Single Fire Coil P65-T

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BOSCH
Invented for life

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

This single fire coil is a low cost concept designed for direct mounting on the cylinder head.
The 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	≤ 200 m/s² at 5 to 2,000 Hz

Technical Specifications

Mechanical Data

Length	143 mm
Weight	222 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 1 MΩ ‖ 10 pF	≤ 33 kV
Spark current	≤ 70 mA
Spark duration at 1 kV ‖ 1 MΩ	≤ 1.85 ms
Noise suppression	Inductive and 2 kΩ resistance
Integrated suppression diode / EFU	
Integrated power stage	

Characteristic

Measured with power stage	BIP 385

Connectors and Wires

Connector	Tyco 0-1488991-1
Mating connector	F 02U B00 555-01
Pin 1	ECU ignition signal
Pin 2	GND

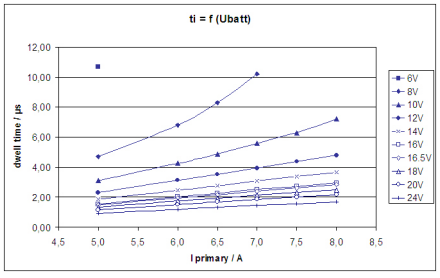
Pin 3	U_{batt}

For spark plugs with a ceramic diameter d=10 mm

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. 1/min	10.000	9.000	8.000	7.000	6.000	5.000
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

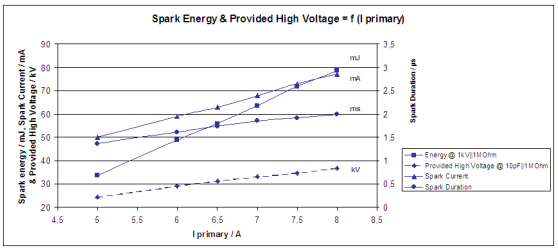
Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement



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.

The P65-T has an integrated transistor and requires an ECU with internal ignition drivers.

For technical reasons the values of the coils may vary.

Please regard the specified limit values.

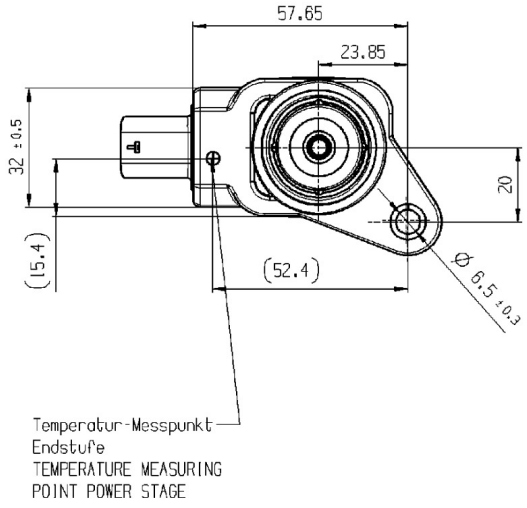
Please find further application hints in the offer drawing at our home-page.

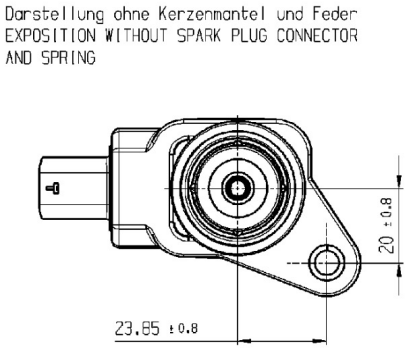
In case of ignition-caused malfunctions, please use screened sensor wires.

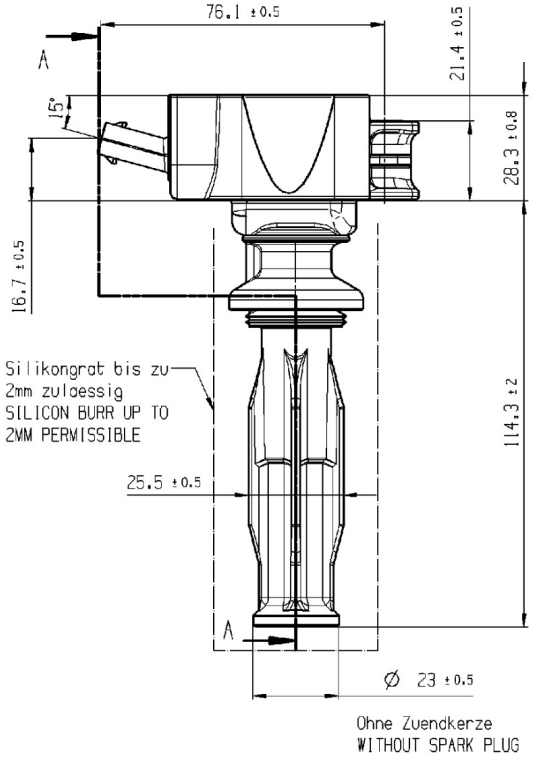
Ordering Information

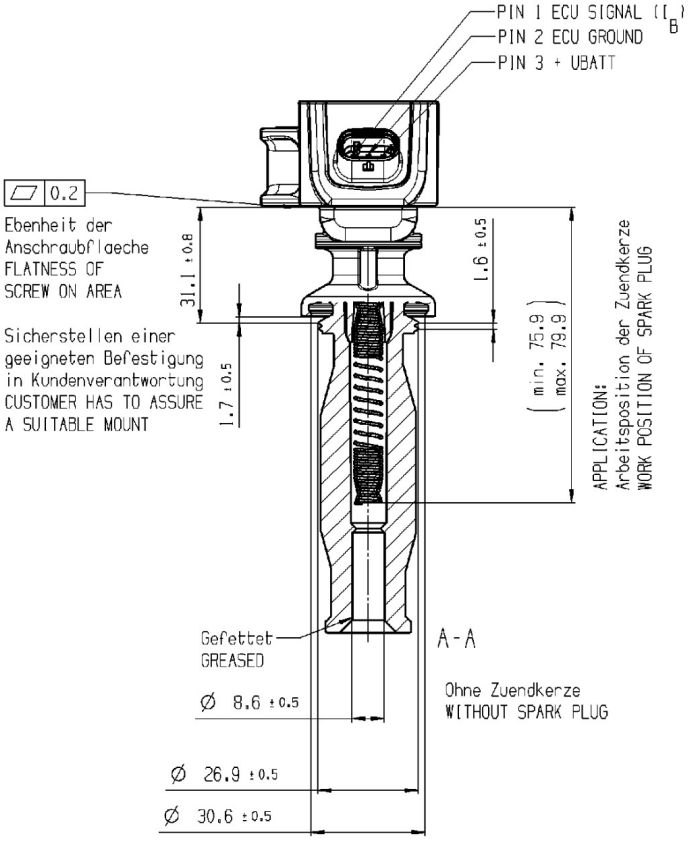
Single Fire Coil P65-T
Order number **0 221 604 024**

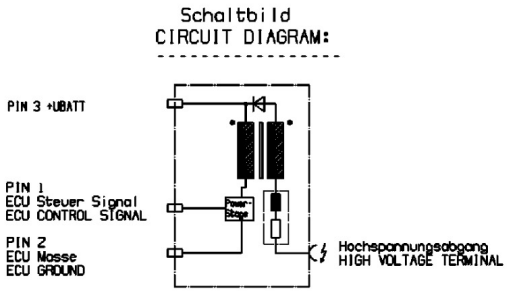
Dimensions


57.65
23.85
32 ±0.5
20
(15.4)
(52.4)
Ø 6.5 ±0.3
Temperatur-Messpunkt
Endstufe
TEMPERATURE MEASURING
POINT POWER STAGE


Darstellung ohne Kerzenmantel und Feder
EXPOSITION WITHOUT SPARK PLUG CONNECTOR
AND SPRING
20 ±0.8
23.85 ±0.8


76.1 ±0.5
A
15°
21.4 ±0.5
28.3 ±0.8
16.7 ±0.5
Silikongrat bis zu
2mm zulaessig
SILICON BURR UP TO
2MM PERMISSIBLE
25.5 ±0.5
114.3 ±2
A
Ø 23 ±0.5
Ohne Zuendkerze
WITHOUT SPARK PLUG


PIN 1 ECU SIGNAL (I_B)
PIN 2 ECU GROUND
PIN 3 + UBATT
0.2
Ebenheit der
Anschraubflaeche
FLATNESS OF
SCREW ON AREA
31.1 ±0.8
1.6 ±0.5
Sicherstellen einer
geeigneten Befestigung
in Kundenverantwortung
CUSTOMER HAS TO ASSURE
A SUITABLE MOUNT
1.7 ±0.5
(min. 75.9
max. 79.9)
APPLICATION:
Arbeitsposition der Zuendkerze
WORK POSITION OF SPARK PLUG
Gefettet
GREASED
A-A
Ohne Zuendkerze
WITHOUT SPARK PLUG
Ø 8.6 ±0.5
Ø 26.9 ±0.5
Ø 30.6 ±0.5


Schaltbild
CIRCUIT DIAGRAM:
PIN 3 +UBATT
PIN 1
ECU Steuer Signal
ECU CONTROL SIGNAL
PIN 2
ECU Masse
ECU GROUND
Power Stage
Hochspannungsabgang
HIGH VOLTAGE TERMINAL

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