



هميان فن
HAMIANFAN



LOCK OUT RELAY
Type ELA070-H
(Heavy-duty latching high speed relay , 4contact)
figure 1

Features

DC voltage electric operated

Stable latched positions heavy-duty contact

Make or break as shown in figure 2, 3, 4 NO or NC

Position indication

Operation voltage 52-140 VDC

Test result by Tektronix Osilloscope

Operation time for 52 VDC : 4.2 msec

Operation time for 110 VDC : 2.5 msec

Test result by vebco

Operation time for 52 VDC : 7.6 msec

Minimum essential time for relay stimulant : 3 msec

Operation time for 110 VDC : 7.2 msec

Minimum essential time for relay stimulant : 3 msec

Disconnection current : 1 Amp DC

Application

The ELA relay is used in lock-out application (e.g. on transformers) and also in industry and general control where high breaking capacity bi-stable contacts are desired. The relay is also applied where multiple switching of current transformer secondary and trip circuits is required (e.g. from primary backup breakers, or for zone selection in bus differential protection). The coil of relay need continuous power supply for using to latch after trip.

Description

The ELA is an 4 contact heavy duty, permanent magnet, latching relay, having stable positions. When coil is energized with the correct polarity, a repulsion occurs and the armature switches to the other side where it locks, magnetically. The relay can be specified for DC operation.

The coils is wired through an additional relay contacts so that the coil is de energized after the relay switches. This contact is not recommended for any other use.

Type ELA070-H

High burden tripping relay with hand reset and electrical reset

this relay operate into complex with protective relay .break contact of protective relay make series with the ELA coil and when this break contact operate,main contact of ELA works.this realy is equiped with tow possibility for reset.

one by hand reset on relay and other one is electrical reset from control room as shown in following figure 3.

IEC STANDARD COMPLINACE

Immunity test

1. Radiated electromagnetic field immunity test
Port : Enclosure
IEC255-22-3
Test level : class2 - 3V/M
24-500 MHZ
The relay place under above criteria and no fail in operation appear .
2. voltage interruption and alternating ripple
IEC255-11
Test level : 125 ms-41 Vac
The power supply of relay interrupted as above and no fail in operation appear.
3. electrostatic discharge immunity test
Enclosure
IEC255-22-2
Test level : class 4
Contact discharge : 8 KV
Air discharge : 15 KV
Electrostatic charge discharge on enclosure under above criteria and no fail in operation appear.
4. fast transient (Burst) immunity test
Port : power supply –signal line
IEC255-22-4
Test level : class 4-2KV-comuon male
In this test 5Khz signal under above criteria applied on power supply and inputs and no fail in operation appear .

5. 1 MHz burst disturbance test
Port : power supply-signal line
IEC255-22-1
Test level : class 3
2.5 KV common mode – 1 KV differential mode

Insulation test

1. insulation resistance
port : input / output – Enclosure
IEC 255-5 IEC255-6
Test level 500 Vdc
The impedance between relay contacts, inputs and enclosure measured above 1 GΩ
2. Dielectric test
port : input / output – Enclosure
IEC 255-5 IEC255-6
Test level : series G
1.5 KVrms
The relay contacts and enclosure put under above criteria for 1 minute and no fail in operation appear.

Atmospheric environment

Temperature IEC 255-6

Storage and transit -25°C to 70°C
operating -25°C to +55°C

IEC 68-2-1 : 1 Cold
IEC 68-2-2 : 1 Dry heat

Humidity

IEC 68-2-3 : 1
56 days at 93% RH and + 40°C

Enclosure protection

IEC 529 IP50

Mechanical environment

Vibration

IEC 255-21-1

0.5g between 10Hz and 150 Hz

Mechanical durability

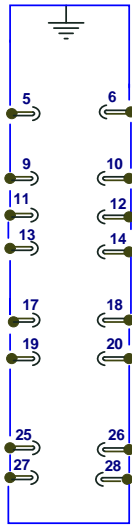
Loaded contact

10,000 operation minimum

Unloaded contact

100,000 operation minimum

Case earth



**Module terminal blocks
viewed from rear**

V* : 110 Vdc

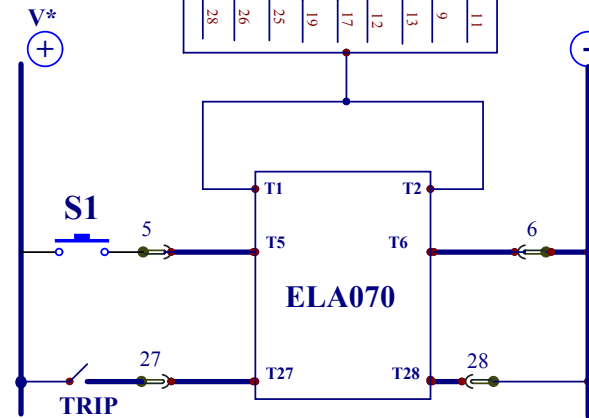
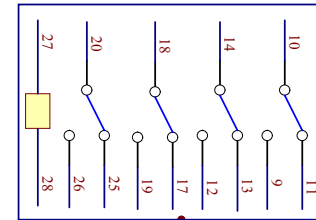
S1 : NC PUSH BUTTOM SWITCH

output contacts to module terminals							
10 9	10 11	14 12	14 13	18 19	18 17	20 26	20 25
M	B	M	B	M	B	M	B

Contact description

M:Make

B:Break



Viewed from inside

Title			ELA070		
Size	Number		Revision		
A4					
Date:	2/3/2019		Sheet of		
File:	D:\مشاريع\2019\2019-03\2019-03-03\ELA070 N.Sch		Drawn By:		

