

Single Fire Coil P35 / P35-T

This single fire coil is a low cost concept designed for direct mounting to the cylinder head.

The P35 coil [1] has no integrated power stage and is developed for use with ECUs that have integrated ignition transistors.

The P35-T [2] has an integrated transistor for use with ECUs that have 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 @ outer core	-20 ... 140 °C
Storage temperature range	-40 ... 100 °C
Max. vibration	≤ 400 m/s ² @ 5 ... 2,500 Hz

Electrical Data	
Primary resistance with wire	[1] 760 mΩ [2] Incapable of measurement
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 2.0 kV/μs
Max. high voltage @ 1 MΩ 10 pF	≤ 34 kV
Spark current	≤ 90 mA
Spark duration @ 1 kV 1 MΩ	≤ 1.13 ms
Noise suppression	Inductive
Suppression diode / EFU	Yes
Integrated power stage	[1] No [2] Yes
Ionic current signal	No

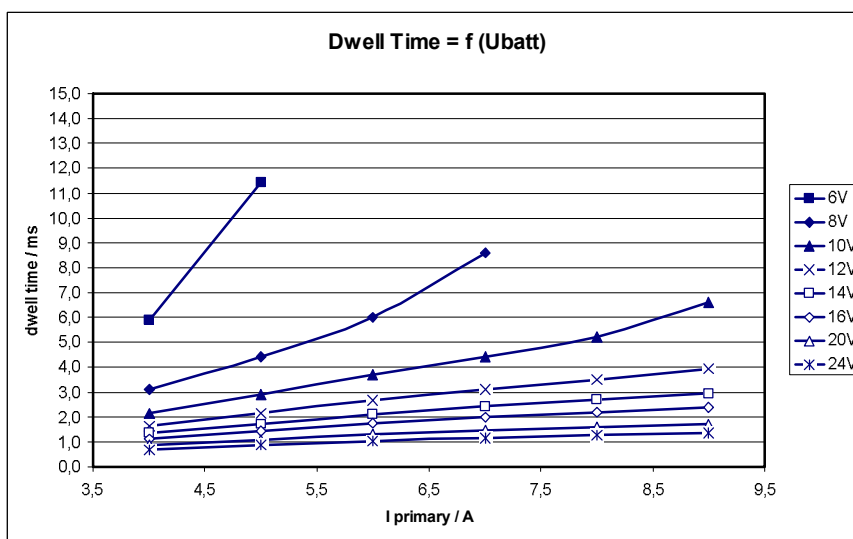
Mechanical Data	
Length	140.5 mm
Weight	194 ... 205 g
Mounting	screw fastening

Characteristic	
Measured with power stage	
	[1] IGBT IRG4BC40S (U _{ce} = 600 V)
	[2] BIP 373

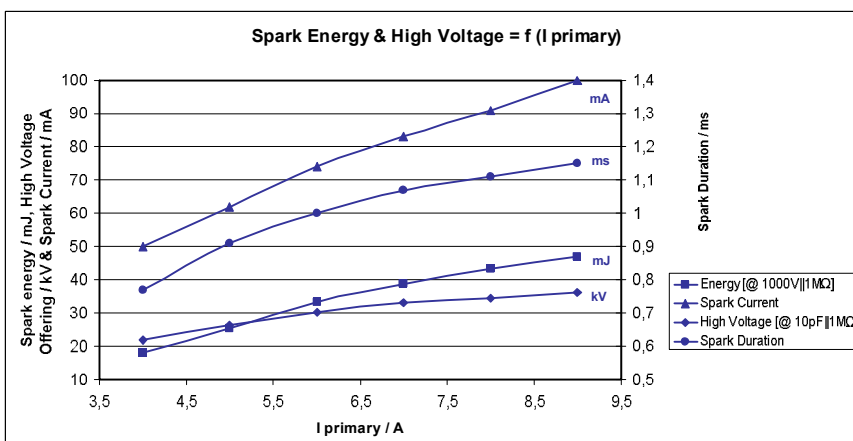
Characteristic Dwell Time [ms]

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


Characteristic Spark Energy & High Voltage

	I primary					
	4 A	5 A	6 A	7 A	8 A	9 A
Spark energy [mJ]	18	25.4	33.4	38.8	43.3	47
Spark duration [ms]	0.77	0.91	1	1.07	1.11	1.15
Spark current [mA]	50	62	74	83	91	100
High voltage [kV]	22	26.5	30.3	33	34.5	36.2



Connectors and Wires

Connector	Sumitomo
Mating connector	D 261 205 367
Pin 1	[1] ECU _{Ignition Driver Stage} [2] ECU _{Ignition Signal}
Pin 2	ECU _{Gnd}
Pin 3	U _{batt}
Various motorsport and automotive connectors are available on request.	
For spark plugs	ceramic diameter d = 10 mm
Spark plug connector	140.5 mm
Various motorsport and automotive connectors are available on request.	
Please specify the required wire with your order.	

Application Hint

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.

For coils without "-T", please only use with engine control units with an integrated ignition power stage, e.g. IGBT IRG4BC40S.

The coils with "-T", please only use with engine control units without integrated power stages.

For technical reasons the values of the coils may vary.

Please only use within specified limit values.

Part Number

Coil P35 [1]	0 221 504 030
Coil P35-T [2]	0 221 604 014

