

Ignition Coil P65-TWG



This single fire coil is a low cost concept designed to connect a high voltage wire on the coil. The coil 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 | ≤ 250 m/s ² at 5 to 2,000 Hz |

Technical Specifications

Mechanical Data

| | |
|----------|-----------------|
| Length | 83 mm |
| Weight | 210 g |
| Mounting | Screw fastening |

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 | ≤ 33 kV |
| Spark current | ≤ 70 mA |
| Spark duration at 1 kV 1 MOhm | ≤ 1.85 ms |
| Noise suppression | Inductive and 1 kOhm resistance |

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

Integrated suppression diode / EFU

Integrated power stage

Characteristic

Measured with power stage BIP 385

Connectors and Wires

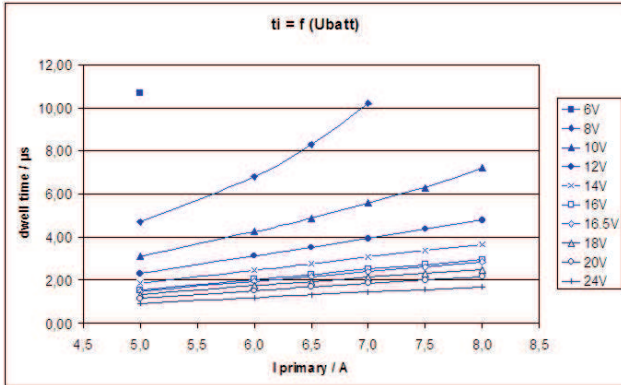
| | |
|-------------------------------|---------------------|
| Connector primary side | Tyco 0-1488991-1 |
| Mating connector primary side | F02U.B00.555-01 |
| Pin 1 | ECU ignition signal |
| Pin 2 | ECU GND |
| Pin 3 | U _{batt} |
| 30 kV grid connector | See Accessories |

Characteristic dwell times [ms]

| U _{batt} | I _{primary} | | | | | |
|-----------------------|----------------------|-------|-------|-------|-------|-------|
| | 5.0 A | 5.5 A | 6.0 A | 6.5 A | 7.0 A | 7.5 A |
| Max. 1000 /min | 10 | 9 | 8 | 7 | 6 | 5 |
| 6 V | 10.7 | 11.6 | | | | |
| 8 V | 4.7 | 5.4 | 6.8 | 8.3 | 10.2 | |
| 10 V | 3.1 | 3.55 | 4.25 | 4.87 | 5.6 | 6.3 |
| 12 V | 2.32 | 2.66 | 3.12 | 3.51 | 3.94 | 4.36 |
| 14 V | 1.86 | 2.1 | 2.45 | 2.75 | 3.07 | 3.36 |
| 16 V | 1.55 | 1.77 | 2.03 | 2.26 | 2.51 | 2.73 |
| 16.5 V | 1.49 | 1.7 | 1.95 | 2.17 | 2.40 | 2.61 |
| 18 V | 1.34 | 1.51 | 1.73 | 1.92 | 2.13 | 2.31 |
| 20 V | 1.16 | 1.33 | 1.51 | 1.67 | 1.85 | 2.0 |

24 V 0.93 1.05 1.19 1.32 1.45 1.57

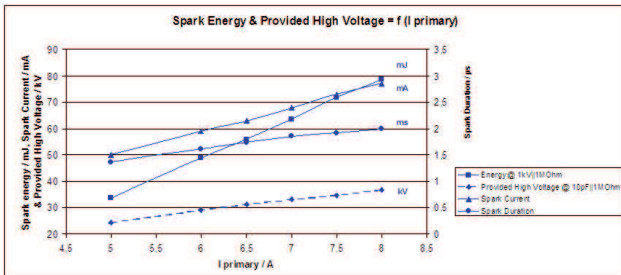
Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement



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 (high voltage wire).

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-TWG

Order number **F02U.V02.429-01**

Accessories

High Voltage Connector straight

Please ask your local Bosch Service
Order number **0356.200.015**

High Voltage Connector angled

Please ask your local Bosch Service
Order number **0356.250.035**

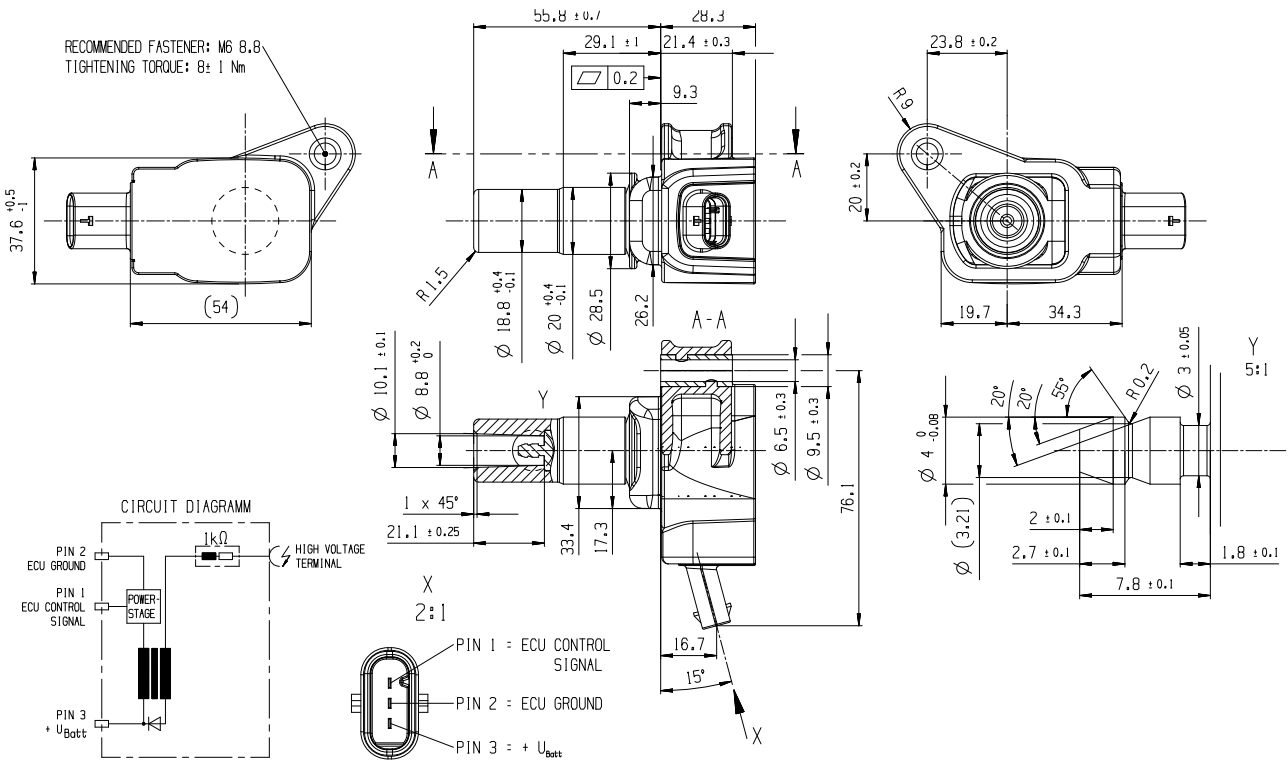
M3 Connector inside (required for every HV Connector)

Please ask your local Bosch Service
Order number **1350.521.001**

High Voltage Wire 50 m

Please ask your local Bosch Service
Order number **5956.563.015**

Dimensions



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