

⚠ 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 serious personal injury, death and/or property damage

OVERVIEW:

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

CONNECTIONS:

Tables 1, 2 and 3 provide details about various terminals on DVR[®]2000E, E+/EC+ and their corresponding terminals on DVR[®]2400/2500.

In a typical application with droop CT, connections to CT1 and CT2 on the DVR[®]2000E/E+/EC+ should be connected to IB1 and IB2 terminals of P1 connector of DVR[®]2400/2500 respectively.

DVR[®]2400/2500 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

DVR [®] 2000E	DVR [®] 2000E+/EC+	DVR [®] 2400/2500	
Terminal	Terminal	Terminal	Description
GND	GND	GND	Protective earth ground
4	4	4	PMG – terminal 1
3	3	3	PMG – terminal 2 (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 1: DVR[®] quick connect connections

DVR [®] 2000E	DVR [®] 2000E+/EC+	DVR [®] 2400/2500			
Terminal	Terminal	Name	Terminal	Name	Description
CT1	CT1 / J2 - 2	CT1	P1 - 1	IB1	Generator Phase B CT – terminal 1
CT2	CT2 / J2 - 11	CT2	P1 - 2	IB2	Generator Phase B CT – terminal 2
-	J1 - 5	AUX_Loop	P1 - 3	A_L	Auxiliary current loop (DVR [®] 2500 only)
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	QPF	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

Table 2: DVR[®]2400/2500 P1 connector connections

- Wiring routed to P1 and P2 should be strain relieved at least 6 inches from the 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 GND terminal near P1/P2 connectors is connected to ground.

DVR®2000E		DVR®2000E+/EC+		DVR®2500	
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

Table 3: DVR®2400/2500 P2 connector connections