

# Single Fire Coil PS

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Invented for life



- ▶ Max. 30 kV
- ▶ Max. 42 mJ
- ▶ Max. 1.5 kV/μs
- ▶ Max. 10,000 1/min

This pencil coil is a basic low cost concept designed for cylinder head installation.

The PS has no integrated transistor and requires an ECU with internal ignition power stages.

The coil is only designed for spark plug shaft mounting. It is a basic concept for ignition applications.

## Application

Spark energy	≤ 42 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	≤ 800 m/s <sup>2</sup> at 5 to 2,500 Hz

## Technical Specifications

### Mechanical Data

Diameter	22 mm
Weight	189 g
Mounting	Screw fastening

### Electrical Data

Primary resistance with wire	570 mΩ
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 1.5 kV/μs
Max. high voltage at 1 MΩ    10 pF	≤ 30 kV
Spark current	≤ 80 mA
Spark duration at 1 kV    1 MΩ	≤ 1.1 ms
Noise suppression	Inductive
Suppression diode / EFU	Integrated

### Characteristic

Measured with power stage	IGBT IRG4BC40S (U <sub>ce</sub> =600 V) respectively BIP372
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### Connectors and Wires

Connector	AMP C-0-28 44 25
Mating connector	D 261 205 350-01
Pin 1	ECU collector
Pin 2	Engine Gnd
Pin 3	U <sub>batt</sub>

Pin 4

N.a.

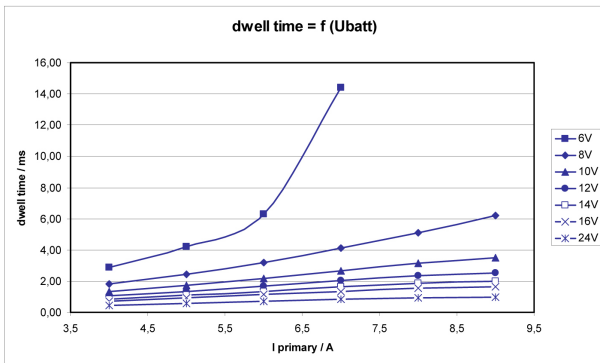
Various motorsport and automotive connectors are available on request.

Please specify the required wire length with your order

**Characteristic dwell times [ms]**

U <sub>batt</sub>	I <sub>primary</sub>					
	4.0A	5.0A	6.0A	7.0A	8.0A	9.0A
6V	2.90	4.20	6.30	14.40	-	-
8V	1.83	2.45	3.17	4.10	5.10	6.20
10V	1.33	1.74	2.18	2.68	3.16	3.49
12V	1.05	1.35	1.68	2.02	2.33	2.53
14V	0.86	1.11	1.35	1.62	1.85	1.99
16V	0.73	0.93	1.14	1.35	1.54	1.65
20V	0.56	0.71	0.86	1.02	1.15	1.23
22V	0.50	0.64	0.77	0.91	1.02	1.09
24V	0.46	0.58	0.70	0.82	0.92	0.98

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

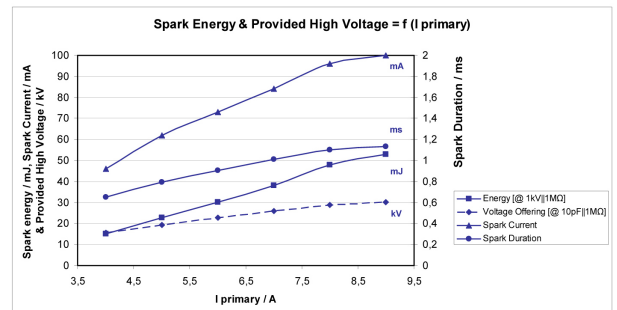


*Dwell time*

**Spark energy and provided high voltage**

I prim.	Spark energy	-duration	-currant	Hi voltage
4 A	15.0 mJ	0.650 ms	46 mA	15.6 kV
5 A	22.8 mJ	0.793 ms	62 mA	19.3 kV
6 A	30.2 mJ	0.904 ms	73 mA	22.7 kV
7 A	38.2 mJ	1.010 ms	84 mA	26.0 kV
8 A	47.9 mJ	1.101 ms	96 mA	28.8 kV
9 A	52.9 mJ	1.130 ms	100 mA	30.2 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.

The PS has no integrated transistor and requires an ECU with internal ignition power stages.

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.

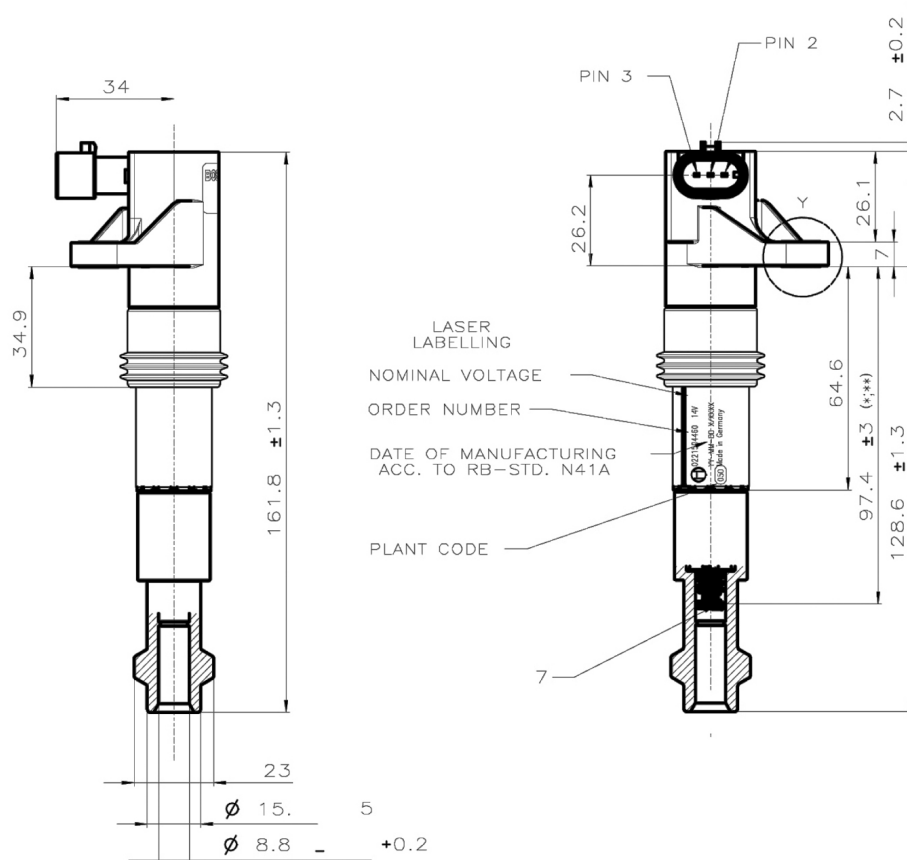
In case of ignition-caused malfunctions, please use screened sensor wires.

### Ordering Information

#### Single Fire Coil PS

Order number 0 221 504 460

### Dimensions



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