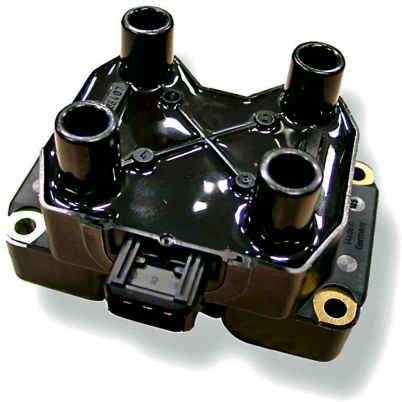
BOSCH
Invented for life

Double Fire Coil 2x2



- **Max. 35 kV**
- **Max. 70 mJ**
- **Max. 1.9 kV/µs**
- **For 4 cyl. engines**

This dual spark ignition coil is designed for low-cost applications in 4-cylinder engines.

The Double Fire Coil 2x2 has no integrated transistor and requires an ECU with internal ignition power stages.

The advantage of this coil is that the ECU needs only two internal ignition power stages for supplying a 4-cylinder engine.

The Double Fire Coil 2x2 benefits from series production ensuring robustness and low cost.

Application

Spark energy	≤ 70 mJ
Primary current	≤ 8.0 A
Operating temperature range at outer core	-20 to 120°C
Storage temperature range	-40 to 100°C
Max. vibration	≤ 200 m/s^2 at 5 to 250 Hz

Technical Specifications

Mechanical Data

Weight	916 g
Mounting	Screw fastening

Electrical Data

Primary resistance with wire	500 mΩ
Secondary resistance	13.3 kΩ
High voltage rise time	≤ 1.9 kV/µs
Max. high voltage at 1 MΩ || 10 pF	≤ 35 kV
Spark current	≤ 70 mA
Spark duration at 1 kV || 1 MΩ	≤ 2.2 ms

Characteristic

Measured with power stage	IGBT IRG4BC40S (Uce=600 V)

Connectors and Wires

Connector	Bosch Jetronic
Mating connector	D 261 205 289-01
Pin 1	Coil 2 ECU Ignition Power Stage
Pin 2	U_{batt}
Pin 3	Coil 1 ECU Ignition Power Stage

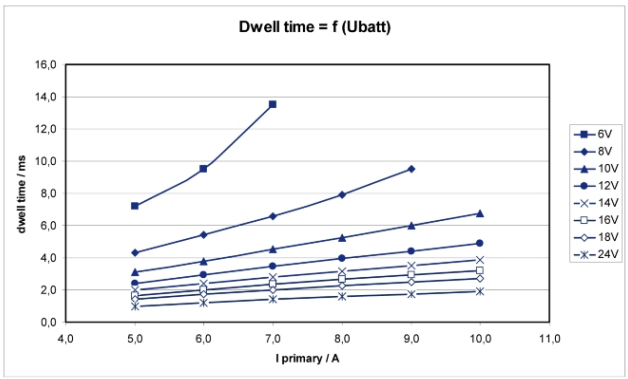
Various motorsport and automotive connectors are available on request.

Please specify the required wire length with your order.

Characteristic dwell times [ms]

U_{batt}	I primary					
	5.0 A	6.0 A	7.0 A	8.0 A	9.0 A	10.0 A
6 V	6.9	9.3	13.1	22.2		
8 V	4.2	5.3	6.7	8.1	9.8	12.0
10 V	3.0	3.8	4.6	5.4	6.2	7.0
12 V	2.4	2.9	3.5	4.1	4.6	5.1
14 V	1.9	2.4	2.8	3.3	3.6	4.0
16 V	1.6	2.0	2.4	2.7	3.0	3.3
20 V	1.2	1.5	1.8	2.0	2.3	2.5
22 V	1.1	1.3	1.6	1.8	2.0	2.2
24 V	1.0	1.2	1.4	1.6	1.8	2.0

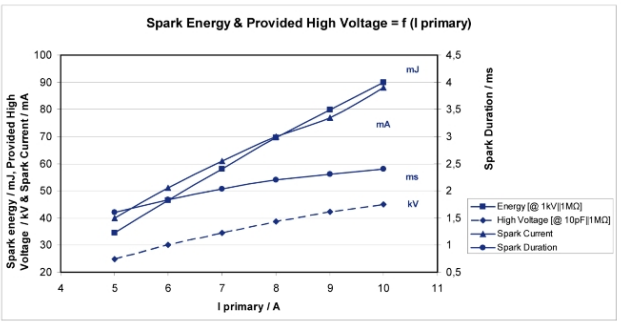
Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement



Dwell time

Spark energy and provided high voltage

I prim.	Spark energy	-duration	-current	Hi voltage
5 A	34.5 mJ	1.6 ms	40 mA	24.9 kV
6 A	46.5 mJ	1.83 ms	51 mA	30 kV
7 A	58.0 mJ	2.03 ms	61 mA	34.5 kV
8 A	69.6 mJ	2.2 ms	70 mA	38.6 kV
9 A	79.9 mJ	2.31 ms	77 mA	42.2 kV
10 A	89.9 mJ	2.4 ms	88 mA	45 kV



Spark energy

Installation Notes

The coil can be mounted directly on the engine.

Ignition wires are needed to connect the coil with the spark plug, please pay attention that the spark plugs are connected in the correct ignition firing order. Numbers in the offer drawing or on the ignition coil are not the firing order but the cylinders' order.

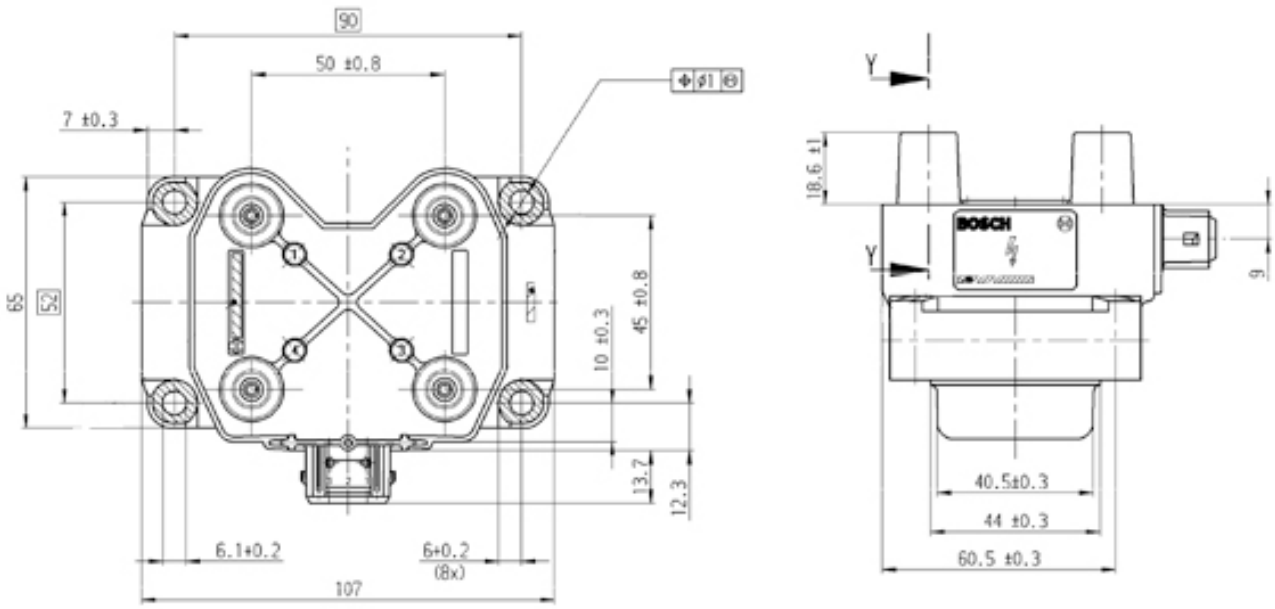
The Double Fire Coil 2x2 has no integrated transistor and requires an ECU with two internal ignition power stages, e.g. IGBT or BIP.

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.

Dimensions



Ordering Information

Double Fire Coil 2x2	**0 221 503 407**

Europe:
Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 79101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

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

Asia Pacific:
Bosch Engineering Japan K.K.
Motor Sport Department
3-33-8 Tsuruya-cho, Kanagawa-ku, Yokohama-shi
Kanagawa 221-0835
Japan
Tel.: +81 45 410 1650
Fax: +81 45 410 1651

Represented by

T6788342923 | Cur: en-US, V35, 23 Aug 2011