2100 Series Miniature Timing Relays

1. INTRODUCTION

This instruction sheet covers the installation and operation of the AGASTAT* 2100 Series Miniature Timing Relays. Read these instructions thoroughly before installing the relay.

NOTE

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Dimensions in this instruction sheet are in millimeters [with inches in brackets]. Figures are not drawn to scale.

2. DESCRIPTION (Figure 1)

Each relay is an accurate timing instrument which balances pneumatic, electrical, and mechanical forces using a minimum of moving parts. When satisfactory performance cannot be restored, the unit should be returned to TE Connectivity for repair or replacement.

3. MOUNTING INSTRUCTIONS

All miniature units will operate in any position with a maximum six percent (6%) variation in timing. Solder lug terminal and "AN" Connector models are mounted by means of attached mounting plate. Octal plug models are secured by a mounting bracket.
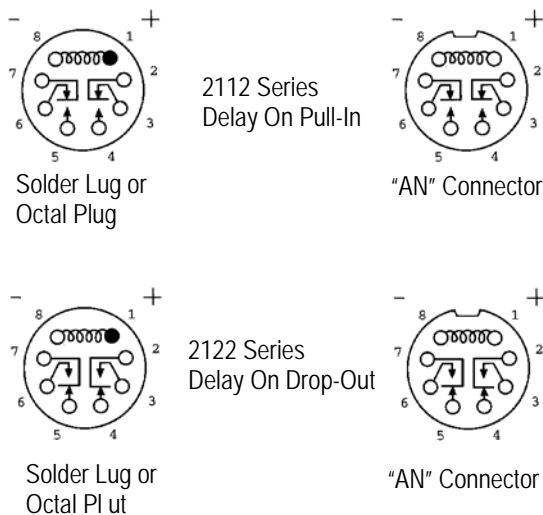
Terminal and Contact Arrangement

2112 Series
Delay On Pull-In

Solder Lug or Octal Plug

"AN" Connector

2122 Series
Delay On Drop-Out

Solder Lug or Octal Pl ut

"AN" Connector

LINEAR TIMING RANGES			
CODE	SECONDS	CODE	SECONDS
A	0.03 to 0.1	G	2 to 60
B	0.1 to 0.3	H	5 to 120
C	0.15 to 1.0	J	5 to 180
D	0.375 to 3.0	K	1.5 to 30 cycles
E	0.75 to 10.0	L	3 to 120 cycles
F	1 to 30		

All units provide non-linear, low-time settings through the first 15° of adjustment. Individual units may have maximum delays at 300° up to double those listed, maintaining linear adjustment throughout.

A maximum 0.016 second variation in timing on 2112 Series, and 0.008 seconds on 2122 Series, may be experienced on AC models due to "one-cycle" alternating current effect.

COIL UNITS			
CODE LETTER	RATED VOLTAGE	PULL-IN[†]	DROP-OUT[‡]
M	12 Vdc	9.6	1
N	28 Vdc	22.4	1.5
P	48 Vdc	38	3.8
R	110 Vdc	88	7
U	115 Vac 25-400 Hz	97	5
S (2112)	120 Vac 60 Hz	102	45
S (2122)	120 Vac 60 Hz	102	45
Y	125 Vdc	100	9
T	240 Vac 60 Hz	204	90

[†] Maximum voltages required to operate specific units throughout the ambient range.

[‡] Minimum voltages at which an energized unit returns to the de-energized position.

Insensitive to transients of +1500 volts for 10 milliseconds.

CONTACT CAPACITY					
TYPE	30 Vdc	110 Vdc	120 Vac 400 Hz	120 Vac 60 Hz	240 Vac 60 Hz
Inductive	2 A	.75 A	2 A	3 A	1.5 A
Resistive	10 A	1 A	10 A	10 A	5 A

Inductive and capacitive loads should not have inrush currents that exceed 5 times normal operating load.

Figure 1

TOOLING ASSISTANCE CENTER 1-800-722-1111
PRODUCT INFORMATION 1-800-522-6752

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4. ADJUSTMENT PROCEDURES

4.1. Hermetically Sealed Models (Figure 2)

Remove the protecting cap nut from the top of the unit and, with a screwdriver, turning the exposed adjusting screw CLOCKWISE to increase the time and COUNTERCLOCKWISE to decrease the time. Adjustment should be gradual. The adjusting screw slot is marked with an arrowhead pointer which should be lined up with timing marks as follows:

1. The 0° mark at the front of the unit indicates absolute minimum time. The linear timing range begins at a point approximately 15° CLOCKWISE from this mark.
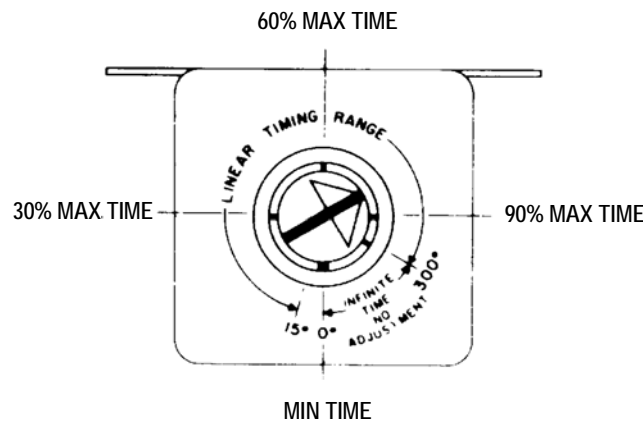

Figure 2

2. Marks at 90°, 180°, and 270° indicate approximately 30%, 60%, and 90% of the maximum time available. Maximum time will be obtained with the pointer at the 300° mark.

3. Models with timing ranges B, C, F, G, H, and J will exhibit an infinite time delay when the point is set between the 300° and 0° marks. Models with timing ranges A, D, E, K, and L will provide instantaneous operation (no delay) when the pointer is set between the 300° and 0° marks.

4.2. Unsealed Models

The adjustment is made by removing the cover plate (secured by four holding screws) and turning the adjusting key CLOCKWISE to increase time and COUNTERCLOCKWISE to decrease the time.

4.3. Unsealed Models with External Knob Adjustment

An indicating plate with letters "O" through "E" is the guide to adjustment with zero time at "O" and maximum time at "E".

5. REVISION SUMMARY

Since the previous version of this document, the following changes were made:

- Removed graphic from Figure 1.
- Changed company name and logo.