Ignition Coil P65

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BOSCH
Invented for life

- Max. 35 kV
- Max. 65 mJ
- Developed for GDI engines
- Max. 10,000 1/min

This single fire coil is a low cost concept, designed to get connected to the spark plug via a high voltage wire. The high voltage connector is specified according to the SAE standard.
The performance of the coil fulfills the demands of modern GDI engines.
The main benefits of this product are the high packaging flexibility and its high electrical performance at low costs.

Application

Spark energy	≤ 65 mJ
Primary current	≤ 7.5 A
Operating temperature range at outer core	-20 to 140°C
Storage temperature range	-40 to 100°C
Max. vibration	≤ 250 m/s² at 5 to 2,500 Hz

Technical Specifications

Mechanical Data

Length	180 mm
Weight w/o wire	225 g
Mounting	Screw fastening
Fits to spark plugs with a ceramic diameter of 10 mm	

Electrical Data

Primary resistance	570 mOhm
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 1.9 kV/µs
Max. high voltage at 1 MOhm || 10 pF	≤ 35 kV
Spark current	≤ 74 mA
Spark duration at 1 kV || 1 MOhm	≤ 2.0 ms
Noise suppression	Inductive and 1 kOhm resistance
Suppression diode / EFU	Integrated

Characteristic

Measured with power stage	IGBT IRG4BC40S (U_{ce}=600 V)

Connectors and Wires

Connector	Tyco AMP
Mating connector	D 261 205 350-01
Pin 1	Engine GND

Pin 2	U_{batt}
Pin 3	ECU ignition power stage

Characteristic dwell times [ms]

U_{batt}	I primary					
	5.0 A	6.0 A	7.0 A	7.5 A	8.0 A	8.5 A
6 V	8.74	18.5				
8 V	4.5	6.4	9	10.8	13.9	
10 V	3.1	4.2	5.4	6	6.6	7.2
12 V	2.36	3.1	3.88	4.25	4.63	4.92
14 V	1.9	2.48	3.05	3.32	3.57	3.77
16 V	1.61	2.06	2.53	2.73	2.93	3.08
18 V	1.55	2	2.43	2.62	2.81	2.95
20 V	1.39	1.77	2.16	2.33	2.48	2.6
22 V	1.22	1.54	1.88	2.02	2.15	2.26
24 V	0.97	1.23	1.49	1.6	1.71	1.78

Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement

Spark energy and provided high voltage

I prim.	Spark energy	-duration	-current	Hi voltage
5 A	37.8 mJ	1.46 ms	49 mA	24.3 kV
6 A	54.5 mJ	1,74 ms	59 mA	28.9 kV
7 A	69.8 mJ	1.97 ms	69 mA	33.2 kV
7.5 A	77.6 mJ	2.04 ms	74 mA	35.8 kV
8 A	83.0 mJ	2.11 ms	77 mA	37.7 kV
8.5 A	88.0 mJ	2.16 ms	81 mA	39.0 kV

Installation Notes

During mounting of the spark plug please pay attention that full clamping and proper contacts are made to ensure safe connection between coil and spark plug.

The coil P65 has no integrated transistor and requires an ECU with internal ignition power stages, e.g. IGBT IRG4BC40S or BIP.

For technical reasons the values of the coils may vary.

Please regard the specified limit values.

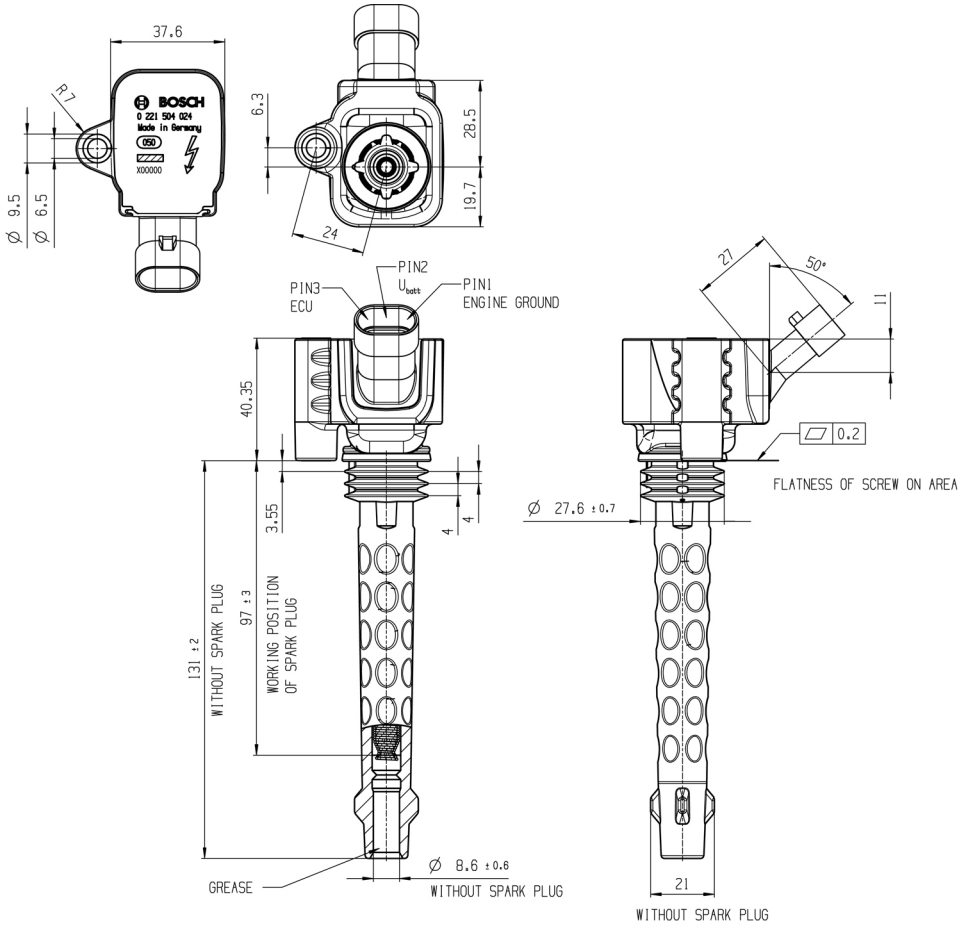
Please find further application hints in the offer drawing at our homepage.

In case of ignition-caused malfunctions, please use screened sensor wires.

Ordering Information

Ignition Coil P65
Order number **0 221 504 024**

Dimensions



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2777845131 | en, V2, 13. Mar 2017