

Single Fire Coil P35

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Invented for life



- ▶ Max. 34 kV
- ▶ Max. 38 mJ
- ▶ Max. 2.0 kV/μs
- ▶ Max. 10,000 1/min

This single fire coil is a low cost concept designed for direct mounting to the cylinder head. The P35 has no integrated transistor and requires an ECU with internal ignition power stages with 10 mA to 20 mA current output. The single fire coil benefits from series production ensuring robustness and low cost.

Application

Spark energy	≤ 38 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	≤ 400 m/s ² at 5 to 2,500 Hz

Technical Specifications

Mechanical Data

Length	140.5 mm
Weight	194 to 205 g
Mounting	Screw fastening

Electrical Data

Primary resistance with wire	760 mΩ
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 2.0 kV/μs
Max. high voltage at 1 MΩ 10 pF	≤ 34 kV
Spark current	≤ 90 mA
Spark duration at 1 kV 1 MΩ	≤ 1.13 ms
Noise suppression	Inductive
Suppression diode / EFU	Integrated
Integrated power stage	-

Characteristic

Measured with power stage	IGBT IRG4BC40S
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Connectors and Wires

Connector	Sumitomo
Mating connector	D 261 205 367
Pin 1	ECU ignition power stage
Pin 2	ECU _{Gnd}

Pin 3 U_{batt}

Various motorsport and automotive connectors are available on request.

For spark plugs with a ceramic diameter $d=10$ mm

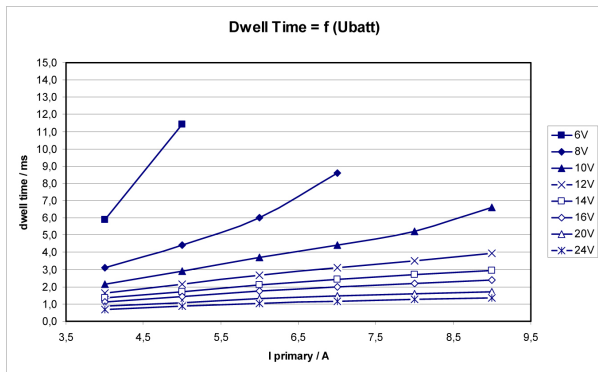
Spark plug connector 140.5 mm

Please specify the required wire length with your order.

Characteristic dwell times [ms]

U_{batt}	$I_{primary}$					
	4.0A	5.0A	6.0A	7.0A	8.0A	9.0A
6V	5.9	11.4				
8V	3.1	4.4	6.0	8.6		
10V	2.2	2.9	3.7	4.4	5.2	6.6
12V	1.6	2.1	2.7	3.1	3.5	3.9
14V	1.4	1.7	2.1	2.4	2.7	3.0
16V	1.1	1.4	1.8	2.0	2.2	2.4
18V	1.0	1.2	1.5	1.7	1.9	2.0
20V	0.9	1.1	1.3	1.5	1.6	1.7
22V	0.8	1.0	1.2	1.3	1.4	1.5
24V	0.7	0.9	1.0	1.2	1.3	1.4

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

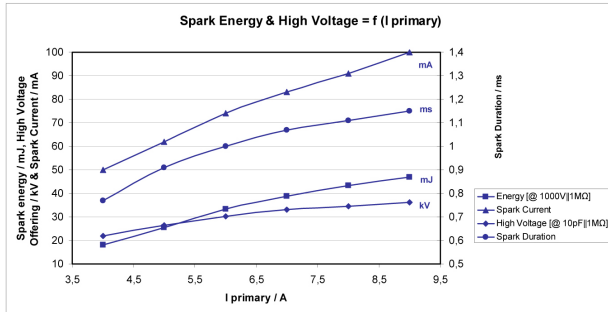


Dwell time

Spark energy and provided high voltage

$I_{prim.}$	Spark energy	-duration	-current	Hi voltage
4 A	18 mJ	0.77 ms	50 mA	22 kV
5 A	25.4 mJ	0.91 ms	62 mA	26.5 kV
6 A	33.4 mJ	1 ms	74 mA	30.3 kV
7 A	38.8 mJ	1.07 ms	83 mA	33 kV

8 A	43.3 mJ	1.11 ms	91 mA	34.5 kV
9 A	47 mJ	1.15 ms	100 mA	36.2 kV



Spark energy

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.

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For technical reasons the values of the coils may vary.

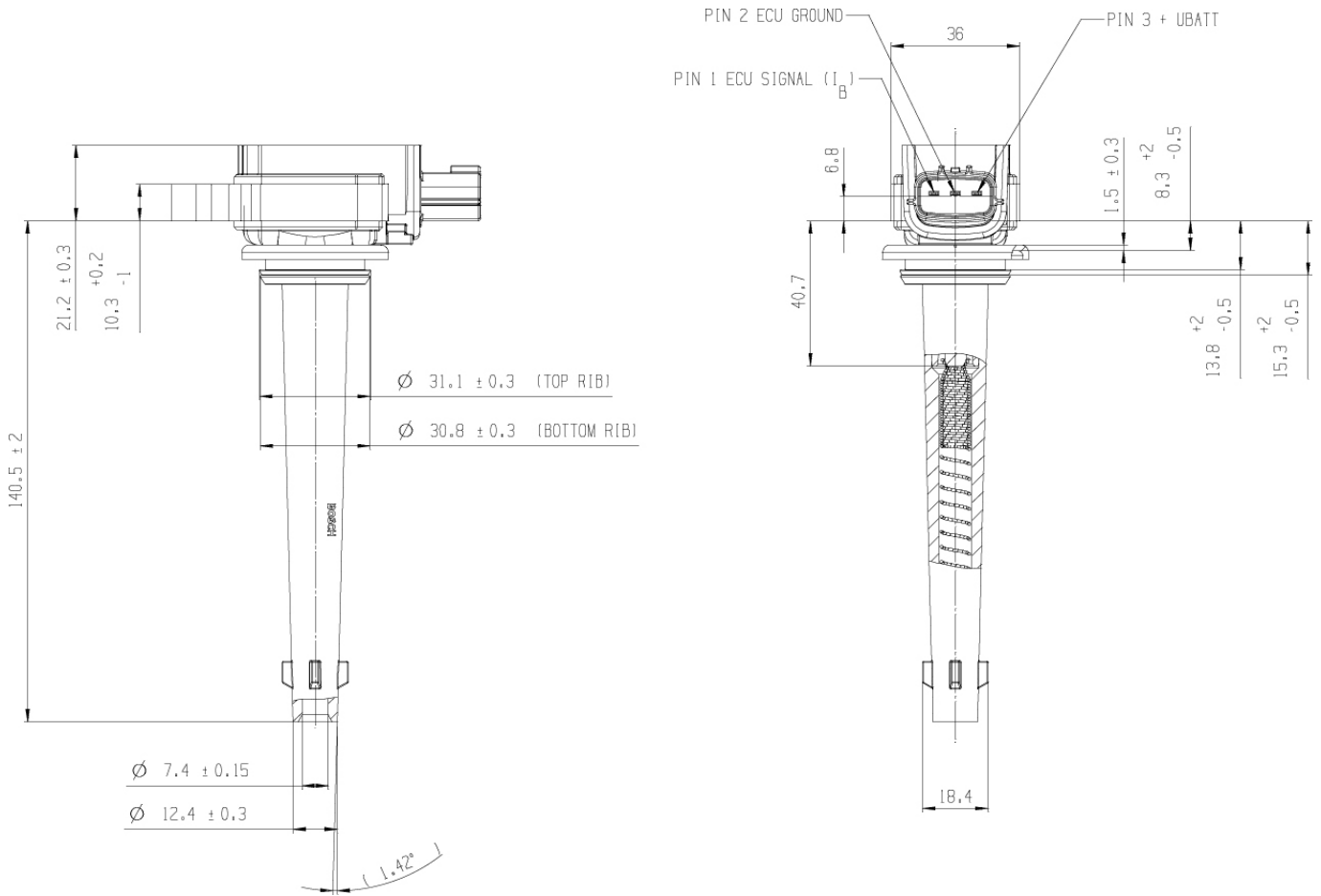
Please regard the specified limit values.

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

Ordering Information

Single Fire Coil P35
 Order number **0 221 504 030**

Dimensions



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