EFC3610 Quick Set up Guide

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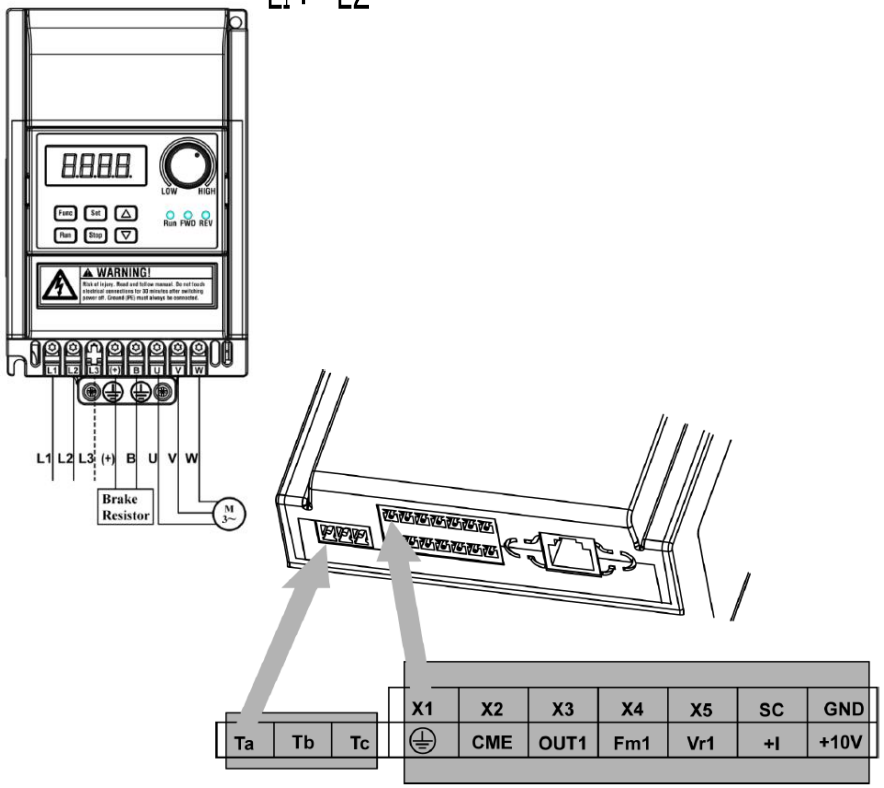
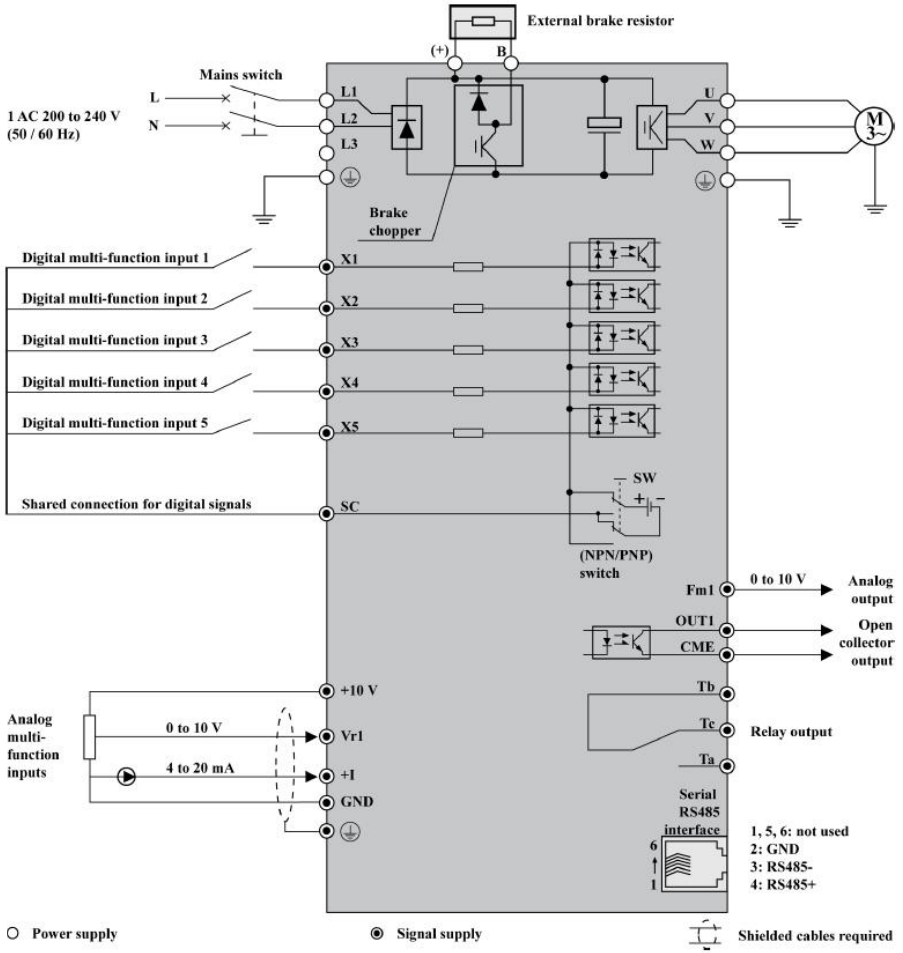
Connections and wiring

- EFC 3610
- Connection 200VAC

L1+ L2





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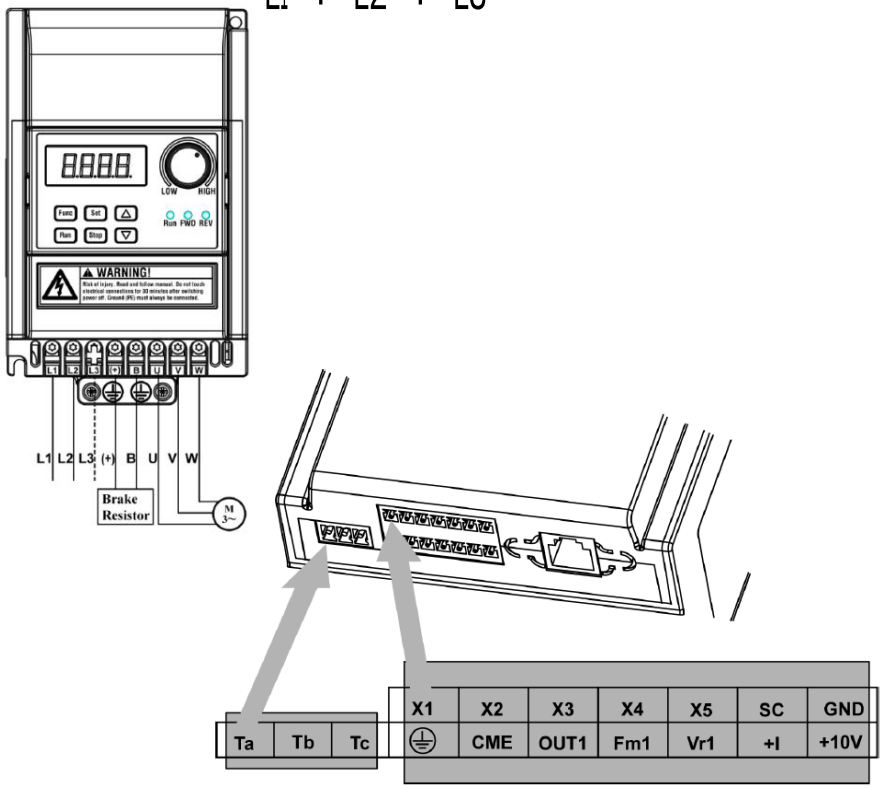
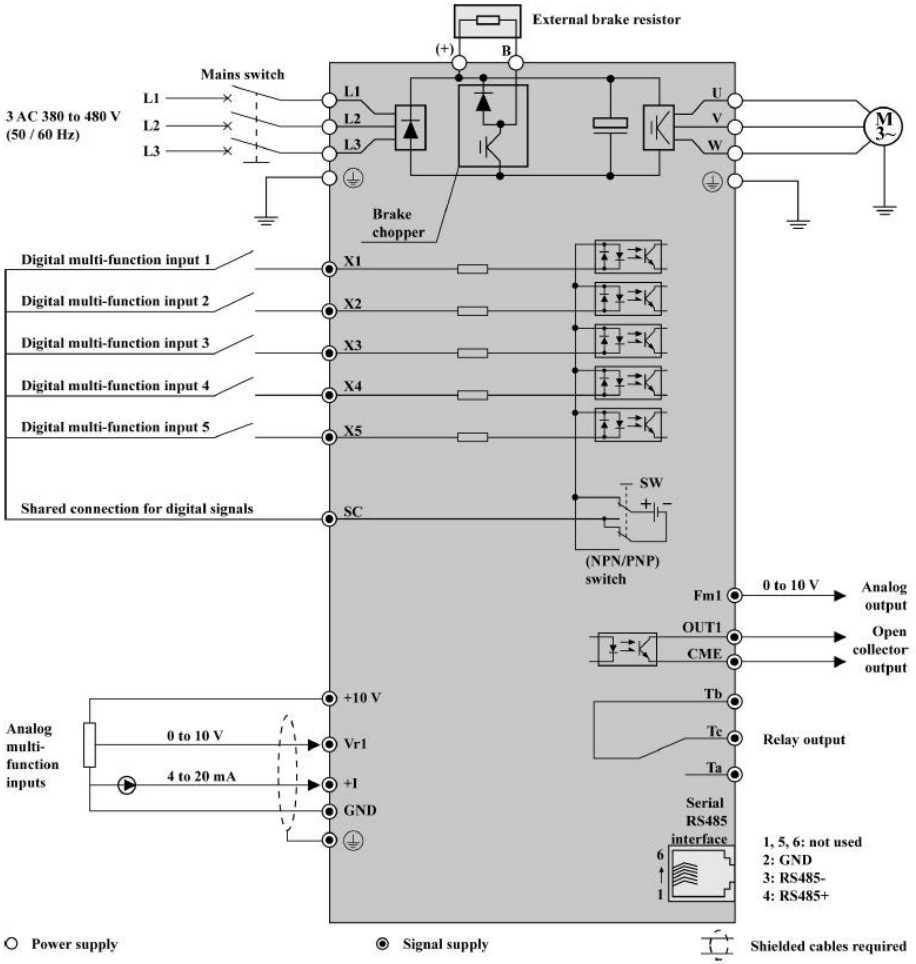
Connections and wiring

- EFC 3610
- Connection 3x400VAC
  L1 + L2 + L3





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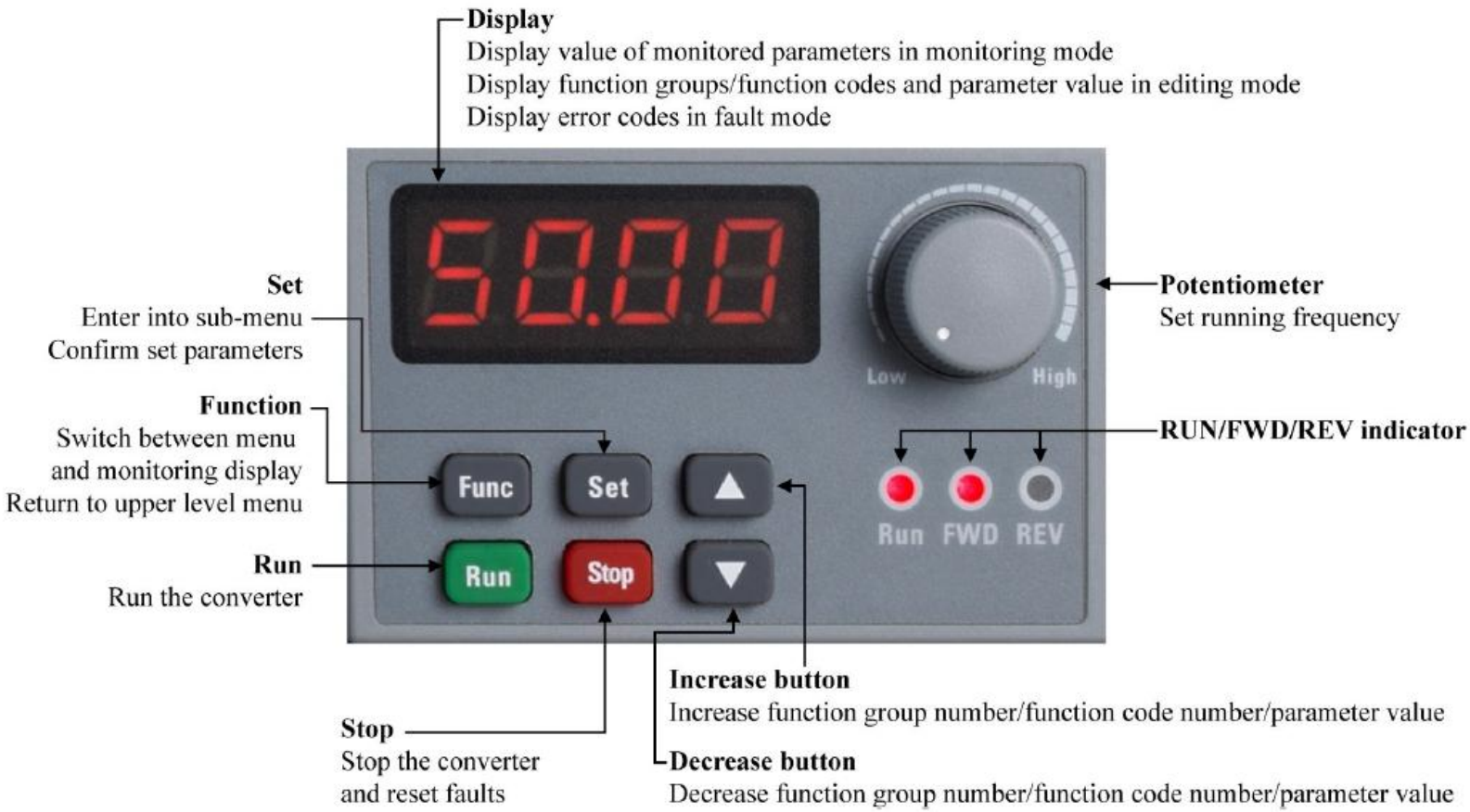
Operating Panel



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EFC3610 Quick Set Up

- Motor data
  - C1.08 Rated motor frequency 50Hz
  - C1.09 Rated motor speed 1450 rpm
  - C1.05 Rated motor power 2 W
  - C1.06 Rated motor voltage 415V
  - C1.07 Rated motor current 0,23A
  - C1.10 Power factor 0,76
  - C1.01 Auto tuning:

Value	Description
0	Inactive
1	Static auto-tuning
2	Rotational auto-tuning

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EFC3610 Quick Set up

1) Running from Panel Potentiometer & Buttons

- § b0.10 = 1 — Load default parameters
- § b0.00 = 2 — Access all authority settings

- These parameters below are automatically set after b0.10 = 1

- § E0.00 = 0 — Frequency set point via potentiometer
- § E0.01 = 0 — Run command via panel buttons

Speed/Frequency Command: set by potentiometer
Start Command: initiated by RUN Button
Stop Command: initiated by STOP Button

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EFC3610 Quick Set up

2) Running from External I/O Terminal, Frequency Set by Potentiometer

- b0.10 = 1 — Load default parameters
- b0.00 = 2 — Access all authority settings

- E0.00 = 0 — Frequency set point via potentiometer
- E0.01 = 1 — Run command through DIs
- E1.15 = 0 — 2-Wire control (Forward/Stop, Reverse/Stop)
- E1.00 = 35 — Set External terminal X1 = FWD
- E1.01 = 36 — Set External terminal X2 = REV

- E0.18 = xx sec — Direction change dead time (0.0-60.0)

Speed Command: set by potentiometer
Start Command: X1 = On for FWD, X2 = On for REV
Stop Command: X1 = OFF, X2 = OFF or STOP on panel

3) Running from External I/O Terminal + Jogging, Frequency Set by Potentiometer

§ b0.10 = 1	Load standard parameters
§ b0.00 = 2	Access all authority settings
§ E0.00 = 0	Frequency set point via potentiometer
§ E0.01 = 1	Run command through DIs
§ E1.15 = 0	2-Wire control (Forward/Stop, Reverse/Stop)
§ E1.00 = 35	Set External terminal X1 = FWD
§ E1.01 = 36	Set External Terminal X2 = REV
§ E1.02 = 34	Error reset X3 = ON
§ E1.03 = 37	X4 = Jog FWD
§ E1.04 = 38	X5 = Jog REV
§ E0.60 = xx	Jog frequency

Speed Command:	set by potentiometer
Start Command:	X1 = On for FWD, X2 = On for REV
Jog Command:	X4 = On, X5 = Off JOG FWD Overrides FWD & REV
	X5 = On, X4 = Off JOG REV Overrides FWD & REV
Stop Command	X1 = Off, X2 = Off or STOP (for FWD & REV)
	X4 = Off, X5 = Off (for Jogging Stop)

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X3	X2	X1	Setting Frequency	Acc / Dec. time
Off	Off	Off	Digital setting freq. [E0.07]	[E0.26] / [E0.27]
Off	Off	On	Multi-speed 1 [E3.40]	[E3.10] / [E3.11]
Off	On	Off	Multi-speed 2 [E3.41]	[E3.12] / [E3.13]
Off	On	On	Multi-speed 3 [E3.42]	[E3.14] / [E3.15]
On	Off	Off	Multi-speed 4 [E3.43]	[E3.16] / [E3.17]
On	Off	On	Multi-speed 5 [E3.44]	[E3.18] / [E3.19]
On	On	Off	Multi-speed 6 [E3.45]	[E3.20] / [E3.21]
On	On	On	Multi-speed 7 [E3.46]	[E3.22] / [E3.23]

4) Running from External I/O Terminal, Fixed Frequency via I/O

- § b0.10 = 1 — Load standard parameters
- § b0.00 = 2 — Access all authority settings

- § E0.00 = 21 — Multi-speed frequency set via external DIs
- § E0.01 = 1 — Run command through DIs
- § E1.15 = 0 — 2-Wire control (Forward/Stop, Reverse/Stop)
- § E1.00 = 1 — X1 = multi-speed control input 1
- § E1.01 = 2 — X2 = multi-speed control input 2
- § E1.02 = 3 — X3 = multi-speed control input 3
- § E1.03 = 35 — X4 = FWD
- § E1.04 = 36 — X5 = REV
- § E0.07 = xx — Frequency when X1, X2 & X3 = 0

Speed Command: combination X1,X2,X3 (Binary Number Combination)
Start Command: X4 = On for FWD, X5 = On for REV
Stop Command: X4 = Off, X5 = Off

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5) Running with Panel UP/Down Arrows

§b0.10 = 1		Load standard parameters
§b0.00 = 2		Access all authority settings
§E0.00 = 1		Frequency set point via panel Arrows UP/DOWN
§E0.01 = 0		Run command via Panel
§E0.36 = 0 Hz		Set Start Frequency
§E0.17 = Direction setup		0 = FWD/REV
		1 = FWD only
		2 = REV only
§U0.00 = Direction control (panel)	0 = FWD	
		1 = REV

Speed Command: UP ▲ Increases Speed, Down ▼ Decrease Speed
Start Command: RUN Button
Stop Command: STOP Button

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6) Running External I/O with UP / DOWN / ZERO Inputs

- § b0.10 = 1 — Load standard parameters
- § b0.00 = 2 — Access all authority settings

- § E0.00 = 4 — Frequency set point via external UP/DOWN
- § E0.01 = 1 — Run command through DIs
- § E1.00 = 20 — X1 = Frequency increment UP Command
- § E1.01 = 21 — X2 = Frequency decrement DOWN command
- § E1.02 = 22 — X3 = Frequency ZERO command
- § E1.03 = 35 — X4 = FWD
- § E1.04 = 36 — X5 = REV
- § E1.16 = xx — UP/DOWN Frequency change rate

Speed Command: X1 = ON UP Increases Speed
X2 = ON Down Arrow Decrease Speed
X3 = ON Zero Speed

Start Command: X4 = On (FWD), X5 = On (REV)
Stop Command: X4 = Off (FWD), X5 = Off (REV) or STOP Button

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7) Running with an Analog Input Voltage

§ b0.10 = 1	Load standard parameters
§ b0.00 = 2	Access all authority settings
§ E0.00 = 2	Frequency set point given via analog input 1
§ E1.35 = 2	Input range: 0 – 10 v
§ E0.01 = 1	Run command through DIs
§ E1.00 = 35	X1 = FWD
§ E1.01 = 36	X2 = REV

Or

§ E0.01=0	Run command via Panel

Speed Command:	0-10V Analog Input @ terminals VR1 (0-10V) & Gnd
Start Command:	X1 = ON FWD, X2 = ON REV (when E0.01=1) RUN Button (when E0.01=0)
Stop Command:	X1 = OFF FWD, X2 = OFF REV STOP Button (when E0.01=0)

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8) Running with Analog Input Voltage switching to 2nd Frequency Source &/or Run Source

- § b0.10 = 1 — Load standard parameters
- § b0.00 = 2 — Access all authority settings

- § E0.00 = 2 — Frequency set point given via analog input 1
- § E1.35 = 2 — Input range: 0 – 10 v
- § E0.01 = 1 — Run command through DIs
- § E1.00 = 35 — X1 = FWD
- § E1.01 = 36 — X2 = REV
- § E1.02 = 30 — X3 = Secondary Frequency Source Active
- § E1.03 = 31 — X4 = Secondary Run Command Active
- § E0.02 = 0 — Secondary Frequency setting from potentiometer
- § E0.03 = 0 — Secondary Run command via Panel

Speed Command: refer to previous pages
Running with an Analog Input Voltage or
Running from panel potentiometer

Start Command: as above
Stop Command: as above

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9) Simple PLC

- b0.10 = 1 — Load standard parameters
- b0.00 = 2 — Access all authority settings

- E0.00 = 21 — Frequency set point given via Multi-speed
- E3.00 = 1 — Simple PLC Active, one cycle then stops
- E1.03 = 35 — X4 = FWD
- E1.04 = 36 — X5 = REV

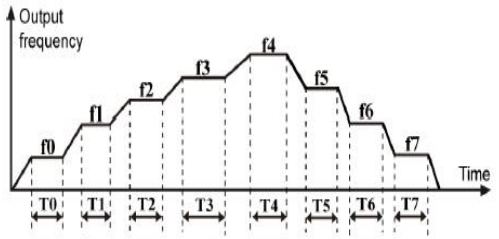
Stage 0
- E0.07 = xx — Start Frequency
- E3.60 = 011 — Stage 0 action
- E3.61 = xx — Running time in sec

Stage 1
- E3.40 = xx — Multi-speed Frequency 1
- E3.62 = 012 — Stage 1 action
- E3.63 = xx — Running time in sec

Stage 2
- E3.41 = xx — Multi-speed Frequency 2
- E3.64 = 013 — Stage 2 action
- E3.65 = xx — Running time in sec

:

Speed & Start Command: X4 = On FWD or X5 = On REV
Stop Command: X4 = Off or X5 = Off



Simple PLC control

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