Double Fire Coil 3x2

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BOSCH
Invented for life

- Max. 35 kV
- Max. 65 mJ
- Max. 1.9 kV/µs
- For 6 cyl. engines

This dual spark ignition coil is designed for low-cost applications in 6-cylinder engines.
The Double Fire Coil 3x2 has no integrated transistor and requires an ECU with internal ignition power stages.
The advantage of this coil is that the ECU needs only three internal ignition power stages for supplying a 6-cylinder engine.
The Double Fire Coil 3x2 benefits from series production ensuring robustness and low cost.

Application

Spark energy	≤ 65 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/s² at 5 to 250 Hz

Technical Specifications

Mechanical Data

Weight	1,490 g
Mounting	Screw fastening

Electrical Data

Primary resistance with wire	500 mΩ
Secondary resistance	12 kΩ
High voltage rise time	≤ 1.9 kV/µs
Max. high voltage at 1 MΩ ‖ 10 pF	≤ 35 kV
Spark current	≤ 80 mA
Spark duration at 1 kV ‖ 1 MΩ	≤ 1.9 ms

Characteristic

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

Connectors and Wires

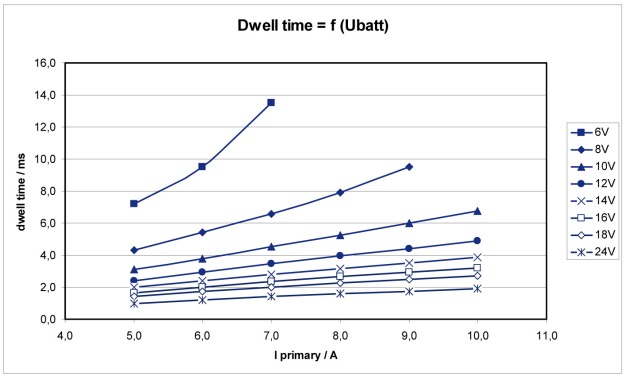
Connector	Bosch Jetronic
Mating connector 3-pole Jetronic	D 261 205 351-01
Pin 1	Coil 3 ECU Ignition Power Stage
Pin 2	Coil 2 ECU Ignition Power Stage
Pin 3	Coil 1 ECU Ignition Power Stage
Pin 4	U_{batt}

Various motorsport and automotive connectors are available on request.

Characteristic dwell times [ms]

U_{batt}	I primary					
	5.0 A	6.0 A	7.0 A	8.0 A	9.0 A	10 A
6 V	7.2	9.5	13.5			
8 V	4.3	5.4	6.6	7.9	9.5	
10 V	3.1	3.8	4.5	5.2	6.0	6.7
12 V	2.4	2.9	3.5	3.9	4.4	4.9
14 V	2.0	2.4	2.8	3.2	3.5	3.9
16 V	1.7	2.0	2.4	2.7	2.9	3.2
18 V	1.4	1.7	2.0	2.3	2.5	2.7
20 V	1.3	1.5	1.8	2.0	2.2	2.4
22 V	1.1	1.3	1.6	1.8	1.9	2.1
24 V	1.0	1.2	1.4	1.6	1.8	1.9

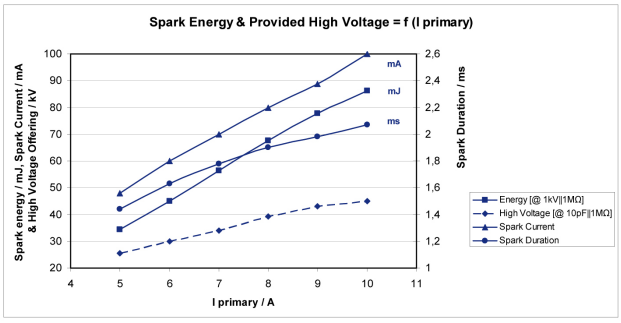
Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement



Dwell time

Spark energy and provided high voltage

I prim.	Spark energy	-duration	-current	Hi voltage
5 A	34.4 mJ	1.44 ms	48 mA	25.4 kV
6 A	45 mJ	1.63 ms	60 mA	29.9 kV
7 A	56.5 mJ	1.78 ms	70 mA	34 kV
8 A	67.6 mJ	1.9 ms	80 mA	39.3 kV
9 A	77.7 mJ	1.98 ms	88.8 mA	43 kV
10 A	86.2 mJ	2.07 ms	100 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 3x2 has no integrated transistor and requires an ECU with three 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.

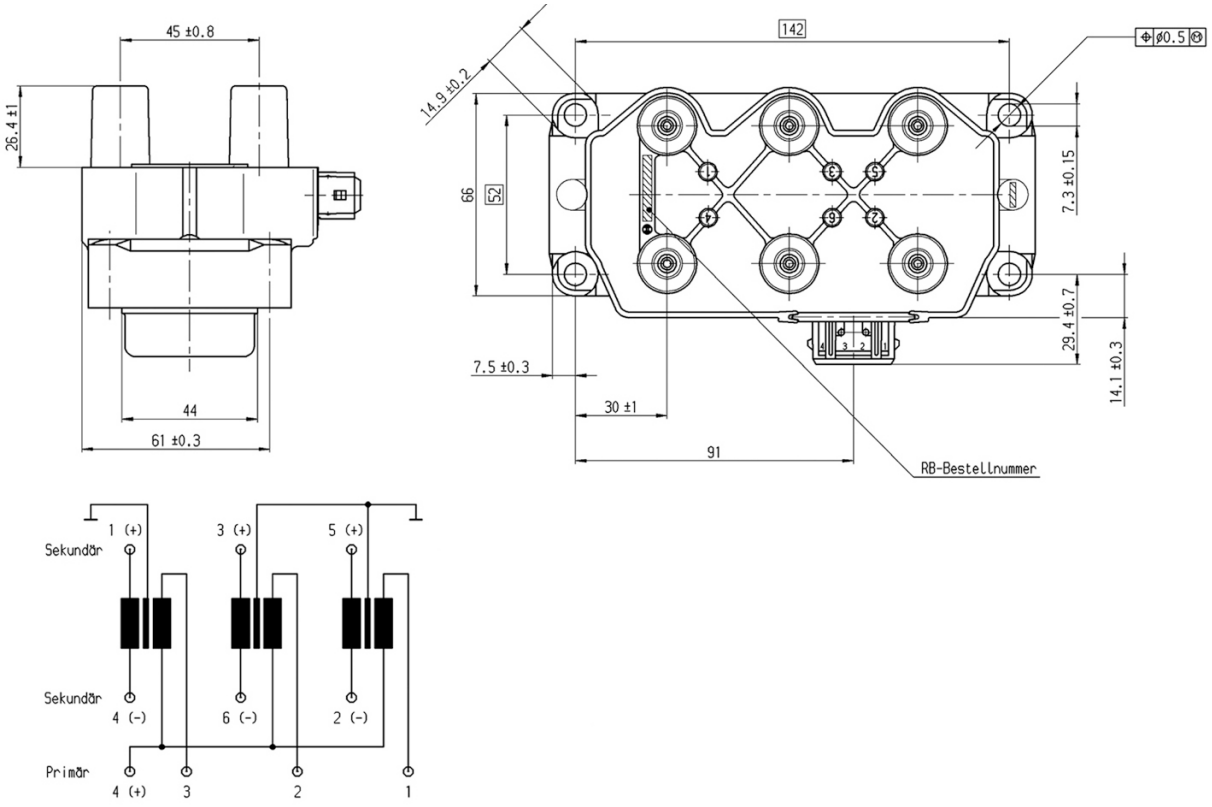
Please find further application hints in the offer drawing at our home-page.

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

Ordering Information

Double Fire Coil 3x2
Order number **0 221 503 002**

Dimensions



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