



ML52

All of the main ranges of Albright contactors are available as single pole magnetic latching contactors. One short pulse to set (close) the contactor and another pulse of opposite supply polarity to unset (open) it again.

The result is a bistable device that can be left in an open or closed state indefinitely with no power applied to, or consumed by the coil. As there is no coil heating these contactors can be engineered with more powerful coils and springs than with conventional contactors.

The contact ratings and all external dimensions are identical to their equivalents with conventional coils.



ML53

### Contactors Operation

The operation of a single pole magnetic latching contactor requires a short duration pulse typically 0.25 seconds at the coil supply voltage to set (close) the contactor. Once set (closed) the contactor will remain set, even if there is a power outage. Subsequent pulses of the same polarity will not affect its status.

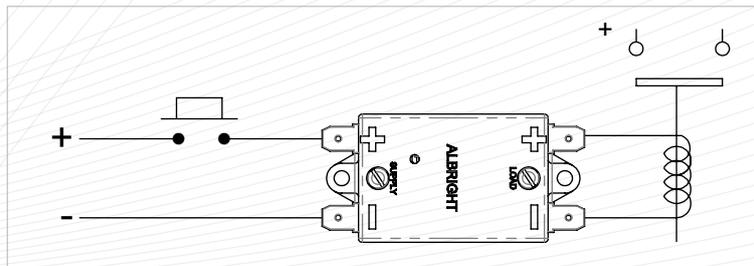
To unset (open) the contactor a pulse of 0.25 seconds duration is applied at the coil supply voltage. Once unset (open) the contactor will remain unset (open), even if there is a power outage. Subsequent pulses and voltages at the same polarity will not affect its status. To set (close) it again the polarity of the pulse must once again be reversed.

Albright offers the ML range for customers requiring an alternating coil polarity drive unit.

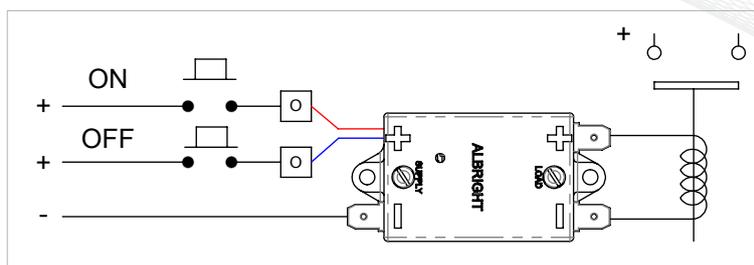
### Operating Methods

Our ML range offer two ways to operate our range of magnetic latching contactors:

1) The **ML52** is a sequential four terminal device. When power is first applied to the input it will generate a positive pulse at supply voltage of 0.25 seconds duration, long enough to set any of our magnetic Latch contactor range. It then needs to power down. The second time it is powered up generates a negative pulse at supply voltage of 0.25 seconds duration, long enough to unset any of our magnetic latch contactor range. Furthermore the duration of the pulse is limited to a maximum of 1/2 second and thus it is impossible to overheat the contactor coil even if the supply voltage is maintained indefinitely. Each time the ML52 is powered up it will automatically generate pulses of alternating polarity to set (close) and unset (open) the contactor.

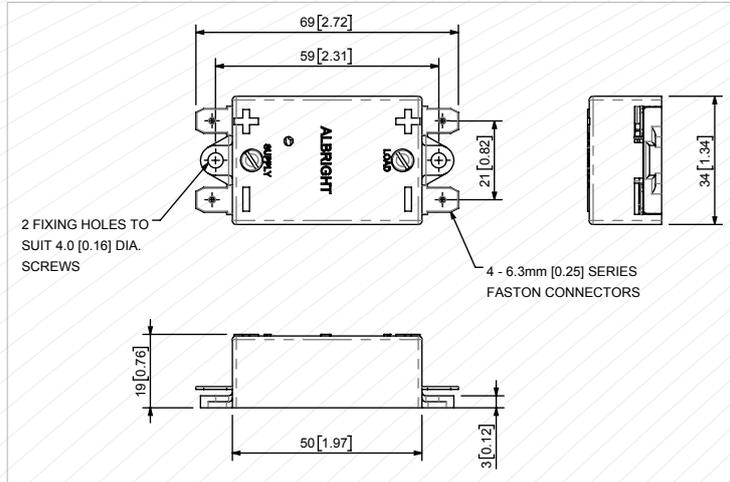


2) The **ML53** is a five terminal non-sequential device. It is similar to the ML52 except that in addition to ground it has two separate inputs for set (close) and unset (open) of the contactors. If the set (close) input is powered up it will generate a positive pulse at supply voltage of 0.25 seconds duration, long enough to set any of our magnetic Latch contactor range. Each time this input is actuated it will generate a positive pulse. If the unset (open) input is powered up it will generate a negative pulse at supply voltage of 0.25 seconds duration, long enough to unset any of our magnetic latch contactor range. Each time this input is actuated it will generate a negative pulse. Powering each input alternatively can set (close) and unset (open) the contactor.

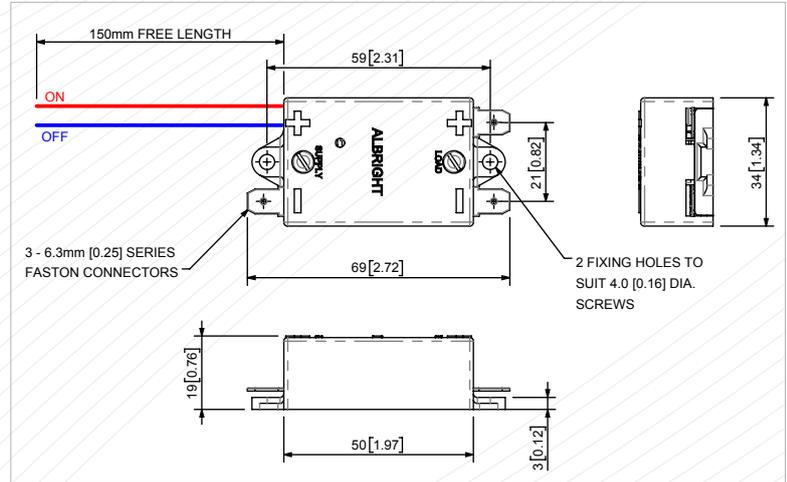


The MLs are available in two varieties; the ML52 and ML53 which are available in two voltage ranges; 12 to 60V, suitable for the majority of applications and 48 to 96V for applications required to energise higher voltage coils.

Voltage Range	ML52 Type	ML53 Type
12-60V	ML52L-60	ML53L-60
48-96V	ML52H-96	ML53H-96



Dimension Drawing for ML52



Dimension Drawing for ML53

**Brief Specification for ML series**

Description	Parameter
Initial Power-up sequence time	10mS ±20%
Drive Pulse Length	0.25S ±20%
ML Power Consumption	<10mA +
Absolute Maximum Voltage	100V
Recommended Maximum switching speed	1 operation per 10 seconds (0.1Hz)
Operating Temperature Parameters	-40 to +85°C

**12-60V 'L' Range Only**

Description	Parameter
Maximum Voltage	60V
Minimum Nominal Voltage	12V
Maximum Drive Current	4A for 0.25S

**48-96V 'H' Range Only**

Description	Parameter
Maximum Voltage	96V
Minimum Nominal Voltage	48
Maximum Drive Current	2A for 0.25S

**Limits**

An ML is designed to operate one contactor coil only.

**Important Note:**

Magnetically Latched Contactors do not fail safe. If there is a power failure, or if the supply to the contactor coil is broken, the contactor contacts will not open or close, i.e. they will not change state. These devices should not therefore be used in applications where the failure of contacts to open or close could result in a hazardous situation for persons or equipment.