

Electric actuator

Selection Manual



SM-SC01 Series



SM-SC02 Series



SML-SC02 Series



SMQ-SC02 Series

1. Standard Configuration Description

1.1 For all Kiket Electric Actuators (General Configuration)

- ◆ Degree of Protection is IP68 (in accordance with DIN EN 60529 standard)
- ◆ The motor insulation class is F, and can be upgraded to H when required; both can adapt to tropical climate environments.
- ◆ Normal ambient temperature is -30°C to $+70^{\circ}\text{C}$; when required, the low-temperature type can reach -50°C and the high-temperature type can reach $+120^{\circ}\text{C}$.
- ◆ Equipped with a handwheel for manual operation, which automatically switches during electric operation.
- ◆ The switching type can achieve an action frequency of 600 times per hour with 15 minutes of continuous operation; the regulating type can reach an action frequency of 1200 times per hour.
- ◆ Can provide Chinese and English manuals.

1.2 For the basic type electric actuator (excluding the integrated control unit)

- ◆ Each switching direction is equipped with a limit switch featuring two normally open (NO) and two normally closed (NC) contacts; the torque switch has one normally open (NO) and one normally closed (NC) contact, and can be configured to two NO and two NC contacts when required.
- ◆ The casing is made of cast steel, and all its external bolts are stainless steel.
- ◆ The cable entry hole is of double-sealed type; SM(R)30-SM(R)100 is equipped with $2 \times 1" + 1 \times 1\frac{1}{2}"$ NPT, and other models with $2 \times 3/4" + 1 \times 1"$ NPT.
- ◆ Equipped with mechanical position indication.

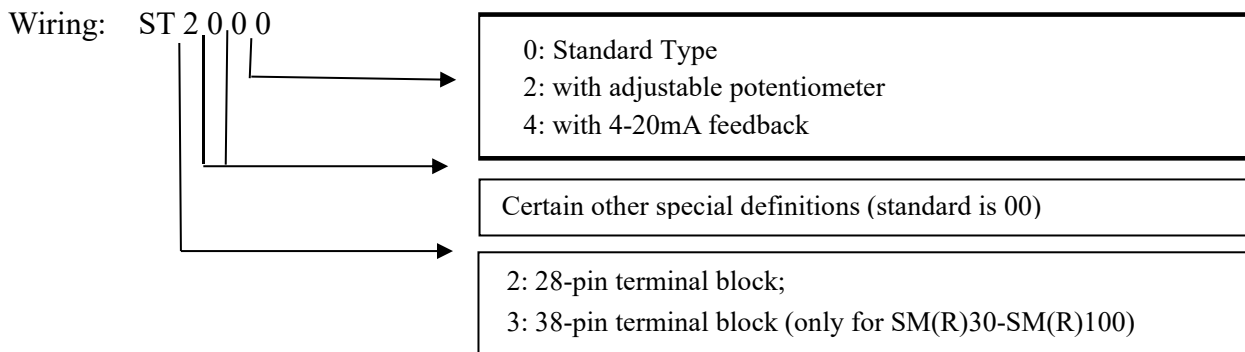
1.3 For Intelligent Integrated Electric Actuators (including integrated control units SC01 or SC02)

- ◆ Equipped with a permanent-magnet absolute encoder; position, torque, and other settings retain permanent memory without relying on a power supply, and all debugging requires no cover opening.
- ◆ The actuator is intelligent, equipped with a liquid crystal display, and can communicate with smartphones (iPhone) via Bluetooth for debugging, fault diagnosis, etc.
- ◆ The actuator is equipped with historical memory, enabling the query of occurred operations, settings, events, faults, and other information at any time; it logs the occurrence time of the information and retains the latest 100 entries for each category.
- ◆ Actuator switch contacts: torque switch: 1 normally open (NO) and 1 normally closed (NC); limit switch: 1 normally open (NO) and 1 normally closed (NC); six output contact pairs can be freely programmed.
- ◆ SC02 is explosion-proof as standard; explosion-proof rating: II2G EEx d IIC T4.
- ◆ SC01 can be split mounted when needed.
- ◆ Cable Entry Holes: SC02 cable entry hole is double-sealed; for SM(R)30-SM(R)100: $2 \times 1" + 1 \times 1\frac{1}{2}"$ NPT; others: $2 \times 3/4" + 1 \times 1"$ NPT; SC01 terminal block is plug-in type, cable entry hole: $M32 \times 1.5 + M25 \times 1.5 + M20 \times 1.5$.
- ◆ The housing material of the control unit is special aluminum alloy; all connecting bolts on the cabinet exterior are stainless steel.

2. Selection of Wiring Diagram

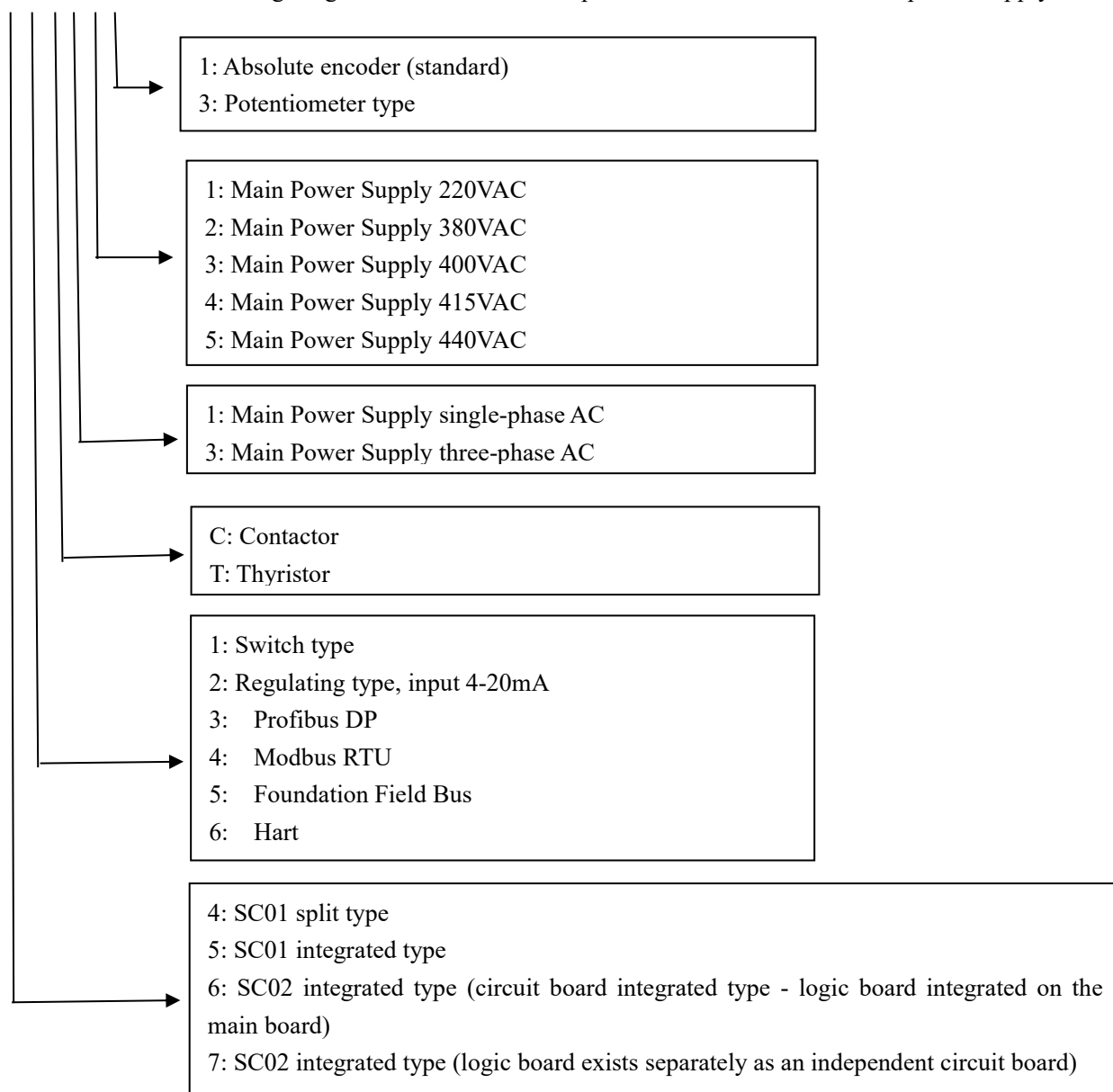
2.1 Basic Type (without integrated control unit)

Typical Wiring Diagram ST2000 (Standard Type)



2.2 Integrated Type (including integrated control unit SC01 or SC02)

Wiring: 7 2 C 3 2 1 Wiring diagrams can be used to express control modes and main power supply levels.

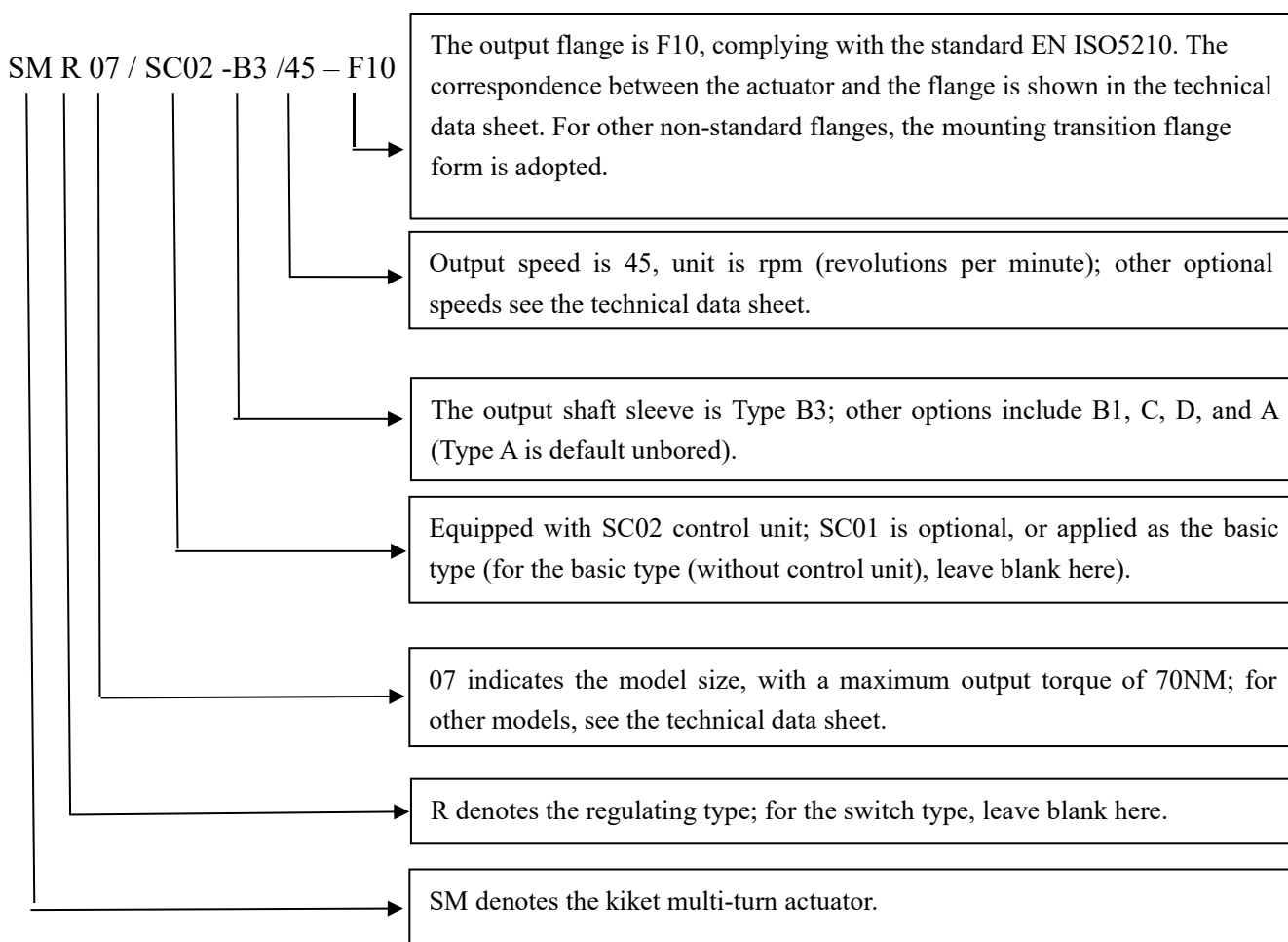


3.Multi-turn actuator

The multi-turn actuator SM(R) series can be applied as the basic type (without integrated control unit), and can be equipped with SC01 or SC02.

3.1 Standalone Actuator (without gearbox)

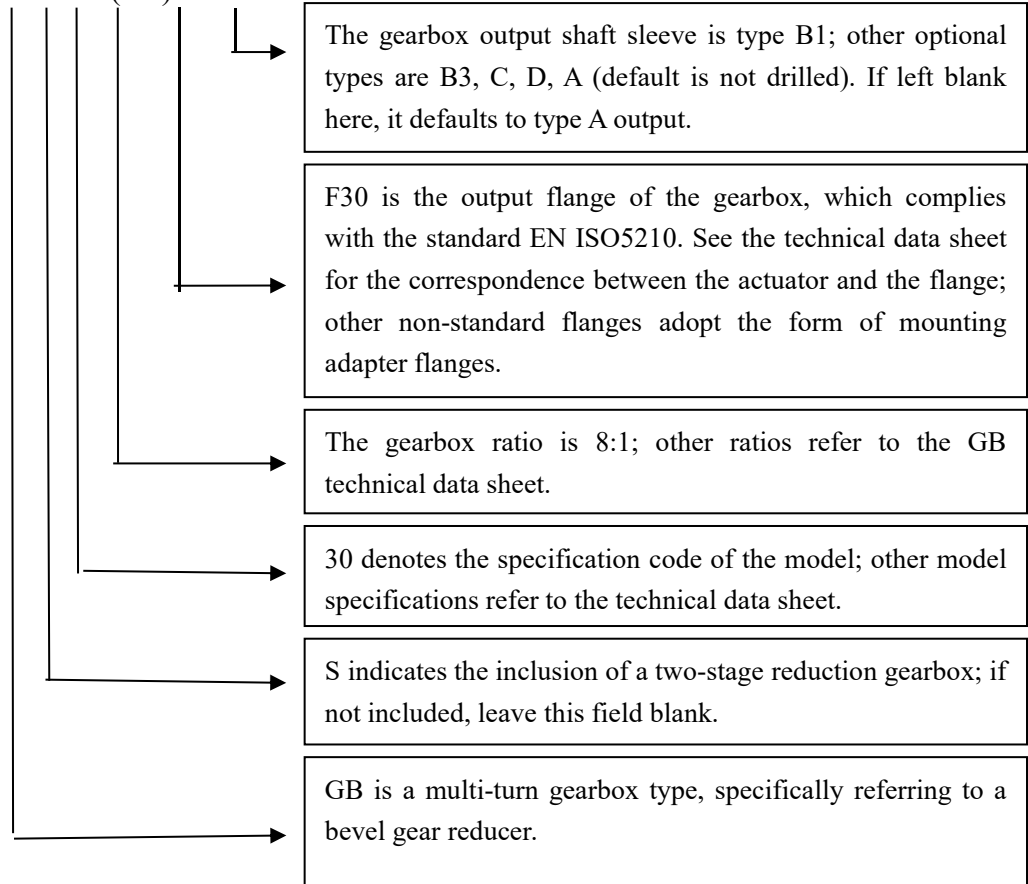
Wiring Diagram Symbols and Their Meanings



3.2 Multi-turn Actuator SM + Multi-turn Gearbox GB

For applications requiring large torque where speed does not need to be high, Kiket provides a solution with the multi-turn gearbox GB.

SM50/SC01-B3/70-GB S 30(8:1)-F30-B1



Note

The Kiket GB gearbox features high output efficiency: the efficiency is approximately 0.9 without a two-stage reduction, and approximately 0.85 with a two-stage reduction (model GBS).

For the actuator equipped with this bevel gearbox GB, the formula for the final output speed is: Actuator final output speed = Actuator output speed $\div$ Gearbox ratio, i.e., $70 \div 8 \approx 9$ rpm.

For the actuator equipped with the bevel gearbox GBS, the formula for the maximum actual output torque is: Actuator maximum actual output torque = Actuator maximum torque $\times$ Gearbox ratio $\times$ Efficiency, i.e., $500 \times 8 \times 0.85 = 3400$ N $\cdot$ m.

! The calculated maximum actual output torque of the gearbox shall be ensured to be within its rated maximum output range; improper selection may result in gearbox damage.

4.Quarter-Turn Actuator

Quarter-turn (partial rotation) actuator SMQ(R) Series is divided into basic type (without integrated control unit) and SC02 type with integrated control device. The maximum output torque of the SMQ Series quarter-turn actuator can reach 3500NM; for larger angular strokes, a combination of multi-turn actuator SM and partial rotation gearbox GW is available.

Note

: Where on-site space allows, for torque requirements above 1500NM, priority shall be given to the latter, i.e., the SM+GW combination scheme.

4.1 SMQ Series Standalone Actuator (Without Gearbox)

SMQ R F 30-31S-F10

F10 is the output flange interface of the gearbox, complying with standard EN ISO 5211; the matching relationship between the actuator and the flange is detailed in the technical data sheet; for other non-standard flanges, an installation transition flange connection shall be adopted.

The actuator has a rated stroke time of 31s/90°; if different stroke times (i.e., adjusting the action speed) need to be customized, it shall be declared in advance during the selection stage.

In the rotary actuator model specification, "30" indicates a maximum output torque of 300 N • m; parameter correspondence for other models is detailed in the technical data sheet.

In the model identifier, "F" indicates that the actuator is equipped with a base crank arm; for the direct-connection type (without base crank arm), the corresponding position in the model identifier shall be left blank.

In the model identifier, "R" indicates that the actuator is of modulating type; if the corresponding position in the model identifier is left blank, it indicates that the actuator is of on-off type.

In the model identifier, "SMQ" is the actuator type code, indicating that the actuator is a rotary actuator.

Note

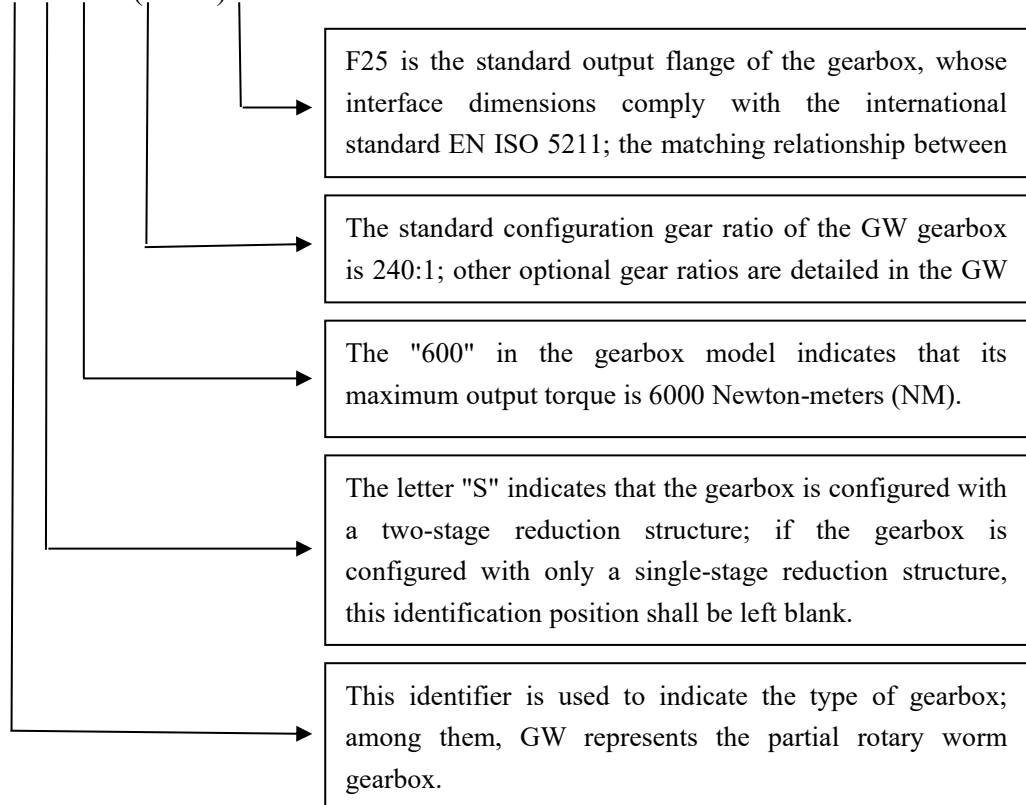
The direct-connection shaft sleeve of SMQ series actuators defaults to a solid structure design with no openings.

4.2 Combination of Multi-Turn Actuator SM and Part-Turn Gearbox GW

For high-torque angular stroke output scenarios, kiket provides partial rotary gearbox GW series solutions, which specifically include two configuration forms: direct-coupled GW type gearbox and base crank arm type GWF type gearbox.

Explanation of Model Identification for Direct-Coupled GW Gearbox

SMR07/SC02-B3/90-GW S 600(240:1)-F25

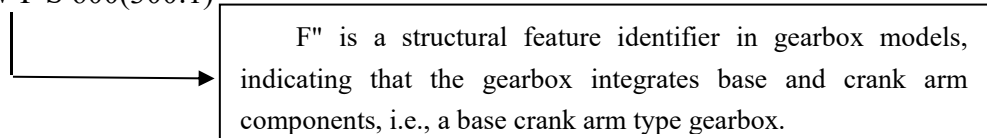


Note

The output shaft sleeve of the GW gearbox is default configured with a solid structure, and no through-hole is opened on the sleeve body.

Explanation of Model Identification for Base Crank Arm Type GWF Gearbox

SMR07/SC02-B3/90-GW F S 600(300:1)



Note

The Kiket GW gearbox features output efficiency: the efficiency is approximately 0.40 without a two-stage reduction, and approximately 0.35 with a two-stage reduction (model GWS).

For the gearbox GWS600, the formula for the 90° stroke time is: 90° stroke time = Gear ratio ÷ 4 ÷ Actuator speed × 60, i.e., $240 \div 4 \div 40 \times 60 = 50$ seconds.

For the gearbox GWS600, the formula for the maximum output torque is: Maximum output torque = Actuator maximum output torque × Gear ratio × Gearbox efficiency, i.e., $70 \times 240 \times 0.35 = 5880 \text{ N} \cdot \text{m}$.

⚠ The calculated maximum actual output torque of the gearbox shall be ensured to be within its rated maximum output range; improper selection may result in gearbox damage.

5.Linear Actuator

The Linear Actuator SML(R) series can be configured as the basic type (without an integrated control unit); for applications requiring an integrated control device, the SC02 model is used.

The SMQ series Rotary Actuator has a maximum thrust of 30,000 N; for linear stroke applications requiring greater thrust, the combination solution of Multi-turn Actuator SM and Linear Thruster LT is adopted.

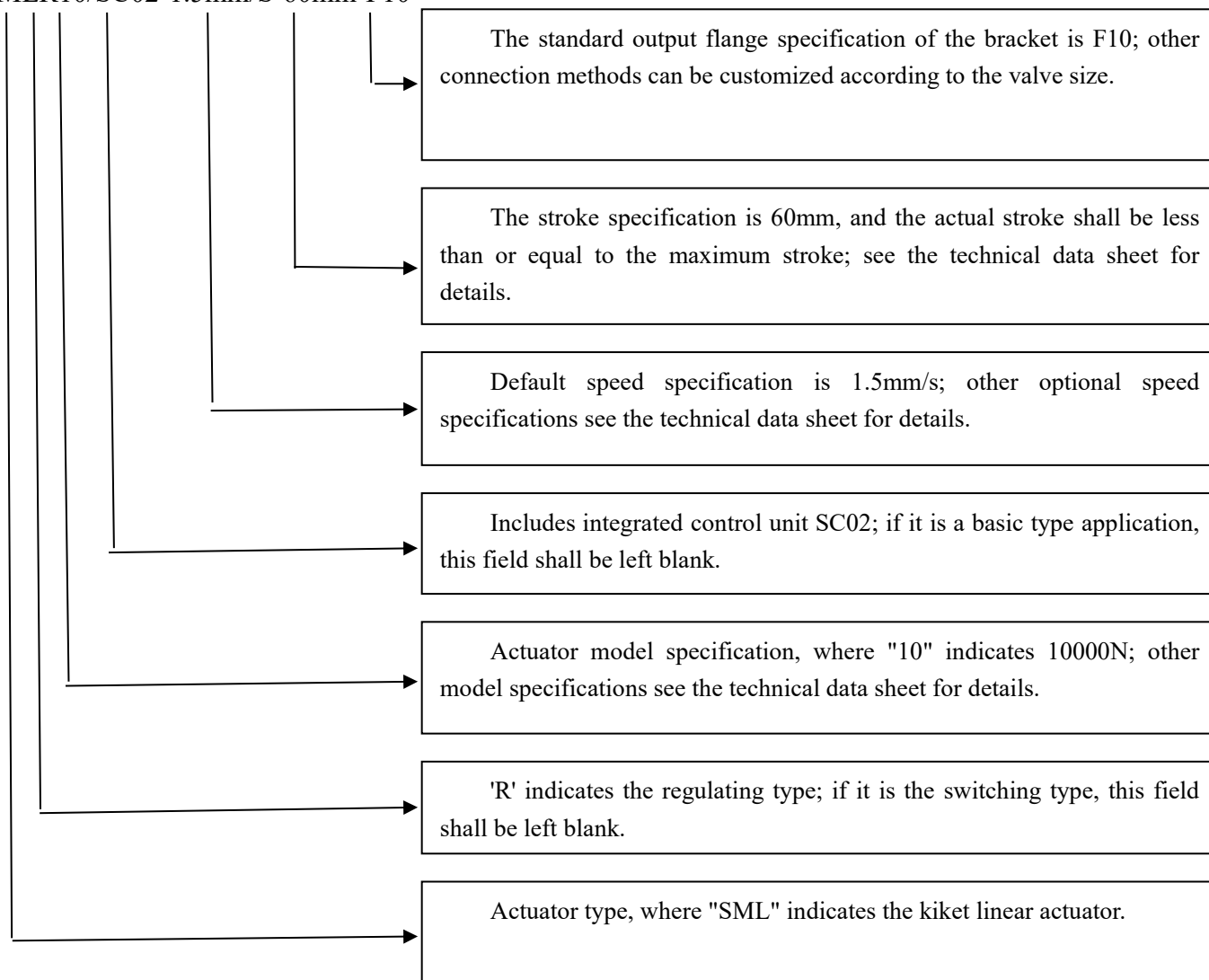
Note

The Kiket Linear Actuator SM+LT offers a wide thrust range, which basically covers the range of the SML series. However, for applications requiring small thrust and single-phase power supply, the SML series is recommended as the preferred choice, featuring compact size and light weight.

5.1 Standalone Actuator SML Series (Without Gearbox)

Linear Actuator SML Series Model Identification and Meaning

SMLR10/SC02-1.5mm/S-60mm-F10



Note

The output shaft sleeve of the GW gearbox is default configured with a solid structure, and no through-hole is opened on the sleeve body.

5.2 Multi-turn Actuator SM + Linear Thruster LT

For scenarios with large linear stroke output, kiket provides the solution of Multi-turn Actuator SM Series + Linear Thruster LT.

Model Identification and Meaning of Linear Thruster LT

SMR12/SC02-B3/70-LT40-F10

The standard output flange is F10; other connection methods shall use an additional transition flange.

In the specification identification of linear thrusters, "40" indicates a maximum output force of 40000N; technical parameters of other models are detailed in the data sheet.

LT denotes Linear Thruster.

B3 is the default connection method between actuator SM and LT, and this identifier can be omitted.

Note

The kiket linear stroke SM+LT does not include the connection bracket matching the valve; if this component is required, custom processing services can be provided.

Appendix Table 1: SM Technical Data Sheet

Electrical data Multi-turn actuators for open-close duty with 3-phase AC motors Short-time duty S2 - 15 min, 380 V/50 Hz									SM04-SM100			
Multi-turn actuator			Motor									
Type	Speed rpm	Torque max. Nm	Type	1 Power PN (kW)	Speed rpm	2) Nominal current IN (A)	3) Current approx. Imax. (A)	Startingc urrent IA (A)	cos φ	kiket Power class Contactor 4) Thyristor 4)		Approx. Weight (kg)
SM04	11	40	MA04-4-0.13	0.13	1400	0.40	0.5	1.1	0.50	C1	T1	26
	22		MA04-8-0.23	0.23	700	0.60	0.7	2.0	0.57	C1	T1	
	45		MA04-4-0.28	0.28	1400	1.00	1.1	2.5	0.42	C1	T1	27
	90		MA04-4-0.32	0.32	1400	0.80	1.4	4.6	0.60	C1	T1	
	135		MA04-4-0.41	0.41	1400	0.90	1.6	4.6	0.70	C1	T1	
	180	35	MA04-2-0.48	0.48	2800	1.05	1.7	4.6	0.70	C1	T1	
SM07	11	70	MA07-4-0.15	0.15	1400	0.60	0.7	1.7	0.38	C1	T1	28
	22		MA07-8-0.24	0.24	700	0.70	1.1	3.2	0.52	C1	T1	
	45		MA07-4-0.47	0.47	1400	1.70	2.1	4.8	0.42	C1	T1	29
	90		MA07-4-0.59	0.59	1400	1.70	2.6	9.5	0.53	C1	T1	
	135		MA07-4-0.73	0.73	1400	1.80	3.2	9.5	0.62	C1	T1	
	180	60	MA07-2-0.81	0.81	2800	1.98	3.4	9.5	0.62	C1	T1	
SM12	9	120	MA12-4-0.29	0.29	1400	1.10	1.2	3.2	0.40	C1	T1	31
	18		MA12-4-0.48	0.48	700	1.40	1.6	4.7	0.52	C1	T1	
	35		MA12-4-0.72	0.72	1400	2.60	2.7	8.9	0.42	C1	T1	34
	70		MA12-4-1.14	1.14	1400	3.20	3.8	17	0.54	C1	T1	
	105		MA12-4-1.56	1.56	1400	3.70	5.5	17	0.64	C1	T2	
	140	100	MA12-2-1.64	1.64	2800	3.90	5.8	17	0.64	C1	T2	
SM30	9	300	MA30-4-0.43	0.43	1400	1.10	1.7	5.5	0.60	C1	T1	52
	18		MA30-8-0.67	0.67	700	1.60	3.2	9.5	0.64	C1	T1	
	35		MA30-4-1.06	1.06	1400	2.60	4.2	17	0.62	C1	T1	56
	70		MA30-4-1.93	1.93	1400	4.90	7.4	40	0.60	C1	T2	
	105		MA30-4-2.40	2.40	1400	5.60	12	40	0.65	C1	T2	
	140	250	MA30-2-2.52	2.52	2800	5.90	12	40	0.65	C1	T2	
SM50	9	500	MA50-4-0.66	0.66	1400	1.80	3.2	9.8	0.56	C1	T1	54
	18		MA50-8-1.28	1.28	700	3.80	5.3	19	0.51	C1	T1	
	35		MA50-4-2.10	2.10	1400	5.60	7.9	40	0.57	C1	T2	61
	70		MA50-4-3.75	3.75	1400	9.50	14	61	0.60	C2	—	
	105		MA50-4-4.28	4.28	1400	10.00	22	61	0.65	C2	—	
	140	400	MA50-2-4.75	4.75	2800	11.10	23	61	0.65	C2	—	
SM100	9	1000	MA100-4-1.09	1.09	1400	2.90	5.3	23	0.57	C1	T1	77
	18		MA100-8-1.91	1.91	700	5.10	9.2	42	0.57	C1	T2	
	35		MA100-4-4.16	4.16	1400	8.90	14	63	0.71	C2	—	88
	70		MA100-4-6.32	6.32	1400	12.00	26	126	0.80	C3	—	
	105		MA100-4-7.10	7.10	1400	13.00	37	126	0.83	C3	—	
	140	800	MA100-2-8.30	8.30	2800	15.20	47	126	0.83	C3	—	
1) The nominal electrical power can be calculated using the following formula: $P = U \times I \times \cos \phi \times \sqrt{3}$ 2) Current at operating torque 3) Current at max. torque. We recommend to select switchgears according to these values. 4) Assignment of switchgears when using kiketcontrols of types SC01. C1≤3KW; 3KW<C2≤6KW; C3>6KW; T1≤1.5KW; 1.5KW<T2≤3KW												
We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document.												
									Issue 1.15			
T01.01/en												

Appendix Table 2: SMR Technical Data Sheet

Electrical data Multi-turn actuators for Modulating duty with 3-phase AC motors Modulating duty S4 - 25 %, 380 V/50 Hz										SMR04- SMR100		
Multi-turn actuator			Motor									
Type	Speed rpm	Torque MARx. Nm	Type	Power PN (kW) ¹	Speed rpm	Nominal current IN (A) ²	Current approx. IMARx. (A) ³	Starting current IA (A)	cos φ	kiketPower class Contacto ⁴ r	Thyristor ⁴ T	Approx. Weight (kg)
SMR04	11	40	MAR04-4-0.13	0.13	1400	0.40	0.5	1.1	0.50	C1	T1	26
	22		MAR04-8-0.23	0.23	700	0.60	0.7	2.0	0.57	C1	T1	
	45		MAR04-4-0.28	0.28	1400	1.00	1.1	2.5	0.42	C1	T1	27
	90		MAR04-4-0.32	0.32	1400	0.80	1.4	4.6	0.60	C1	T1	
	135		MAR04-4-0.41	0.41	1400	0.90	1.6	4.6	0.70	C1	T1	
SMR07	11	70	MAR07-4-0.15	0.15	1400	0.60	0.7	1.7	0.38	C1	T1	28
	22		MAR07-8-0.24	0.24	700	0.70	1.1	3.2	0.52	C1	T1	
	45		MAR07-4-0.47	0.47	1400	1.70	2.1	4.8	0.42	C1	T1	29
	90		MAR07-4-0.59	0.59	1400	1.70	2.6	9.5	0.53	C1	T1	
	135		MAR07-4-0.73	0.73	1400	1.80	3.2	9.5	0.62	C1	T1	
SMR12	9	120	MAR12-4-0.29	0.29	1400	1.10	1.2	3.2	0.40	C1	T1	31
	18		MAR12-4-0.48	0.48	700	1.40	1.6	4.7	0.52	C1	T1	
	35		MAR12-4-0.72	0.72	1400	2.60	2.7	8.9	0.42	C1	T1	34
	70		MAR12-4-1.14	1.14	1400	3.20	3.8	17	0.54	C1	T1	
	105		MA12-4-1.56	1.56	1400	3.70	5.5	17	0.64	C1	T2	
SMR30	9	300	MAR30-4-0.43	0.43	1400	1.10	1.7	5.5	0.60	C1	T1	52
	18		MAR30-8-0.67	0.67	700	1.60	3.2	9.5	0.64	C1	T1	
	35		MAR30-4-1.06	1.06	1400	2.60	4.2	17	0.62	C1	T1	56
	70		MAR30-4-1.93	1.93	1400	4.90	7.4	40	0.60	C1	T2	
	105		MAR30-4-2.40	2.40	1400	5.60	12	40	0.65	C1	T2	
SMR50	9	500	MAR50-4-0.66	0.66	1400	1.80	3.2	9.8	0.56	C1	T1	54
	18		MAR50-8-1.28	1.28	700	3.80	5.3	19	0.51	C1	T1	
	35		MAR50-4-2.10	2.10	1400	5.60	7.9	40	0.57	C1	T2	61
	70		MAR50-4-3.75	3.75	1400	9.50	14	61	0.60	C2	—	
	105		MAR50-4-4.28	4.28	1400	10.00	22	61	0.65	C2	—	
SMR100	9	1000	MAR100-4-1.09	1.09	1400	2.90	5.3	23	0.57	C1	T1	77
	18		MAR100-8-1.91	1.91	700	5.10	9.2	42	0.57	C1	T2	
	35		MAR100-4-4.16	4.16	1400	8.90	14	63	0.71	C2	—	88
	70		MAR100-4-6.32	6.32	1400	12.00	26	126	0.80	C3	—	
	105		MAR100-4-7.10	7.10	1400	13.00	37	126	0.83	C3	—	
1) The nominal electrical power can be calculated using the following formula: P = U x I x cos φ _{sc}												
2) Current at operating torque												
3) Current at MARx. torque. We recommend to select switchgears according to these values.												
4) Assignment of switchgears when using kikit controls of types SC01. C1≤3KW; 3KW<C2≤6KW; C3>6KW; T1≤1.5KW; 1.5KW<T2≤3KW												
We reserve the right to alter data according to improvements MARde. Previous documents become invalid with the issue of this document.												
										Issue 1.15		
T01.02/en												

Appendix Table 3: SM Bushing Technical Data Sheet

Table 1: Valve Stem Nut Connection (Type A Connection) Unit: mm

Model	SM(R)07-F10	SM(R)12-F10	SM(R)30-F14	SM(R)100-F16
			SM(R)50-F14	
Flange Interface (ISO 5210)	F10	F10	F14	F16
Max Torque (kN)	40	70	160	250
Φd_1	$\Phi 125$	$\Phi 125$	$\Phi 175$	$\Phi 210$
Φd_2	$\Phi 70$	$\Phi 70$	$\Phi 100$	$\Phi 130$
Φd_3	$\Phi 102$	$\Phi 102$	$\Phi 140$	$\Phi 165$
Φd_4	M10	M10	M16	M20
Φd_5 max	$\Phi 28$	$\Phi 40$	$\Phi 58$	$\Phi 75$
Φd_6	$\Phi 34$	$\Phi 42$	$\Phi 60$	$\Phi 80$
h	1	1	2	2
h1	3	3	4	5
h2	15	15	25	35
H	50	55	65	80
l	50	55	65	80
Z	4	4	4	4
β	90°	45°	45°	45°

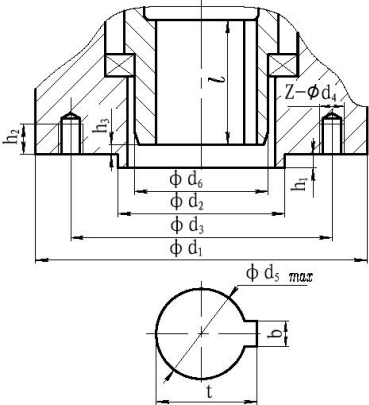
The actuator is connected to the valve stem via the drive nut of the Type A driver, while transmitting torque and withstanding a certain amount of axial thrust.

Table 2 Three-Jaw Connection (Type B Connection) Unit: mm

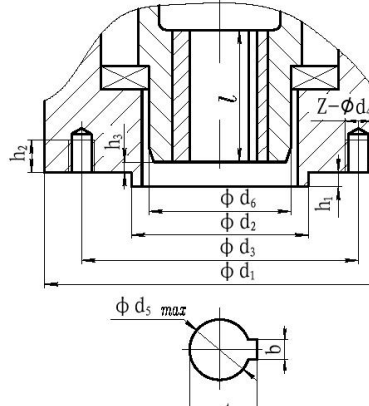
Model	SM(R)07-F10	SM(R)12-F10	SM(R)30-F14	SM(R)12-F10
			SM(R)50-F14	
Φd_1	$\Phi 125$	$\Phi 125$	$\Phi 175$	$\Phi 210$
Φd_2 H9	$\Phi 70$	$\Phi 70$	$\Phi 100$	$\Phi 130$
Φd_3	$\Phi 102$	$\Phi 102$	$\Phi 140$	$\Phi 165$
Φd_4	M10	M10	M16	M20
Φd_5 max	$\Phi 42$	$\Phi 42$	$\Phi 60$	$\Phi 80$
Φd_6	$\Phi 55$	$\Phi 55$	$\Phi 80$	$\Phi 105$
h1	3	3	4	5
h2	15	15	25	35
h3	2	2	3	4
h4	8	8	10	12
Z	4	4	4	4

The actuator main unit is only suitable for application scenarios where it transmits torque (and cannot withstand axial thrust). Therefore, it cannot be directly connected to valves that require axial thrust transmission. The main unit can be connected to two-stage reducers, Type A drivers (capable of withstanding axial thrust), and linear stroke drivers to drive the corresponding valves.

Appendix Table 3: SM Bushing Technical Data Sheet

	Table 3 Large Shaft Diameter Flat Key Connection (Type B1 Connection) Unit: mm			
	Model	SM(R)07-F10	SM(R)12-F10	SM(R)30-F14 SM(R)50-F14 SM(R)100-F16
$\Phi d1$	$\Phi 125$	$\Phi 125$	$\Phi 175$	$\Phi 210$
$\Phi d2 f8$	$\Phi 70$	$\Phi 70$	$\Phi 100$	$\Phi 130$
$\Phi d3$	$\Phi 102$	$\Phi 102$	$\Phi 140$	$\Phi 165$
$\Phi d4$	M10	M10	M16	M20
$\Phi d5 H9$	$\Phi 42$	$\Phi 42$	$\Phi 60$	$\Phi 80$
$\Phi d5 min$	Φ	Φ	Φ	Φ
$\Phi d6$	$\Phi 55$	$\Phi 55$	$\Phi 80$	$\Phi 105$
h1	3	3	4	5
h2	15	15	25	30
h3	1	1	2	3
t	45.3	45.3	64.4	85.4
b	12	12	18	22
Z	4	4	4	4
l	45	45	65	80

The flange dimensions for the connection between the actuator and the valve comply with the EN ISO5210 standard.

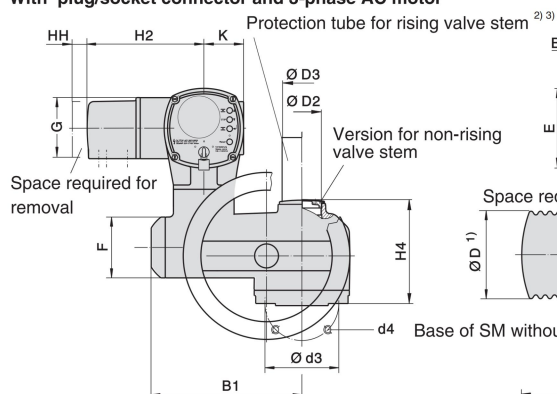
	Table 4 Small Shaft Diameter Flat Key Connection (Type B3 Connection) Unit: mm			
	Model	SM(R)07-F10	SM(R)12-F10	SM(R)30-F14 SM(R)50-F14 SM(R)100-F16
$\Phi d1$	$\Phi 125$	$\Phi 125$	$\Phi 175$	$\Phi 210$
$\Phi d2 f8$	$\Phi 70$	$\Phi 70$	$\Phi 100$	$\Phi 130$
$\Phi d3$	$\Phi 102$	$\Phi 102$	$\Phi 140$	$\Phi 165$
$\Phi d4$	M10	M10	M16	M20
$\Phi d5 H9$	$\Phi 20$	$\Phi 20$	$\Phi 30$	$\Phi 40$
$\Phi d5 max$	$\Phi 20$	$\Phi 28$	$\Phi 40$	$\Phi 55$
$\Phi d6$	$\Phi 55$	$\Phi 55$	$\Phi 80$	$\Phi 105$
h1	3	3	4	5
h2	15	15	25	30
h3	1	1	2	3
t	22.8	22.8	33.3	43.3
b	6	6	8	12
Z	4	4	4	4
l	45	45	65	80

The flange dimensions for the connection between the actuator and the valve comply with the EN ISO5210 standard.

When the actuator is connected to valves with smaller stem diameters or two-stage reducers with smaller input shaft diameters, the actuator and the connected components shall be connected via an intermediate transition sleeve. The maximum diameter of the connected components shall not exceed the value of $\Phi d5 max$ in the table.

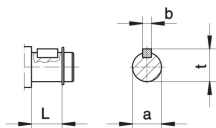
Appendix Table 4 SM Flange Data Sheet

With plug/socket connector and 3-phase AC motor

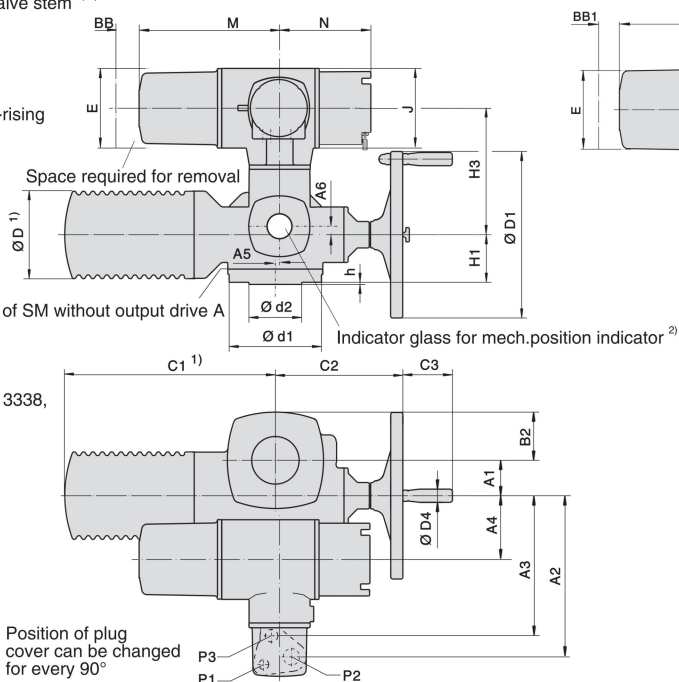
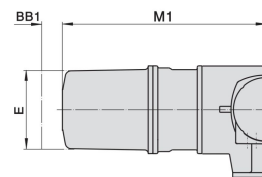


Output drives according to EN ISO 5210, DIN 3210, DIN 3338, dimensions see next page

Handwheel shaft



Version with thermal overload relay



1) Exact dimensions according to motor used

2) Only if ordered additionally

3) In steps of 100 mm length each

4) Standard, other threads on request

Dimensions	Multi-turn actuator type					
	SM04 / SC 01 SMR 04 / SC 01	SM07 / SC 01 SMR 07 / SC 01	SM12 / SC 01 SMR 12 / SC 01	SM30 / SC 01 SMR30 / SC 01	SM50 / SC 01 SMR50 / SC 01	SM100 / SC 01 SMR100 / SC 01
EN ISO 5210/DIN 3210	F07 (F10/G0)	F07 (F10/G0)	F10 (G0)	F14 (G1/2)	F14 (G1/2)	F16 (G3)
A1	40	40	50	67	67	80
A2	287	287	287	303	303	303
A3	247	247	247	263	263	263
A4	103	103	103	119	119	123.5
A5	—	—	—	8	8	15
A6	—	—	—	16	16	20
B1	238	238	248	286	286	303
B2	62	62	65	91	91	117
C1	265	265	283	389	389	430
C2	186	186	191	242	245	271
C3	63	63	63	94	94	94
ØD	101	101	121	153	153	190
ØD1	160	160	200	315	400	500
ØD2	G 1/2"	G 1/4"	G 2"	G 20	G 214"	G 3"
ØD3	42 x 3.3	42 x 3.3	60 x 3.7	76 x 3.7	76 x 3.7	89x4.1
ØD4	20	20	20	25	25	25
E	150	150	150	150	150	150
F	115	115	115	115	115	115
G	115	115	115	115	115	115
H1	78	78	80	90	90	110
H2	220	220	220	220	220	220
H3	225	225	225	241	241	245
H4	160	160	170	196	196	235
J	150	150	150	150	150	150
K	75	75	75	75	75	75
L	20	20	24	38.8	45.8	45.8
M	265	265	265	265	265	265
M1	349	349	349	349	349	349
N	173	173	173	173	173	173
P1 4)	M20 x 1.5	M20 x 1.5	M20 x 1.5	M20 x 1.5	M20 x 1.5	M20 x 1.5
P2 4)	M32 x 1.5	M32 x 1.5	M32 x 1.5	M32 x 1.5	M32 x 1.5	M32 x 1.5
P3 4)	M25 x 1.5	M25 x 1.5	M25 x 1.5	M25 x 1.5	M25 x 1.5	M25 x 1.5
BB min.	70	70	70	70	70	70
BB 1 min.	90	90	90	90	90	90
HH min.	30	30	30	30	30	30
a	20 d7	20 d7	20 d7	30 d7	30 d7	30 d7
b	6	6	6	8	8	8
Ød1	90 (125)	90 (125)	125	175	175	210
Ød2	55 (70/60)	55 (70/60)	70 (60)	100	100	130
Ød3	70 x (102)	70 x (102)	102	140	140	165
d4	4 x M8 (4 x M10)	4 x M8 (4 x M10)	4 x M10	4 x M16	4 x M16	4 x M20
h	3	3	3	4	4	5
t	22.5	22.5	22.5	33	33	33

We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document.

1/2

Issue 2.16

Appendix Table 5 Angular Stroke Direct Connection SMQR



SMQR05 – SMQR 300

Technical data Part-turn actuators for modulating duty with 3-phase AC motors

Intermittent duty S4 – 25%, 380 V/50 Hz

Part-turn actuator					Motor				
Type	Valve attachment EN ISO5211	Cylindrical max.mm	Operating time for 90° [in seconds]	Max. torque [Nm]	Nominal power ¹⁾ P _N [kW]	Nominal current ²⁾ I _N [A]	Max. current ³⁾ I _{max} [A]	Starting current I _A [A]	cos φ
SMQR05	F07	20	22	50	0.02	0.3	0.45	1.1	0.11
SMQR08	F07	20	22	80	0.02	0.3	0.45	1.1	0.11
SMQR10	F07	20	22	100	0.02	0.3	0.45	1.1	0.11
SMQR15	F10/F07	22	25	150	0.04	0.31	0.58	1.5	0.2
SMQR20	F10/F07	22	25	200	0.04	0.31	0.58	1.5	0.2
SMQR30	F12/F10	35	31	300	0.09	0.35	0.71	1.62	0.4
SMQR50	F12/F10	35	31	500	0.09	0.59	0.78	1.63	0.23
SMQR60	F12/F10	35	31	600	0.12	0.6	0.85	1.65	0.31
SMQR80	F14/F12	45	37	800	0.18	0.85	1.45	2.93	0.32
SMQR120	F14	45	37	1200	0.18	0.87	1.55	2.98	0.31
SMQR150	F14	45	93	1500	0.18	0.85	1.45	2.93	0.32
SMQR200	F14	45	112	2000	0.18	0.85	1.45	2.93	0.32
SMQR300	F14	45	112	3000	0.18	0.87	1.55	2.98	0.31

Notes on table

- 1) Nominal power P_N Mechanical power output at motor shaft at running torque of multi-turn actuator (corresponds to approx. 35 % of maximum torque). Consumed electrical power can be calculated using the following formula:

$$P = U \times I \times \cos \phi \times \sqrt{3}$$
- 2) Nominal current I_N Current at running torque.
- 3) Max. current I_{max} Current at maximum torque

We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document.

Appendix Table 5 Angular Stroke Direct Connection SMQR



SMQR05 – SMQR 300

Technical data Part-turn actuators for modulating duty with 1-phase AC motors

Intermittent duty S4 – 25%, 220 V/50 Hz

Part-turn actuator					Motor				
Type	Valve attachment EN ISO5211	Cylindrical max.mm	Operating time for 90° [in seconds]	Max. torque [Nm]	Nominal power ¹⁾ P _N [kW]	Nominal current ²⁾ I _N [A]	Max. current ³⁾ I _{max} [A]	Starting current I _A [A]	cos φ
SMQR05	F07	20	22	50	0.02	0.54	0.76	2.12	0.17
SMQR08	F07	20	22	80	0.02	0.54	0.76	2.12	0.17
SMQR10	F07	20	22	100	0.02	0.54	0.76	2.12	0.17
SMQR15	F10/F07	22	25	150	0.04	0.84	1.18	3.29	0.22
SMQR20	F10/F07	22	25	200	0.04	0.85	1.19	3.33	0.21
SMQR30	F12/F10	35	31	300	0.09	0.92	1.29	3.61	0.44
SMQR50	F12/F10	35	31	500	0.09	1.58	2.21	6.19	0.26
SMQR60	F12/F10	35	31	600	0.12	2.20	3.08	8.62	0.25
SMQR80	F14/F12	45	37	800	0.18	2.20	3.08	8.62	0.37
SMQR120	F14	45	37	1200	0.18	2.30	3.22	9.02	0.36
SMQR150	F14	45	93	1500	0.18	2.20	3.08	8.62	0.37
SMQR200	F14	45	112	2000	0.18	2.20	3.08	8.62	0.37
SMQR300	F14	45	112	3000	0.18	2.30	3.22	9.02	0.36

Notes on table

- 1) Nominal power P_N Mechanical power output at motor shaft at running torque of multi-turn actuator (corresponds to approx. 35 % of maximum torque). Consumed electrical power can be calculated using the following formula:

$$P = U \times I \times \cos \phi$$
- 2) Nominal current I_N Current at running torque.
- 3) Max. current I_{max} Current at maximum torque

We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document.

Appendix Table 6 Angular Stroke SM+GW Combination

Technical data Part-turn gearboxes and primary reduction gearings, version with worm wheel made of spheroidal castiron													GW 60 – GW(S)600 GW(S)1080 – GW(S)3900 Spheroidal castiron						
Application																			
Manual operation and motor operation of valves (e.g. butterfly valves and ball valves). For special applications, please consult kiket																			
Worm gearboxes GW60 – GW 600 with primary reduction gearings GWS																			
Valve						Gearboxes													
Max.	Valve		Gearbox/ prim. red. gearing	Reduction ratio	Turns for 90°	Factor	Input Shaft ²⁾	Max. input Torques ³⁾	Weight ⁴⁾										
permissible	attachment																		
valve torque ¹⁾	Flange	Max.																	
	acc. to	shaft																	
in Nm	EN ISO	diameter																	
up to	5211	in mm								mm	in Nm	kg							
600	F10 ⁵⁾ F12	45	GW60	51:1	12.75	15.3	20	70	13										
1600	F12 ⁵⁾ F14	60	GW160	53:1	13.25	15.9	20	120	18										
			GWS160	106:1	26.5	31.8			18										
2700	F14 ⁵⁾ F16	80	GWS270	GW270	60:1	15	18	20	120	47									
					120:1	30	36			65									
					144:1	36	43.2			65									
					168:1	42	50.4			65									
					180:1	45	54			65									
					240:1	60	72			65									
					300:1	75	90			65									
															66				
6000	F16 ⁵⁾ F25	90	GWS600	GW600	60:1	15	18	20/30	300	84									
					90:1	22.5	27			84									
					102:1	25.5	30.6			84									
					120:1	30	36			84									
					156:1	39	46.8			84									
					180:1	45	54			84									
					204:1	51	61.2			84									
					240:1	60	72			84									
									84										
Possible combinations with multi-turn actuators													Multi-turn actuator Actuator for max. input torque	Flange ²⁾ for mounting of multi-turn actuator		Max. Weight ⁷⁾	GW/GWS+SM+SC max. kg		
Gearboxes/ prim. red gearing	Operating times for 50 Hz ⁶⁾ in seconds for 90° at actuator speed in rpm																		
	9	11	18	22	35	45	70	90	105	135	140	180							
GW60	–	70	–	35	–	17	–	–	–	–	–	–	–	SM04 SM07	F07	–	38		
	–	70	–	35	–	17	–	–	–	–	–	–			F10	G0	41		
GW160	89	73	45	37	23	18	–	–	–	–	–	–	–	SM07 SM12	F10	G0	46		
GWS160	177	145	89	73	45	36	23	18	–	–	–	–							50
GW270	100	82	49	41	26	20	–	–	–	–	–	–	–				79		
GWS270	200	164	98	82	52	40	26	20	–	–	–	–	–	SM07 SM12	F10	G0	94		
	240	197	118	99	63	48	31	24	21	16	–	–	99						
	280	230	138	115	73	56	36	28	24	19	–	–							
	300	246	147	123	78	60	39	30	26	20	19	15 ⁸⁾							
	400	328	196	164	104	80	52	40	35	27	26	20 ⁸⁾							
	500	410	245	205	130	100	65	50	43	34	33	25 ⁸⁾							
GW600	100	82	49	41	26	20	–	–	–	–	–	–	–	SM07 SM12 SM30	F10 F14	G0 G1/2	122		
GWS600	150	123	75	62	39	30	20	15	–	–	–	–							
	170	140	84	70	45	34	22	17	–	–	–	–							
	200	164	98	82	52	40	26	20	–	–	–	–							
	260	214	128	107	68	52	34	26	23	18	–	–	212						
	300	246	147	123	78	60	39	30	26	20	19	15 ⁸⁾	217						
	342	281	168	141	89	69	44	34	30	23	22	17 ⁸⁾	140						
	400	328	196	164	104	80	52	40	35	27	26	20 ⁸⁾							
		500	410	245	205	130	100	65	50	43	34	33	25 ⁸⁾						
1) For ball valve applications, sizing up to 80 % of the maximum permissible valve torque 2) Depending on the required input torque 3) In new condition approx. 15 % higher input torque required 4) With coupling (without bore) and grease filling in the gear housing 5) Observe the maximum torques of the mounting flanges in accordance with EN ISO 5211 6) Standard values at 50 Hz; at 60 Hz, the indicated operating time is reduced by 17 %. 7) With coupling (without bore) and grease filling in the gear housing, multi-turn actuator kiket with 3-phase AC motor, standard electrical connection, output drive type B3 and handwheel 8) Observe max. output torque of the multi-turn actuator																			
We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document																			
													www.kiket-tech.com				Issue 1.1 X000 265/001/en		1/5

1) For ball valve applications, sizing up to 80 % of the maximum permissible valve torque

2) Depending on the required input torque

3) In new condition approx. 15 % higher input torque required

4) With coupling (without bore) and grease filling in the gear housing

5) Observe the maximum torques of the mounting flanges in accordance with EN ISO 5211

6) Standard values at 50 Hz; at 60 Hz, the indicated operating time is reduced by 17 %

7) With coupling (without bore) and grease filling in the gear housing, multi-turn actuator kiket with 3-phase AC motor, standard electrical connection, output drive type B3 and handwheel

8) Observe max. output torque of the multi-turn actuator

We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document



www.kiket-tech.com

Issue

1.1

Y000.265/001/en

1/5

Appendix Table 6 Angular Stroke SM+GW Combination

Technical data Part-turn gearboxes and primary reduction gearings, version with worm wheel made of spheroidal castiron							GW 60 – GW(S)600 GW(S)1080 – GW(S)3900 Spheroidal castiron								
Application															
Manual operation and motor operation of valves (e.g. butterfly valves and ball valves). For special applications, please consult kiket															
Worm gearboxes GW60 – GW 600 with primary reduction gearings GWS															
Valve			Gearboxes												
Max.	Valve		Gearbox/ prim. red. gearing	Reduction ratio	Turns for 90°	Factor	Input Shaft ²⁾	Max. input Torques ³⁾	Weight ⁴⁾						
permissible	attachment														
valve torque ¹⁾	Flange	Max.													
	acc. to	shaft													
	EN ISO	diameter													
in Nm	5211	in mm					mm	in Nm	GW/GWS kg						
10800	F25 ⁵⁾ F30	100	GW1080	60:1	15	18	20/30	500	121						
			GWS1080	90:1	22.5	27			151						
				102:1	25.5	30.6			151						
				120:1	30	36			151						
				156:1	39	46.8			151						
				180:1	45	54			151						
				204:1	51	61.2			151						
				240:1	60	72			151						
				300:1	75	90			151						
				360:1	90	108			151						
				420:1	105	126			151						
				19500	F30 ⁵⁾ F35	125			GW1950	55:1	13.75	17.6	20/30/40	1000	197
									GWS1950	83:1	20.75	26.56			255
110:1	27.5	35.2	255												
132:1	33	42.24	255												
165:1	41.25	52.8	255												
187:1	46.75	59.84	255												
220:1	55	70.4	255												
275:1	68.75	88	255												
330:1	82.5	105.6	255												
385:1	96.25	123.2	255												
440:1	110	140.8	255												
480:1	120	153.6	255												
550:1	137.5	176	255												
638:1	159.5	204.16	255												
688:1	172	220.16	255												
748:1	187	239.36	255												
811:1	202.75	259.52	255												
880:1	220	281.6	255												
39000	F35 ⁵⁾ F40	160	GW3900				55:1	13.75		17.6	20/30/40	1000			288
			GWS3900	83:1	20.75	26.56	368								
				110:1	27.5	35.2	368								
				132:1	33	42.24	368								
				165:1	41.25	52.8	368								
				187:1	46.75	59.84	368								
				220:1	55	70.4	368								
				275:1	68.75	88	368								
				330:1	82.5	105.6	368								
				385:1	96.25	123.2	368								
				440:1	110	140.8	368								
				480:1	120	153.6	368								
				550:1	137.5	176	368								
				638:1	159.5	204.16	368								
				688:1	172	220.16	368								
				748:1	187	239.36	368								
				811:1	202.75	259.52	368								
				880:1	220	281.6	368								

1) For ball valve applications, sizing up to 80 % of the maximum permissible valve torque

2) Depending on the required input torque

3) In new condition approx. 15 % higher input torque required

4) With coupling (without bore) and grease filling in the gear housing

5) Observe the maximum torques of the mounting flanges in accordance with EN ISO 5211



www.kiket-tech.com

Issue

1.1
Y000.265/001/en

2/5

Appendix Table 6 Angular Stroke SM+GW Combination

Technical data Part-turn gearboxes and primary reduction gearings, version with worm wheel made of spheroidal castiron													GW 60 – GW(S)600 GW(S)1080 – GW(S)3900 Spheroidal castiron			
	Possible combinations with multi-turn actuators												Multi-turn actuator Actuator for max. input torque	Flange ³⁾ for mounting of multi-turn actuator		Max. Weight ¹⁾
Gearboxes/ prim. red gearing	Operating times for 50 Hz ²⁾ in seconds for 90° at actuator speed in rpm													EN ISO 5210	DIN 3210	GW/GWS+SM+SC max. kg
	9	11	18	22	35	45	70	90	105	135	140	180				
GW1080	100	82	49	41	26	20	–	–	–	–	–	–	SM07 SM12	F10	G0	153
GWS1080	150	123	75	62	39	30	20	15	–	–	–	–				
	170	140	84	70	45	34	22	17	–	–	–	–				
	200	164	98	82	52	40	26	20	–	–	–	–				
	260	214	128	107	68	52	34	26	23	18	–	–				179
	300	246	147	123	78	60	39	30	26	20	19	–				183
	342	281	168	141	89	69	44	34	30	23	22	17 ⁸⁾				
	400	328	196	164	104	80	52	40	35	27	26	20 ⁸⁾				
	500	410	245	205	130	100	65	50	43	34	33	25 ⁸⁾				
	600	491	300	246	155	120	78	60	52	40	39	30 ⁸⁾				
–	573	350	286	180	140	90	70	60	47	45	35 ⁸⁾					
GW1950	92	75	46	38	24	19	–	–	–	–	–	–	SM07 SM12 SM30 SM50	F10 F14	G0 G1/2	258
GWS1950	139	114	70	57	36	28	18	–	–	–	–	–				
	184	150	92	75	48	37	24	19	–	–	–	–				
	220	180	110	90	57	44	29	22	19	–	–	–				
	275	225	138	113	71	55	36	28	24	19	–	–				
	312	255	156	128	81	63	41	32	27	21	20	–				
	367	300	184	150	95	74	48	37	32	25	24	19 ⁸⁾				
	459	375	230	188	118	92	59	46	40	31	30	23 ⁸⁾				283
	550	450	275	225	142	110	71	55	48	37	36	28 ⁸⁾				288
	642	525	321	263	165	129	83	65	55	43	42	33 ⁸⁾				311
	–	600	367	300	189	147	95	74	63	49	48	37 ⁸⁾				316
	–	–	400	328	206	160	103	80	69	54	53	40 ⁸⁾				
	–	–	459	375	236	184	118	92	79	62	59	46 ⁸⁾				
	–	–	532	435	274	213	137	107	92	71	69	54 ⁸⁾				
	–	–	574	470	295	230	148	115	99	77	74	58 ⁸⁾				
	–	–	624	510	321	249	161	125	107	84	81	63 ⁸⁾				
	–	–	–	553	348	271	174	136	116	91	87	68 ⁸⁾				
	–	–	–	600	378	294	189	147	126	98	95	74 ⁸⁾				
GW3900	92	75	46	38	24	19	–	–	–	–	–	–	SM07 SM12 SM30 SM50 SM100	F10 F14 F16	G0 G1/2 G3	376
GWS3900	139	114	70	57	36	28	18	–	–	–	–	–				
	184	150	92	75	48	37	24	19	–	–	–	–				
	220	180	110	90	57	44	29	22	19	–	–	–				
	275	225	138	113	71	55	36	28	24	19	–	–				
	312	255	156	128	81	63	41	32	27	21	20	–				
	367	300	184	150	95	74	48	37	32	25	24	19 ⁸⁾				396
	459	375	230	188	118	92	59	46	40	31	30	23 ⁸⁾				400
	550	450	275	225	142	110	71	55	48	37	36	28 ⁸⁾				412
	642	525	321	263	165	129	83	65	55	43	42	33 ⁸⁾				417
	–	600	367	300	189	147	95	74	63	49	48	37 ⁸⁾				434
	–	–	400	328	206	160	103	80	69	54	53	40 ⁸⁾				
	–	–	459	375	236	184	118	92	79	62	59	46 ⁸⁾				
	–	–	532	435	274	213	137	107	92	71	69	54 ⁸⁾				
	–	–	574	470	295	230	148	115	99	77	74	58 ⁸⁾				
	–	–	624	510	321	249	161	125	107	84	81	63 ⁸⁾				
	–	–	–	553	348	271	174	136	116	91	87	68 ⁸⁾				
	–	–	–	600	378	294	189	147	126	98	95	74 ⁸⁾				

1) For ball valve applications, sizing up to 80 % of the maximum permissible valve torque

2) Depending on the required input torque

3) In new condition approx. 15 % higher input torque required

4) With coupling (without bore) and grease filling in the gear housing

5) Observe the maximum torques of the mounting flanges in accordance with EN ISO 5211

6) Standard values at 50 Hz; at 60 Hz, the indicated operating time is reduced by 17 %.

7) With coupling (without bore) and grease filling in the gear housing, multi-turn actuator kikit with 3-phase AC motor, standard electrical connection, output drive type B3 and handwheel

8) Observe max. output torque of the multi-turn actuator

- 1) For ball valve applications, sizing up to 80 % of the maximum permissible valve torque
2) Depending on the required input torque
3) In new condition approx. 15 % higher input torque required
4) With coupling (without bore) and grease filling in the gear housing
5) Observe the maximum torques of the mounting flanges in accordance with EN ISO 5211
6) Standard values at 50 Hz; at 60 Hz, the indicated operating time is reduced by 17 %
7) With coupling (without bore) and grease filling in the gear housing, multi-turn actuator kikit with 3-phase AC motor, standard electrical connection, output drive type B3 and handwheel
8) Observe max. output torque of the multi-turn actuator

We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document

		www.kiket-tech.com	Issue 1.1 Y000.265/001/en	3/5



SML03 – SML30

Electrical data Straight stroke actuators for open-close duty with 3-phase AC motors

Short-time duty S2 - 15 min, 380V/50 Hz

Straight stroke actuator				Motor							
Type	Output speed [mm/ s]	Max. torque [kN]	Stroke Max. mm	Motor type	Nominal power ¹ P _N [kW]	Nominal current ²⁾ I _N [A]	Max. current ³⁾ I _{max} [A]	Starting current I _A [A]	cos φ	kiket power class switchgears	
										Contactor	Thyristor
SML03	0.75	3	25	MD03-0.015	0.015	0.09	0.12	0.36	0.51	C1	T1
	1.0			MD03-0.03	0.03	0.11	0.14	0.42	0.82	C1	T1
	1.5			MD03-0.03	0.03	0.11	0.16	0.48	0.82	C1	T1
SML05	0.75	5	40	MD05-0.02	0.02	0.12	0.07	0.21	0.5	C1	T1
	1.0			MD05-0.045	0.045	0.16	0.21	0.63	0.85	C1	T1
	1.5			MD05-0.045	0.045	0.16	0.24	0.72	0.85	C1	T1
SML08	0.75	8	60	MD08-0.04	0.04	0.18	0.23	0.69	0.67	C1	T1
	1.0			MD08-0.06	0.06	0.23	0.31	0.93	0.79	C1	T1
	1.5			MD08-0.06	0.06	0.23	0.35	1.05	0.79	C1	T1
SML10	0.75	10	60	MD10-0.04	0.04	0.33	0.43	1.29	0.37	C1	T1
	1.0			MD10-0.09	0.09	0.41	0.53	1.59	0.66	C1	T1
	1.5			MD10-0.09	0.09	0.41	62	186	0.66	C1	T1
SML16	0.75	16	60	MD16-0.06	0.06	0.36	0.47	1.41	0.51	C1	T1
	1.0			MD16-0.09	0.09	0.45	0.49	1.47	0.61	C1	T1
	1.5			MD16-0.09	0.09	0.45	0.59	1.77	0.61	C1	T1
SML20	0.75	20	60	MD20-0.06	0.09	0.39	0.51	1.53	0.7	C1	T1
	1.0			MD20-0.09	0.09	0.49	0.64	1.92	0.55	C1	T1
	1.5			MD20-0.09	0.09	0.49	0.74	2.22	0.55	C1	T1
SML25	0.75	25	100	MD25-0.09	0.09	0.42	0.55	1.65	0.65	C1	T1
	1.0			MD25-0.12	0.12	0.52	0.68	2.04	0.7	C1	T1
	1.5			MD25-0.12	0.12	0.52	0.82	2.46	0.7	C1	T1
SML30	0.75	30	100	MD30-0.09	0.09	0.49	0.64	1.92	0.55	C1	T1
	1.0			MD30-0.12	0.12	0.58	0.81	2.43	0.62	C1	T1
	1.5			MD30-0.12	0.12	0.58	0.92	2.76	0.62	C1	T1

SMLR 03 – SMLR 30

Electrical data Straight stroke actuators for Modulating duty with 3-phase AC motors

Intermittent duty S4-25%, 380V/50 Hz



Straight stroke actuator				Motor							
Type	Output speed [mm/ s]	Max. torque [kN]	Stroke Max. mm	Motor type	Nominal power ¹ P _N [kW]	Nominal current ²⁾ I _N [A]	Max. current ³⁾ I _{max} [A]	Starting current I _A [A]	cos φ	kiket power class switchgears	
										Contactor	Thyristor
SMLR03	0.75	3	25	MD03-0.015	0.015	0.09	0.12	0.36	0.51	C1	T1
	1.0			MD03-0.03	0.03	0.11	0.14	0.42	0.82	C1	T1
	1.5			MD03-0.03	0.03	0.11	0.16	0.48	0.82	C1	T1
SMLR05	0.75	5	40	MD05-0.02	0.02	0.12	0.07	0.21	0.5	C1	T1
	1.0			MD05-0.045	0.045	0.16	0.21	0.63	0.85	C1	T1
	1.5			MD05-0.045	0.045	0.16	0.24	0.72	0.85	C1	T1
SMLR08	0.75	8	60	MD08-0.04	0.04	0.18	0.23	0.69	0.67	C1	T1
	1.0			MD08-0.06	0.06	0.23	0.31	0.93	0.79	C1	T1
	1.5			MD08-0.06	0.06	0.23	0.35	1.05	0.79	C1	T1
SMLR10	0.75	10	60	MD10-0.04	0.04	0.33	0.43	1.29	0.37	C1	T1
	1.0			MD10-0.09	0.09	0.41	0.53	1.59	0.66	C1	T1
	1.5			MD10-0.09	0.09	0.41	62	186	0.66	C1	T1
SMLR16	0.75	16	60	MD16-0.06	0.06	0.36	0.47	1.41	0.51	C1	T1
	1.0			MD16-0.09	0.09	0.45	0.49	1.47	0.61	C1	T1
	1.5			MD16-0.09	0.09	0.45	0.59	1.77	0.61	C1	T1
SMLR20	0.75	20	60	MD20-0.06	0.09	0.39	0.51	1.53	0.7	C1	T1
	1.0			MD20-0.09	0.09	0.49	0.64	1.92	0.55	C1	T1
	1.5			MD20-0.09	0.09	0.49	0.74	2.22	0.55	C1	T1
SMLR25	0.75	25	100	MD25-0.09	0.09	0.42	0.55	1.65	0.65	C1	T1
	1.0			MD25-0.12	0.12	0.52	0.68	2.04	0.7	C1	T1
	1.5			MD25-0.12	0.12	0.52	0.82	2.46	0.7	C1	T1
SMLR30	0.75	30	100	MD30-0.09	0.09	0.49	0.64	1.92	0.55	C1	T1
	1.0			MD30-0.12	0.12	0.58	0.81	2.43	0.62	C1	T1
	1.5			MD30-0.12	0.12	0.58	0.92	2.76	0.62	C1	T1

SML 03 – SML 30

Electrical data Straight stroke actuators for open-close duty with 1-phase AC motors

Short-time duty S2 - 15 min, 220V-240V/50 Hz



Straight stroke actuator				Motor							
Type	Output speed [mm/ s]	Max. torque [kN]	Stroke Max. mm	Motor type	Nominal power ¹ P _N [kW]	Nominal current ² I _N [A]	Max. current ³ I _{max} [A]	Starting current I _A [A]	cos φ	kiket power class switchgears	
SML03	0.75	3	25	MS03-0.02	0.02	0.28	0.38	0.87	0.32	C1	T1
	1.0			MS03-0.03	0.03	0.31	0.42	0.96	0.44	C1	T1
	1.5			MS03-0.03	0.03	0.31	0.42	0.96	0.44	C1	T1
SML05	0.75	5	40	MS05-0.025	0.025	0.39	0.53	1.21	0.29	C1	T1
	1.0			MS05-0.045	0.045	0.42	0.57	1.30	0.49	C1	T1
	1.5			MS05-0.045	0.045	0.42	0.57	1.30	0.49	C1	T1
SML08	0.75	8	60	MS08-0.04	0.04	0.57	0.77	1.77	0.32	C1	T1
	1.0			MS08-0.06	0.06	0.62	0.84	1.93	0.44	C1	T1
	1.5			MS08-0.06	0.06	0.62	0.84	1.93	0.44	C1	T1
SML10	0.75	10	60	MS10-0.06	0.06	0.73	0.99	2.27	0.37	C1	T1
	1.0			MS10-0.09	0.09	0.82	1.11	2.55	0.50	C1	T1
	1.5			MS10-0.09	0.09	0.82	1.11	2.55	0.50	C1	T1
SML16	0.75	16	60	MS16-0.06	0.06	0.69	0.93	2.14	0.40	C1	T1
	1.0			MS16-0.09	0.09	0.85	1.15	2.64	0.48	C1	T1
	1.5			MS16-0.09	0.09	0.85	1.15	2.64	0.48	C1	T1
SML20	0.75	20	60	MS20-0.06	0.06	0.72	0.97	2.24	0.38	C1	T1
	1.0			MS20-0.09	0.09	0.87	1.17	2.70	0.47	C1	T1
	1.5			MS20-0.09	0.09	0.87	1.17	2.70	0.47	C1	T1
SML25	0.75	25	100	MS25-0.09	0.09	1.09	1.47	3.38	0.38	C1	T1
	1.0			MS25-0.12	0.12	1.22	1.65	3.79	0.45	C1	T1
	1.5			MS25-0.12	0.12	1.22	1.65	3.79	0.45	C1	T1
SML30	0.75	30	100	MS30-0.09	0.09	1.16	1.57	3.6	0.35	C1	T1
	1.0			MS30-0.12	0.12	1.28	1.73	3.97	0.43	C1	T1
	1.5			MS30-0.12	0.12	1.28	1.73	3.97	0.43	C1	T1

SMLR 03 – SMLR 30

Electrical data Straight stroke actuators for Modulating duty with 1-phase AC motors

Intermittent S4 – 25%, 220V-240V/50 Hz



Straight stroke actuator				Motor							
Type	Output speed [mm/ s]	Max. torque [kN]	Stroke Max. mm	Motor type	Nominal power ¹ P _N [kW]	Nominal current ² I _N [A]	Max. current ³ I _{max} [A]	Starting current I _A [A]	cos φ	kiket power class switchgears	
SMLR03	0.75	3	25	MS03-0.02	0.02	0.28	0.38	0.87	0.32	C1	T1
	1.0			MS03-0.03	0.03	0.31	0.42	0.96	0.44	C1	T1
	1.5			MS03-0.03	0.03	0.31	0.42	0.96	0.44	C1	T1
SMLR05	0.75	5	40	MS05-0.025	0.025	0.39	0.53	1.21	0.29	C1	T1
	1.0			MS05-0.045	0.045	0.42	0.57	1.30	0.49	C1	T1
	1.5			MS05-0.045	0.045	0.42	0.57	1.30	0.49	C1	T1
SMLR08	0.75	8	60	MS08-0.04	0.04	0.57	0.77	1.77	0.32	C1	T1
	1.0			MS08-0.06	0.06	0.62	0.84	1.93	0.44	C1	T1
	1.5			MS08-0.06	0.06	0.62	0.84	1.93	0.44	C1	T1
SMLR10	0.75	10	60	MS10-0.06	0.06	0.73	0.99	2.27	0.37	C1	T1
	1.0			MS10-0.09	0.09	0.82	1.11	2.55	0.50	C1	T1
	1.5			MS10-0.09	0.09	0.82	1.11	2.55	0.50	C1	T1
SMLR16	0.75	16	60	MS16-0.06	0.06	0.69	0.93	2.14	0.40	C1	T1
	1.0			MS16-0.09	0.09	0.85	1.15	2.64	0.48	C1	T1
	1.5			MS16-0.09	0.09	0.85	1.15	2.64	0.48	C1	T1
SMLR20	0.75	20	60	MS20-0.06	0.06	0.72	0.97	2.24	0.38	C1	T1
	1.0			MS20-0.09	0.09	0.87	1.17	2.70	0.47	C1	T1
	1.5			MS20-0.09	0.09	0.87	1.17	2.70	0.47	C1	T1
SMLR25	0.75	25	100	MS25-0.09	0.09	1.09	1.47	3.38	0.38	C1	T1
	1.0			MS25-0.12	0.12	1.22	1.65	3.79	0.45	C1	T1
	1.5			MS25-0.12	0.12	1.22	1.65	3.79	0.45	C1	T1
SMLR30	0.75	30	100	MS30-0.09	0.09	1.16	1.57	3.6	0.35	C1	T1
	1.0			MS30-0.12	0.12	1.28	1.73	3.97	0.43	C1	T1
	1.5			MS30-0.12	0.12	1.28	1.73	3.97	0.43	C1	T1

Appendix Table 8 Linear Stroke SM+LT Combination

Technical data kiketlinear thrust unit for Modulating duty						LT 12 – LT 230 with SMR 04 – SMR 100				
kiketlinear thrust units LT 12 – LT 230 attached to multi-turn actuators SMR 04 – SMR 100 are used for valves requiring linear travel. The thrust units convert the output torque of the multi-turn actuator into an axial thrust.										
Suitable multi-turn actuator		Thrust ¹⁾	Linear thrust unit	Speed	Valve mounting flange	Stem thread	Factor ²⁾	Stroke	Thrust at stall torque	Weight ³⁾
Type	1/min	F max. kN	Type	mm/min	DIN 3358		f	max. mm	F max. kN	ca. kg
SMR 04	11	12	LT12	55	F 10	26 x 5 LH	2.8	50	24	8
	22			110				100		9
	45			225				200		10
	90			450				400		13
SMR 07	11	25	LT25	55	F 10	26 x 5 LH	2.8	50	46	8
	22			110				100		9
	45			225				200		10
	90			450				400		13
SMR 12	9	40	LT40	54	F 10	32 x 6 LH	3.0	63	64	10
	18			108				125		12
	35			210				250		15
	70			420				400		18
SMR 30	9	70	LT70	63	F 14	40 x 7 LH	4.0	80	100	23
	18			126				160		26
	35			245				320		32
	70			490				400		35
SMR 50	9	140	LT140	63	F 14	40 x 7 LH	4.0	80	197	23
	18			126				160		26
	35			245				320		32
	70			490				400		35
SMR 100	9	230	LT230	72	F 16	48 x 8 LH	4.4	100	318	45
	18			144				200		50
	35			280				400		62
	70			560				500		68
Weight of base			LT12	LT25	LT40	LT70		LT140		LT230
			11				40			
Technical data for multi-turn actuators refer to sheet «Technical/Electrical Data SMR 04 – SMR 100», latest issue.										
1) at min. / max. setting of torque switching at actuator, tolerance 20 %										
2) Conversion factor f for torque (T in Nm) to thrust (F in kN) at average coefficient of friction 0,15 (T = F x f)										
3) without multi-turn actuator and base										
We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.										
 www.kiket-tech.com						Issue		1.1 Y000.275/011/en		



SM-SC+GWS Combination



SM-SC+GWF Combination



SM-SC+LT Combination



SM-SC+GB Combination

SHANGHAI KAIKAI TECHNOLOGY DEVELOPMENT CO.,LTD

Address: No. 499, Kanghua Road, Pudong New Area, Shanghai

Tel: +86-21-61640516 Mobil: +86-13701864977

Website: www.kiket-tech.com

Email: shkkjd@sina.com, mailbox@jickee.com, info@kiket-tech.com