

Single Fire Coil S16-T

This single fire coil was exclusively developed for the use in high performance engines. It is designed to mount directly on the spark plug.

This coil optionally provides an ionic current measurement and an integrated ignition power stage.

The upper part (wire side) and the lower part (spark plug side) can be designed per customer specification.

The main benefits of this high performance coil are its robustness in hard racing applications and high energy efficiency.



Application	
Spark energy	≤ 28 mJ
Primary current	≤ 27 A
Operating temperature range @ outer core	0 ... 140 °C
Storage temperature range	-40 ... 100 °C
Max. vibration	≤ 800 m/s ² @ 5 ... 2,500 Hz

Electrical Data	
Primary resistance	incapable of measurement
Secondary resistance	incapable of measurement
High voltage rise time	≤ 4 kV/μs
Provided high voltage @ 1 MΩ 10 pF	≤ 22 kV
Spark current	≤ 375 mA
Spark duration @ 1 kV 1 MΩ	≤ 0.145 ms
Noise suppression	inductive
Suppressor diode / EFU	Yes
Integrated power stage	Yes
Ionic current signal	optional

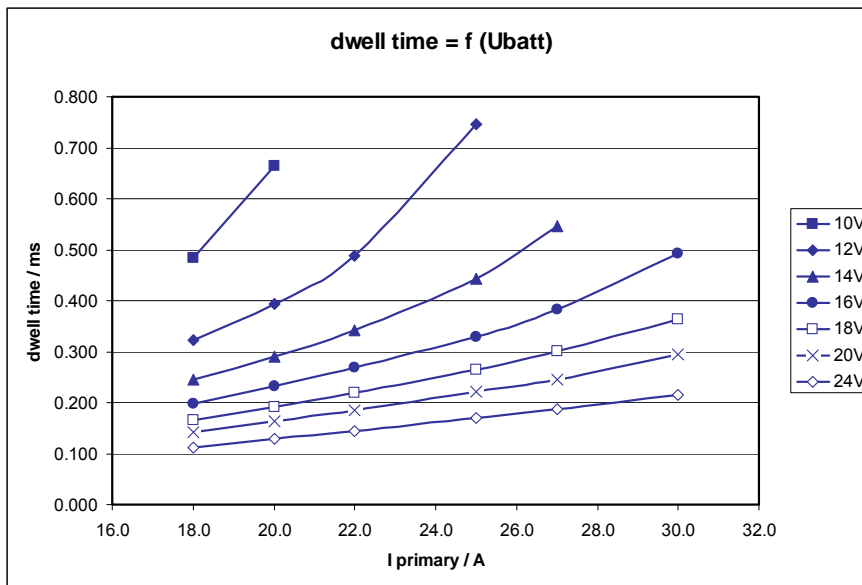
Mechanical Data	
Diameter	16 mm
Weight w/o wire	50 g
Mounting	pluggable / pressed

Characteristic	
Measured with power stage	IGBT IRF5036S (U _{ce} = 400 V)

Characteristic Dwell Time [ms]

I primary [A]	U batt [V]						
	10 V	12 V	14 V	16 V	18 V	20 V	24 V
18.0 A	0.484	0.322	0.245	0.198	0.166	0.143	0.112
20.0 A	0.664	0.394	0.291	0.233	0.192	0.164	0.128
22.0 A		0.488	0.343	0.268	0.220	0.186	0.144
25.0 A		0.747	0.443	0.330	0.265	0.222	0.169
27.0 A			0.546	0.382	0.301	0.246	0.188
30.0 A				0.493	0.363	0.294	0.216

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 & Provided High Voltage

	I primary					
	18 A	20 A	22 A	25 A	27 A	30 A
Spark Energy [mJ]	13.8	16.9	20.1	25.2	28.8	33.8
Spark Duration [µs]	105	115	123	135	143	151
Spark Current [mA]	250	280	307	347	373	409
High Voltage [kV]	18	19.3	20.3	21.1	21.4	21.9

