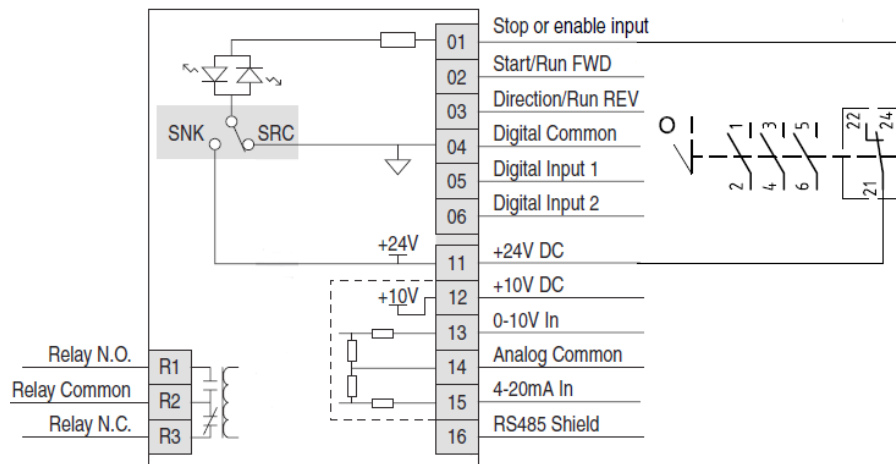


Disconnect Switch for Variable Speed Drives

The following application note outlines how to connect a Katko disconnect switch to the output of a PowerFlex Variable Speed Drive (VSD).

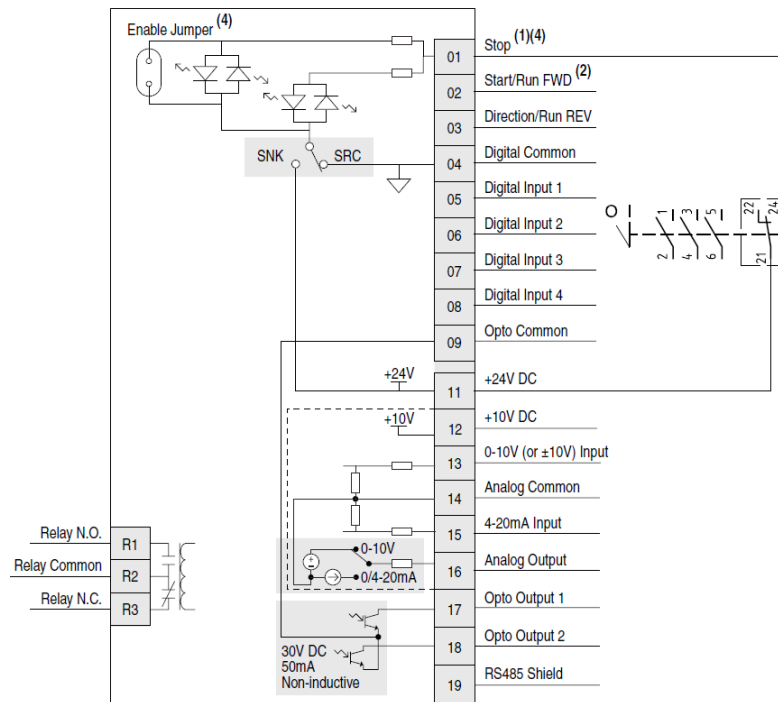
Wire the normally open auxiliary contact from the disconnect switch to the enable circuit on the VSD. See below for wiring examples.

PowerFlex 4M Enable Wiring:



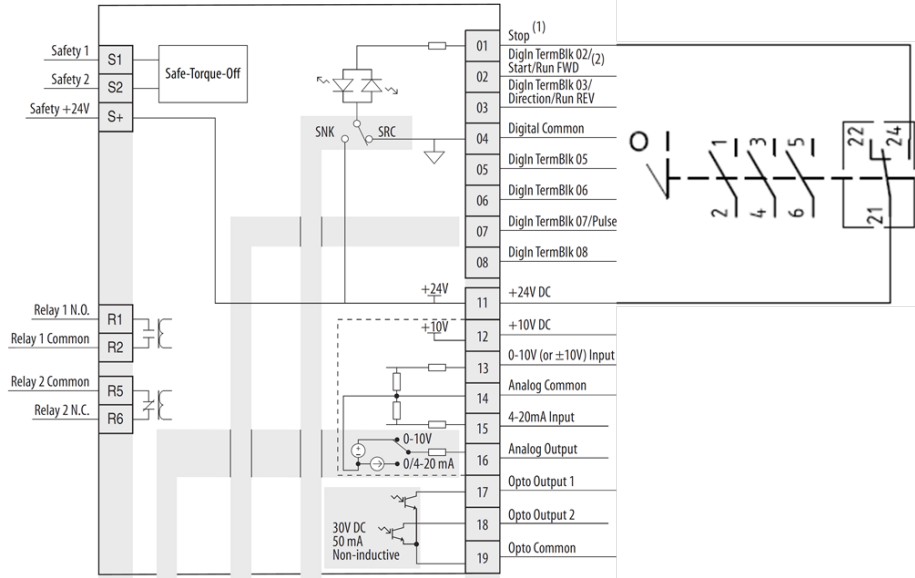
By wiring the VSD as shown above, the stop input acts as an enable input.

PowerFlex 40 Enable Wiring:



By wiring the VSD as shown above and removing jumper ENBL, the stop input acts as an enable input.

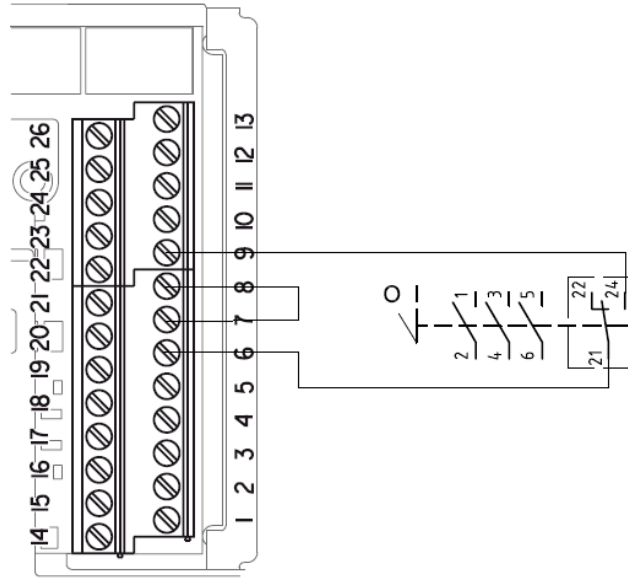
PowerFlex 525 Enable Wiring:



By wiring the VSD as shown above, the stop input acts as an enable input.

PowerFlex 70 Enable Wiring

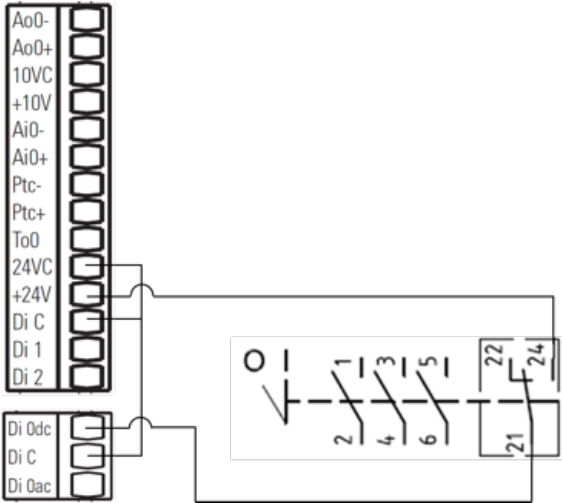
No.	Signal
1	Digital In 1
2	Digital In 2
3	Digital In 3
4	Digital In 4
5	Digital In 5
6	Digital In 6
7	24V Common
8	Digital In Common
9	+24V DC
10	+10V DC Pot Reference
11	Digital Out 1 – N.O. ⁽¹⁾
12	Digital Out 1 Common
13	Digital Out 1 – N.C. ⁽¹⁾
14	Analog In 1 (– Volts)
15	Analog In 1 (+ Volts)
16	Analog In 1 (– Current)
17	Analog In 1 (+ Current)
18	Analog In 2 (– Volts)
19	Analog In 2 (+ Volts)
20	Analog In 2 (– Current)
21	Analog In 2 (+ Current)
22	10V Pot Common Analog Out (– Volts) Analog Out (– Current)
23	Analog Out (+ Volts) Analog Out (+ Current)
24	Digital Out 2 – N.O. ⁽¹⁾
25	Digital Out 2 Common
26	Digital Out 2 – N.C. ⁽¹⁾



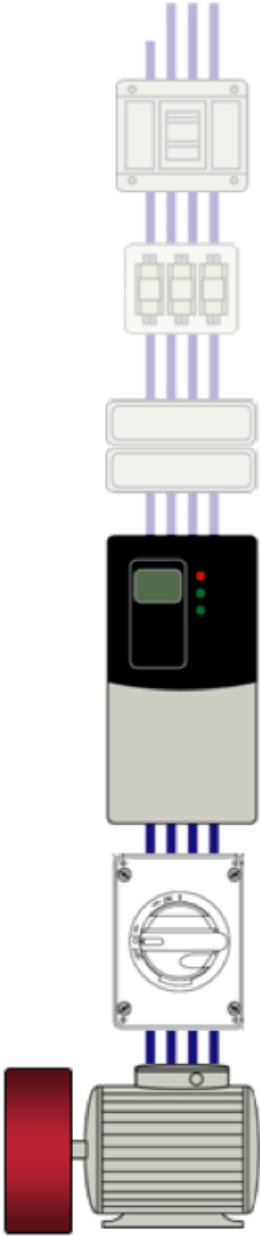
By wiring the VSD as shown above and removing jumper ENBL, Digital In 6 acts as an enable input.

PowerFlex 753 Enable Wiring:

Terminal	Name
Ao0-	Analog Out 0 (-)
Ao0+	Analog Out 0 (+)
10VC	10 Volt Common
+10V	+10 Volt Reference
Ai0-	Analog Input 0 (-)
Ai0+	Analog Input 0 (+)
Ptc-	Motor PTC (-)
Ptc+	Motor PTC (+)
T0	Transistor Output 0
24VC	24 Volt Common
+24V	+24 Volt DC
Di C	Digital Input Common
Di 1	Digital Input 1
Di 2	Digital Input 2



By wiring the VSD as shown above and removing jumper J1 ENABLE, Digital In 0 acts as an enable input.



VSD and Disconnect Switch Selection Chart

Component Class VSDs:

Size (kW)	PowerFlex 4M	PowerFlex 40	PowerFlex 525	Cat. No.	
				Isolator ¹⁾	Aux ²⁾
0.37	22FD1P5N113	22BD1P4N104	25BD1P4N114	ISO325...EMC	ISOAUX1
0.75	22FD2P5N113	22BD2P3N104	25BD2P3N114	ISO325...EMC	ISOAUX1
1.5	22FD4P2N113	22BD4P0N104	25BD4P0N114	ISO325...EMC	ISOAUX1
2.2	22FD6P0N113	22BD6P0N104	25BD6P0N114	ISO325...EMC	ISOAUX1
4	22FD8P7N113	22BD010N104	25BD010N114	ISO325...EMC	ISOAUX1
5.5	22FD013N114	22BD012N104	25BD013N114	ISO325...EMC	ISOAUX1
7.5	22FD018N114	22BD017N104	25BD017N114	ISO325...EMC	ISOAUX1
11	22FD024N114	22BD024N104	25BD024N114	ISO340...EMC	ISOAUX1
15	-	-	25BD030N114	ISO363...EMC	ISOAUX1
18.5	-	-	25BD037N114	ISO363...EMC	ISOAUX1
22	-	-	25BD043N114	ISO380...EMC	ISOAUX1

Architecture Class VSDs:

Size (kW)	PowerFlex 70	PowerFlex 753	Cat. No.	
			Isolator ¹⁾	Aux ²⁾
0.37	20AC1P3A0AYNANC Ø	-	ISO325...EMC	ISOAUX1
0.75	20AC2P1A0AYNANC Ø	20F11RC2P1JA0NNNNN	ISO325...EMC	ISOAUX1
1.5	20AC3P5A0AYNANC Ø	20F11RC3P5JA0NNNNN	ISO325...EMC	ISOAUX1
2.2	20AC5P0A0AYNANC Ø	20F11RC5P0JA0NNNNN	ISO325...EMC	ISOAUX1
4	20AC8P7A0AYNANC Ø	20F11RC8P7JA0NNNNN	ISO325...EMC	ISOAUX1
5.5	20AC011A0AYNANC Ø	20F11RC011JA0NNNNN	ISO325...EMC	ISOAUX1
7.5	20AC015A0AYNANC Ø	20F11RC015JA0NNNNN	ISO325...EMC	ISOAUX1
11	20AC022A0AYNANC Ø	20F11NC022JA0NNNNN	ISO340...EMC	ISOAUX1
15	20AC030A0AYNANC Ø	20F11NC030JA0NNNNN	ISO363...EMC	ISOAUX1
18.5	20AC037A0AYNANC Ø	20F11NC037JA0NNNNN	ISO363...EMC	ISOAUX1
22	20AC043A0AYNANC Ø	20F11NC043JA0NNNNN	ISO380...EMC	ISOAUX1
30	20AC060A0AYNANC Ø	20F11NC060JA0NNNNN	ISO3100...EMC	ISOAUX1
37	20AC072A0AYNANC Ø	20F11NC072JA0NNNNN	ISO3160...EMC	ISOAUX3
45	-	20F11NC085JA0NNNNN	ISO3160...EMC	ISOAUX3
55	-	20F11NC104JA0NNNNN	ISO3160...EMC	ISOAUX3

Notes:

1) The isolator Cat. No. as listed is incomplete. Select an enclosure material/handle colour code from the table on the following page to complete the isolator Cat. No. For example: Polycarbonate enclosure, grey handle: Cat. No. ISO325...EMC becomes ISO325PGEMC.

2) Snap on auxiliary contacts 1 C/O type



Enclosure material/handle colour codes:

Enclosure Material	Handle Colour	
	Grey	Yellow
Polycarbonate	PG	PY
Aluminium	MG	MY



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