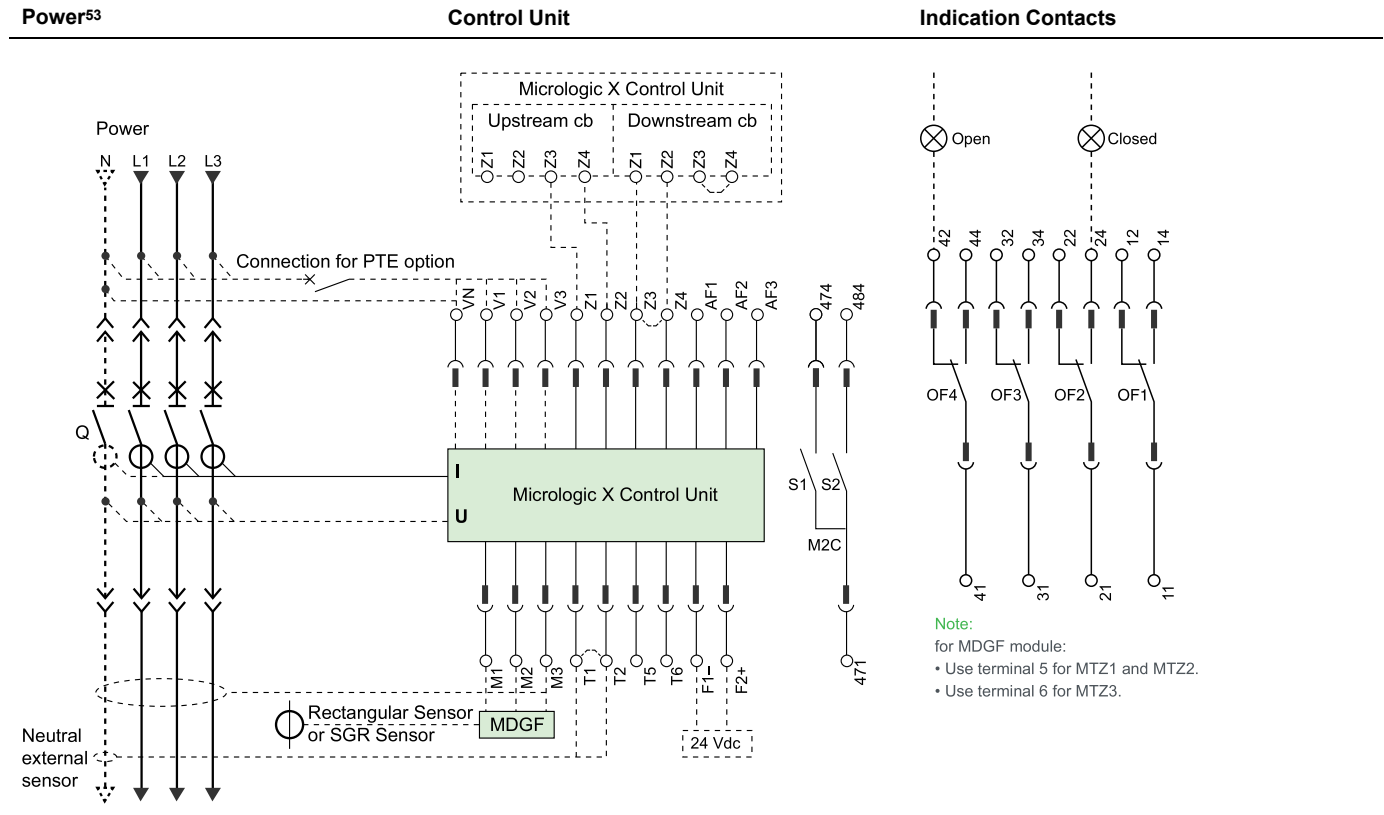


Masterpact MTZ Circuit Breaker Electrical Diagrams

Masterpact MTZ1 Fixed and Drawout Devices

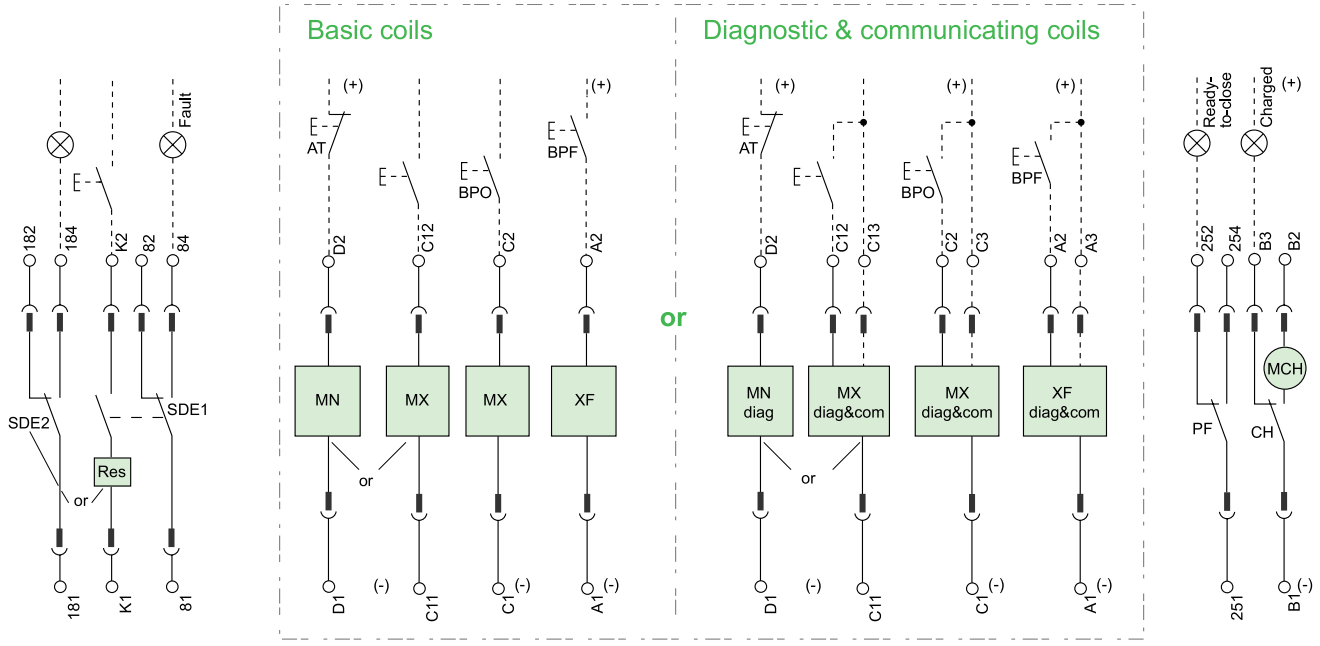
The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.



NOTE: It is possible to add a second MX/MX diag&com or a MN/MN diag voltage release. The second MX diag&com voltage release can only be installed after the delivery of the circuit breaker. This is an after-sales adaptation.

53. For a three-pole Masterpact MTZ circuit breaker in a power system with neutral distributed, the neutral must be connected to the Vn terminal of the Micrologic X control unit and the ENVV configured to "Yes" to maintain the quality of power measurement.

Remote Operation⁵⁴



NOTE: Maximum length of the two wires between A2–A3/C20C3/C12/C13: 5 m (16 ft).
 For the maximum length of the wiring between the AC/DC power supply and the voltage release terminals A1–A3/C1–C3/C11–C13/D1–D2: see *Shunt Close (XF)*, *Shunt Trip (MX)*, and *Undervoltage Release (MN)* with *Basic Coils*, page 83.

54. Possible to add a second MX/MX diag&com or a MN/MN diag coil.

Terminal Block Marking

CE3	CE2	Com	UC1	UC2	SDE2	UC4	UC3	SDE1	MN	MX	XF	PF	MCH	
		<p>F2+ or F1-</p>												

OF4	OF3	OF2	OF1	CD2	CD1	CE1	CT1

Res	M2C / ESM	2 nd MX



- Drawout device only.
- SDE1, OF1, OF2, OF3, OF4 supplied as standard.
- Interconnected connections (only one wire per connection point).

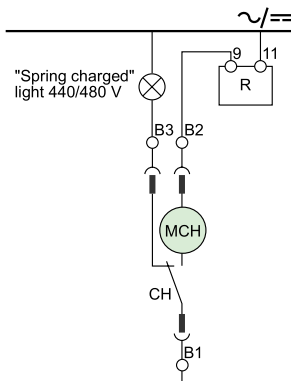
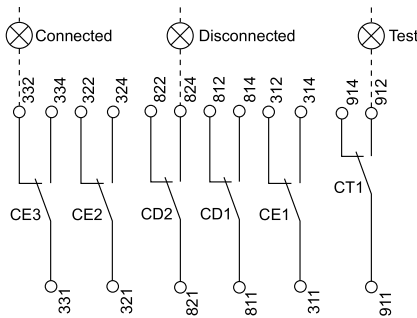
[1] The connection of the +/- of the power supply either on terminals F2/F1 or on the +/- terminals of the ULP port must be strictly respected. Crossing the polarities may damage the device.

Indication Contacts Terminal Block

OF4 / OF3 / OF2 / OF1 : Open/closed indication contacts OF

Cradle Contacts Terminal Block

- CD2 / CD1:** Disconnected position contacts
- CE3 / CE2 / CE1:** Connected position contacts
- CT1:** Test position contacts



Control Unit Terminal Block

- Com :** ULP Communication
- UC1 :** Z1-Z4 Zone Selective Interlocking
M1 = MDGF module input
- UC2 :** T1, T2 = Neutral External Sensors
M2, M3 = MDGF Module Input
- UC3 :** Voltage Connector (must be connected to the neutral with a 3P circuit breaker)
- UC4 :** External Voltage Connector (PTE option)
or
M2C : 2 Programmable Contacts (external relay) ext. 24 Vdc power supply required is not installed.

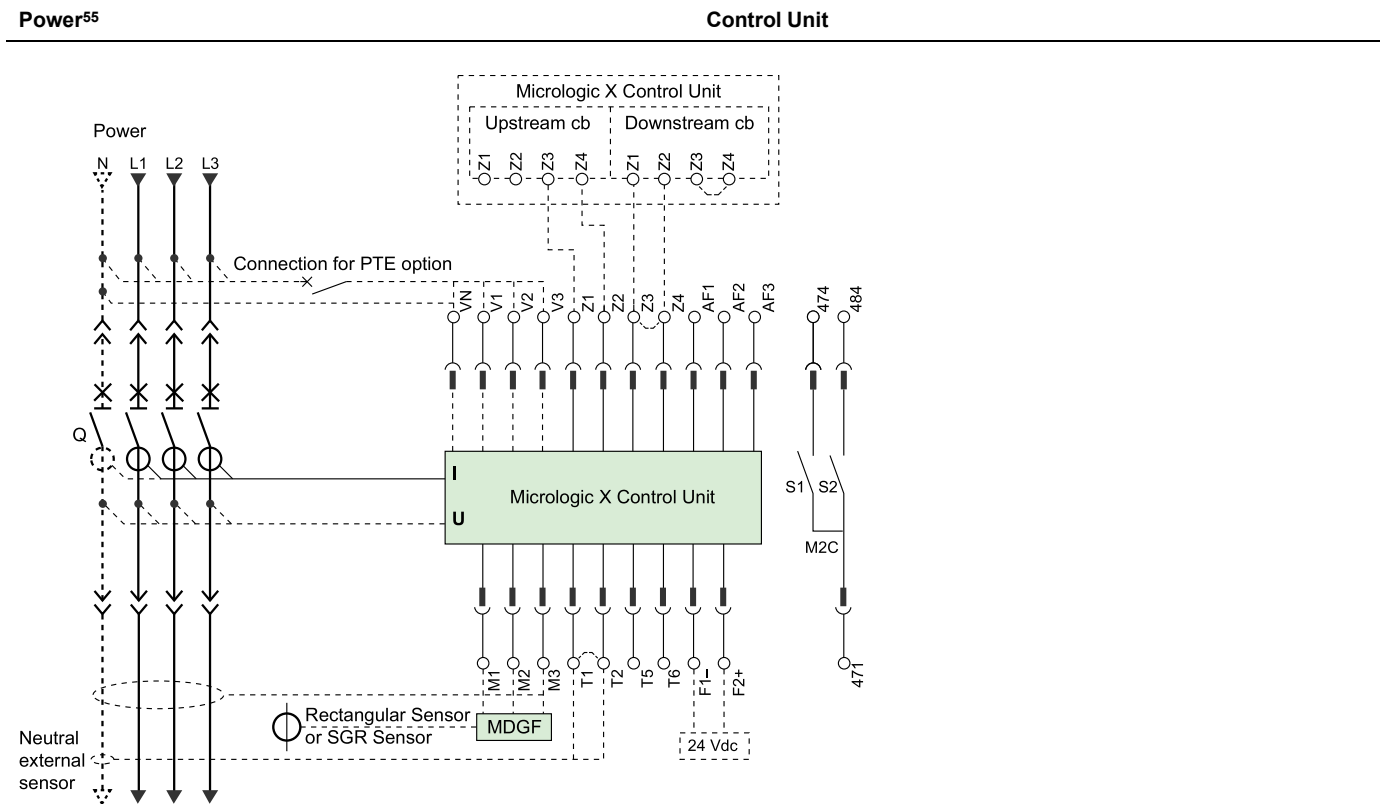
Remote Operation Terminal Block

- SDE2:** Overcurrent Trip Indication Contact
or
Res: remote reset Remote Reset
- SDE1:** Overcurrent Trip Indication Contact (supplied as standard)
- MN /MN diag:** Undervoltage Release Standard or Diagnostic
- MX/MX diag&com:** Shunt Trip Standard or Diagnostic & Communicating
- 2nd MX/MX diag&com:** Shunt Trip Standard or Diagnostic
- XF/XF diag&com:** Shunt Close Standard or Diagnostic & Communicating
- PF:** Ready-to-Close Contact
- MCH:** Spring Charging Motor

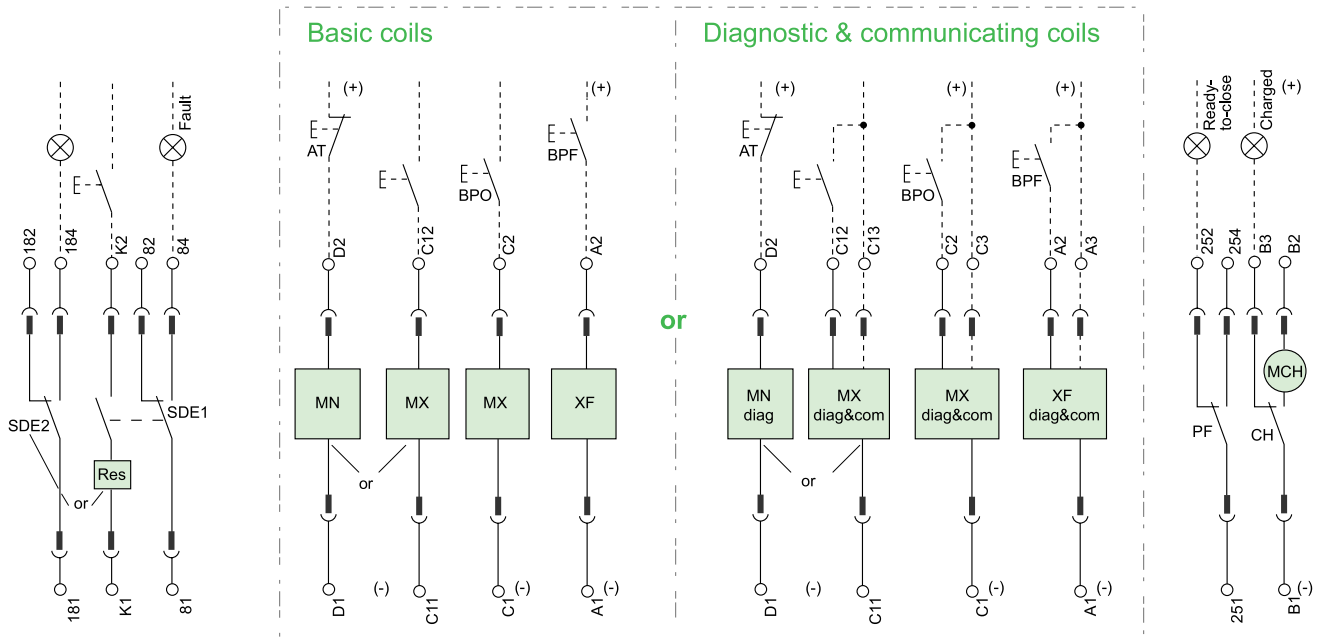
NOTE: When communicating MX diag&com or XF diag&com accessories are used, the third wire (C3,A3, C13) must be connected even if the communication module is not installed.

Masterpact MTZ2/MTZ3 Fixed and Drawout Devices

The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.



Remote Operation⁵⁶

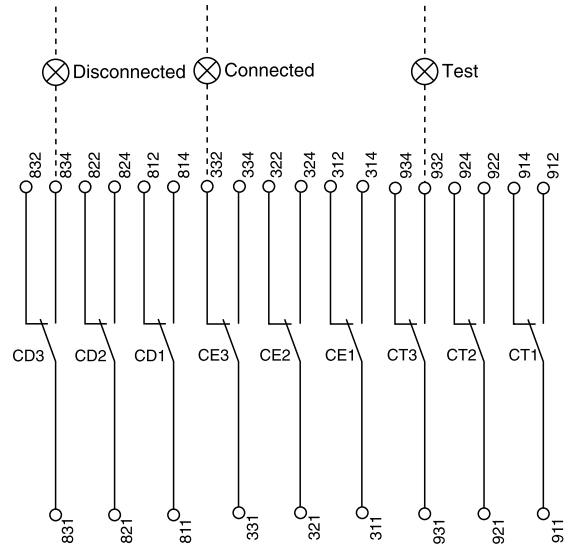
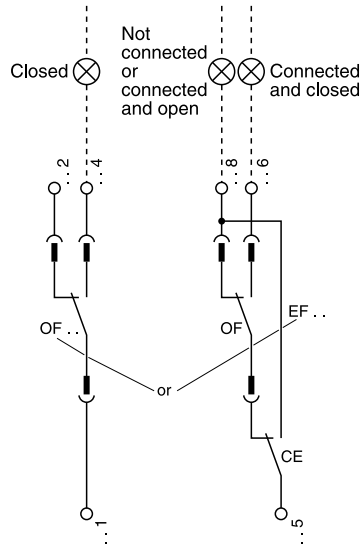
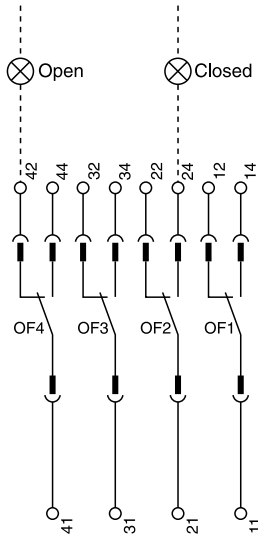


55. For a three-pole Masterpact MTZ circuit breaker in a power system with neutral distributed, the neutral must be connected to the Vn terminal of the Micrologic X control unit and the ENVT configured to "Yes" to maintain the quality of power measurement.

56. It is possible to add a second MX/MX diag&com or an MN/MN diag coil.

Indication Contacts

Cradle Contacts



Control Unit Terminal Block

- Com :** ULP communication
- UC1 :** Z1-Z4 Zone Selective Interlocking
M1 = MDGF module input
- UC2 :** T1, T2 = Neutral External Sensors
M2, M3 = MDGF module input ext. 24 Vdc power supply required
- UC3 :** Voltage Connector (must be connected to the neutral with a 3P circuit breaker)
- UC4 :** External Voltage Connector (PTE option)
or
M2C : 2 Programmable Contacts (external relay)

Remote Operation Terminal Block

- SDE2:** Overcurrent trip indication contact
or
Res: Remote Reset
- SDE1:** Overcurrent Trip Indication Contact (Supplied as Standard)
- MN /MN diag:** Undervoltage Release Standard or Diagnostic
- MX/MX diag&com:** Shunt Trip Standard or Diagnostic & Communicating
- 2nd MX/MX diag&com:** Shunt Trip Standard or Diagnostic
- XF/XF diag&com:** Shunt Close Standard or Diagnostic & Communicating
- PF:** Ready-to-Close Contact
- MCH:** Spring Charging Motor

NOTE: When communicating MX com or XF com accessories are used, the third wire (C3,A3, C13) must be connected even if the communication module is not installed.

Terminal Block Marking

CD3	CD2	CD1	Com	UC1	UC2	SDE2	UC4	UC3	M2C / ESM	SDE1	CE3	CE2	CE1	MN	MX	XF	PF	MCH
834	824	814		T6	M1	184	V3		484	84	334	324	314	D2	C2	A2	254	B2
832	822	812		Z3	Z4	182	V2	VN	474	82	332	322	312		C3	A3	252	B3
831	821	811		Z1	Z2	181	V1		471	81	331	321	311	D1	C1	A1	251	B1

or

CE6	CE5	CE4
364	354	344
362	352	342
361	351	341

or

Res
K2
K1

or

CT6	CT5	CT4	2 nd MX
964	954	944	C12
962	952	942	C13
961	951	941	C11

OF24	OF23	OF22	OF21	OF14	OF13	OF12	OF11	OF4	OF3	OF2	OF1	CT3	CT2	CT1
244	234	224	214	144	134	124	114	44	34	24	14	934	924	914
242	232	222	212	142	132	122	112	42	32	22	12	932	922	912
241	231	221	211	141	131	121	111	41	31	21	11	931	921	911

or

EF24	EF23	EF22	EF21	EF14	EF13	EF12	EF11
248	238	228	218	148	138	128	118
246	236	226	216	146	136	126	116
245	235	225	215	145	135	125	115

or

CE9	CE8	CE7
394	384	374
392	382	372
391	381	371

or

CD6	CD5	CE4
864	854	844
862	852	842
861	851	841

EIFE

OF22	OF21	OF14	OF13	OF12	OF11	OF4	OF3	OF2	OF1
224	214	124	134	124	114	44	34	24	14
222	212	122	132	122	112	42	32	22	12
221	211	121	131	121	111	41	31	21	11

or

EF22	EF21	EF14	EF13	EF12	EF11
228	218	148	138	128	118
226	216	146	136	126	116
225	215	145	135	125	115

- Drawout device only.
- SDE1, OF1, OF2, OF3, OF4 supplied as standard.
- Interconnected connections (only one wire per connection point).

[1] The connection of the +/- of the power supply either on terminals F2/F1 or on the +/- terminals of the ULP port must be strictly respected. Crossing the polarities may damage the device.