



## Normal Inverse IDMT Form 1.3/10 Relays Type 2TJM70

Burden	3VA at current setting
Time multiplier	0.1 to 1.0, continuously adjustable with 0.05 calibration markings
Pick-up	Not greater than 130% of setting
Reset	Not less than 90% of setting Typical reset time 6s (TM=1.0 and current switched to zero)
Overshoot	Less than 80ms
Indication	Hand reset flag
Contacts	2 normally open self reset
Contact rating	Make and carry continuously 5A, or 20A for 0.5s a.c. or d.c. with L/R = 50ms and 300V maximum

**Technical information - Highset element**

Burden	1 – 2VA over setting range
Operating time	20ms at 2x setting – 12ms at 5x setting
Contacts	2 normally open self reset
Contact rating	10A continuously or 30A for 3s

**Setting ranges**

Rating 1A	Rating 5A
0.4 – 1.6A	2 – 8A
2 – 8A	10 – 40A
4 – 16A	20 – 80A
8 – 32A	40 – 160A
10 – 40A	50 – 200A

**Indication** Hand reset flag

**Technical Information – Directional element**

**Rating Vn** Overcurrent, 110V nominal  
Earth fault, 63.5V or 110V nominal

Earth fault current and voltage coils need to be residually connected. For voltage this will require a five limb voltage transformer with an open delta tertiary winding, alternatively 3 single phase interposing transformers may prove suitable.

**Burden** Current 0.5VA, voltage 12VA at rating

**Settings** (Expressed as a percentage of IDMT nominal current)  
Overcurrent 15% at the maximum torque angle of 45° lead. Earth fault 7<sup>1</sup>/<sub>2</sub>% at the maximum torque angle of 12<sup>1</sup>/<sub>2</sub>° lag

**Operating time** 100ms nominal

**Accuracy (IDMT)**

**Reference Conditions**

Time multiplier,	1.0
Reference tap,	M1 = 2
Reference multiplier,	10x setting

**Accuracy** Timing characteristic

Complies with the requirements of IEC 255-4 and BS142. The reference limiting error is the assigned / declared error of 7.5% within the effective range 2x to 20x setting.

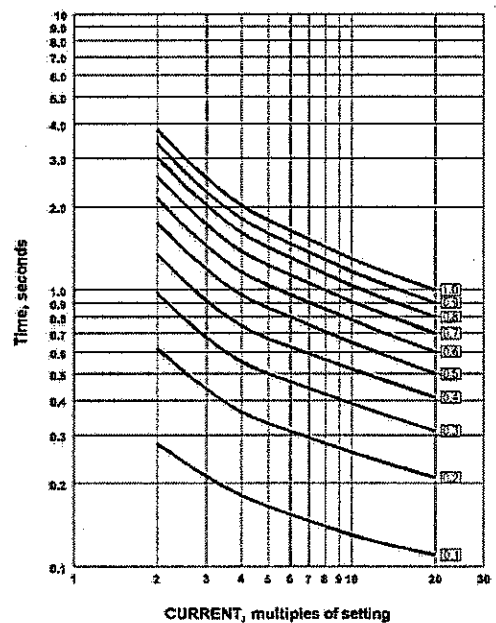
**Limits of influencing quantities and factors**  
The limits shown in BS142 Section 2.2 (1990) table 3 apply, additionally frequency can also be 56Hz to 62Hz and ambient temperature has an increased range of -25°C to +55°C.

**Cases**

Single pole - size 6, or Vedette size 2/3V  
Three pole - size 16 or Vedette size 2V in vertical or horizontal arrangements.

**Ordering information**

Model reference. Case style & size. Rating. Setting range or ranges.



*Fig.1 Time / Current Characteristic*

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