

Ignition Coil C75-E8



- ▶ Max. 35 kV
- ▶ Max. 75 mJ
- ▶ Max. 8.0 kV/μs
- ▶ Max. 15,000 1/min
- ▶ Developed for GDI engines

This single fire coil was developed for the use e.g. in GDI high performance engines. It is designed for direct cylinder head mounting.

The main benefits of this high performance coil are its high energy capability and a very good provided high voltage.

Application

Spark energy	≤ 75 mJ
Primary current	≤ 17 A
Operating temperature range outer core	0 to 160°C
Storage temperature range	-40 to 100°C
Max. vibration	≤ 480 m/s ² at 50 to 2,000 Hz

Technical Specifications

Mechanical Data

Length (L)	customized
Weight w/o wire	195 g
Mounting	screw fastening

Electrical Data

Primary resistance	330 mOhm
Secondary resistance	Incapable of measurement
High voltage rise time	≤ 8.0 kV/μs
Max. high voltage at 1 MOhm 10 pF	≤ 35 kV
Spark current	≤ 240 mA
Spark duration at 1 kV 1 MOhm	≤ 0.68 ms
Noise suppression	Inductive

Suppression diode / EFU	Internal
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Characteristic

Measured with power stage	IGBT IRG4BC40S (U _{ce} =600 V)
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Connectors and Wires

Connector	On request
Mating connector	On request
Pin 1	U _{batt} red
Pin 2	ECU ignition power stage white
Pin 3	Engine GND black
Wire length	100 cm
Wire size	AWG 20/22
For spark plugs	Ceramic diameter d = 8 mm (7 to 9 mm)

Various motorsport and automotive connectors are available on request.

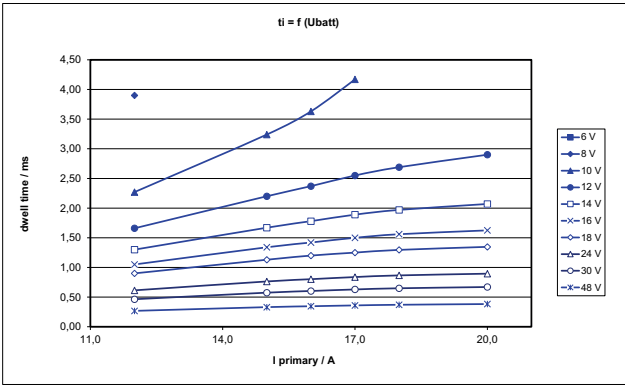
Please specify the required wire length and the length of the spark plug connector with your order

Characteristic dwell times [ms]

U _{batt}	I primary					
	12 A	15 A	16 A	17 A	18 A	20 A
6 V						
8 V	3.9					
10 V	2.27	3.24	3.63	4.17		
12 V	1.66	2.2	2.37	2.55	2.69	2.9
14 V	1.3	1.67	1.78	1.89	1.97	2.07
16 V	1.05	1.34	1.42	1.5	1.56	1.62

18 V	0.9	1.13	1.2	1.25	1.30	1.35
24 V	0.61	0.76	0.80	0.84	0.87	0.90
30 V	0.46	0.58	0.60	0.63	0.65	0.67
48 V	0.27	0.33	0.35	0.36	0.37	0.38

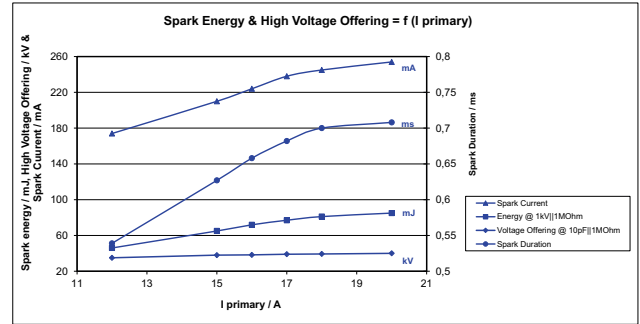
Measured values are without loom resistance. Loom resistance must be less than the primary resistance. The needed dwell time is to be verified through current measurement



Dwell time

Spark energy and provided high voltage

I prim.	Spark energy	-duration	-current	Hi voltage
12 A	46 mJ	0.539 ms	174 mA	35 kV
15 A	65 mJ	0.627 ms	210 mA	38 kV
16 A	71.9 mJ	0.658 ms	224 mA	38.3 kV
17 A	77 mJ	0.682 ms	238 mA	39 kV
18 A	81.1 mJ	0.7 ms	245 mA	39.3 kV
20 A	85 mJ	0.708 ms	254 mA	40 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.

This coil is only for use with engine control units having an integrated ignition power stage, e.g. IGBT IRG4BC40S or BIP.

For technical reasons the values of the coils may vary.

Please regard the specified limit values (see "Electrical Data").

Usage above Iprim = 17 A or 35 kV may reduce the lifetime.

Please find further application hints in the offer drawing at our homepage.

Design Note

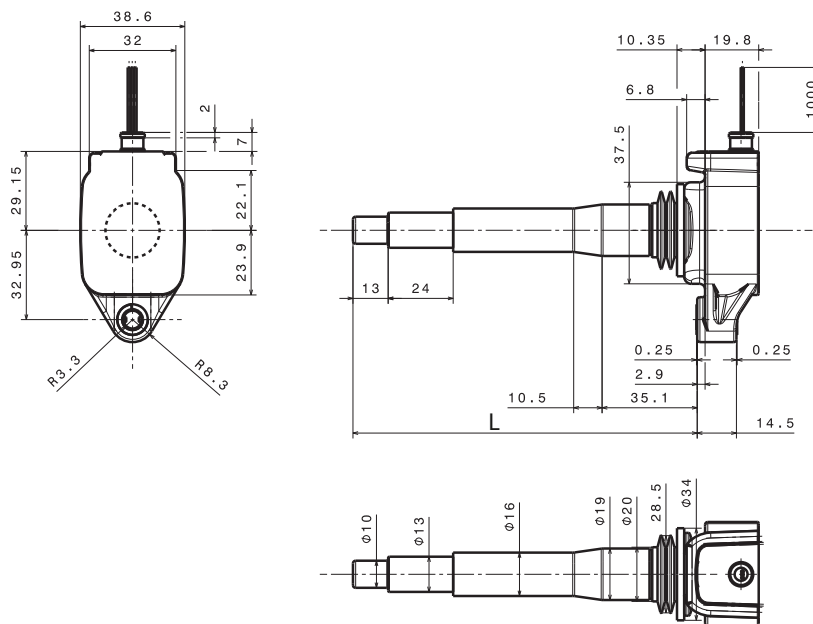
We strongly recommend the design of the spark plug shaft has to ensure that there are no sharp edges in the shaft geometry due to design or machining. Only in compliance with this recommendation, a proper function can be ensured.

Ordering Information

Ignition Coil C75-E8

Order number **F02U.V02.086-01**

Dimensions



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