

⚠ WARNING ELECTRICAL/MECHANICAL HAZARDS

- Before proceeding, read Quick Start Guide or the Installation and Maintenance Manual for instruction on Electrical/ Mechanical Safety. Failure to follow the instructions could result in death or serious injury, and/or property damage.

Overview

This document provides instructions on how to install a DVR®2400 or 2500 voltage regulator in a generator that has either a DVR®2000E or DVR®2000E+/EC+ voltage regulator.

Connections

Tables 1, 2 and 3 provide details about various terminals on DVR2000E, E+/EC+ voltage regulator and their corresponding terminals on DVR2400/2500 voltage regulator.

In a typical application with droop CT, connections to CT1 and CT2 on the DVR2000E/E+/EC+ voltage regulator should be connected to IB1 and IB2 terminals of P1 connector of DVR2400/2500 respectively.

Table 1: DVR® quick connect connections

DVR2000E	DVR2000E+/EC+	DVR2400/2500	Description
Terminal	Terminal	Terminal	
GND	GND	GND	Protective earth ground
4	4	4	PMG – terminal 2 (Fused)
3	3	3	PMG – terminal 1 (Fused)
E1	E1	E1	Generator armature – Phase A
E2	E2	E2	Generator armature – Phase B
E3	E3	E3	Generator armature – Phase C
—	—	—	UNUSED
—	—	—	UNUSED
F-	F-	F-	Exciter stator field (-)
F+	F+	F+	Exciter stator field (+)

Table 2: DVR ®2400/2500 voltage regulator P1 connector connections

DVR2000E	DVR2000E+/EC+		DVR2400/2500		Description
Terminal	Terminal	Name	Terminal	Name	
CT1	CT1 / J2 - 2	CT1	P1 - 1	IB1	Generator Phase B CT – terminal 1
CT2	CT2 / J2 - 11	C12	P1 - 2	IB2	Generator Phase B CT – terminal 2
—	J1 - 5	AUX_Loop	P1 - 3	A_L	Auxiliary current loop
A	J1 - 1	AUX IN (+)	P1 - 4	AU+	Auxiliary input positive
B	J1 - 12	AUX IN (-)	P1 - 5	AU-	Auxiliary input negative
—	J1 - 11	EXC_OFF	P1 - 6	EXC	Excitation disable contact input (active closed)
6U	J1 - 2	UP	P1 - 7	UP	UP contact input (active closed)
6D	J1 - 3	DOWN	P1 - 8	DN	DOWN contact input (active closed)
52L	J1 - 10	DROOP_OFF	P1 - 9	DRP	Droop disable contact input (active closed)
52J	J1 - 9	VAR/PF_OFF	P1 - 10	QRP	VAR/PF mode disable (active closed)
52K, 52M, 7	J1 - 4	CGND	P1 - 11	DG	Digital ground
AL1	J1 - 6	CONTACT1	P1 - 12	NO	Contact output normally open
AL2	J1 - 7	CONTACT2	P1 - 13	COM	Contact output common
—	—	—	P1 - 14	NC	Contact output normally closed

NOTICE

DVR2400/2500 voltage regulator accepts bare wire (stranded) or ferrules for connectors P1 and P2. The following instructions should be followed while making connections to P1 and P2

- Recommended strip/ferrule length of 0.393 in (10 mm) should be used for connections terminated to P1 and P2
- Wiring routed to P1 and P2 should be strain relieved 6-8 inches from P1 and P2.
- Wiring terminated to P1 needs to be bundled together with tie wraps to reduce strain. This is applicable to P2 also. Do not bundle wiring connected to P1 and P2 together as this adds more strain to the connections.

NOTE: Ensure that both GND terminals near Terminal 4 and P1/P2 connectors are connected to ground.

Table 3: DVR®2500 voltage regulator P2 connector connections

DVR2000E	DVR2000E+/EC+		DVR2500		
Terminal	Terminal	Name	Terminal	Name	Description
	J2 - 1	IA1	P2-1	IA1	Generator Phase A CT – terminal 1
	J2 - 12	IA2	P2-2	IA2	Generator Phase A CT – terminal 2
	J2 - 3	IC1	P2-3	IC1	Generator Phase C CT – terminal 1
	J2 - 10	IC2	P2-4	IC2	Generator Phase C CT – terminal 2
			P2-5	5	Reserved
			P2-6	RST	Reset Regulator (active closed)
			P2-7	PS0	Preset select line 0 (active closed)
			P2-8	PS1	Preset select line 1 (active closed)
			P2-9	VM	Reserved
	J1-4	CGND	P2-10	DG	Digital ground
			P2-11	11	Reserved
			P2-12	BT+	Battery input – positive
			P2-13	BT-	Battery input – negative
			P2-14	TR	CAN terminating resistor - terminal 1
			P2-15	15	Reserved
	J3 - 1	CAN_H	P2-16	CH	CAN high data line
	J3 - 2	CAN_L	P2-17	CL	CAN low data line
	J3 - 3	CAN_GND	P2-18	CG	CAN GND

Note: Document numbers must be retained due to bill of material reference.



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