Remote operation

Motor operator

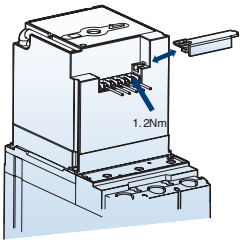
TS250 + MOP2

Motor operators can also be operated by manual. The motor drives a mechanism which switches TD & TS toggle handle to the “ON” and “OFF/RESET” positions.
- The manual actuator handle is located on the front of the cover.
- Manual or Automatic operation can be selected.
- Applicable to 2, 3 and 4-pole breakers.

The motor operator is an essential device for constructing a remote operated automatic source-changeover system to ensure a continuous supply of electrical power at following certain installations:
- Commercial sector: Hospital, Tall building, Bank, Insurance companies, Shopping centers
- Industry: Ships, Assembly lines at plant, Military sites, Port and Railway installation

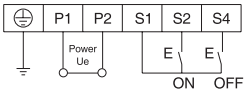
MCCB	Type	Control voltage	Actuation current (A)	Response time (ms)		Consumption (W)	Mechanical service life (operations)	No. of operations per hour
				Closing	Opening			
TD100, TD160	MOP1	① DC 24V ② AC 100~240V/ DC 100~220V	≤2.5A (DC 24V) ≤0.5A (AC)	310	200	14	25,000	120
TS100, TS160, TS250	MOP2	① DC 24V ② AC 100~110V/ DC 110V ③ AC 230/ DC 220V	≤5A (DC 24V) ≤2A (AC)	350	230	14	25,000	120
TS400,TS630	MOP3			500	350	35	20,000	60
TS800	MOP4			700	420	35	10,000	20

Wiring connection



Standard connection

Circuit breaker On and Off controlled by remote operation and manual operation

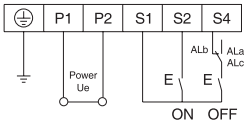


Connection with alarm switch (AL)

1) The below connection diagram is the method of using a alarm switch (AL) without shunt or undervoltage trip.
2) After clearing the fault surely, manual reset is mandatory in case of tripping due to an electrical fault.

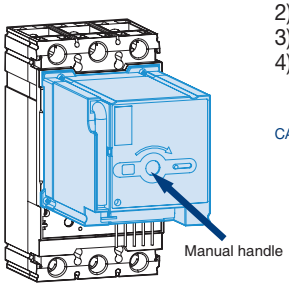
Connection with FAL (only for the breakers with electronic trip unit ETS or ETM)

1) The below connection diagram is the method of using a FAL for circuit breakers with electronic trip unit.
2) After clearing the fault surely, manual reset is mandatory in case of tripping due to an electrical fault.



Remote operation

Manual operation

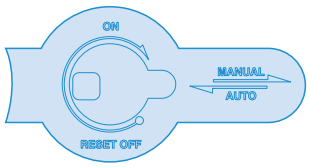


1) Insert the manual handle into the slot of Motor Operator surface and rotate it clockwise.
2) It must be rotated just 180° clockwise for safe operation of micro switch in the motor operator.
3) Return the manual handle after the manual operation
4) Turn the slide switch back to the position of AUTO.

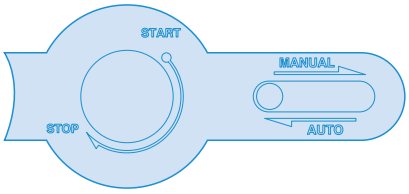
CAUTION: When the circuit breaker is tripped by trip button in the OFF status,
it is impossible to operate motor operator automatically It must be reset by manual operation.

Automatic operation

1) Set the slide switch to AUTO, then internal power is closed automatically.
2) Operating frequency should be less than these below regulated values.
   TD 160N/H/L, TS250N/H/L:180 operations per hour
3) Use the ON/OFF switch in the range of regulated values.
4) It may interfere near communication equipments because of internal switching power supply.
   It's recommended that a noise filter be installed to power supply.
5) Please do not input ON/OFF signals at the same time during the automatic operation.
6) If the circuit breaker has a UVT attached inside, charge a UVT on the rated voltage before performing MOTOR OPERATOR.



[TD100, 160, TS100, 160, 250]



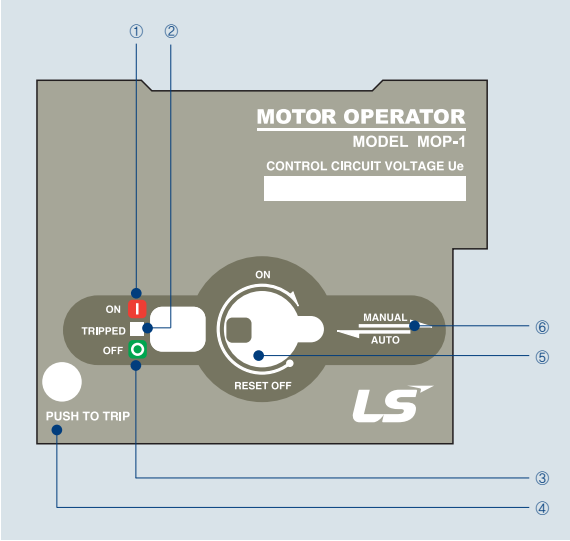
[TS400, 630, 800]

Remote operation

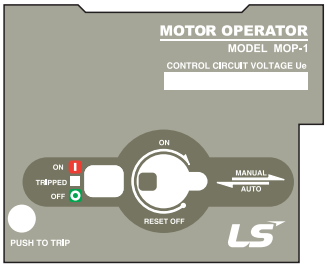
Motor operator

Feature

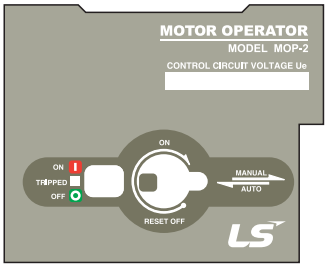
① On position indication (Red color)
② Trip position indication (White color)
③ Off position indication (Green color)
④ Button for push to trip
(available for only for TD160AF and TS630AF)
⑤ On/Off/Reset selection lever
⑥ Manual/Auto selection lever



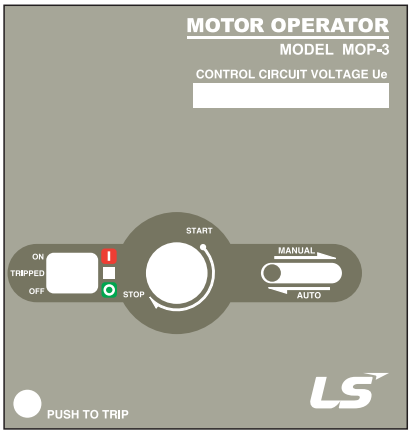
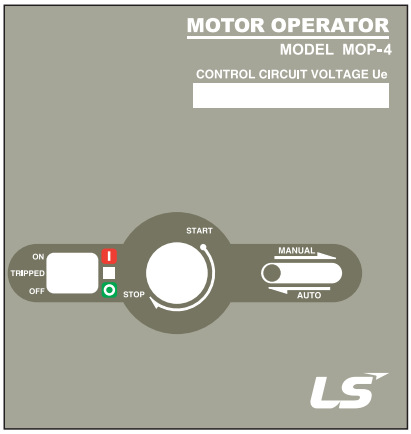
TD160 .... MOP-1



TS250 .... MOP-2



TS630.... MOP-3



TS800 .... MOP-4