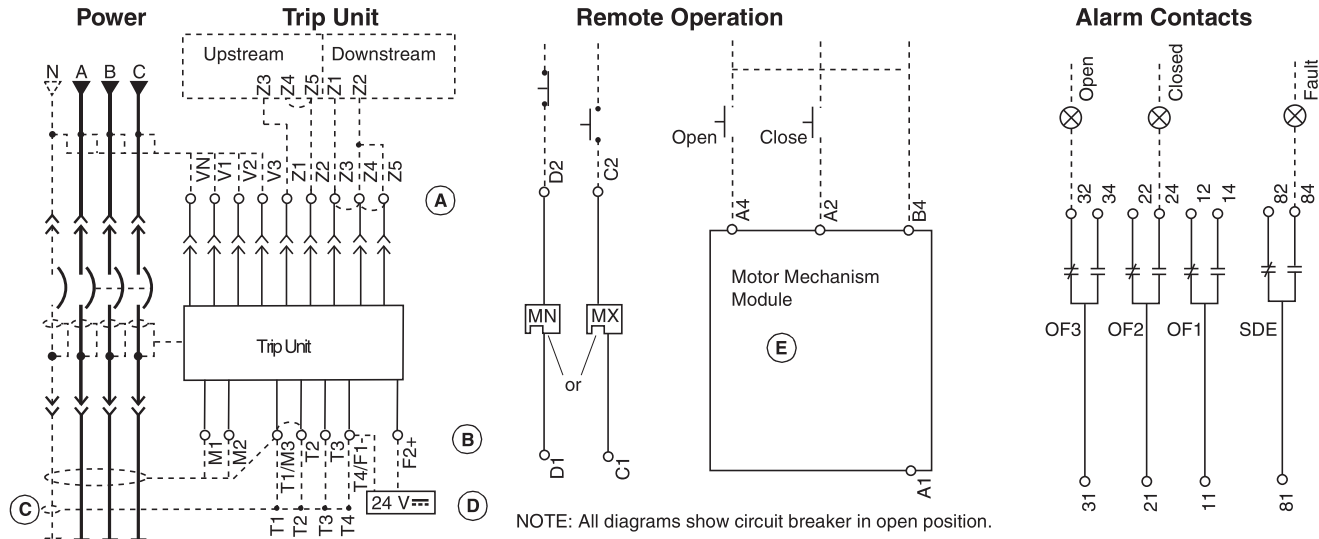


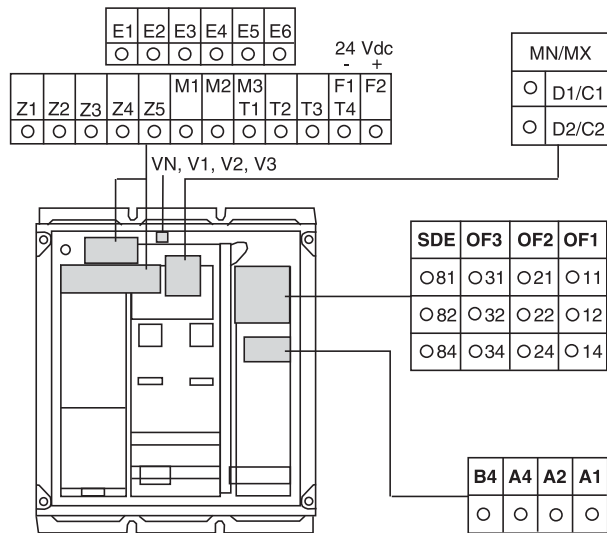
PowerPact™ M-, P- and R-Frame, and Compact™ NS630b–NS3200 Circuit Breakers

Section 5—PowerPact P-Frame Molded Case Circuit Breakers

Figure 8: Accessory Control Wiring Diagrams for Electrically-operated Circuit Breakers



- A—Do not remove factory-installed jumpers between Z3, Z4 and Z5 unless ZSI is connected.
 B—Do not remove factory-installed jumper between T1 and T2 unless neutral CT is connected. Do not install jumper between T3 and T4.
 C—For proper wiring of neutral CT, refer to Instruction Bulletin 48041-082-01 shipped with it.
 D—24 Vdc power supply for trip unit must be separate and isolated from 24 Vdc power supply for communication modules.
 E—Motor mechanism includes opening and closing coils.



Connector	Recommended Wire Size
E1–E2	22 AWG (0.3 mm ²) MIN shielded pair cable or twisted pair copper wires
V1, V2, V3, Vn	22–16 AWG (0.3–1.5 mm ²)
T	22 AWG (0.3 mm ²) stranded shielded cable
E3–E6, Q1, Q2, Q3	22 AWG (0.3 mm ²) shielded twisted pairs with drain (Belden 8723 or equal) ³
M	Refer to MDGF instructions
OF, SD, SDE	18–16 AWG (0.8–1.5 mm ²)
MN, MX	18–14 AWG (0.8–2.5 mm ²)
F	Size per aux 24 Vdc power supply
Z1–Z5	22–18 AWG (0.3–0.8 mm ²)

Trip Unit Type				Connector	Description
Basic	A	P	H		
—	•	•	•	Com: E1–E6	Circuit breaker communication module E1 = +24 Vdc E2 = Common E3 = A/Tx- D0 E4 = B/Tx+ D1 E5 = A/Rx- D0 E6 = B/Rx+ D1
—	•	•	•	Z	Zone-selective interlocking (ZSI) Z1 = ZSI OUT signal Z2 = ZSI OUT Z3 = ZSI IN signal Z4 = ZSI IN short-time delay Z5 = ZSI IN ground fault
—	•	•	•	T	External neutral sensor
—	•	•	•	F	24 Vdc external power supply
—	—	•	•	Vn1	External voltage takeoff
—	—	•	•	V1, V2, V3 ¹	External phase voltage takeoff
—	—	•	•	M6C1: Q1, Q2, Q3	6 programmable contacts 24 Vdc external power supply required
Function				Connector	Description
Auxiliary Contacts				OF	Open/Closed circuit breaker or switch position contacts
				SDE	Electrical fault alarm contact
Remote Operation				MN	Undervoltage trip device
				MX	Shunt trip
Motor Mech Module				A4	Electrical opening
				A2	Electrical closing
				B4, A1	Power supply for control devices and gear motor

¹ Optional M6C and external voltage takeoff are supplied with flying leads.