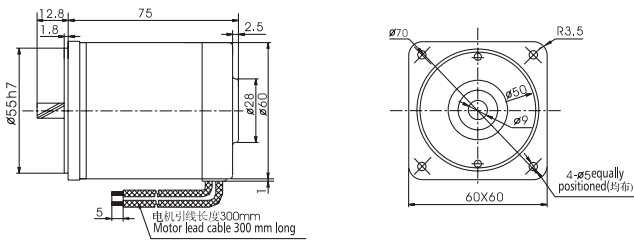


电机外形尺寸 Motor Overall Dimension

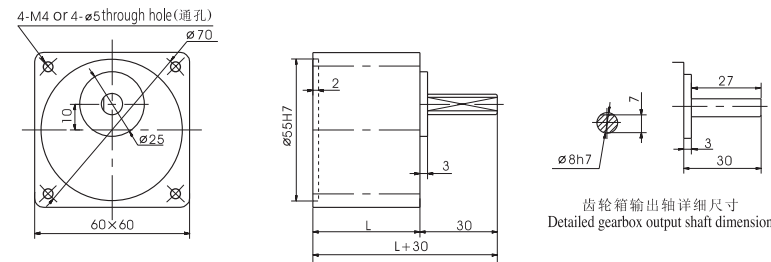
直流电机 DC Motor **6-10W**



电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage V | 功率 Power W | 空载参数 No-load Parameters | | 负载参数 Load Parameters | | | 电刷寿命 Brush Life H | 电机重量 Motor Weight kg | 备注 Remarks |
|-------------|--------------------|------------------|-------------------------|-----------------|----------------------|--------------------|-----------------|-------------------------|----------------------------|---------------|
| | | | 转速 Speed RPM | 电流 Current A | 转速 Speed RPM | 力矩 Torque kg.cm | 电流 Current A | | | |
| Z2D06-12 □ | 12 | 6 | 3200 | 0.6 | 2950 | 0.2 | 0.8 | 2000 | 0.6 | |
| Z2D06-24 □ | 24 | 6 | 3200 | 0.3 | 2950 | 0.2 | 0.5 | 2000 | 0.6 | |
| Z2D06-90 □ | 90 | 6 | 3000 | 0.2 | 2800 | 0.2 | 0.3 | 2000 | 0.6 | |
| Z2D10-12 □ | 12 | 10 | 3200 | 1.0 | 2800 | 0.35 | 2.0 | 2000 | 0.7 | |
| Z2D10-24 □ | 24 | 10 | 3300 | 0.5 | 3000 | 0.35 | 0.9 | 2000 | 0.7 | |
| Z2D10-90 □ | 90 | 10 | 3200 | 0.3 | 2800 | 0.35 | 0.6 | 2000 | 0.7 | |

齿轮箱外形尺寸 Overall Dimension of Gearbox



| | 速比 Reduction Ratio | 尺寸 L(mm) | 质量(kg) |
|----------------|--------------------|----------|--------|
| 齿轮箱 Gearbox | 2GN3K-GN18K | 32 | 0.24 |
| | 2GN20K-GN50K | 42 | 0.30 |
| | 2GN60K-GN200K | | 0.33 |

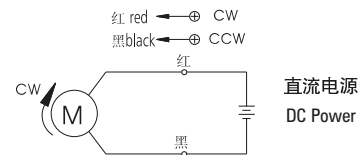
齿轮箱允许力矩 Allowable Torque on Gearbox

齿轮箱型式 Model of Gearbox: 2GN □ K

| 型号 Mode | 减速比 Reduction Ratio | | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 |
|------------|-----------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Z2D06-24 □ | 输出轴转速 Output Shaft Speed | r/min | 1067 | 889 | 640 | 533 | 427 | 356 | 320 | 256 | 213 | 178 | 160 | 128 | 107 | 89 | 80 | 64 | 53 |
| Z2D10-24 □ | 允许力矩 Allowable Torque | N.m | 0.04 | 0.05 | 0.07 | 0.09 | 0.11 | 0.13 | 0.15 | 0.18 | 0.22 | 0.26 | 0.26 | 0.33 | 0.39 | 0.47 | 0.52 | 0.65 | 0.71 |
| | | kgf.cm | 0.44 | 0.53 | 0.74 | 0.89 | 1.11 | 1.33 | 1.48 | 1.85 | 2.22 | 2.66 | 2.68 | 3.33 | 4.00 | 4.80 | 5.34 | 6.67 | 7.24 |

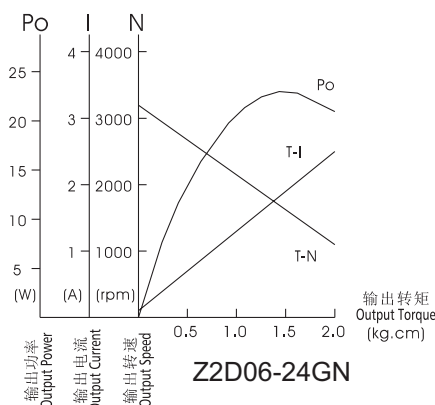
齿轮箱型式 Model of Gearbox: 2GN □ K

| 型号 Mode | 减速比 Reduction Ratio | | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|------------|-----------------------------|--------|------|-------|-------|-------|-------|-------|-------|
| Z2D06-24 □ | 输出轴转速 Output Shaft Speed | r/min | 43 | 36 | 32 | 27 | 21 | 18 | 16 |
| Z2D10-24 □ | 允许力矩 Allowable Torque | N.m | 0.89 | 1.06 | 1.18 | 1.42 | 1.77 | 2.13 | 2.36 |
| | | kgf.cm | 9.04 | 10.85 | 12.06 | 14.47 | 18.09 | 21.71 | 24.12 |



电机接线图 Wiring Diagram of Motor

电机特性曲线 Characteristic Curve of Motor

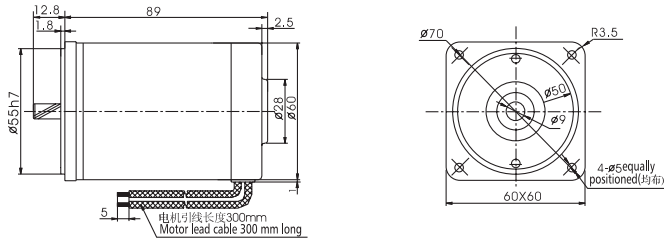


光电机出轴尺寸 Bare Motor Output Shaft Dimension

| 光电机 Motor | 齿轴 Gear Shaft Z2D06- □ GN Z2D10- □ GN | 铣扁 Flat type Z2D06- □ A Z2D10- □ A |
|---|---|--|
| 出轴型式 及尺寸 Output Shaft Type and Dimension | | |

电机外形尺寸 Motor Overall Dimension

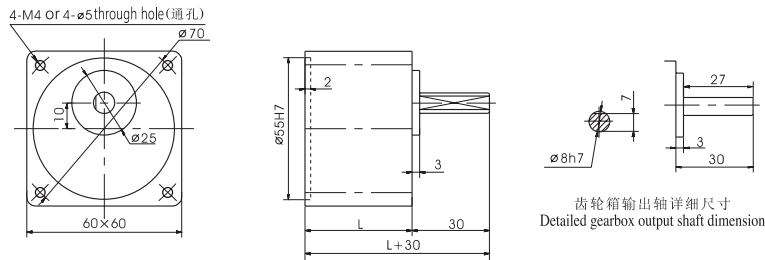
直流电机 DC Motor 15W



电机性能参数 Motor Performance Parameters

| 型号 Model | 电压 Voltage V | 功率 Power W | 空载参数 No-load Parameters | | 负载参数 Load Parameters | | | 电刷寿命 Brush Life H | 电机重量 Motor Weight kg | 备注 Remarks |
|-------------|--------------------|------------------|-------------------------|-----------------|----------------------|--------------------|-----------------|-------------------------|----------------------------|---------------|
| | | | 转速 Speed RPM | 电流 Current A | 转速 Speed RPM | 力矩 Torque kg.cm | 电流 Current A | | | |
| Z2D15-12 □ | 12 | 15 | 3200 | 0.8 | 2950 | 0.5 | 2.0 | 2000 | 0.9 | |
| Z2D15-24 □ | 24 | 15 | 3300 | 0.4 | 3000 | 0.5 | 1.0 | 2000 | 0.9 | |
| Z2D15-90 □ | 90 | 15 | 3200 | 0.2 | 3000 | 0.5 | 0.4 | 2000 | 0.9 | |

齿轮箱外形尺寸 Overall Dimension of Gearbox



| | 速比 Reduction Ratio | 尺寸 L(mm) | 质量(kg) |
|----------------|--------------------|----------|--------|
| 齿轮箱 Gearbox | 2GN3K-GN18K | 32 | 0.24 |
| | 2GN20K-GN50K | 42 | 0.30 |
| | 2GN60K-GN200K | | 0.33 |

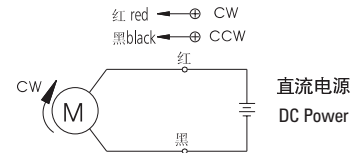
齿轮箱允许力矩 Allowable Torque on Gearbox

齿轮箱型式 Model of Gearbox: 2GN □ K

| 型号 Mode | 减速比 Reduction Ratio | | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 |
|------------|-----------------------------|--------|------|------|-------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| Z2D15-24 □ | 输出轴转速 Output Shaft Speed | r/min | 1100 | 917 | 660 | 550 | 440 | 367 | 330 | 264 | 220 | 183 | 165 | 132 | 110 | 92 | 83 | 66 | 55 |
| | 允许力矩 Allowable Torque | N.m | 0.11 | 0.13 | 0.176 | 0.21 | 0.26 | 0.32 | 0.35 | 0.44 | 0.53 | 0.63 | 0.63 | 0.73 | 0.95 | 1.14 | 1.27 | 1.59 | 1.72 |
| | | kgf.cm | 1.08 | 1.29 | 1.79 | 2.15 | 2.69 | 3.23 | 3.59 | 4.48 | 5.38 | 6.46 | 6.47 | 8.08 | 9.70 | 11.64 | 12.93 | 16.17 | 17.54 |

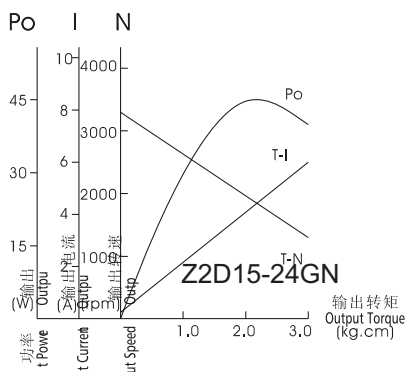
齿轮箱型式 Model of Gearbox: 2GN □ K

| 型号 Mode | 减速比 Reduction Ratio | | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|------------|-----------------------------|--------|-------|-------|-------|------|------|------|------|
| Z2D15-24 □ | 输出轴转速 Output Shaft Speed | r/min | 44 | 37 | 33 | 28 | 22 | 18 | 17 |
| | 允许力矩 Allowable Torque | N.m | 2.15 | 2.58 | 2.87 | 2.94 | 2.94 | 2.94 | 2.94 |
| | | kgf.cm | 21.93 | 26.31 | 29.23 | 30.0 | 30.0 | 30.0 | 30.0 |



电机接线图 Wiring Diagram of Motor

电机特性曲线 Characteristic Curve of Motor

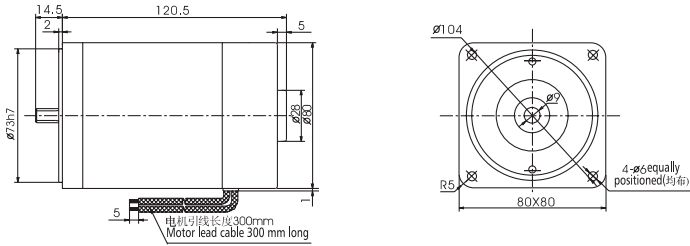


光电机出轴尺寸 Bare Motor Output Shaft Dimension

| 光电机 Motor | 齿轴 Gear Shaft Z2D15-□ GN | 铣扁 Flat type Z2D15-□ A |
|---|-----------------------------|---------------------------|
| 出轴型式 及尺寸 Output Shaft Type and Dimension | | |

电机外形尺寸 Motor Overall Dimension

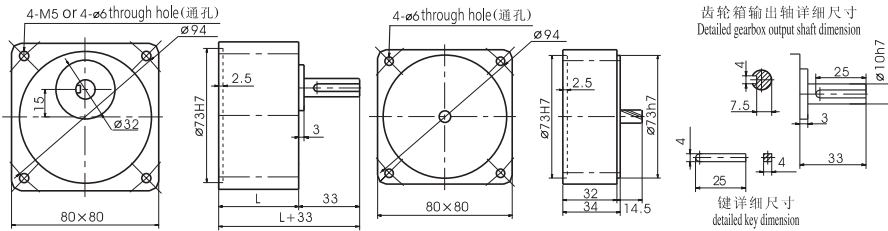
直流电机 DC Motor **25-40W**



电机特性表 List of Motor Characteristics

| 型号 Model | 电压 Voltage V | 功率 Power W | 空载参数 No-load Parameters | | 负载参数 Load Parameters | | | 电刷寿命 Brush Life H | 电机重量 Motor Weight kg | 备注 Remarks |
|-------------|--------------------|------------------|-------------------------|-----------------|----------------------|--------------------|-----------------|-------------------------|----------------------------|---------------|
| | | | 转速 Speed RPM | 电流 Current A | 转速 Speed RPM | 力矩 Torque kg.cm | 电流 Current A | | | |
| Z4D25-12 | 12 | 25 | 3200 | 1.4 | 3100 | 0.8 | 3.6 | 2000 | 1.7 | |
| Z4D25-24 | 24 | 25 | 3000 | 0.7 | 2850 | 0.9 | 1.7 | 2000 | 1.7 | |
| Z4D25-90 | 90 | 25 | 3200 | 0.2 | 3000 | 0.8 | 0.5 | 2000 | 1.7 | |
| Z4D40-12 | 12 | 40 | 3100 | 2.0 | 2800 | 1.4 | 5.2 | 2000 | 1.8 | |
| Z4D40-24 | 24 | 40 | 3100 | 0.8 | 3000 | 1.3 | 2.1 | 2000 | 1.8 | |
| Z4D40-90 | 90 | 40 | 3200 | 0.3 | 3000 | 1.3 | 0.7 | 2000 | 1.8 | |

齿轮箱外形尺寸 Overall Dimension of Gearbox



| | 速比 Reduction Ratio | 尺寸 L(mm) | 质量(kg) |
|-------------------------------|--------------------|----------|--------|
| 齿轮箱 Gearbox | 5GN3K-GN18K | 32 | 0.43 |
| | 5GN20K-GN36K | 43.5 | 0.57 |
| | 5GN40K-GN200K | | 0.61 |
| 中间齿轮箱 Intermediate Gearbox | 4GN10X | 32 | 0.43 |

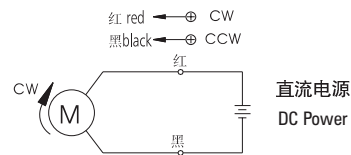
齿轮箱允许力矩 Allowable Torque on Gearbox

齿轮箱型式 Model of Gearbox: 4GN □ K

| 型号 Mode | 减速比 Reduction Ratio | | | | | | | | | | | | | | | | | | |
|----------|-----------------------------|--------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 | |
| Z4D40-24 | 输出轴转速 Output Shaft Speed | r/min | 1033 | 861 | 620 | 517 | 413 | 344 | 310 | 248 | 207 | 172 | 155 | 124 | 103 | 86 | 78 | 62 | 52 |
| | 允许力矩 Allowable Torque | N.m | 0.30 | 0.36 | 0.50 | 0.60 | 0.75 | 0.90 | 1.00 | 1.25 | 1.50 | 1.80 | 2.00 | 2.25 | 2.70 | 3.24 | 3.60 | 4.50 | 4.88 |
| | | kgf.cm | 3.06 | 3.67 | 5.09 | 6.1 | 7.64 | 9.17 | 10.2 | 12.73 | 15.28 | 18.33 | 20.36 | 22.95 | 27.54 | 33.04 | 36.71 | 45.90 | 49.80 |

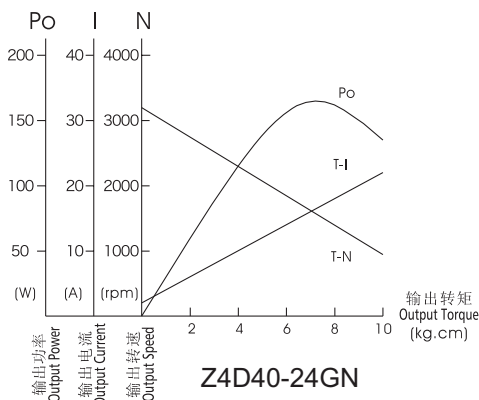
齿轮箱型式 Model of Gearbox: 4GN □ K

| 型号 Mode | 减速比 Reduction Ratio | | | | | | | | |
|----------|-----------------------------|--------|-------|-------|-------|-------|-------|-------|-------|
| | | 75 | 90 | 100 | 120 | 150 | 180 | 200 | |
| Z4D40-24 | 输出轴转速 Output Shaft Speed | r/min | 41 | 34 | 31 | 26 | 21 | 17 | 16 |
| | 允许力矩 Allowable Torque | N.m | 6.10 | 7.32 | 8.13 | 9.76 | 9.8 | 9.8 | 9.8 |
| | | kgf.cm | 62.24 | 74.69 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 |



电机接线图 Wiring Diagram of Motor

电机特性曲线 Characteristic Curve of Motor

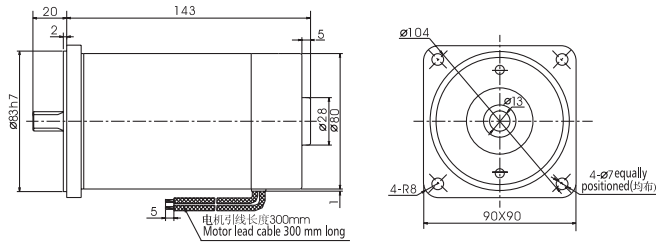


光电机出轴尺寸 Bare Motor Output Shaft Dimension

| 光电机 Motor | 齿轴 Gear Shaft Z4D25- □ GN Z4D40- □ GN | 铣扁 Flat type Z4D25- □ A Z4D40- □ A |
|---|---|--|
| 出轴型式 及尺寸 Output Shaft Type and Dimension | | |

电机外形尺寸 Motor Overall Dimension

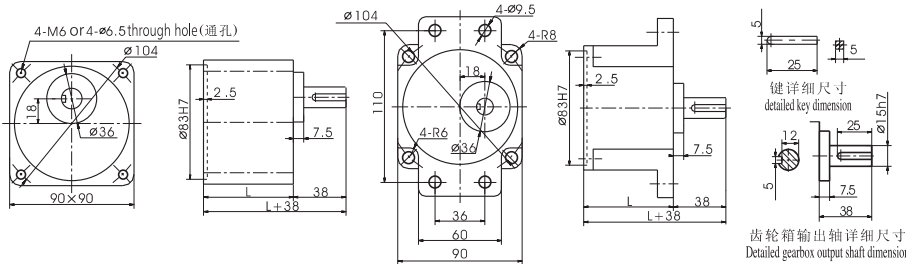
直流电机 DC Motor **60-120W**



电机特性表 List of Motor Characteristics

| 型号 Model | 电压 Voltage V | 功率 Power W | 空载参数 No-load Parameters | | 负载参数 Load Parameters | | | 电刷寿命 Brush Life H | 电机重量 Motor Weight kg | 备注 Remarks |
|-------------|--------------------|------------------|-------------------------|-----------------|----------------------|--------------------|-----------------|-------------------------|----------------------------|---------------|
| | | | 转速 Speed RPM | 电流 Current A | 转速 Speed RPM | 力矩 Torque kg.cm | 电流 Current A | | | |
| Z5D60-12 | 12 | 60 | 3000 | 2.0 | 2600 | 2.3 | 9.0 | 2000 | 2.2 | |
| Z5D60-24 | 24 | 60 | 3100 | 1.0 | 2800 | 2.1 | 3.5 | 2000 | 2.2 | |
| Z5D60-90 | 90 | 60 | 3100 | 0.3 | 2900 | 2.0 | 1.0 | 2000 | 2.2 | |
| Z5D90-12 | 12 | 90 | 3100 | 2.0 | 2600 | 3.4 | 12.0 | 2000 | 2.2 | |
| Z5D90-24 | 24 | 90 | 3300 | 1.0 | 2800 | 3.2 | 5.0 | 2000 | 2.2 | |
| Z5D90-90 | 90 | 90 | 3000 | 0.3 | 2800 | 3.2 | 1.4 | 2000 | 2.2 | |
| Z5D120-12 | 12 | 120 | 3100 | 2.0 | 2500 | 4.7 | 15.0 | 2000 | 2.2 | |
| Z5D120-24 | 24 | 120 | 3200 | 1.2 | 2600 | 4.5 | 7.0 | 2000 | 2.2 | |
| Z5D120-90 | 90 | 120 | 3000 | 0.3 | 2600 | 4.5 | 2.0 | 2000 | 2.2 | |

齿轮箱外形尺寸 Overall Dimension of Gearbox



| 速比 Reduction Ratio | 尺寸 L(mm) | 质量(kg) |
|--------------------|----------|--------|
| 5GU3K-GU9K | 65 | 1.21 |
| 5GU10K-GU18K | | 1.30 |
| 5GU20K-GU75K | | 1.40 |
| 5GU90K-GU200K | | 1.45 |

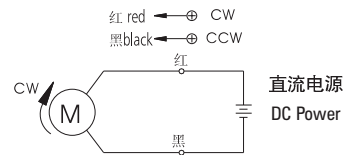
齿轮箱允许力矩 Allowable Torque on Gearbox

齿轮箱型式 Model of Gearbox: 5GU □ K

| 型号 Mode | 减速比 Reduction Ratio | | 3 | 3.6 | 5 | 6 | 7.5 | 9 | 10 | 12.5 | 15 | 18 | 20 | 25 | 30 | 36 | 40 | 50 | 60 |
|------------|-----------------------------|--------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Z5D90-24 □ | 输出轴转速 Output Shaft Speed | r/min | 1100 | 916 | 660 | 550 | 440 | 366 | 330 | 264 | 220 | 183 | 165 | 132 | 110 | 91 | 82 | 66 | 55 |
| | 允许力矩 Allowable Torque | N.m | 0.64 | 0.76 | 1.05 | 1.27 | 1.58 | 1.90 | 1.90 | 2.38 | 2.85 | 3.42 | 3.44 | 4.30 | 5.16 | 6.19 | 6.88 | 8.60 | 10.31 |
| | | kgf.cm | 6.53 | 7.75 | 10.76 | 12.92 | 16.12 | 19.37 | 19.40 | 24.25 | 29.10 | 34.92 | 35.08 | 43.85 | 52.62 | 63.15 | 70.16 | 87.70 | 105.24 |

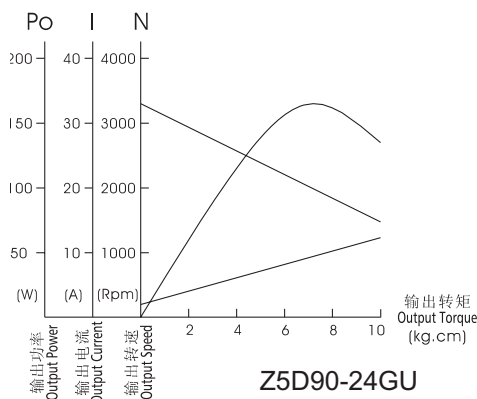
齿轮箱型式 Model of Gearbox: 5GU □ K

| 型号 Mode | 减速比 Reduction Ratio | | 75 | 90 | 100 | 120 | 150 | 180 | 200 |
|------------|-----------------------------|--------|--------|--------|--------|--------|-------|-------|-------|
| Z5D90-24 □ | 输出轴转速 Output Shaft Speed | r/min | 44 | 36 | 33 | 27 | 22 | 18 | 16 |
| | 允许力矩 Allowable Torque | N.m | 12.89 | 13.83 | 15.37 | 18.44 | 19.60 | 19.60 | 19.60 |
| | | kgf.cm | 131.56 | 141.12 | 156.80 | 188.17 | 200.0 | 200.0 | 200.0 |



电机接线图 Wiring Diagram of Motor

电机特性曲线 Characteristic Curve of Motor



光电机出轴尺寸 Bare Motor Output Shaft Dimension

| 光电机 Motor | 齿轴 Gear Shaft Z5D90- □ GU | 铣扁 Flat type Z5D90- □ A | 光轴 Bare Shaft Z5D90- □ A1 |
|---|------------------------------|----------------------------|------------------------------|
| 出轴型式 及尺寸 Output Shaft Type and Dimension | | | |