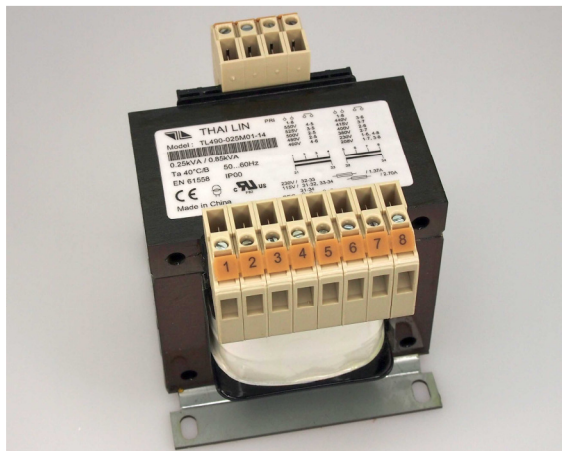




# THAI LIN RADIO

since 1975

Трансформатор управления  
двигателям MOTOR  
STARTER CONTROL  
TRANSFORMERS



## TL490 Series



- Power – 0.25kVA ~ 2.5kVA
- Frequency – 50/60 Hz
- High short-time rating power
- Ambient temperature (ta) – 40°C ~ 50°C
- Insulation class – class F (155°C)
- Dielectric strength – 4000Vrms
- Degree of protection – IP00
- Satisfying to EN61558-2-2 "Special requirements for control transformer"

Terminal:

- 24A:

screw type connection:

solid- 0.5 – 6 mm<sup>2</sup>

stranded- 0.5 – 4 mm<sup>2</sup>

Flat-type connection: 6.3x0.8

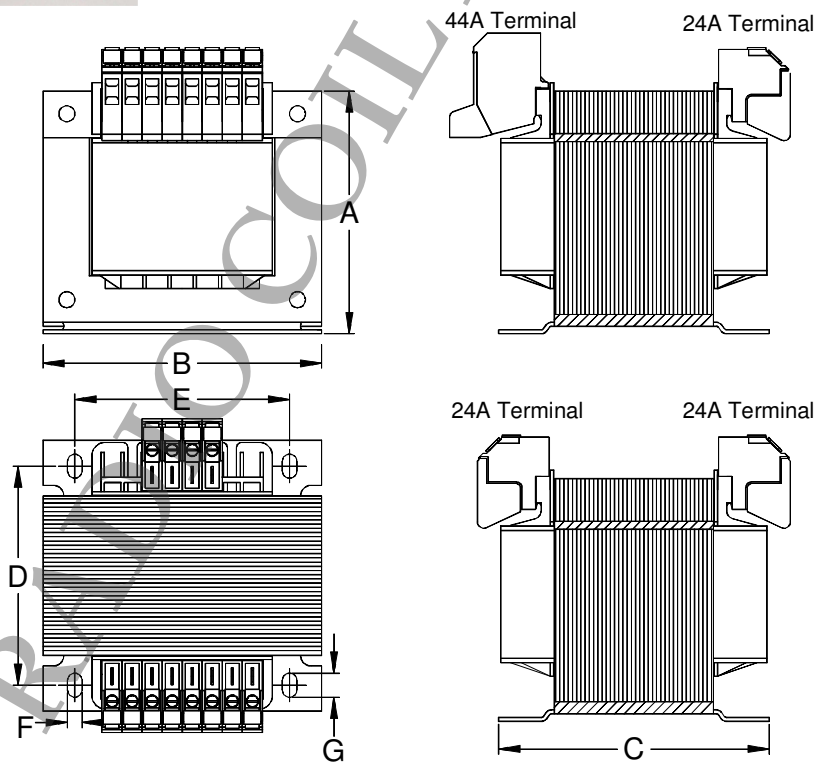
- 44A:

screw type connection:

solid- 0.5 – 16 mm<sup>2</sup>

stranded- 0.5 – 10 mm<sup>2</sup>

- All terminal block are labeling with numerical label



Product Series	Rated Power kVA	Dimension (mm)							Max. no. of terminal per side		Weight (kg)
		A	B	C	D	E	F	G	24A	44A	
TL490-025	0.25	87	96	101	86.0	84.0	5.8	10.0	8	4	3.7
TL490-031	0.315	96	105	103	85.6	80.2	5.8	12.0	8	4	4.3
TL490-040	0.4	105	117	102	85.0	90.0	5.8	12.0	10	6	5.1
TL490-050	0.5	105	117	121	104.0	90.0	5.8	12.0	10	6	6.6
TL490-063	0.63	137	152	110	90.0	122.0	7.0	15.0	14	8	8.0
TL490-080	0.8	137	152	126	106.0	122.0	7.0	15.0	14	8	10.2
TL490-100	1.0	137	152	154	134.0	122.0	7.0	15.0	14	8	13.4
TL490-160	1.6	149	171	150	126.0	145.0	7.0	15.0	16	10	19
TL490-200	2.0	149	171	170	146.0	145.0	7.0	15.0	16	10	23
TL490-250	2.5	165	190	188	164.0	160.0	9.0	16.0	16	10	27
Tolerance	(1)	typ	typ.	typ.	typ	typ	±0.5	±1.0	--	--	approx.



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MOTOR STARTER  
CONTROL  
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### Part Number Designation:

TL490 – XXX R YY – ZZ

Where XXX = Output Power (0.25kVA ~ 2.5kVA)

R = Input Style (“S” = Single, “D” = Double, “M” = multiple)

YY = Input Voltage Range

ZZ = Output Voltage Range

Example: TL490-031S01-02 = 0.315kVA / Single / Input 100V / Output 24V

Part no.	RatedPower		Short-Time Rating Power (PF=0.5)	Rated input Voltage		Output Voltage (ZZ) V							
	(XXX)	kVA		(RYY)	V	(02)	(03)	(06)	(07)	(11)	(14)		
			kVA			24	42	110	115	230	2x 115		
TL490-XXXRYY-ZZ	(025)	0.25	0.85	(S01)	100V	•	•	•	•	•	•		
	(031)	0.315	1.12			•	•	•	•	•	•		
	(040)	0.4	1.44			(S02)	110V	•	•	•	•	•	•
	(050)	0.5	2			(S03)	115V	•	•	•	•	•	•
	(063)	0.63	2.35			(S04)	120V	•	•	•	•	•	•
	(080)	0.8	3.4			(S05)	200V	•	•	•	•	•	•
	(100)	1	5			(S06)	220V	•	•	•	•	•	•
	(160)	1.6	7.3			(S07)	230V			•	•	•	•
	(200)	2	9.7			(S08)	240V			•	•	•	•
	(250)	2.5	13.3							•	•	•	•

Part no.	RatedPower		Short-Time Rating Power (PF=0.5)	Rated input Voltage		Output Voltage (ZZ) V							
	(XXX)	kVA		(RYY)	V	(02)	(03)	(06)	(07)	(11)	(14)		
			kVA			24	42	110	115	230	2x 115		
TL490-XXXRYY-ZZ	(025)	0.25	0.85	(S09)	277V	•	•	•	•	•	•		
	(031)	0.315	1.12			•	•	•	•	•	•		
	(040)	0.4	1.44			(S10)	300V	•	•	•	•	•	•
	(050)	0.5	2			(S11)	380V	•	•	•	•	•	•
	(063)	0.63	2.35			(S12)	400V	•	•	•	•	•	•
	(080)	0.8	3.4			(S13)	415V	•	•	•	•	•	•
	(100)	1	5			(S14)	440V	•	•	•	•	•	•
	(160)	1.6	7.3			(S15)	500V			•	•	•	•
	(200)	2	9.7			(S16)	550V			•	•	•	•
	(250)	2.5	13.3			(S17)	600V			•	•	•	•



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Part no.	Rated Power		Short-Time Rating Power (PF=0.5)	Rated input Voltage		Output Voltage (ZZ) V					
	(XXX)	kVA		(RYY)	V	(02)	(03)	(06)	(07)	(11)	(14)
			kVA			24	42	110	115	230	2x 115
TL490-XXXXRYY-ZZ	(025)	0.25	0.85	(D01)	230-400V	•	•	•	•	•	•
	(031)	0.315	1.12			•	•	•	•	•	•
	(040)	0.4	1.44			•	•	•	•	•	•
	(050)	0.5	2			•	•	•	•	•	•
	(063)	0.63	2.35			•	•	•	•	•	•
	(080)	0.8	3.4			•	•	•	•	•	•
	(100)	1	5			•	•	•	•	•	•
	(160)	1.6	7.3					•	•	•	•
	(200)	2	9.7					•	•	•	•
	(250)	2.5	13.3					•	•	•	•

Part no.	Rated Power		Short-Time Rating Power (PF=0.5)	Rated input Voltage		Output Voltage (ZZ) V					
	(XXX)	kVA		(RYY)	V	(02)	(03)	(06)	(07)	(11)	(14)
			kVA			24	42	110	115	230	2x 115
TL490-XXXXRYY-ZZ	(025)	0.25	0.85	(M01)	550-525-500- 480-460-440- 415-400-380- 230-208V	•	•	•	•	•	•
	(031)	0.315	1.12			•	•	•	•	•	•
	(040)	0.4	1.44			•	•	•	•	•	•
	(050)	0.5	2			•	•	•	•	•	•
	(063)	0.63	2.35			•	•	•	•	•	•
	(080)	0.8	3.4	(M02)	600-575-550- 525-500-480- 460-440-415- 400-240-230V	•	•	•	•	•	•
	(100)	1	5			•	•	•	•	•	•
	(160)	1.6	7.3					•	•	•	•
	(200)	2	9.7					•	•	•	•
	(250)	2.5	13.3					•	•	•	•

Note: (1) The rated power is only applicable to transformers with separate windings. (not to autotransformer)

(2) Short-time rating power is the most important selection criterion for control transformers. This is required for switching on electromagnetic loads, the output voltage with this load should not drop more than 5% in relation to the rated voltage in order to ensure safe switching.



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MOTOR STARTER  
CONTROL  
TRANSFORMERS

**Available Schematics for single style input (S01~S17):**

	Terminal	Shorted		Terminal	Shorted
Rated input Voltage	1-3	--	Rated input Voltage	1-3	--
Rated input Voltage -5%	1-2	--	Rated input Voltage -5%	1-2	--
Rated input Voltage +5%	1-4	--	Rated input Voltage +5%	1-4	--
Rated output Voltage	31-32	--	Rated output Voltage (Series)	31-34	32-33
			Rated output Voltage (Parallel)	31-34	31-32, 33-34

**Available Schematics for double style input (D01):**

	Terminal	Shorted		Terminal	Shorted
Rated input Voltage 230V	2-4	--	Rated input Voltage 230V	2-4	--
Rated input Voltage 230 -15V	3-4	--	Rated input Voltage 230 - 15V	3-4	--
Rated input Voltage 230 +15V	1-4	--	Rated input Voltage 230 + 15V	1-4	--
Rated input Voltage 400V	2-5	--	Rated input Voltage 400V	2-5	--
Rated input Voltage 400 -15V	3-5	--	Rated input Voltage 400 - 15V	3-5	--
Rated input Voltage 400 +15V	1-5	--	Rated input Voltage 400 + 15V	1-5	--
Rated output Voltage	31-32	--	Rated output Voltage (Series)	31-34	32-33
			Rated output Voltage (Parallel)	31-34	31-32, 33-34



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## MOTOR STARTER CONTROL TRANSFORMERS

### Available Schematics for multiple style input (M01):

	Terminal	Shorted		Terminal	Shorted
Rated input Voltage: 550V	1-8	4-5	Rated input Voltage: 550V	1-8	4-5
Rated input Voltage: 525V	1-8	3-5	Rated input Voltage: 525V	1-8	3-5
Rated input Voltage: 500V	1-8	2-5	Rated input Voltage: 500V	1-8	2-5
Rated input Voltage: 480V	1-8	2-5	Rated input Voltage: 480V	1-8	2-5
Rated input Voltage: 460V	1-8	4-6	Rated input Voltage: 460V	1-8	4-6
Rated input Voltage: 440V	1-8	3-6	Rated input Voltage: 440V	1-8	3-6
Rated input Voltage: 415V	1-8	3-7	Rated input Voltage: 415V	1-8	3-7
Rated input Voltage: 400V	1-8	2-6	Rated input Voltage: 400V	1-8	2-6
Rated input Voltage: 380V	1-8	2-7	Rated input Voltage: 380V	1-8	2-7
Rated input Voltage: 230V	1-8	1-6, 4-8	Rated input Voltage: 230V	1-8	1-6, 4-8
Rated input Voltage: 208V	1-8	1-7, 3-8	Rated input Voltage: 208V	1-8	1-7, 3-8
Rated output Voltage	31-32	--	Rated output Voltage (Series)	31-34	32-33
			Rated output Voltage (Parallel)	31-34	31-32, 33-34

### Available Schematics for multiple style input (M02):

	Terminal	Shorted		Terminal	Shorted
Rated input Voltage: 600V	1-8	4-5	Rated input Voltage: 600V	1-8	4-5
Rated input Voltage: 575V	1-8	4-6	Rated input Voltage: 575V	1-8	4-6
Rated input Voltage: 550V	1-8	4-7	Rated input Voltage: 550V	1-8	4-7
Rated input Voltage: 525V	1-8	3-5	Rated input Voltage: 525V	1-8	3-5
Rated input Voltage: 500V	1-8	3-6	Rated input Voltage: 500V	1-8	3-6
Rated input Voltage: 480V	1-8	3-7	Rated input Voltage: 480V	1-8	3-7
Rated input Voltage: 460V	1-8	3-7	Rated input Voltage: 460V	1-8	3-7
Rated input Voltage: 440V	1-8	2-5	Rated input Voltage: 440V	1-8	2-5
Rated input Voltage: 415V	1-8	2-6	Rated input Voltage: 415V	1-8	2-6
Rated input Voltage: 400V	1-8	2-7	Rated input Voltage: 400V	1-8	2-7
Rated input Voltage: 240V	1-8	1-7, 3-8	Rated input Voltage: 240V	1-8	1-7, 3-8
Rated input Voltage: 230V	1-8	1-7, 3-8	Rated input Voltage: 230V	1-8	1-7, 3-8
Rated output Voltage	31-32	--	Rated output Voltage (Series)	31-34	32-33
			Rated output Voltage (Parallel)	31-34	31-32, 33-34