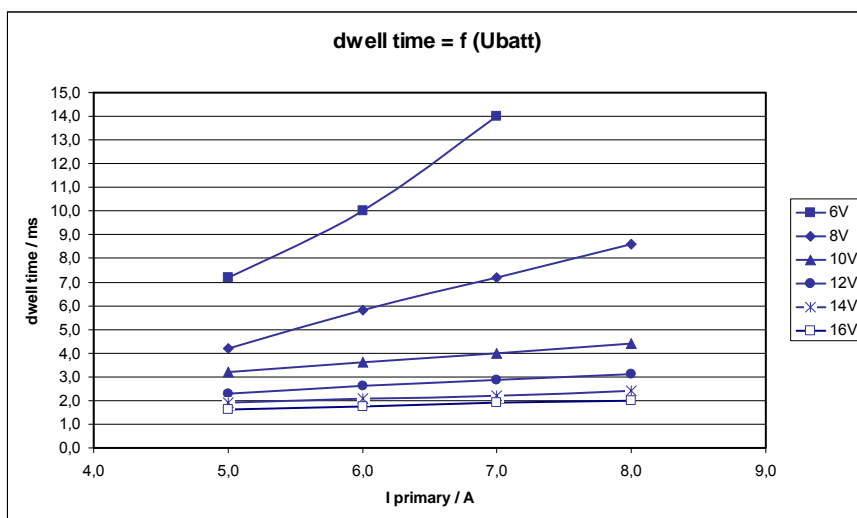
Application	
Spark Energy	≤ 38 mJ
Primary Current	≤ 8,0 A
Operating Temperature Range Outer Core	-20 ... 140 °C
Storage Temperature Range	-40 ... 100 °C
Max. Vibration	400 m/s ² @ 5 ... 2500 Hz
Mechanical Data	
Weight w/o Cable	194 g
Fixation	screw on

Electrical Data	
Primary Resistance with/without Cable	incapable of measurement
Secondary Resistance without Noise Suppression	incapable of measurement
Voltage Supply	6 ... 16,5 V
Dwell Time	see Primary Characteristic Diagram
High Voltage	≥ 34 kV [@8 pF 1MOhm]
High Voltage Rise Time	≤ 2,8 kV / μs
Spark Current	≤ 78 mA
Spark Duration	see Secondary Characteristic Diagram
Noise Suppression	1 kOhm integrated
Suppressure- / EFU-Diode	Yes
Integrated Power Stage	Yes
Ion Current Signal	No

Characteristic	
Measure with Power Stage	BIP 373

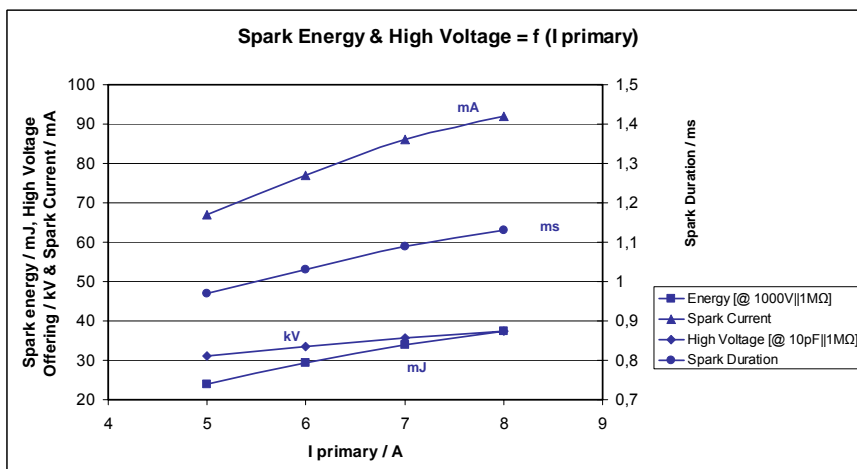
Primary Characteristic Diagram

I pri [A]	U batt [V]					
	6 V	8 V	10 V	12 V	14 V	16 V
5,0	7,2	4,2	3,2	2,3	1,9	1,6
6,0	10,0	5,8	3,6	2,6	2,1	1,8
7,0	14,0	7,2	4,0	2,9	2,2	1,9
8,0	-	8,6	4,4	3,1	2,4	2,0



Secondary Characteristic Diagram

	I pri [A]			
	5 A	6 A	7 A	8 A
Spark Energy [mJ]	24	29,3	34	37,3
Spark Duration [ms]	0,97	1,03	1,09	1,13
Spark Current [mA]	67	77	86	92
High Voltage [kV]	31	33,5	35,7	37,4



Connectors and Cables

Pin 1 Control [ECU]

Pin 2 Ground [ECU]

Pin 3 Ubatt [Power Supply]

Various military and automotive connectors on request.

Please specify the requested cable length with your order.

Application Hint

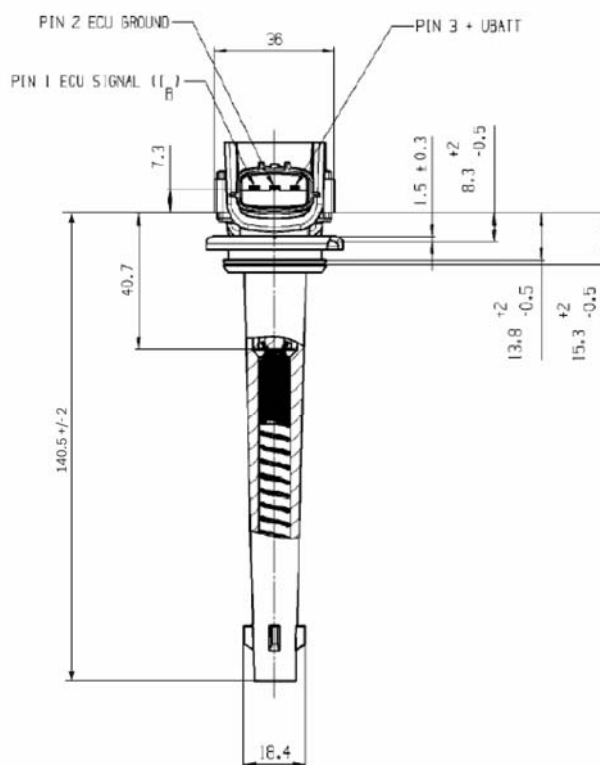
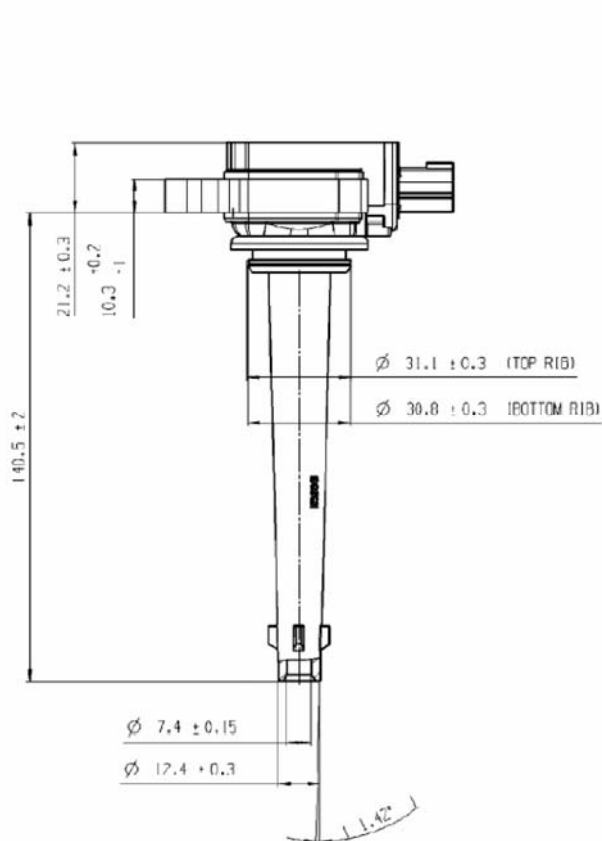
During the mounting in the spark plug shaft please pay attention that the clamping and contacting is completed exactly to realize a safe connection between coil and spark plug.

This coil is with a integrated Power Stage (BIP 373). Use only with engine control units having an output current driver about 10 mA.

Please regard the specified limit values.

Please find further application hints in the offer drawing (<http://www.bosch-motorsport.com>).

Design



Part number

Single Fire Coil PT **0 221 604 014**