

PRODUCT SPECIFICATION

TSL-RS-775

PMDC Motor Series

12 V and 24 V options

5000 and 8000 r/min variants

85T, 100T and 125T configurations

12 V

24 V

5000 r/min

8000 r/min

Clean design. Reliable performance. Custom configurations available.



RS-775 Permanent Magnet DC Motor

Performance Specifications

Nominal values at rated voltage

Motor Model	TSL-RS-775-1280-100T	TSL-RS-775-1280-125T	TSL-RS-775-2480-100T	TSL-RS-775-2480-125T	TSL-RS-775-1250-85T	TSL-RS-775-2450-85T
Operating Voltage Range	9.0-14.0V	9.0-14.0V	14.5-26.0V	14.5-26.0V	9.0-14.0V	14.5-26.0V
Rated Working Voltage	12V	12V	24V	24V	12V	24V
No-Load Speed (r/min)	8000	8000	8000	8000	5000	5000
No-Load Current (A)	0.535	0.739	0.395	0.241	0.478	0.252
Max Efficiency Speed (r/min)	7038	7005	6712	6834	4032	4603
Max Efficiency Current (A)	3.949	4.42	2.716	1.824	2.533	1.697
Max Efficiency Torque (g.cm)	477.88	491.98	655.85	473.43	433.03	592.33
Max Efficiency Output Power (W)	35.42	36.79	47.59	32.97	20	29.53
Max Power Speed (r/min)	4145	4323	4010	4006	2573	2763
Max Power Current (A)	14.31	12.85	9.14	6.78	6.47	5.59
Max Power Torque (g.cm)	2002.5	1717.3	2582.3	2028.2	1363.7	2290.7
Max Power Output (W)	84.257	74.939	107.32	79.956	37.441	65.581
Stall Torque (g.cm)	4005.1	3434.6	5164.6	4056.5	2727.4	4581.3
Stall Current (A)	29.146	26.437	18.669	13.804	13.419	11.429

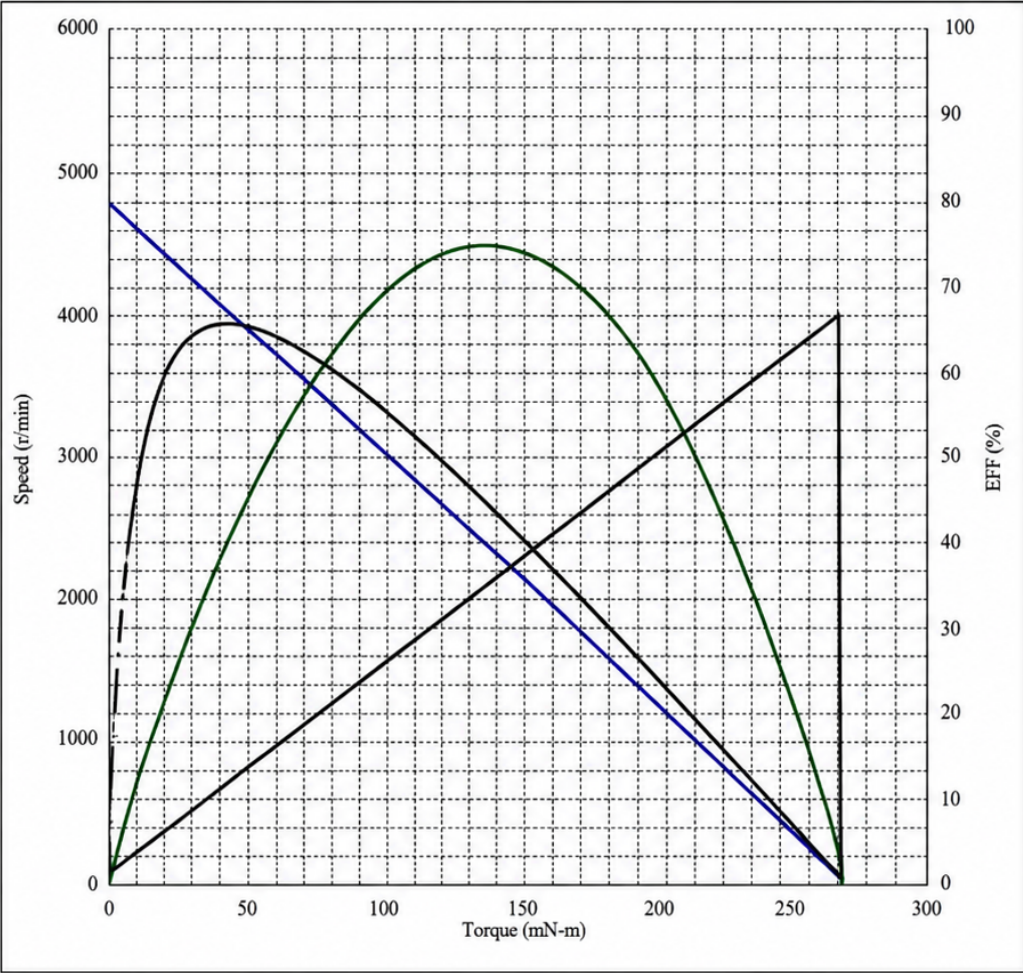
Specifications are for reference only. Products can be customized according to customer requirements.

Performance Curve - 12 V / 5000 r/min

Reference model: TSL-RS-775-1250-85T

Model: RS-775-12500

Date : 05/10/22
Full scale : 100 % Eff
50.0 Watts
2.00 Amp.



Performance (in an ambient temperature of 25-30 ° C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 12.0 Volts

Direction : CW

At No Load

Speed :	4793	r/min
Current :	0.478	AMPS

At stall (Extrapolated)

Torque :	272.74	mN-m
Current :	13.419	AMPS

At maximum efficiency

Efficiency:	65.8	%
Torque :	43.305	mN-m
Speed :	4032	r/min
Current :	2.533	AMPS
Output :	20.00	Watts

At maximum Power output

Output :	37.441	Watts
Torque :	136.372	mN-m
Speed :	2573	r/min
Current :	6.47	AMPS

Characteristics

Torque constant K_t :	21.075	mN-m/AMP
E.M.F. constant E_c :	21.075	mV/rad/sec
Dynamic resistance :	0.8942	Ohms
Motor regulation M_r :	17.57	r/min/mN-m

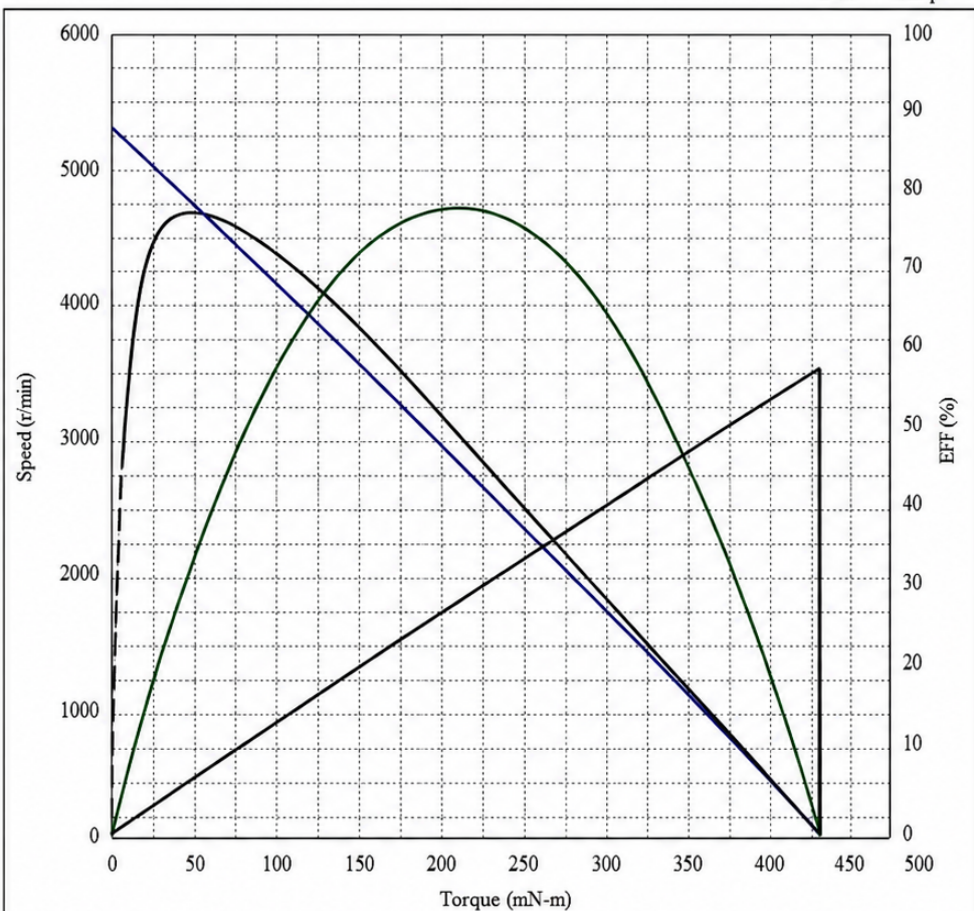
K_m 22.28694637

Performance Curve - 24 V / 5000 r/min

Reference model: TSL-RS-775-2450-85T

Model: RS-775-24500

Date : 05/10/22
 Full scale : 100 % Eff
100.0 Watts
2.00 Amp.



Performance (in an ambient temperature of 25-30 ° C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 24.0 Volts

Direction : CCW

At No Load

Speed :	5287	r/min
Current :	0.252	AMPS

At stall (Extrapolated)

Torque :	458.13	mN-m
Current :	11.429	AMPS

At maximum efficiency

Efficiency:	72.5	%
Torque :	59.233	mN-m
Speed :	4603	r/min
Current :	1.697	AMPS
Output :	29.53	Watts

At maximum Power output

Output :	65.581	Watts
Torque :	229.065	mN-m
Speed :	2763	r/min
Current :	5.59	AMPS

Characteristics

Torque constant K_t :	40.990	mN-m/AMP
E.M.F. constant E_c :	40.990	mV/rad/sec
Dynamic resistance:	2.1000	Ohms
Motor regulation M_r :	11.54	r/min/mN-m

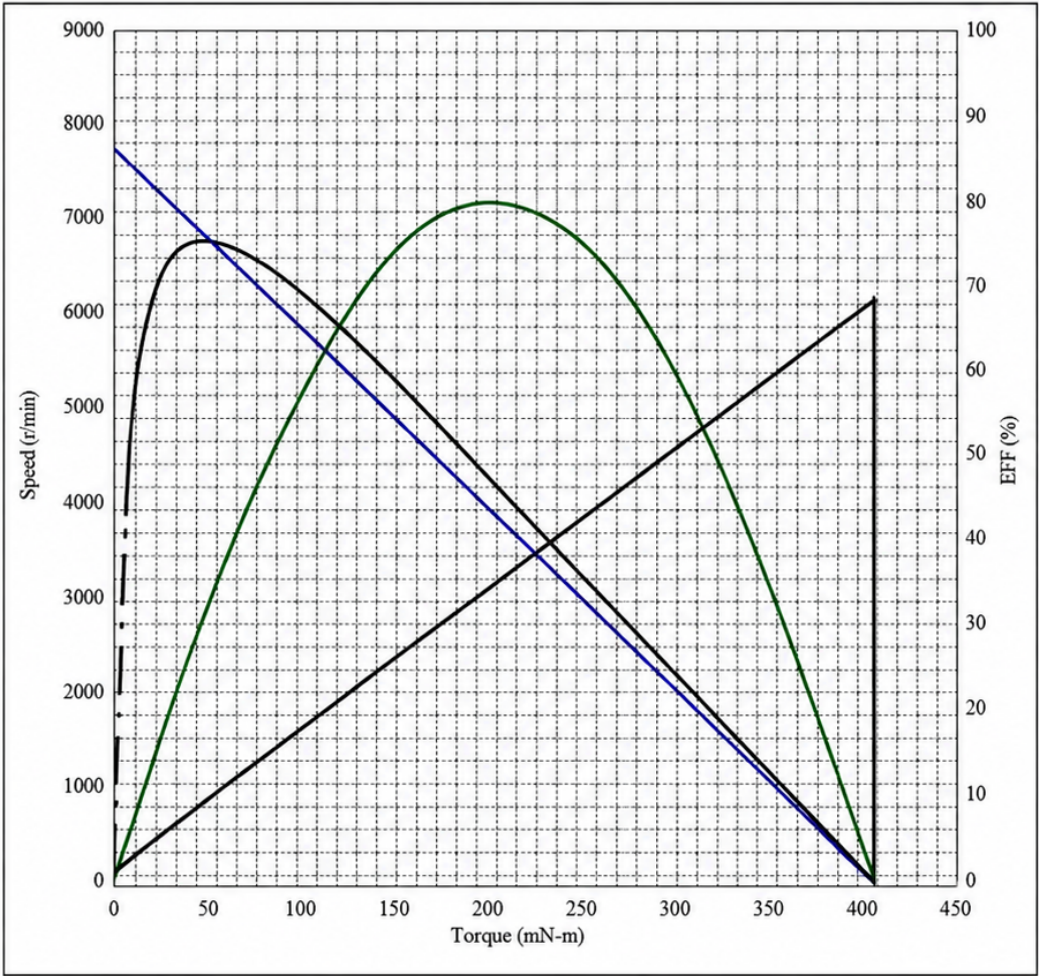
K_m	28.28391781
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Performance Curve - 24 V / 8000 r/min

Reference model: TSL-RS-775-2480-125T

Model: RS-775-24800

Date : 05/10/22
Full scale : ----- 100 % Eff
----- 100.0 Watts
----- 2.00 Amp.



Performance (in an ambient temperature of 25-30 ° C)

Motor tested rapidly to prevent significant temperature rise.

At a constant voltage of : 24.0 Volts

Direction : CCW

At No Load

Speed :	7737	r/min
Current :	0.241	AMPS

At stall (Extrapolated)

Torque :	405.65	mN-m
Current :	13.804	AMPS

At maximum efficiency

Efficiency:	75.3	%
Torque :	47.343	mN-m
Speed :	6834	r/min
Current :	1.824	AMPS
Output :	32.97	Watts

At maximum Power output

Output :	79.956	Watts
Torque :	202.823	mN-m
Speed :	4006	r/min
Current :	6.78	AMPS

Characteristics

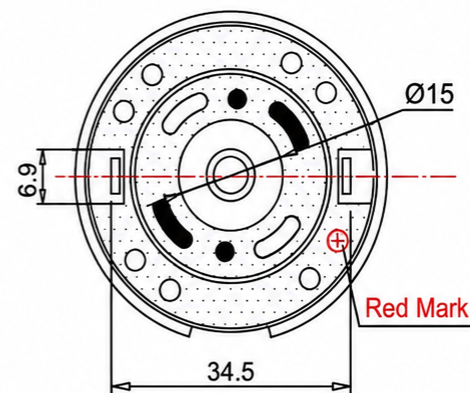
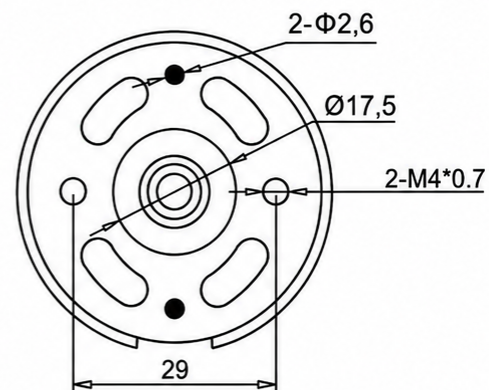
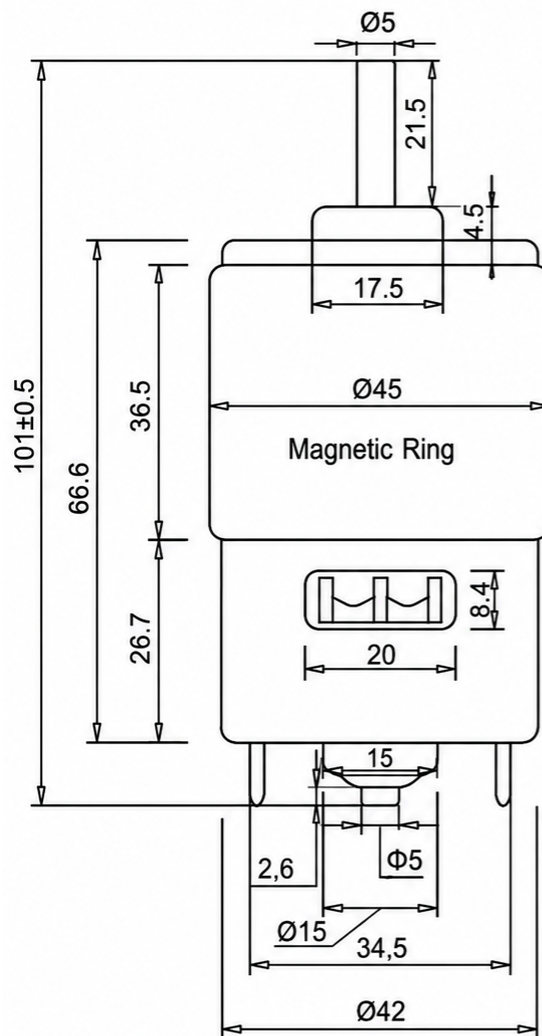
Torque constant K_t :	29.909	mN-m/AMP
E.M.F. constant E_c :	29.909	mV/rad/sec
Dynamic resistance:	1.7387	Ohms
Motor regulation M_r :	19.07	r/min/mN-m

K_m 22.68249513

Outline Dimensions - 100T Configuration

Applicable models: TSL-RS-775-1280-100T / TSL-RS-775-2480-100T

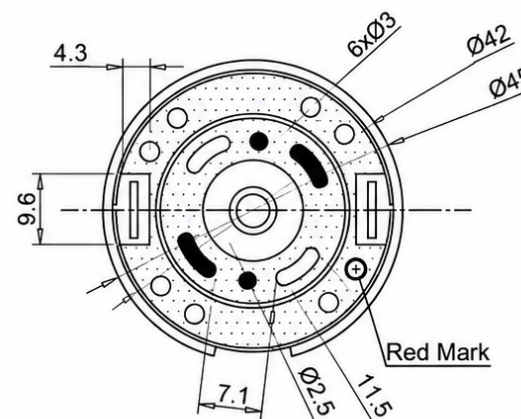
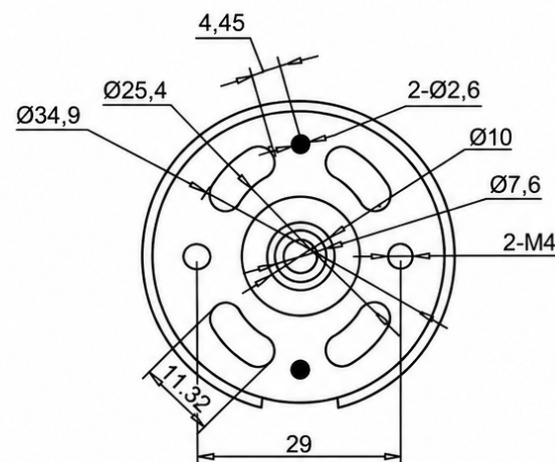
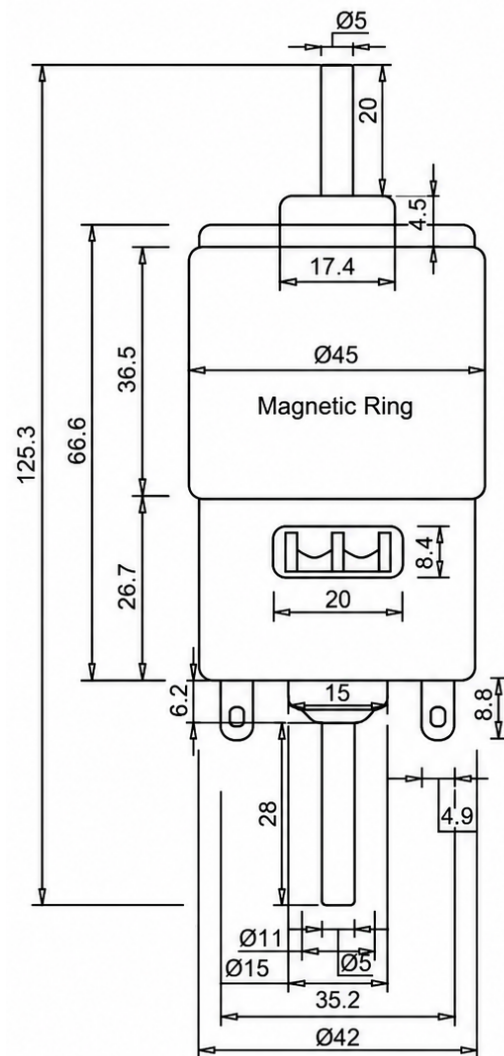
R-775 $\Phi 5$ 21.5MM with step 26MM



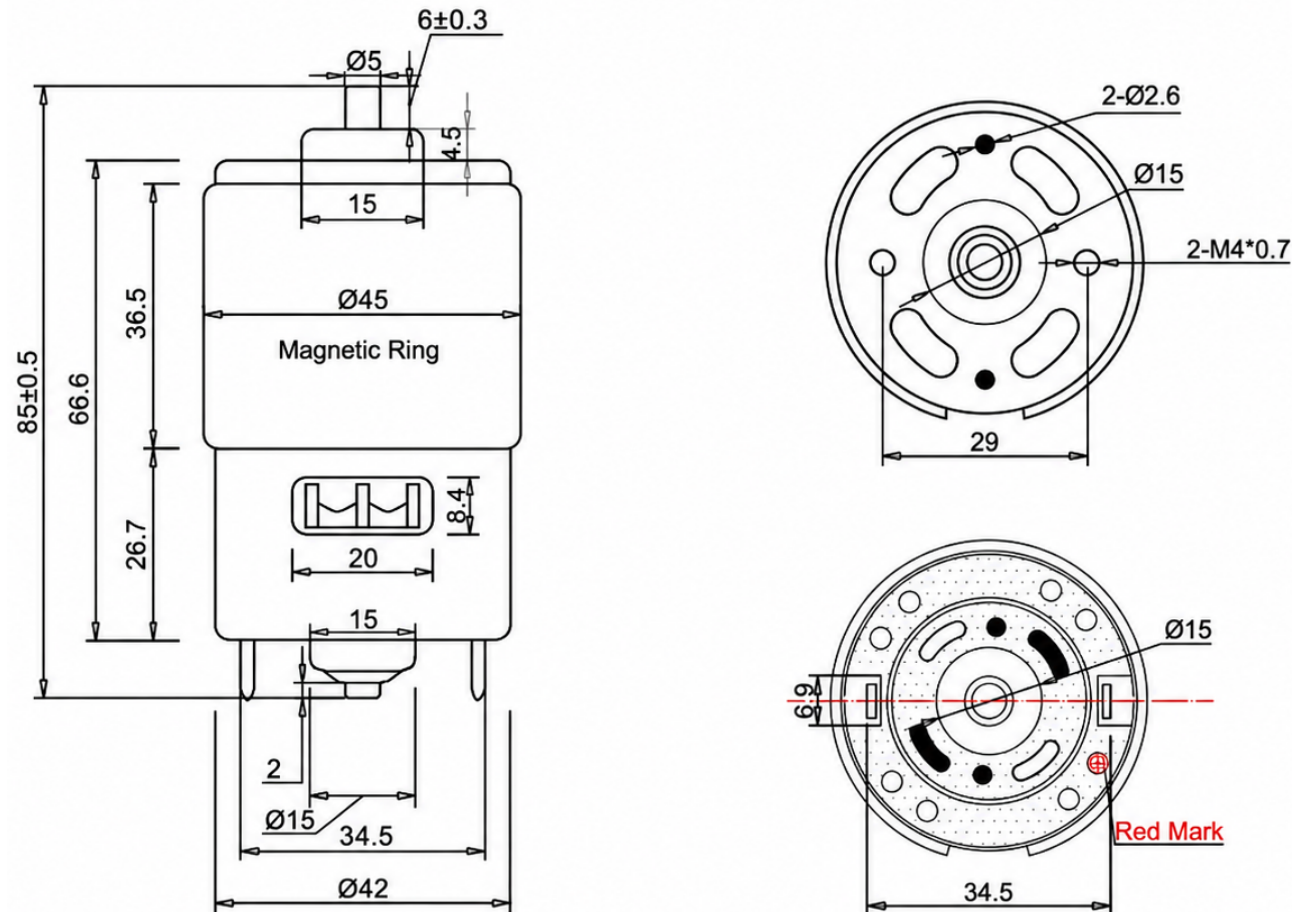
Outline Dimensions - 125T Configuration

Applicable models: TSL-RS-775-1280-125T / TSL-RS-775-2480-125T

R-775 PMDC $\Phi 5$ 125T



R-775 $\Phi 5$ 6MM with step 10.5MM

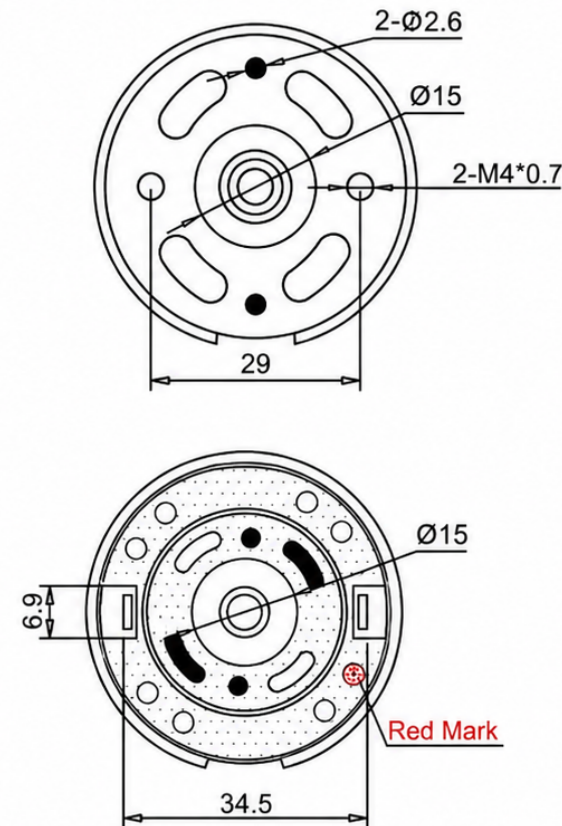
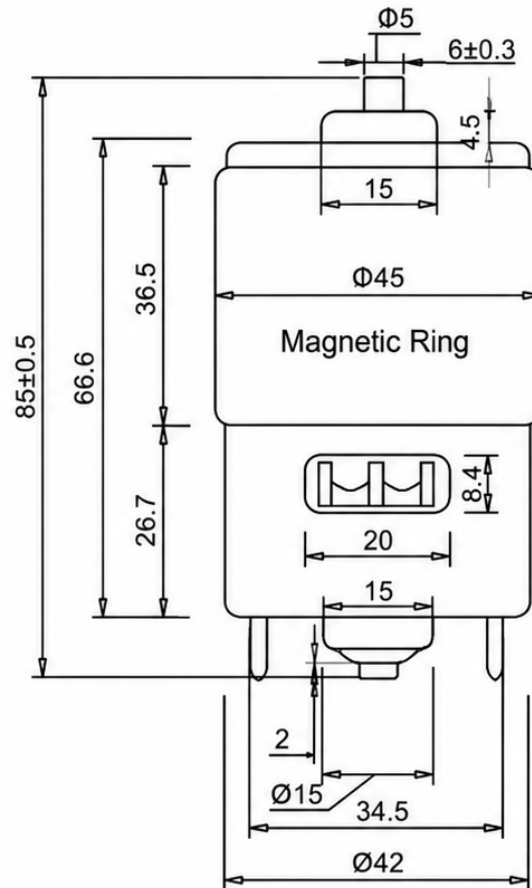


12V 5000RPM Single Shaft / CCW / Balanced Fan Blade,
Oil-Impregnated Bearing, 6MM with step 10.5MM

Outline Dimensions - 24 V / 5000 r/min / 85T

Applicable model: TSL-RS-775-2450-85T

R-775 $\Phi 5$ 6MM with step 10.5MM



24V 5000RPM Single Shaft / CW / Balanced Fan Blade, Ball Bearing,
6MM with step 10.5MM