

Ignition Coil P65



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

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	$\leq 250 \text{ m/s}^2 \text{ at } 5 \text{ to } 2,500 \text{ Hz}$

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 resist- ance
Suppression diode / EFU	Integrated
Characteristic	
Measured with power stage	IGBT IRG4BC40S (U _{ce} =600 V)
Connectors and Wires	
Connector	Тусо АМР
Mating connector	D261.205.350-01
Pin 1	Engine GND
Pin 2	U _{batt}
Pin 3	ECU ignition power stage
	o , o

Characteristic dwell times [ms]

\mathbf{U}_{batt}	l 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

l prim.	Spark en- ergy	-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.

Dimensions

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.

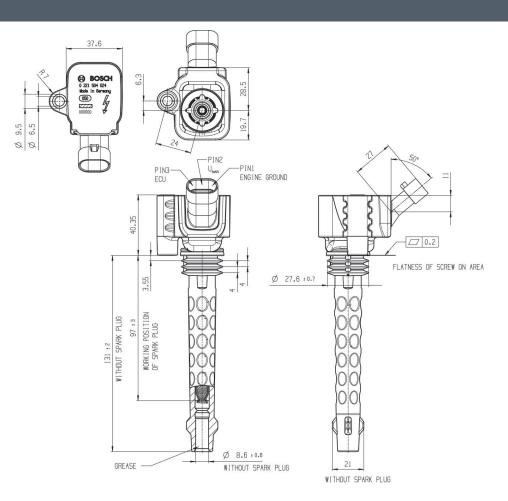
Design Note

We strongly recommend the design of the spark plug shaft has to ensure that there are no sharp edges in the shaft geometry due to design or machining. Only in compliance with this recommendation, a proper function can be ensured.

Ordering Information

Ignition Coil P65

Order number 0221.504.024



Represented by:

Europe: Bosch Engineering GmbH Motorsport Robert-Bosch-Allee 1 74232 Abstatt Germany Tel.: +49 7062 911 9101 Fax: +49 7062 911 79104 motorsport@bosch.com www.bosch-motorsport.de

North America: Bosch Engineering North America Motorsport 38000 Hills Tech Drive Farmington Hills, MI 48331-3417 United States of America TeL: +1 248 876 2977 Fax: +1 248 876 7373 motorsport@hosch.com motorsport@bosch.com www.bosch-motorsport.com

 \circledast Bosch Engineering GmbH 2022 | Data subject to change without notice | , V, 02. Nov 2022

Asia-Pacific: Bosch Engineering Japan K.K. Motorsport 18F Queen's Tower C, 2-3-5 Minato Mirai Nishi-ku, Yokohama-shi Kanagawa 220-6218 Japan TeL: +81 45 650 5610 Fax: +81 45 650 5611 www.bosch-motorsport.jp

Australia, New Zealand and South Africa: Robert Bosch Pty. Ltd Motorsport 1555 Centre Road Clayton, Victoria, 3168 Australia Tel.: +61 (3) 9541 3901 motor.sport@au.bosch.com