

# Ignition Coil P65-T



This single fire coil is a low cost concept designed for direct mounting on the cylinder head. The coil P65-T has an integrated transistor and requires an ECU with internal ignition drivers.

## Application

Spark energy	≥ 65 mJ
Primary current	≤ 7.0 A
Operating temperature range at outer core	-40 to 140°C
Storage temperature range	-40 to 140°C
Max. vibration	≤ 480 m/s <sup>2</sup> at 5 to 2,000 Hz

## Technical Specifications

### Mechanical Data

Length	143 mm
Weight	223 g
Mounting	Screw fastening
Fits to spark plugs with a ceramic diameter of 10 mm	

### Electrical Data

Primary resistance with wire	Incapable of measurement
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 1.4 kV/μs
Max. high voltage at 1 MOhm    10 pF	≤ 33 kV
Spark current	≤ 70 mA
Spark duration at 1 kV    1 MOhm	≤ 1.85 ms

- ▶ Max. 33 kV
- ▶ Min. 65 mJ
- ▶ Max. 10,000 1/min (with reduced dwell time)
- ▶ Developed for GDI engines

Noise suppression	Inductive and 1 kOhm resistance
Integrated suppression diode / EFU	
Integrated power stage	

### Characteristic

Measured with power stage	BIP 385
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### Connectors and Wires

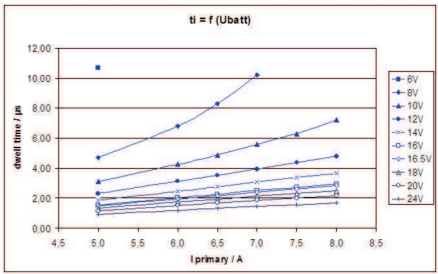
Connector	Tyco 0-1488991-1
Mating connector	F02U.B00.555-01
Pin 1	ECU ignition signal
Pin 2	ECU GND
Pin 3	U <sub>batt</sub>

### Characteristic dwell times [ms]

U <sub>batt</sub>	I <sub>primary</sub>					
	5.0 A	5.5 A	6.0 A	6.5 A	7.0 A	7.5 A
<b>Max. 1000 /min</b>	10	9	8	7	6	5
<b>6 V</b>	10.7	11.6				
<b>8 V</b>	4.7	5.4	6.8	8.3	10.2	
<b>10 V</b>	3.1	3.55	4.25	4.87	5.6	6.3
<b>12 V</b>	2.32	2.66	3.12	3.51	3.94	4.36
<b>14 V</b>	1.86	2.1	2.45	2.75	3.07	3.36
<b>16 V</b>	1.55	1.77	2.03	2.26	2.51	2.73
<b>16.5 V</b>	1.49	1.7	1.95	2.17	2.40	2.61
<b>18 V</b>	1.34	1.51	1.73	1.92	2.13	2.31

<b>20V</b>	1.16	1.33	1.51	1.67	1.85	2.0
<b>24V</b>	0.93	1.05	1.19	1.32	1.45	1.57

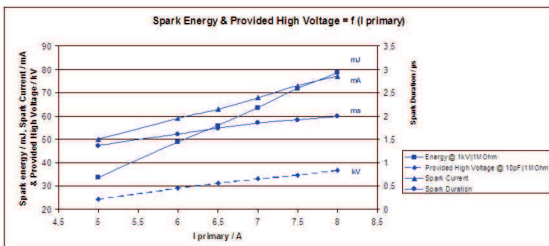
Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement



Dwell time

**Spark energy and provided high voltage**

I prim.	Spark energy	-duration	-current	Hi voltage
5 A	33.7 mJ	1.37 ms	50 mA	24.4 kV
5.5 A	42 mJ	1.54 ms	54 mA	27.0 kV
6 A	48.9 mJ	1.62 ms	59 mA	29.1 kV
6.5 A	55.9 mJ	1.74 ms	63 mA	31.2 kV
7 A	63.6 mJ	1.85 ms	68 mA	33.2V
7.5 A	71.9 mJ	1.92 ms	73 mA	34.7 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 coil P65-T has an integrated transistor and requires an ECU with internal ignition drivers with 10 to 20 mA current output. 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.

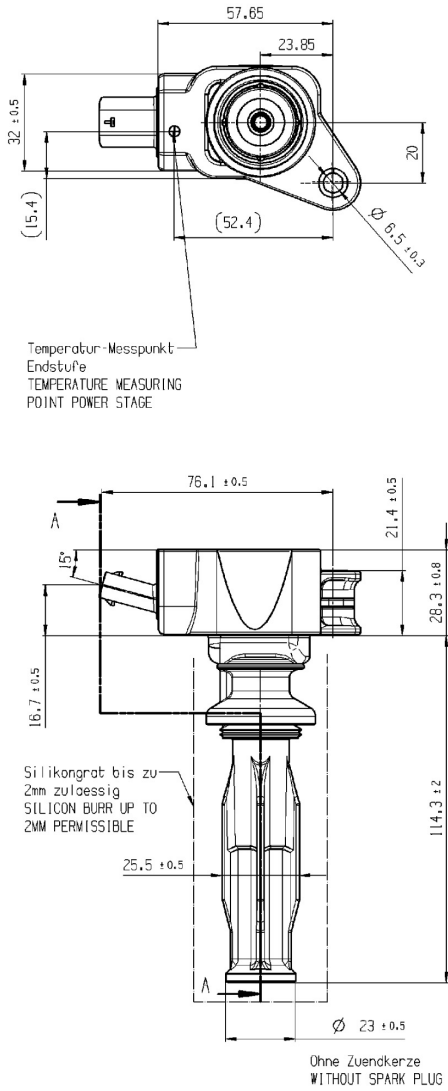
**Legal Restrictions**

Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

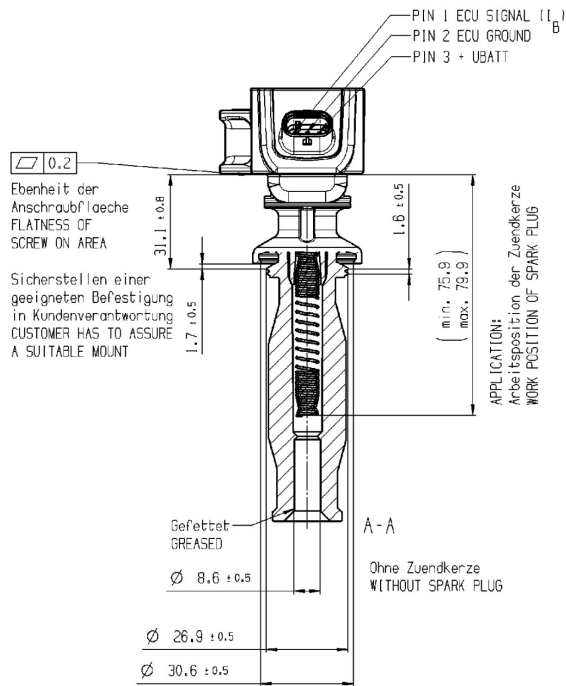
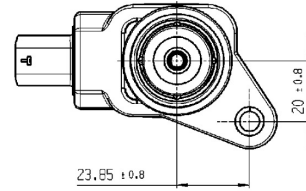
**Ordering Information**

**Ignition Coil P65-T**  
Order number **0221.604.024**

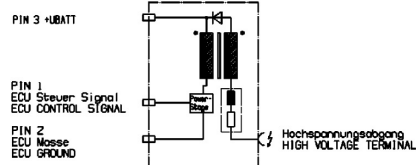
Dimensions



Darstellung ohne Kerzenmantel und Feder  
EXPOSITION WITHOUT SPARK PLUG CONNECTOR  
AND SPRING



Schaltbild  
CIRCUIT DIAGRAM:



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