

### 3. Ignition units

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## Ignition/units

### Introduction

When a Danfoss ignition transformer or an electronic ignition unit must be replaced, please proceed according to the following table.

Ignition transformers are stated to the left and ignition unit EBI, which must be used, to the right.

When replacing an ignition unit from a competitor, please take the below criterions into consideration:

In order to choose the right ignition unit, make sure that the ignition unit is designed for a supply voltage (primary voltage) of 220/230 V and that a ignition unit with higher or equal ED is chosen (ED = duty cycle).

### Danfoss' electronic ignition units

#### **EI4 Series**

Electronic ignition units for oil burners

- ED 33% at 60°C
- 1 or 2 pole ignition
- Complies with the RoHs and WEEE directives
- 230 V or 120 V

#### **EI4 C Series**

Electronic ignition units for constant ignition

- ED 100% at 35°C
- 1 or 2 pole ignition
- Complies with the RoHs and WEEE directives

#### **EI4 HP Series**

Electronic ignition units for large oil burners

- 50% stronger spark compared to other ignition units
- ED 33% at 60°C
- 1 or 2 pole ignition
- Complies with the RoHs and WEEE directives



### Conversion Danfoss EBI → EBI4 Service

EBI Series		➔	Relevant Danfoss types		
Type	Code no.	➔	Type	Code no.	Comments/accessories
EBI	052F0030	➔	EBI4 M S	052F4045	
EBI	052F0036	➔	EBI4	052F4031	
EBI	052F0037	➔	EBI4 M S	052F4045	
EBI	052F0052	➔	EBI4 CM S	052F4047	
EBI	052F0058	➔	EBI4	052F4031	
EBI 1P	052F0040	➔	EBI4 1P S	052F4046	
EBI 1P	052F0043	➔	EBI4 1P S	052F4046	
EBI 1P	052F0044	➔	EBI4 1P S	052F4046	
EBI 1P	052F0045	➔	EBI4 1P	052F4044	
EBI 1P (120 V)	052F0054	➔	EBI4 1P (120 V)	052F4063	+ Primary cable 052F5052
EBI 1P (120 V)	052F0057	➔	EBI4 1P (120 V)	052F4063	
EBI M	052F0033	➔	EBI4 M S	052F4045	
EBI M	052F0034	➔	EBI4 M S	052F4045	
EBI M	052F0035	➔	EBI4 M S	052F4045	
EBI M	052F0039	➔	EBI4 M S	052F4045	
EBI M	052F0050	➔	EBI4 M S	052F4045	
EBI M	052F0074	➔	EBI4 M S	052F4045	
EBI M (120 V)	052F0053	➔	EBI 4M (120 V)	052F4062	+ Primary cable 052F5052
EBI M (120 V)	052F0055	➔	EBI 4M (120 V)	052F4062	
EBI C	052F0070	➔	EBI4 CM S	052F4047	
EBI C	052F0071	➔	EBI4 CM S	052F4047	
EBI C1P	052F0079	➔	EBI4 C1P S	052F4048	
EBI CM	052F0077	➔	EBI4 CM S	052F4047	
EBI CM	052F0078	➔	EBI4 CM	052F4035	
EBI HP1P	052F0084	➔	EBI4 1P S	052F4046	
EBI HPM	052F0075	➔	EBI4 M S	052F4045	
EBI HPM	052F0076	➔	EBI4 HPM	052F4033	

## Ignition units

### Conversion Danfoss EBI4 ➔ EBI4 Service

EBI4 Series		➔	Relevant Danfoss types		
Type	Code no.	➔	Type	Code no.	Comments/accessories
EBI4	052F4030	➔	EBI4 M S	052F4045	
EBI4	052F4031	➔	EBI4	052F4031	
EBI4	052F4041	➔	EBI4 M S	052F4045	
EBI4	052F4037	➔	EBI4 M S	052F4045	
EBI4 1P	052F4040	➔	EBI4 1P S	052F4046	
EBI4 1P	052F4044	➔	EBI4 1P	052F4044	
EBI4 1P	052F4050	➔	EBI4 1P S	052F4046	
EBI4 M	052F4038	➔	EBI4 M S	052F4045	
EBI4 M	052F4043	➔	EBI4 M S	052F4045	
EBI4 M	052F4042	➔	EBI4 M S	052F4045	
EBI4 M	052F4055	➔	EBI 4 M	052F4035	
EBI4 M	052F4057	➔	EBI4 M S	052F4045	
EBI4 M	052F4059	➔	EBI4 M S	052F4045	
EBI4 M	052F4065	➔	EBI4 M S	052F4045	
EBI4 C1P	052F4036	➔	EBI4 C1P S	052F4048	
EBI4 CM	052F4034	➔	EBI4 CM S	052F4047	
EBI4 CM	052F4035	➔	EBI4 CM	052F4035	
EBI4 HP1P	052F4049	➔	EBI4 1P S	052F4046	
EBI4 HPM	052F4032	➔	EBI4 M S	052F4045	
EBI4 HPM	052F4033	➔	EBI4 HPM	052F4033	

### Conversion Danfoss transformers 052L series ➔ EBI4 Service

52L		➔	Relevant Danfoss types		
Type	Code no.	➔	Type	Code no.	Comments/accessories
52L	052L0000-03	➔	EBI4	052F0063	
52L	052L0005	➔	EBI4	052F0063	
52L	052L0007-09	➔	EBI4	052F0063	
52L	052L0014-15	➔	EBI4	052F0063	
52L	052L0017	➔	EBI4	052F0063	
52L	052L0019-20	➔	EBI4	052F0063	
52L	052L0023	➔	EBI4	052F0063	
52L	052L0028	➔	EBI4	052F0063	
52L	052L0034	➔	EBI4	052F0063	
52L	052L0036-39	➔	EBI4	052F0063	
52L	052L0041-42	➔	EBI4	052F0063	
52L	052L0045-48	➔	EBI4	052F0063	
52L	052L0050-56	➔	EBI4	052F0063	
52L	052L0058-61	➔	EBI4	052F0063	
52L	052L0063-64	➔	EBI4	052F0063	
52L	052L0066-79	➔	EBI4	052F0063	
52L	052L0082	➔	EBI4	052F0063	
52L	052L0086-87	➔	EBI4	052F0063	
52L	052L0089-93	➔	EBI4	052F0063	
52L	052L0095-98	➔	EBI4	052F0063	
52L	052L1011	➔	EBI4	052F0063	
52L	052L1033	➔	EBI4	052F0063	
52L	052L1050-51	➔	EBI4	052F0063	
52L	052L1054-57	➔	EBI4	052F0063	
52L	052L1075-76	➔	EBI4	052F0063	
52L	052L1080	➔	EBI4	052F0063	
52L	052L1085	➔	EBI4	052F0063	

## Ignition units

### Conversion Danfoss transformers 052L series ➔ EBI4 Service

52L		➔	Relevant Danfoss types		
Type	Code no.	➔	Type	Code no.	Comments/accessories
52L	052L0018	➔	EBI4 1P S	052F4046	
52L	052L0026	➔	EBI4 1P S	052F4046	
52L	052L0030	➔	EBI4 1P S	052F4046	
52L	052L0040	➔	EBI4 1P S	052F4046	
52L	052L0049	➔	EBI4 1P S	052F4046	
52L	052L0065	➔	EBI4 1P S	052F4046	
52L	052L0088	➔	EBI4 1P S	052F4046	
52L	052L1058	➔	EBI4 1P S	052F4046	+ Primary cable 052F5052 and accessory set 052F0061
52L	052L0006	➔	EBI M (120 V)	052F4062	
52L	052L0013	➔	EBI M (120 V)	052F4062	
52L	052L0016	➔	EBI M (120 V)	052F4062	
52L	052L0021	➔	EBI M (120 V)	052F4062	
52L	052L0044	➔	EBI M (120 V)	052F4062	
52L	052L0062	➔	EBI M (120 V)	052F4062	
52L	052L0099-1002	➔	No repl.		
52L	052L1007-08	➔	No repl.		
52L	052L1010	➔	No repl.		
52L	052L1012	➔	No repl.		
52L	052L1019	➔	No repl.		
52L	052L1021-22	➔	No repl.		
52L	052L0010	➔	No repl.		
52L	052L0027	➔	No repl.		

### Conversion ignition units other makes → EBI4 service

Satronic/Honeywell		Relevant Danfoss types		
Type	→	Type	Code no.	Comments/accessories
ZT 930, 2-pole	→	EBI4	052F4031	
ZT 801, 2-pole	→	EBI4	052F4031	
ZT 900, 2-pole	→	EBI4	052F4031	
ZT 931, 1-pole	→	EBI4 1P	052F4044	
ZT 812, 1-pole	→	EBI4 1P	052F4044	
ZT 812B, 1-pole	→	EBI4 1P	052F4044	

COFI		Relevant Danfoss types		
Type	→	Type	Code no.	Comments/accessories
TRK 1, 2-pole	→	EBI4 CM	052F4035	
TRK 2, 2-pole	→	EBI4	052F4031	
TRK 2P, 1-pole	→	EBI4 1P	052F4044	
TRK 1P, 1-pole	→	EBI4 C1PS*	052F4048	+ primary cable 052F5052 (* Do have secondary front connection)
TRAF 1, 2-pole	→	EBI4 CM S	052F4047	
TRAF 2, 2-pole	→	EBI4 M S	052F0063	
TRAF 1P, 1-pole	→	EBI4 C1P S*	052F4048	+ primary cable 052F5052 (* Do have secondary front connection)

Siemens		Relevant Danfoss types		
Type	→	Type	Code no.	Comments/accessories
TQO 31 A 27	→	EBI4 M S	052F4045	

BERU		Relevant Danfoss types		
Type	→	Type	Code no.	Comments/accessories
0 096 600 017	→	EBI4 CM S	052F4047	
P 001 820 000	→	EBI4	052F4031	
0 096 600 009	→	EBI4 CM S	052F4047	



## Ignition units

### Conversion ignition units other makes ➔ EBI4 service

F.I.D.A.		Relevant Danfoss types		
Type	➔	Type	Code no.	Comments/accessories
26/30 IS	➔	EBI4 CM S	052F4047	
26/30 CM	➔	EBI4 CM S	052F4047	
26/30 PM	➔	EBI4 C1P S	052F4048	+ primary cable 052F5052
26/35 IS	➔	EBI4 CM S	052F4047	
26/40 PM	➔	EBI4 C1P S	052F4048	

### Conversion ignition units other makes ➔ EBI4 service

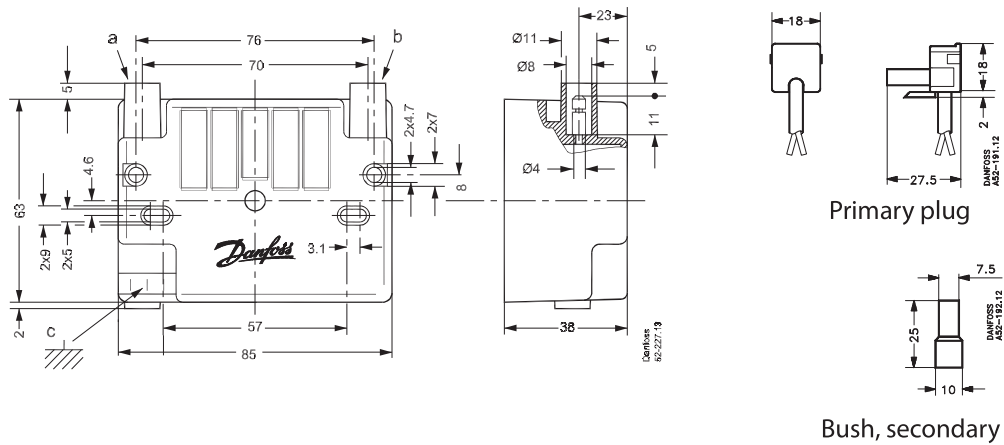
Brahma		Relevant Danfoss types		
Type	➔	Type	Code no.	Comments/accessories
TCD1BA	➔	EBI4 1P	052F4044	+ primary cable 052F5052
TCD2BA	➔	EBI4	052F4031	
TCD1BS	➔	EBI4 C1PS*	052F4048	+ primary cable 052F5052 (* Do have secondary front connection)
TCD2BS	➔	EBI4 CM	052F4035	
TCD1FA	➔	EBI4 1P	052F4044	
TCD2FA	➔	EBI4	052F4031	
TCD1FS	➔	EBI4 C1PS*	052F4048	+ primary cable 052F5052 (* Do have secondary front connection)
TCD2FS	➔	EBI4 CM	052F4035	
TC1LTCA(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052
TC1LTPA(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052
TC2LTCA(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052
TC2LTPA(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052
TD1LTCA(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052 (TD slightly smaller dimension)
TD1LTPA(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052 (TD slightly smaller dimension)
TD2LTCA(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052 (TD slightly smaller dimension)
TD2LTPA(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052 (TD slightly smaller dimension)
TC1LTCS(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052
TC1LTPS(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052
TC2LTCS(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052
TC2LTPS(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052
TD1LTCS(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052 (TD slightly smaller dimension)
TD1LTPS(F)	➔	EBI4 C1PS	052F4048	+ primary cable 052F5052 (TD slightly smaller dimension)
TD2LTCS(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052 (TD slightly smaller dimension)
TD2LTPS(F)	➔	EBI4 CM S	052F4047	+ primary cable 052F5052 (TD slightly smaller dimension)

## Ignition units

### Dimensions

EBI4	EBI4 M, EBI4 CM, EBI4 HPM	EBI4 1P, EBI4 C1P, EBI4 HP1P	a: Lefthand secondary connection b: Righthand secondary connection c: Earth terminal
a + b + c	a + b + c	b + c	

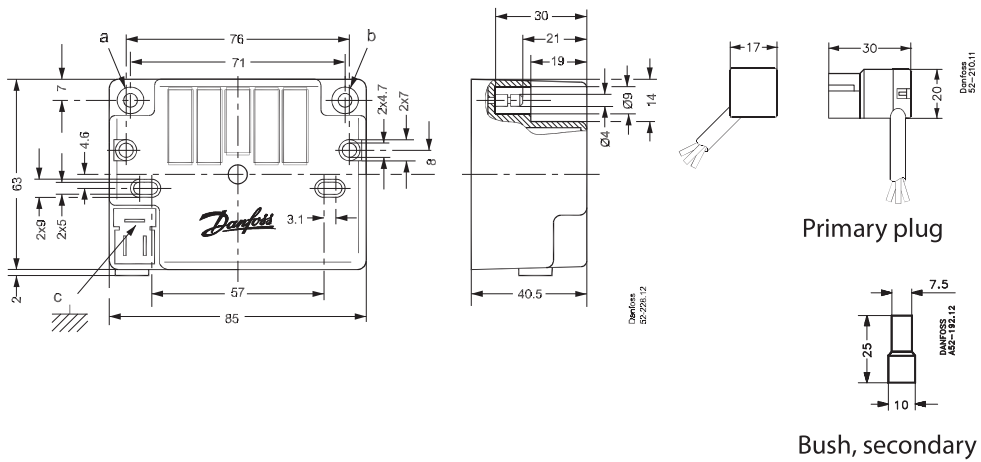
Secondary front connection



## Dimensions

EBI4	EBI4 CM, EBI4 HPM	EBI4 1P	a: Lefthand secondary connection b: Righthand secondary connection c: Earth terminal
a + b + c	a + b + c	b + c	

Secondary top connection



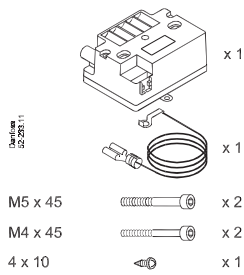
## Ignition units

### Service

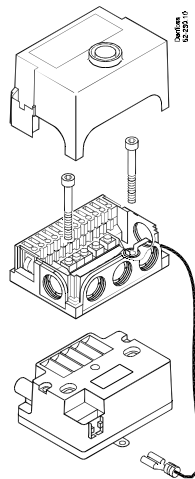
#### EBI4 Service Kits

The EBI4 Service Kits are used when replacing ignition units of the EBI Series.

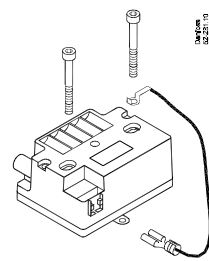
Code no.	Service kits
052F4045	EBI4 M S
052F4046	EBI4 1P S
052F4047	EBI4 CM S
052F4048	EBI4 C1P S



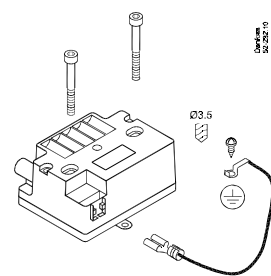
Example 1



Example 2

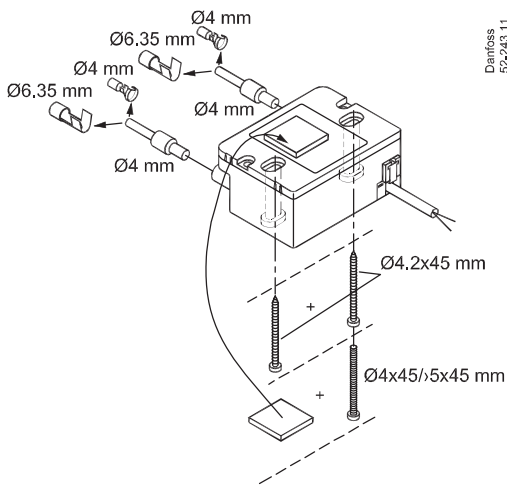


Example 3



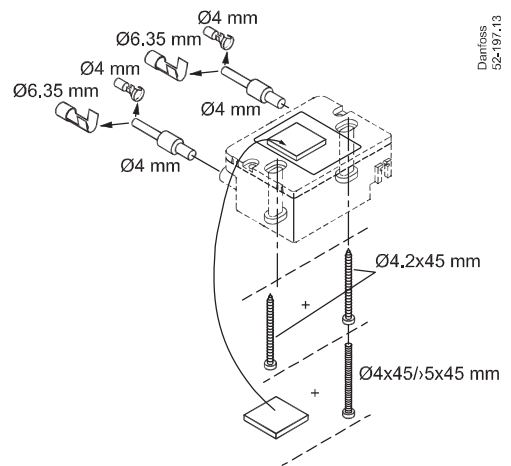
## Service

The EBI4 sets 052F0061 and 052F0063 are used, for example, when replacing a Danfoss type 52L ignition transformer or another make.



### Content Service set 052F0063

- 1 × Service set 052F0061
- 1 × Primary cable
- 1 × EBI4



### Content Accessory set 052F0061

- 2 × Ignition cables with Ø4 mm electrode plugs
- 2 × Ø4 mm electrode plugs
- 2 × Ø6.35 mm electrode plugs
- 1 × M4 screws
- 1 × M5 screws
- 2 × 4.2 mm self-tapping screws
- 1 × double-sided adhesive pad