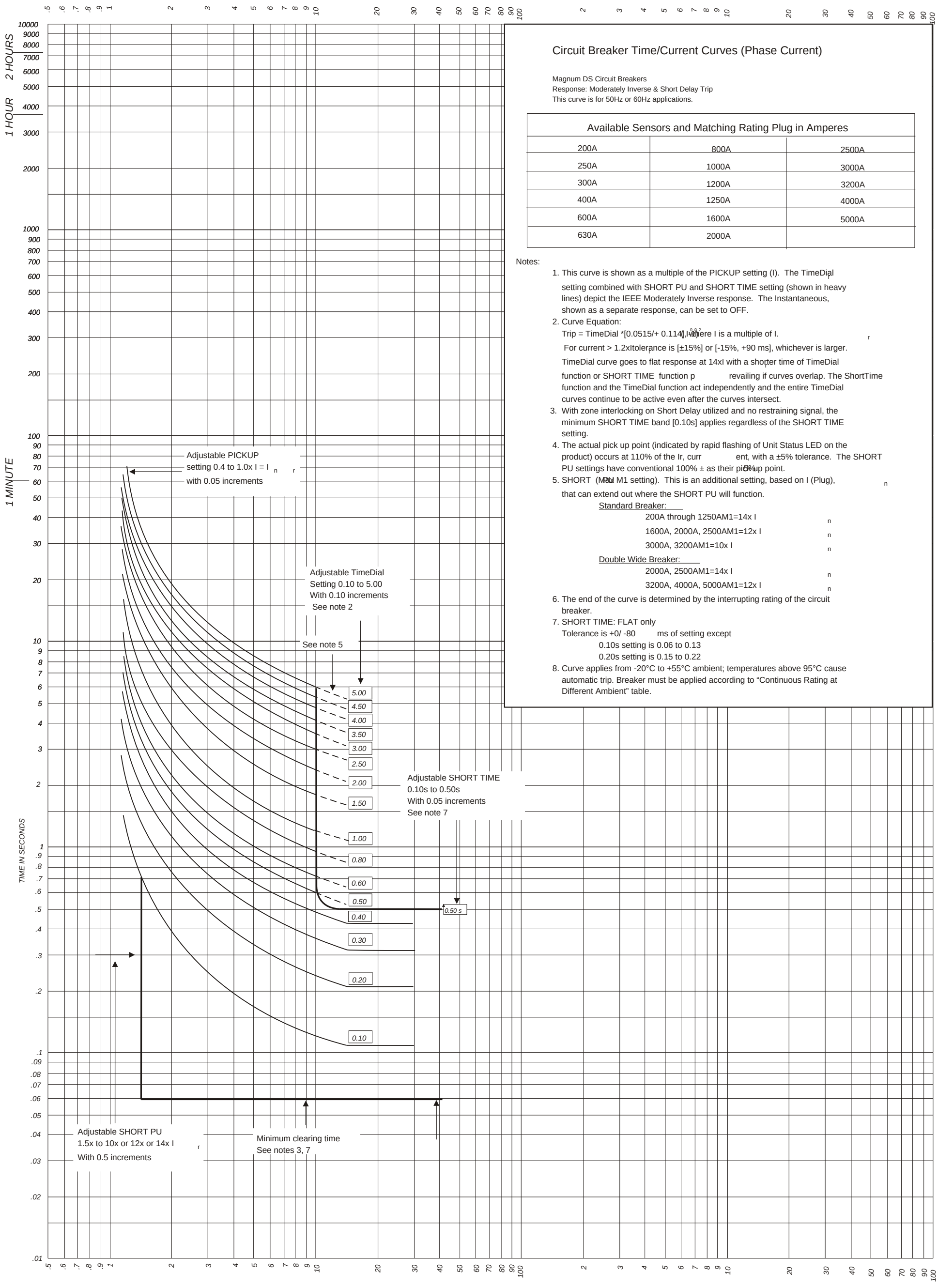
Cutler-Hammer

Digitrip 1150 - IEEE Curves
Moderately Inverse



Circuit Breaker Time/Current Curves (Phase Current)

Magnum DS Circuit Breakers
Response: Moderately Inverse & Short Delay Trip
This curve is for 50Hz or 60Hz applications.

Available Sensors and Matching Rating Plug in Amperes		
200A	800A	2500A
250A	1000A	3000A
300A	1200A	3200A
400A	1250A	4000A
600A	1600A	5000A
630A	2000A	

Notes:

1. This curve is shown as a multiple of the PICKUP setting (I). The TimeDial setting combined with SHORT PU and SHORT TIME setting (shown in heavy lines) depict the IEEE Moderately Inverse response. The Instantaneous, shown as a separate response, can be set to OFF.
2. Curve Equation:
   Trip = TimeDial *[0.0515/+ 0.114(I/I)^0.02]. Where I is a multiple of I.
   For current > 1.2xI tolerance is [±15%] or [-15%, +90 ms], whichever is larger.
   TimeDial curve goes to flat response at 14xI with a shorter time of TimeDial function or SHORT TIME function p revailing if curves overlap. The ShortTime function and the TimeDial function act independently and the entire TimeDial curves continue to be active even after the curves intersect.
3. With zone interlocking on Short Delay utilized and no restraining signal, the minimum SHORT TIME band [0.10s] applies regardless of the SHORT TIME setting.
4. The actual pick up point (indicated by rapid flashing of Unit Status LED on the product) occurs at 110% of the Ir, curr ent, with a ±5% tolerance. The SHORT PU settings have conventional 100% ± as their pick up point.
5. SHORT (Mag PU M1 setting). This is an additional setting, based on I (Plug), that can extend out where the SHORT PU will function.
   Standard Breaker:
   200A through 1250AM1=14x I
   1600A, 2000A, 2500AM1=12x I
   3000A, 3200AM1=10x I
   Double Wide Breaker:
   2000A, 2500AM1=14x I
   3200A, 4000A, 5000AM1=12x I
6. The end of the curve is determined by the interrupting rating of the circuit breaker.
7. SHORT TIME: FLAT only
   Tolerance is +0/ -80 ms of setting except
   0.10s setting is 0.06 to 0.13
   0.20s setting is 0.15 to 0.22
8. Curve applies from -20°C to +55°C ambient; temperatures above 95°C cause automatic trip. Breaker must be applied according to "Continuous Rating at Different Ambient" table.

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