

Single Fire Coil P65

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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 for direct mounting to the cylinder-head. The P65 has no integrated transistor and requires an ECU with internal ignition power stages.

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/s ² at 5 to 2,500 Hz

Technical Specifications

Mechanical Data

Length	180 mm
Weight w/o wire	< 222 g
Mounting	Screw fastening

Electrical Data

Primary resistance	570 mΩ
Secondary resistance	Incapable of measurement

High voltage rise time	≤ 1.9 kV/μs
Max. high voltage at 1 MΩ 10 pF	≤ 35 kV
Spark current	≤ 74 mA
Spark duration at 1 kV 1 MΩ	≤ 2.0 ms
Noise suppression	Inductive and 2 kΩ resistance
Suppression diode / EFU	Integrated

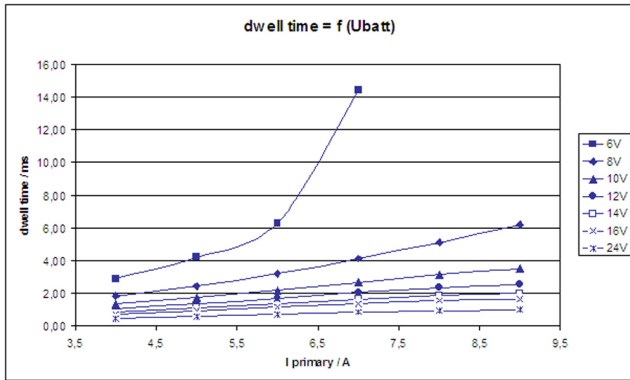
Characteristic

Measured with power stage	IGBT IRG4BC40S (U _{ce} =600 V)
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Connectors and Wires

Connector	Tyco AMP
Mating connector	D 261 205 350-01
Pin 1	Engine GND
Pin 2	U _{batt}
Pin 3	ECU
For spark plugs	Ceramic diameter d = 10 mm

Characteristic dwell times [ms]

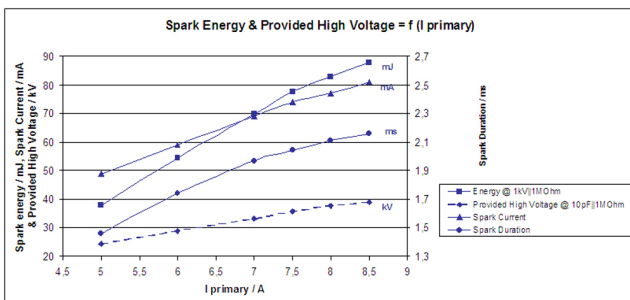


Dwell time

U _{batt}	I _{primary}					
	4.0A	5.0A	6.0A	7.0A	8.0A	9.0A
6V	2.90	4.20	6.30	14.40		
8V	1.83	2.45	3.17	4.10	5.10	6.20
10V	1.33	1.74	2.18	2.68	3.16	3.49
12V	1.05	1.35	1.68	2.02	2.33	2.53
14V	0.86	1.11	1.35	1.62	1.85	1.99
16V	0.73	0.93	1.14	1.35	1.54	1.65
18V	0.64	0.82	0.98	1.16	1.32	1.41
20V	0.56	0.71	0.86	1.02	1.15	1.23
22V	0.50	0.64	0.77	0.91	1.02	1.09
24V	0.46	0.58	0.70	0.82	0.92	0.98

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



Spark energy

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 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 home-page.

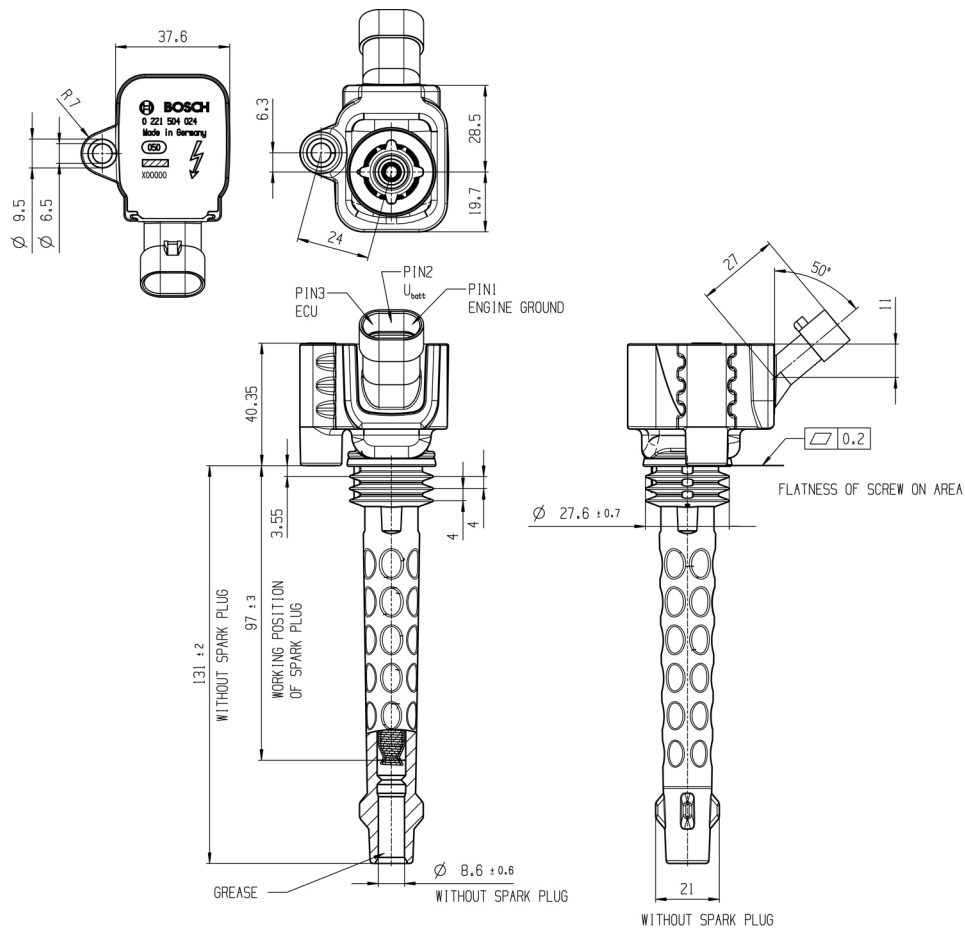
In case of ignition-caused malfunctions, please use screened sensor wires.

Ordering Information

Single Fire Coil P65

Order number **0 221 504 024**

Dimensions



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