

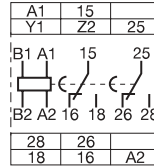
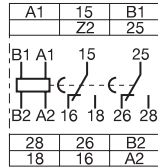
Star-delta timer YDAV timetron® with relay output



- Twice delayed on operate
- 10 time ranges from 0.05 s ... 300 h for a variable time covered by one unit
- Variable time range (start-up time) and fixed changeover time of 50 ms
- Primarily for star-delta changeover
- 2 SPDT contacts
- 3 LEDs to display operational status
- Supply voltage 380...440 V AC

Operation

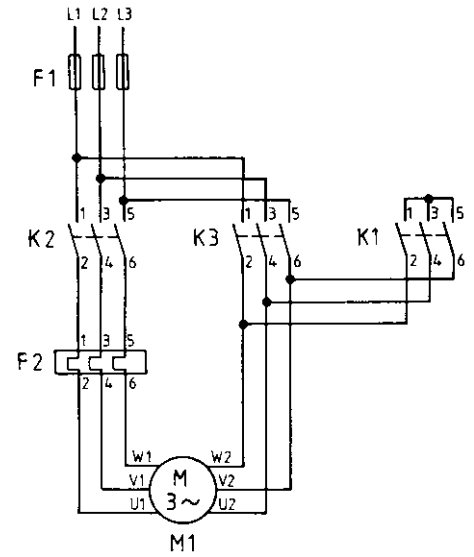
The YDAV is designed primarily for starting-up squirrel cage motors by a star-delta starter. It has two separate timing circuits, a variable one for starting up and a fixed one of 50 ms for the changeover from star contactor to delta contactor. If supply voltage is applied to the terminals **B1** and **A2**, **B2** and **A2** or **A1** and **A2**, the first output relay will close after the set delay time. The second output relay will close after another 50 ms. The green LED flashes while timing. After the set time has elapsed, the green LED turns steady.



Version 380...440 V AC

■ Approvals:

Diagram of powering circuit



10 time ranges in one unit

1	0.05 - 1 s*	6	15.0 - 300 s ¹
2	0.15 - 3 s*	7	1.50 - 30 min.
3	0.50 - 10 s ¹	8	15.0 - 300 min.
4	1.50 - 30 s ¹	9	1.50 - 30 h
5	5.00 - 100 s ¹	10	15.0 - 300 h

* In this range no flashing of the green LED while timing.
¹ Ranges 3, 4, 5 and 6 are the most common for start-up times.

Supply voltage

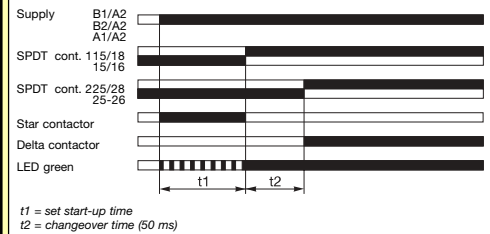
Supply voltage	P/ N:
24 V, 42...48 V AC/DC / 110...240 V AC	2 430 203 02
380...440 V AC	2 430 201 23

Accessories

Accessories	P/ N:
Sealable transparent cover	3 430 005 01
Adapter for screw mounting	3 440 029 01

1 Function

= Star-delta changeover



Technical Data

Input circuit

Supply voltage - power consumption	B1-A2	24 V AC/DC	-	approx. 0.5 VA / W
	B2-A2	42...48 V AC/DC	-	approx. 2 VA/ W
	A1-A2	110...240 V AC	-	approx. 2.5...12 VA
	A1-A2	380...440 V AC	-	approx. 1.2 VA

Tolerance of the supply voltage	-15 % ... +10 %
Supply voltage frequency	50...60 Hz

Timing circuit

Time range	0.05 s ... 300 h
Recovery time	< 50 ms
Repetitive accuracy (constant parameters)	< 0.2 %
Timing error within the tolerance of the supply voltage	< 0.008 % / % ΔV
Timing error within temperature range	< 0.07 % / °C

Display of operational status

Supply voltage/ timing	LED green steady / flashing while timing
1st output relay energized	LED red
2nd output relay energized	LED red

Output circuit 15-16/18, 25-26/28

Rated voltage	VDE 0110, IEC 947-1	250 V
Rated switching voltage		250 V AC
Rated switching current	AC 12 (resistive)	4 A (at 230 V)
Rated switching current	AC 15 (inductive)	3 A (at 230 V)
Rated switching current	DC 12 (resistive)	4 A (at 24 V)
Rated switching current	DC 13 (inductive)	2 A (at 24 V)
Maximum mechanical life		30 x 10 ⁶ operations
Maximum electrical life (to AC 12 / 230 V/4 A)		1 x 10 ⁶ operations
Short-circuit proof, max. fuse rating		10 A / fast, operating class gL

General data

Rated impulse withstand voltage V _{imp}	4 kV
Ambient temperature	-20°C ... +60°C
Storage temperature	-40°C ... +85°C
Installation position	any
Mounting of DIN rail (EN 50022)	Snap-on mounting/Screw mounting by adapter
Wire size stranded with wire end ferrule	2 x 14 AWG (2 x 2.5 mm ²)
Weight	approx. 5.3 oz (150 g)
Dimensions (W x H x D)	22.5 x 78 x 100 mm
Accessories	See Accessories page at end of section

Diagram of control circuit

