

# Ignition Coil P65-WS

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**BOSCH**  
Invented for life



- ▶ Connection for high voltage wire according to SAE (American standard)
- ▶ 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/s <sup>2</sup> at 5 to 2,500 Hz

## Technical Specifications

### Mechanical Data

Length	See offer drawing
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 1 kΩ resistance
Suppression diode / EFU	Integrated

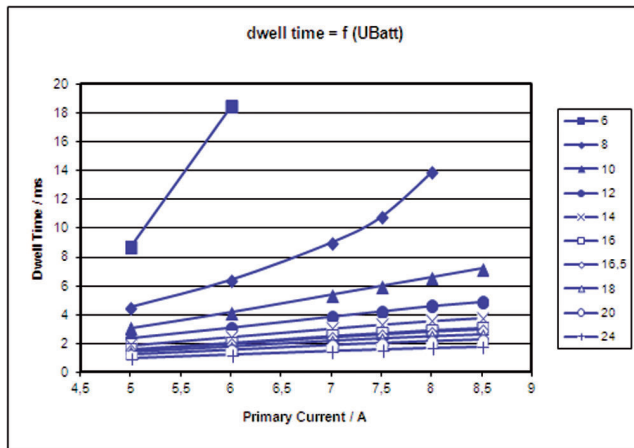
### Characteristic

Measured with power stage	IGBT IRG4BC40S (U <sub>ce</sub> = 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 <sub>batt</sub>
Pin 3	ECU ignition power stage

**Characteristic dwell times [ms]**

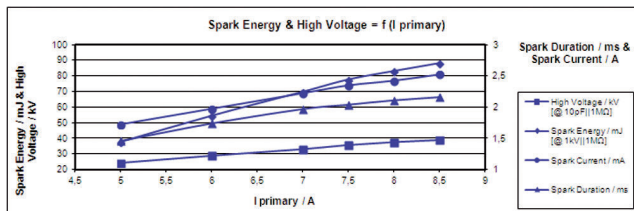


*Dwell time*

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



*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 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-WS**

Order number **F 02U V01 926-01**

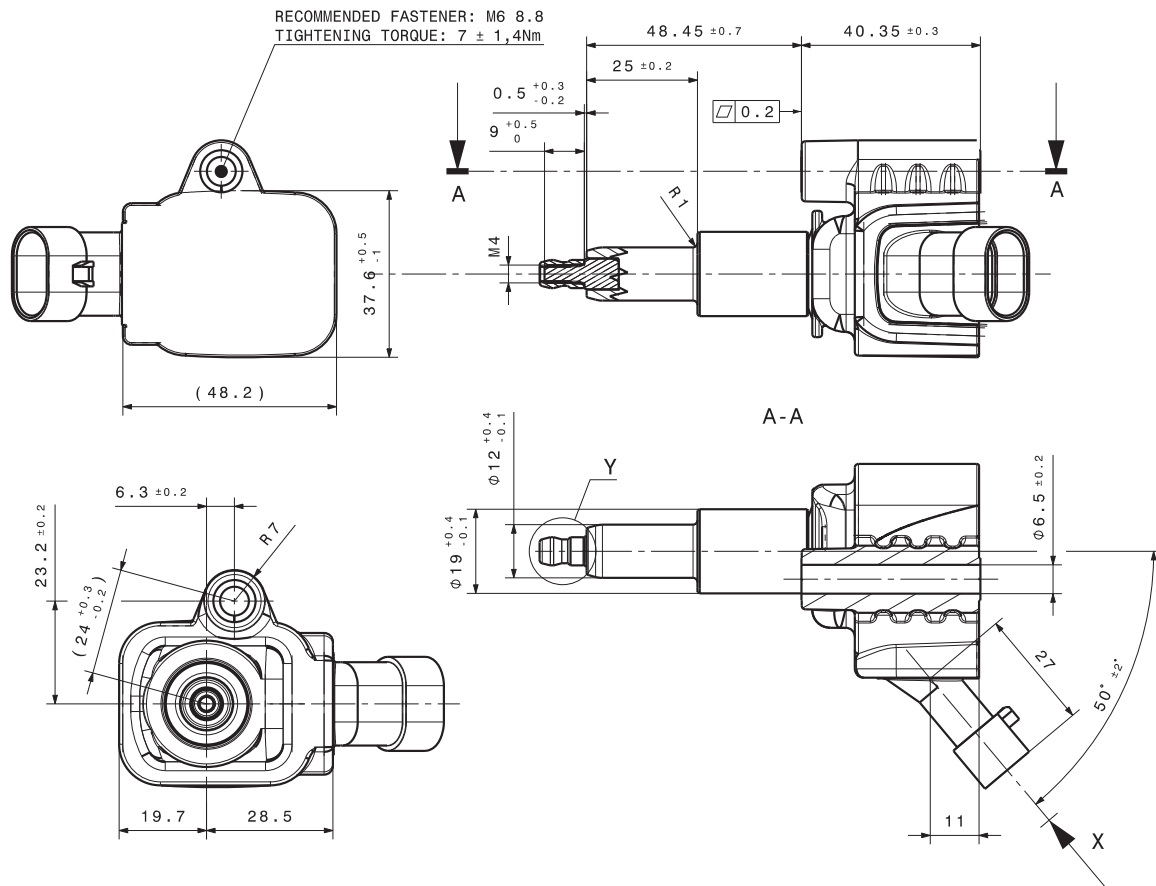
**Accessories**

**High Voltage Connector angled**

Please ask your local Bosch Service

Order number **0 356 250 035**

Dimensions



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