

AF range contactors / CP-C, -S, -E, -T range power supply units

Primary switch mode power supply units for supplying contactors with electronic coil

The following table shows which of our power supply units can safely switch-on and operate each size of ABB contactor with electronic coil.

Assignment of the devices under the following conditions:

The power supply units have been loaded with contactors only. There was no additional load.
 The contactors have been actuated in cold state or after thermally built-up hold power.
 The single-phase power supply units have been tested on the primary side with 115 and 230 V AC.
 The three-phase power supply units have been tested on the primary side with 400 V AC.
 The secondary voltage was in both cases 24 V DC.

Co-ordination parameters

Average pick-up current of the contactors ≈ Max. load operating point of the power supply units
 Ambient temperature range: 0...70 °C
 Switching frequency: 120/h
 Mounting position of the contactors: horizontal
 Wire length: 2 x 2.5 m
 Cross section: 1.5 mm²

Result / Co-ordination table

Type of contactor	Operating range of the coil (V)	Average pick-up power of the coil (W)	Average pick-up current (A) at 24V DC	CP-C 24/5.0	CP-S 24/5.0	CP-E 24/5.0	CP-T 24/5.0	CP-C 24/10.0	CP-S 24/10.0	CP-E 24/10.0	CP-T 24/10.0	CP-C 24/20.0	CP-S 24/20.0	CP-E 24/20.0	CP-T 24/20.0	CP-T 24/40.0
				Max. load operating point of the power supply units (A)												
				7,3	7,3	6,4	6,0	12,3	12,3	13,5	13,0	22,5	22,5	25,0	25,0	45,0
AF-45 AF-50 AF-63 AF-75	20...60	190	7,9	x(*1)	x(*1)	n.a	n.a	x	x	x	x	x	x	x	x	x
AF-95 AF-110		400	16,7	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	x	x	x	x	x
AF-145 AF-185		500	20,8	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	x	x	x	x	x
AF-210 AF-300		520	21,7	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	x	x	x	x	x
AF-400 AF-460	24...60	990	41,2	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	x
AF-580 AF-750		950	39,6	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	x
Note (*1)	The pick-up current of the contactors exceeds the max. load operating point of the power supply units CP-C 24/5.0 and CP-S 24/5.0 slightly (8%). Due to the sufficient acceleration of the mechanical parts inside the contactor during the pick-up phase, the co-ordination of the units is nevertheless guaranteed.															

Example of supply of the contactor AF-750

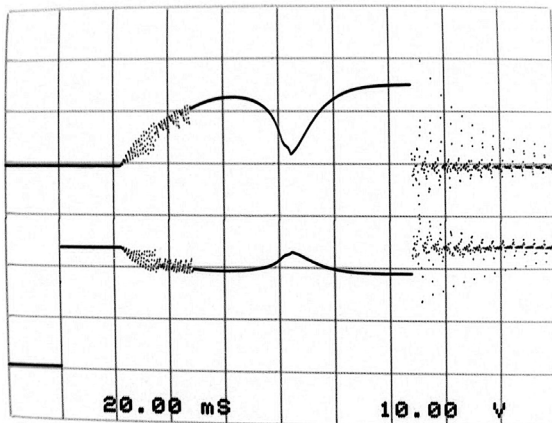


Fig. 1: Functioning supply with power supply unit CP-T 24/40.0

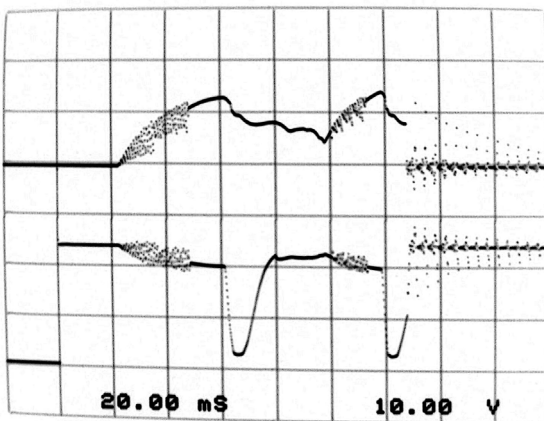


Fig. 2: Critical supply with power supply unit CP-T 24/20.0

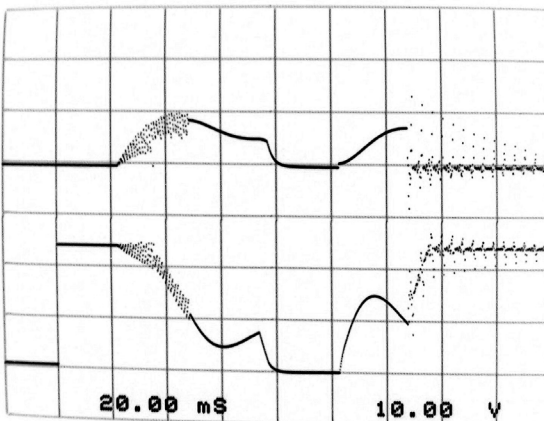


Fig. 3: Non functioning supply with power supply unit CP-T 24/10.0