

# INOX - IVR 144 L - IVR 145 T



Valvola a sfera in acciaio inox AISI 316 tre vie passaggio ridotto - Sfera forata L (IVR 144) - Sfera forata T (IVR145) - Attacchi F/F/F - Flangia ISO 5211

Impieghi: impianti industriali, chimici ed alimentari.

Three ways reduced bore ball valve in stainless steel AISI 316 - Bored ball as L (IVR144) - Bored ball as T (IVR145) - threaded ends F/F/F - ISO 5211 flange

Application: industrial, chemical and food plants.

3-Wege-Kugelhahn aus Edenstahl AISI 316 mit reduziertem Durchgang, Kugel mit L-Bohrung (IVR 144) – Kugel mit T-Bohrung (IVR 145) – alle Anschlüsse mit Innengewinde – Flansch ISO 5211

Anwendung: Industrie-Lebensmittel-und chemischen Anlagen.

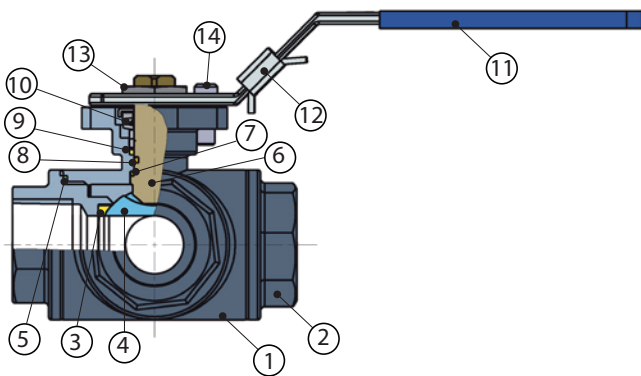
Vanne à boisseau sphérique en acier inox AISI 316 trois voies passage réduit – Sphère percée en L (IVR144) - Sphère percée en T (IVR145) - Fixations F/F/F – Bride ISO 5211

Application: Installations industrielles, chimiques et alimentaires.

Трёхходовой шаровой кран из нержавеющей стали AISI 316 с редуцированным проходом – L\_образный шар (IVR 144) - T\_образный шар (IVR 145).

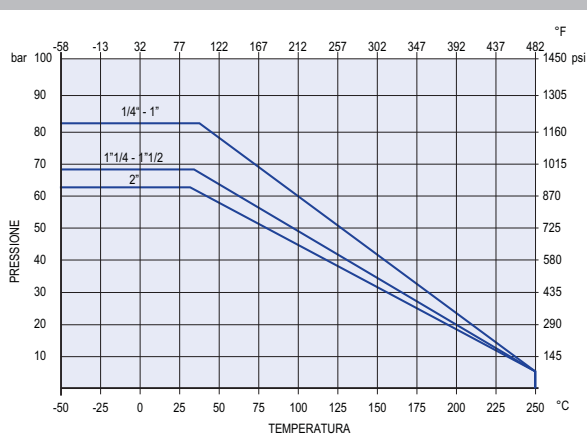
Резьбовые соединения В - В- В - Фланец ISO 5211 .

Сфера применения: индустриальные системы, химическая и пищевая промышленность.



N	DENOMINAZIONE PART NAME	MATERIALE MATERIAL	TRATTAMENTO TREATMENT
1	Corpo - Body	AISI 316	
2	Manicotto - Body end	AISI 316	
3	Seggio - Seat	PPL	
4	Sfera - Ball	AISI 316	
5	Guarnizione - Gasket	PPL	
6	Asta - Stem	AISI 316	
7	Guarnizione - Gasket	PPL	
8	O-Ring - O-Ring	FP	
9	Guarnizione asta - Stem packing	PPL	
10	Premistoppa - Packing nut	AISI 316	
11	Maniglia - Handle	AISI 304	Rivest. PVC - Plastic coated
12	Bloccaggio - Locking	AISI 304	
13	Dado - Nut	AISI 304	
14	Fermo - Stop pin	AISI 304	

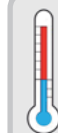
PRESSIONE / TEMPERATURA - PRESSURE / TEMPERATURE



Size



1/4" - 1" 83 bar  
1 1/4" - 1 1/2" 69 bar  
2" 63 bar



Max +250° C  
Min -50 C

Estremità filettate  
UNI EN 10226-1

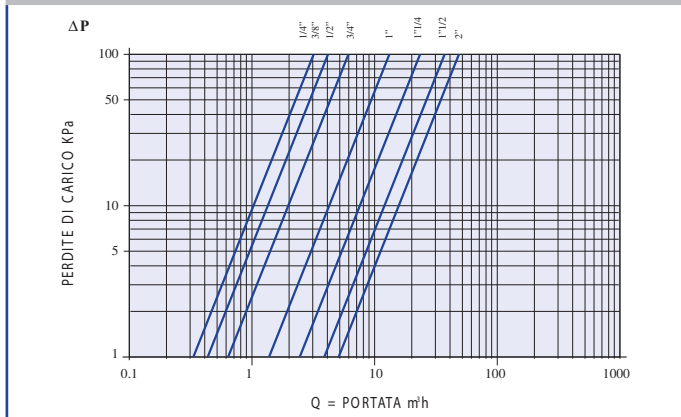
Asta anticoppio  
Anti blow-out stem



Ed. 03/19

Tutte le caratteristiche tecniche dei prodotti sono soggette a modifiche senza preavviso - All product's technical specifications are subject to modification without prior notice

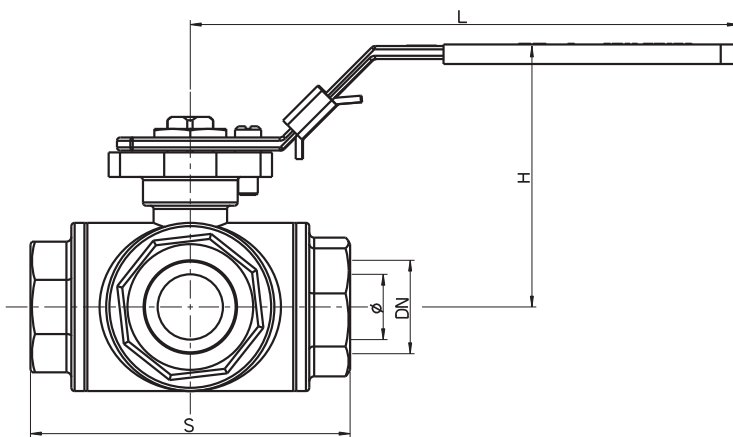
## PERDITE DI CARICO - FLOW AND PRESSURE DROPS



Misura - Size	KV
1/4" - 9.5	3
3/8" - 11	3
1/2" - 12	4
3/4" - 15	6
1" - 20	12
1 1/4" - 25	21
1 1/2" - 32	35
2" - 40	47

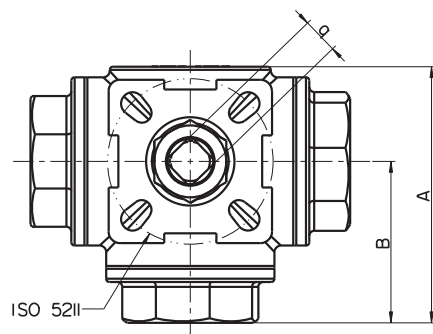
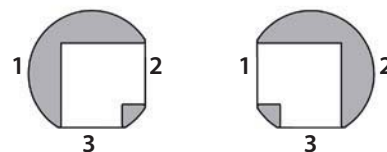
## DIMENSIONI - DIMENSIONS (mm)

DN	Ø	S	H	L	A	B	ISO 5211	q
1/4"	9.5	75	66	130	57.5	37.5	F03/F04	9
3/8"	11	75	66	130	57.5	37.5	F03/F04	9
1/2"	12	75	66	130	57.5	37.5	F03/F04	9
3/4"	15	85	72	161	65.5	42.5	F04/F05	11
1"	20	100	77	161	79	50	F04/F05	11
1 1/4"	25	122	92	203	97	61	F05/F07	14
1 1/2"	32	131	96	203	106.5	65.5	F05/F07	14
2"	40	158	107	203	129	79	F05/F07	14



Schema di manovra IVR 144 L  
Operation draft IVR 144 L

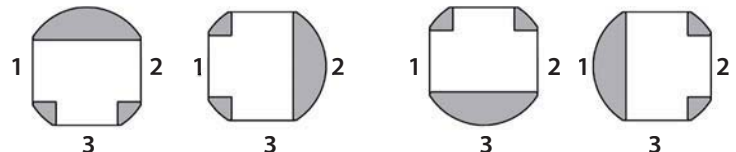
L1



Schema di manovra IVR 145 T  
Operation draft IVR 145 T






T1

T2

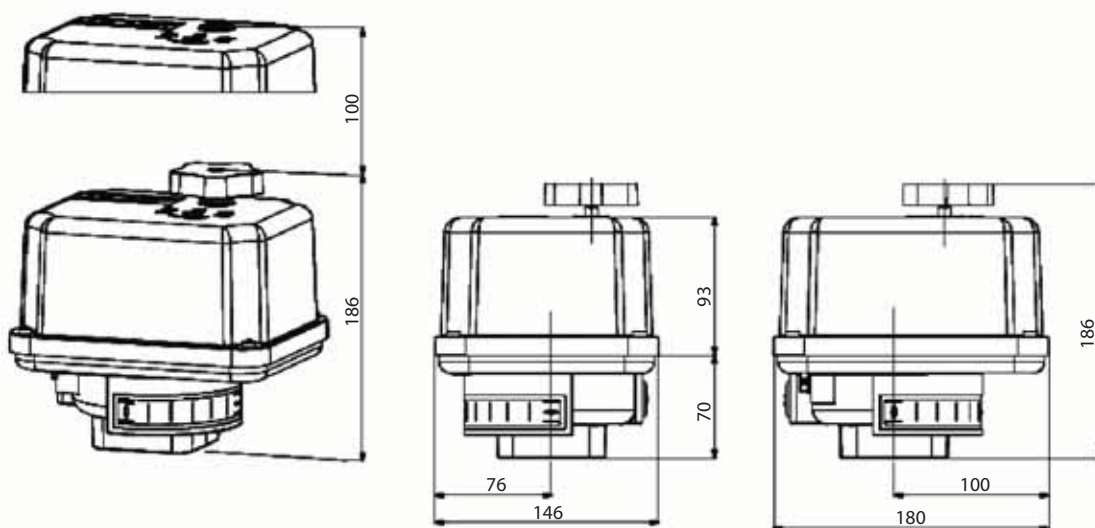


# ATTUATORI ELETTRICI - IVR 272 m - IVR 272 t



-  IVR 272 m - Attuatori elettrici 1/4 di giro - Monofase c.a.  
IVR 272 t - Attuatori elettrici 1/4 di giro - Trifase c.a.
-  IVR 272 m - Electrical quarter-turn actuators - 1-phase a.c.  
IVR 272 t - Electrical quarter-turn actuators - 3-phase a.c.
-  IVR 272 m - Elektrische Antriebe mit 1/4-Umdrehung - einphasiger Wechselstrom  
IVR 272 t - Elektrische Antriebe mit 1/4-Umdrehung - dreiphasiger Wechselstrom
-  IVR 272 m - Actuateurs électriques à 1/4 de tour - Monophasé c.a.  
IVR 272 t - Actuateurs électriques à 1/4 de tour - Triphasé c.a.
-  IVR 272 m - Электроприводы на 1/4 оборота – однофазные - переменный ток  
IVR 272 t - Электроприводы на 1/4 оборота – трёхфазные - переменный ток

## MH-R25/12 MH-R-E25/17



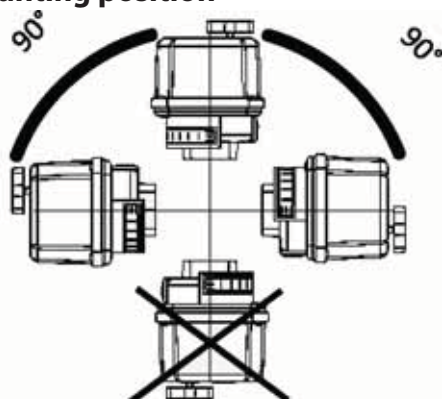
Operating time/90°	17 s (50Hz) - 14 s (60Hz)			9 s
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC	*24 VDC
Frequency (Hz)	50 / 60	50 / 60	50 / 60	-
Nominal Current (A)	0.08	0.15	0.8	0.6
Max current (A)	0.09	0.18	0.96	1.2
Power consumption (W)	17 / 23	18 / 20	18 / 23	15
Max. torque	25 Nm			
Flange	F04/F07 or F05/F07 according to ISO 5211			
Actuator	Class C according to EN 15714-2			
<b>Standard equipment</b>				
Duty cycle IEC 60034-1.8	S2 - 20 min, S3/S4 1200 c/h - 25% ED at 25°C			
Ambient temperature (°C)	-25°C to + 70°C			
Motor protection	Thermo switch			Multifuse
Add'l position switches 2WE	2 additional position switches included (changeover contact) ampacity: 1 A inductive, 3 A ohmic; max. voltage: 250 VAC			
Drive bush	17 mm double square			
Overvoltage category	II			

- \* 24 Volt - 115 Volt disponibile su richiesta
- \* 24 Volt - 115 Volt available on request
- \* 24 Volt - 115 Volt erhältlich auf Anfrage
- \* 24 Volt - 115 Volt Disponible sur demande
- \* 24 Volt - 115 Volt под заказ

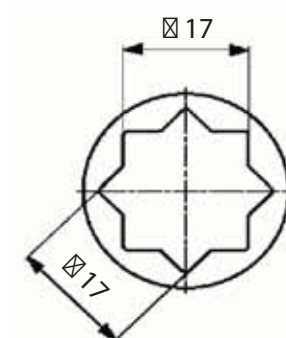
Ed. 12/16

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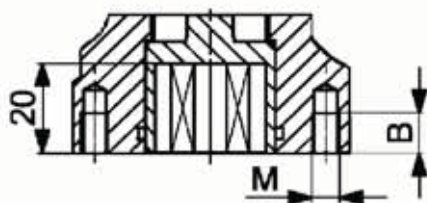
## Mounting position



## Double square drive



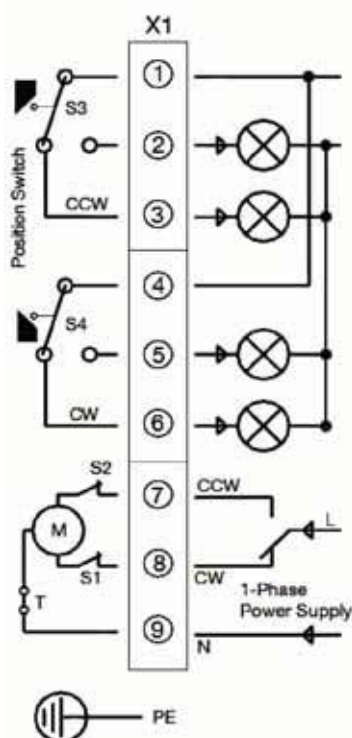
## ISO Flange



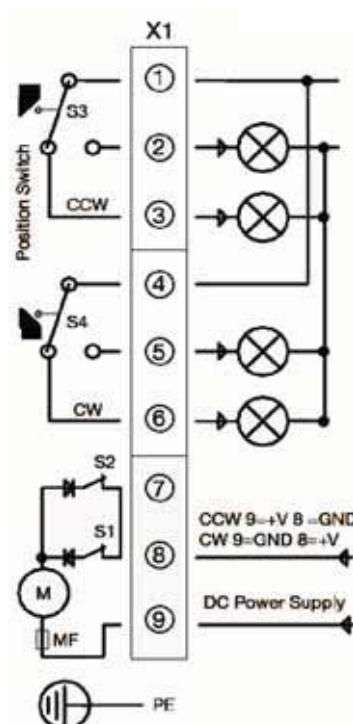
ISO 5211	F04/F07	F05/F07
M	M 5 / M 8	M 6 / M 8
B	8 / 12 mm	9 / 12 mm

## Electric wiring diagram

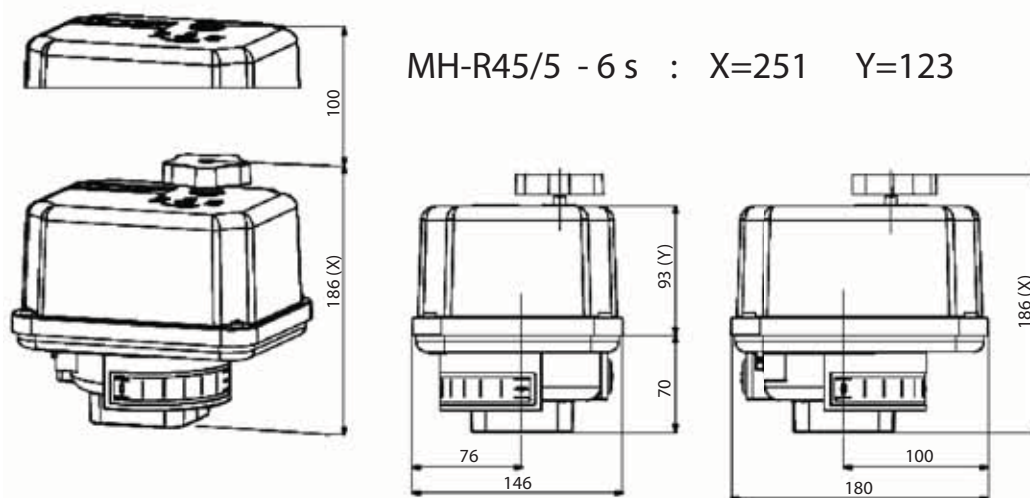
### 230,115,24 VAC 1 ~



### 24 VDC



## MH-R45/30 MH-R45/5 MH-R-E50/33



### Operating time/90° 6 s (50Hz) - 5 s (60Hz)

Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC	400 V 3~	
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	
Nominal Current (A)	0.17	0.34	1.6	0.08	
Max current (A)	0.2	0.41	1.9	0.13	
Power consumption (W)	39	39	39	55	

### Operating time/90° 33 s (50Hz) - 28 s (60Hz) 16 s

Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC		*24 VDC
Frequency (Hz)	50 / 60	50 / 60	50 / 60		-
Nominal Current (A)	0.05	0.13	0.6		0.6
Max current (A)	0.06	0.15	0.73		1.2
Power consumption (W)	13	15	15		15

### Operating time/90° 80 s (50Hz) - 67 s (60Hz)

Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC		
Frequency (Hz)	50 / 60	50 / 60	50 / 60		
Nominal Current (A)	0.03	0.07	0.33		
Max current (A)	0.04	0.08	0.4		
Power consumption (W)	8	8	8		

Max. torque 50 Nm

Flange F04/F07 or F05/F07 according to ISO 5211

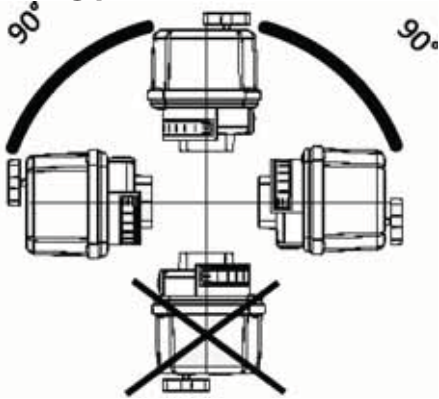
Actuator Class C according to EN 15714-2

### Standard equipment

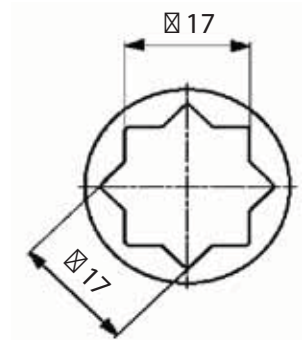
Duty cycle IEC 60034-1.8	S2 - 20 min, S3/S4 1200 c/h - 25% ED at 25°C	
Ambient temperature (°C)	-25°C to + 70°C	
Motor protection	Thermo switch	Multifuse
Add'l position switches 2WE	2 additional position switches included (changeover contact) ampacity: 1 A inductive, 3 A ohmic; max. voltage: 250 VAC	
Drive bush	17 mm double square	
Overvoltage category	II	

- \* 24 Volt - 115 Volt disponibile su richiesta
- \* 24 Volt - 115 Volt available on request
- \* 24 Volt - 115 Volt erhältlich auf Anfrage
- \* 24 Volt - 115 Volt Disponible sur demande
- \* 24 Volt - 115 Volt под заказ

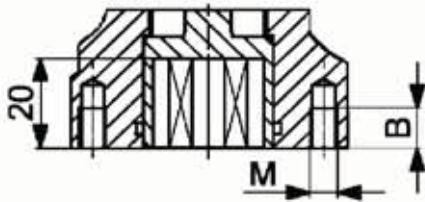
## Mounting position



## Double square drive



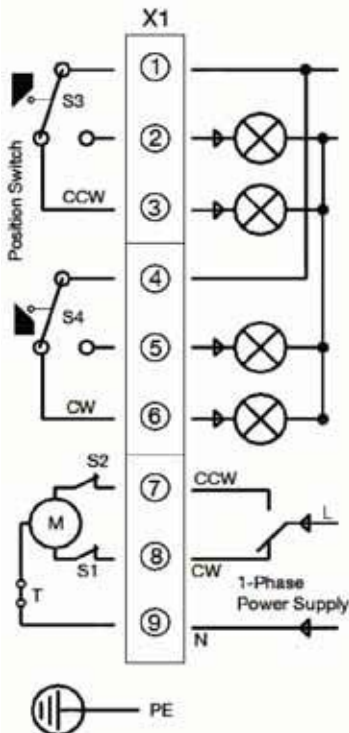
## ISO Flange



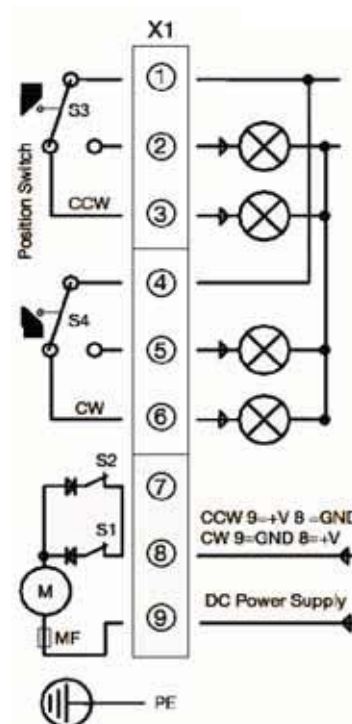
ISO 5211	F04/F07	F05/F07
M	M 5 / M 8	M 6 / M 8
B	8 / 12 mm	9 / 12 mm

## Electric wiring diagram

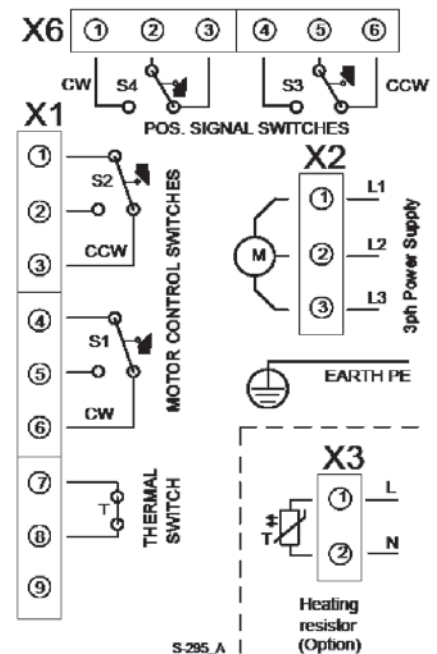
### 230,115,24 VAC 1 ~



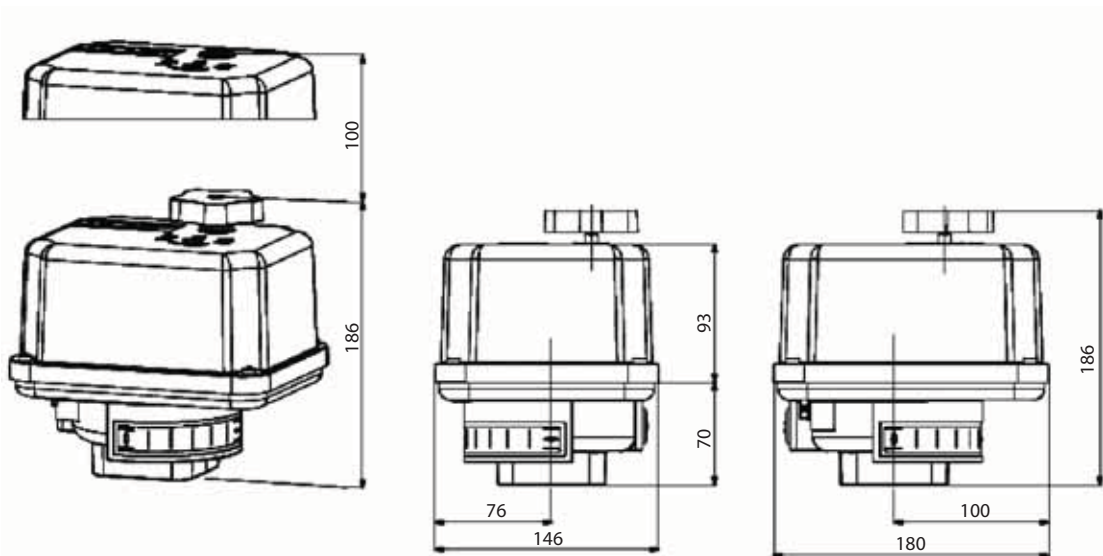
### 24 VDC



### 400 VAC



**MH-Q52/22**  
**MH-Q67/32**  
**MH-Q77/60**

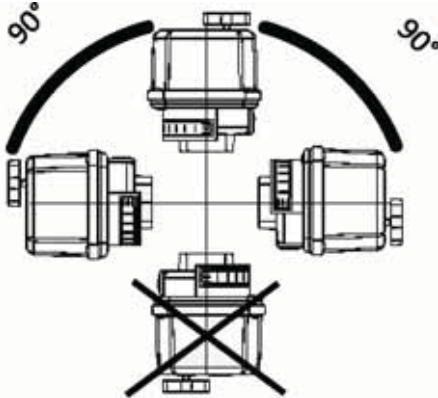


Operating time/90°	23 s (50Hz) - 19 s (60Hz)			32 s	
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC 1~	400 VAC 3~	*24 VDC
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	-
Nominal Current (A)	0.12	0.23	1.1	0.065 <sup>1</sup>	1.3
Max current (A)	0.14	0.28	1.3	0.075 <sup>1</sup>	2.5
Power consumption (W)	27	27	27	45	31
Max. torque	100 Nm				
Flange	F05 or F07 according to ISO 5211				
Actuator	Class C according to EN 15714-2				
<b>Standard equipment</b>					
Duty cycle IEC 60034-1.8	S2 - 30 min, S3/S4 1200 c/h - 25% ED at 25°C				
Ambient temperature (°C)	-25°C to + 70°C				
Motor protection	Thermo switch				Multifuse
Add'l position switches 2WE	2 additional position switches included (changeover contact) ampacity: 1 A inductive, 3 A ohmic; max. voltage: 250 VAC				
Drive bush	22 mm double square				
Overvoltage category	II				

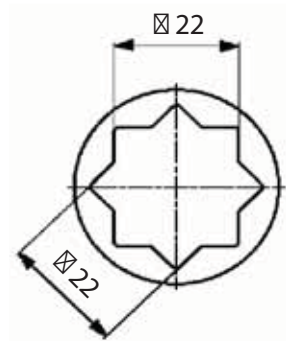
\* 24 Volt - 115 Volt disponibile su richiesta  
 \* 24 Volt - 115 Volt available on request  
 \* 24 Volt - 115 Volt erhältlich auf Anfrage  
 \* 24 Volt - 115 Disponible sur demande  
 \* 24 Volt - 115 Volt под заказ

<sup>1</sup> per phase

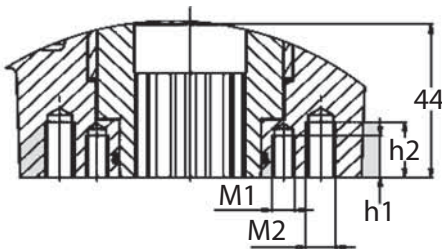
## Mounting position



## Double square drive



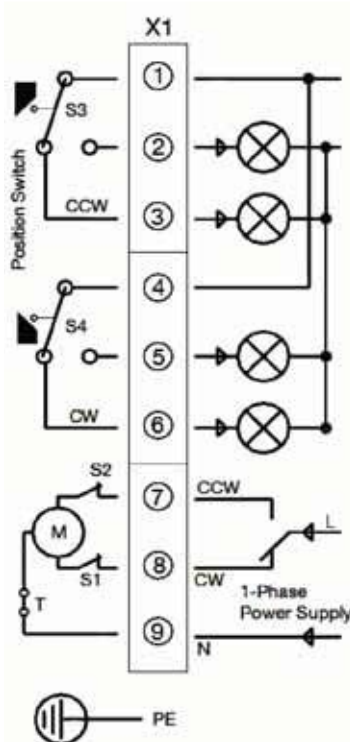
## ISO Flange



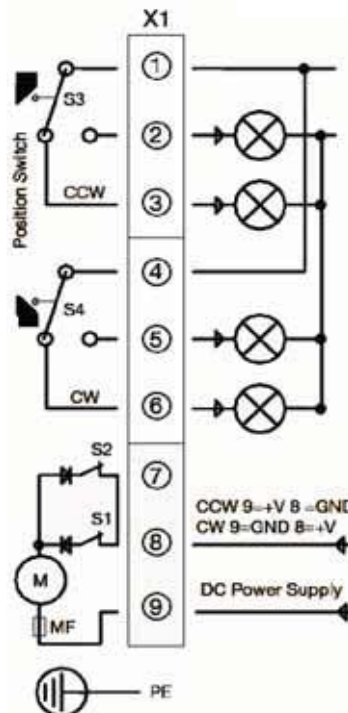
ISO 5211	F05	F07
M1	M6	-
M2	-	M8
h1	12	-
h2	-	16

## Electric wiring diagram

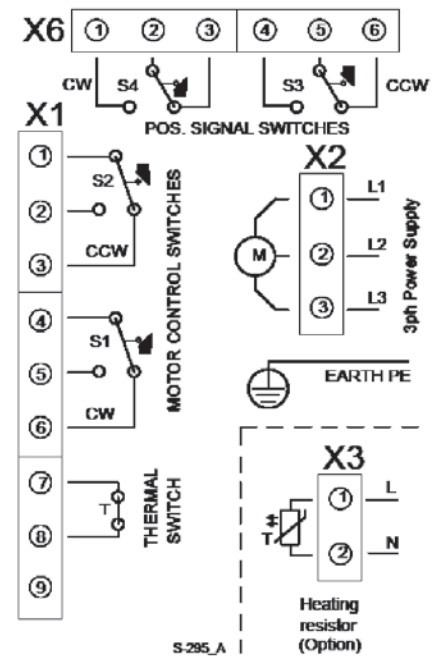
### 230,115,24 VAC 1 ~



### 24 VDC

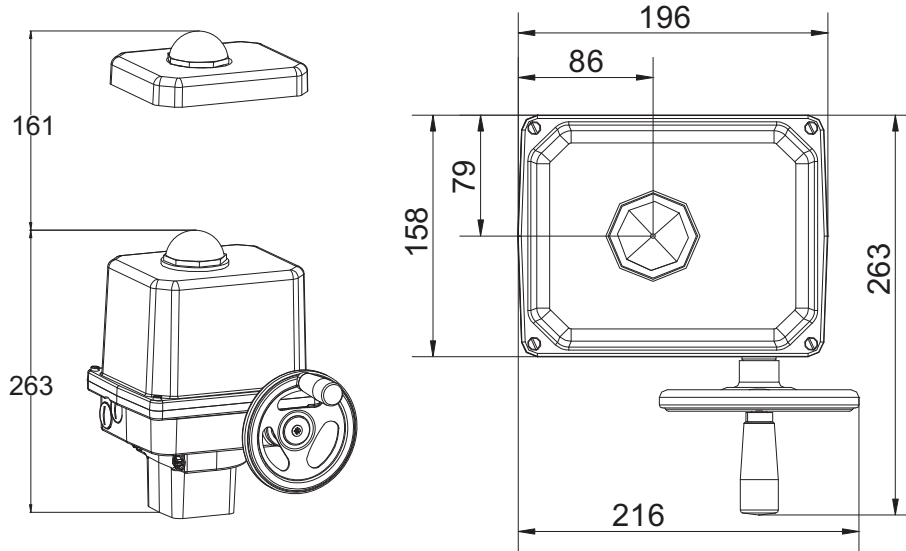


### 400 VAC





## MH-Q102/32



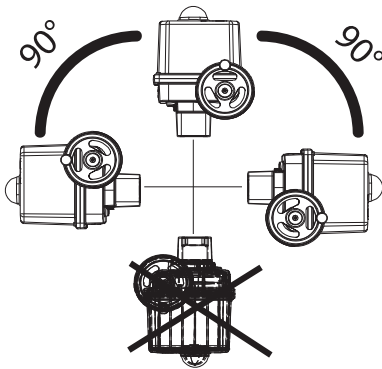
Operating time/90°	32 s (50Hz) - 27 s (60Hz)				32 s
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC 1~	400 VAC 3~	*24 VDC
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	-
Rated Current (A)	0.27/0.23	0.57/0.05	2.7/2.3	0.12	1.3
Max current (A)	0.33/0.28	0.68/0.60	3.3/2.8	0.15	2.5
Power consumption (W)	62/53	64/55	62/52	51	31
Switching torque <sup>1</sup>	130 Nm				
Flange	F05 + F07 according to ISO 5211				
Modulating actuator	Class C according to EN 15714-2				
<b>Standard equipment</b>					
Duty cycle IEC 60034-1	S2 - 30 min / S4 50% ED - 1200 c/h				
Ambient temperature (°C)	-20°C to +80°C (S2) / -20°C to +60°C (S4)				
Motor protection	Thermo switch <sup>2</sup>				Multifuse
Overvoltage category	II				

\* 24 Volt - 115 Volt disponibile su richiesta  
 \* 24 Volt - 115 Volt available on request  
 \* 24 Volt - 115 Volt erhältlich auf Anfrage  
 \* 24 Volt - 115 Disponibile sur demande  
 \* 24 Volt - 115 Volt под заказ

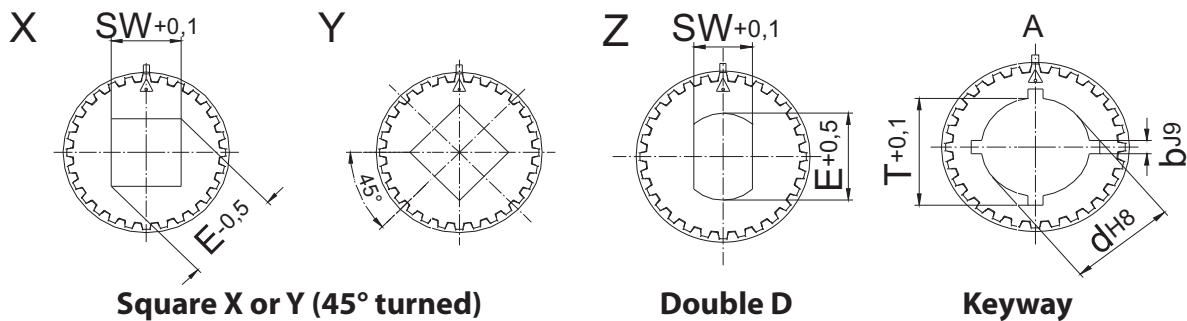
<sup>1</sup> 65 Nm modulating torque

<sup>2</sup> Thermo switch must be wired externally at 400 VAC 3~

## Mounting position



## Drive bush



**Square X or Y (45° turned)**

**Double D**

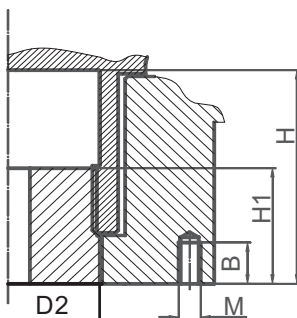
**Keyway**

Square X or Y							
SW (mm)	10	11	12	14	16	17	22

Double D				
SW (mm)	9	11	14	17
E (mm)	12.1	14.1	18.1	22.2

Keyway (DIN 6885/1-J9)										
d (mm)	10	12	14	16	18	20	22	23	24	25
b (mm)	3	4	5	5	6	6	6	8	8	8

## ISO Flange



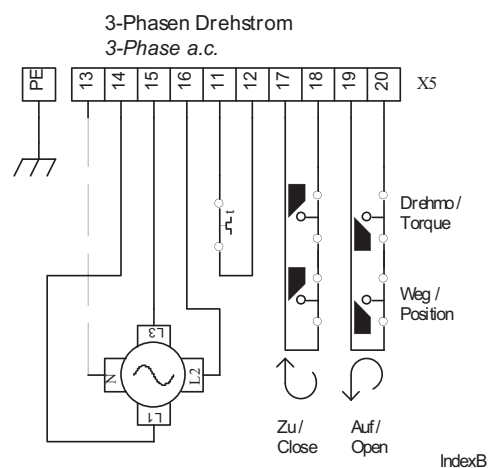
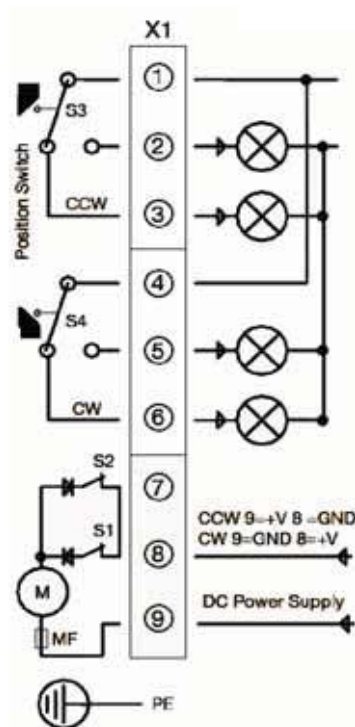
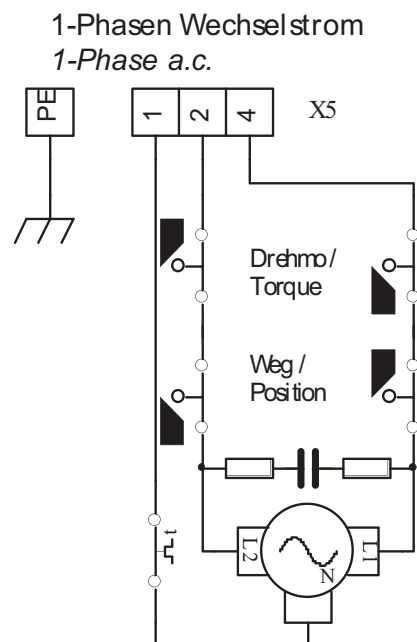
	ISO 5211	F05	F07
D2	38	44	44
H	44	44	44
h1	35	35	35
M	M6	M8	M8
B	12	16	16

## Electric wiring diagram

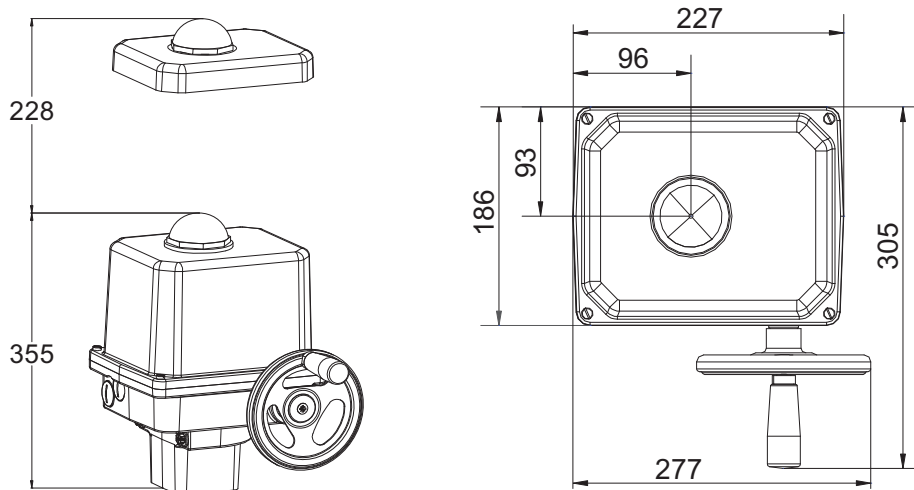
230,115,24 VAC 1 ~

24 VDC

400 VAC



## MH-Q202/69



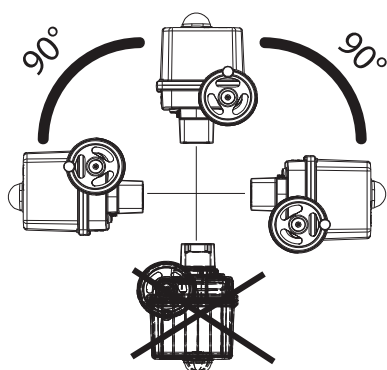
Operating time/90°	69 s (50Hz) - 57 s (60Hz)				60 s
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC 1~	400 VAC 3~	*24 VDC
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	-
Rated Current (A)	0.27	0.57	2.7	0.12	1.3
Max current (A)	0.33	0.68	3.3	0.15	2.5
Power consumption (W)	62	64	64	51	30
Switching torque <sup>1</sup>	250 Nm				
Flange	F07 + F10 according to ISO 5211				
Modulating actuator	Class C according to EN 15714-2				
<b>Standard equipment</b>					
Duty cycle IEC 60034-1	S2 - 30 min / S4 50% ED - 1200 c/h				
Ambient temperature (°C)	-20°C to +80°C (S2) / -20°C to +60°C (S4)				
Motor protection	Thermo switch <sup>2</sup>				Multifuse
Overvoltage category	II				

\* 24 Volt - 115 Volt disponibile su richiesta  
 \* 24 Volt - 115 Volt available on request  
 \* 24 Volt - 115 Volt erhältlich auf Anfrage  
 \* 24 Volt - 115 Disponible sur demande  
 \* 24 Volt - 115 Volt под заказ

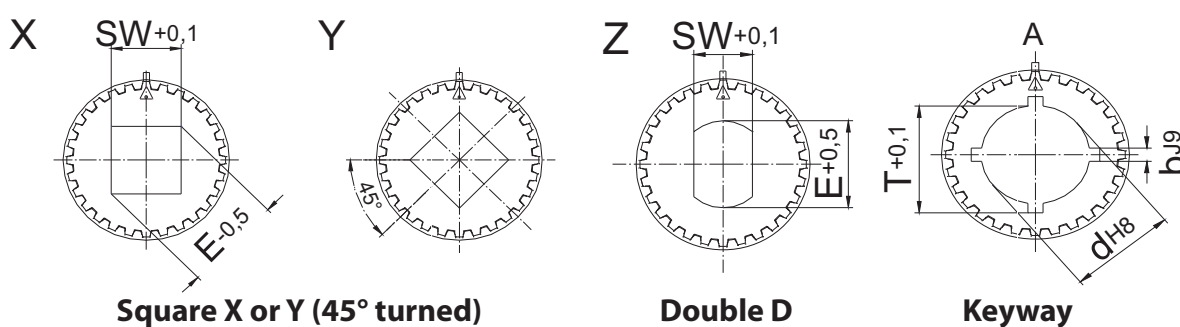
<sup>1</sup> 115 Nm modulating torque

<sup>2</sup> Thermo switch must be wired externally at 400 VAC 3~

## Mounting position



## Drive bush

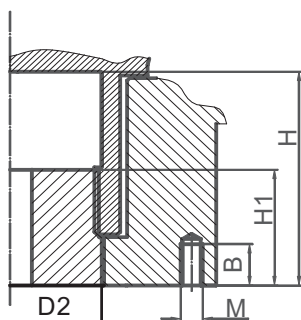


Square X or Y							
SW (mm)	10	11	12	14	16	17	22

Double D				
SW (mm)	9	11	14	17
E (mm)	12.1	14.1	18.1	22.2

Keyway (DIN 6885/1-J9)										
d (mm)	10	12	14	16	18	20	22	23	24	25
b (mm)	3	4	5	5	6	6	6	8	8	8

## ISO Flange



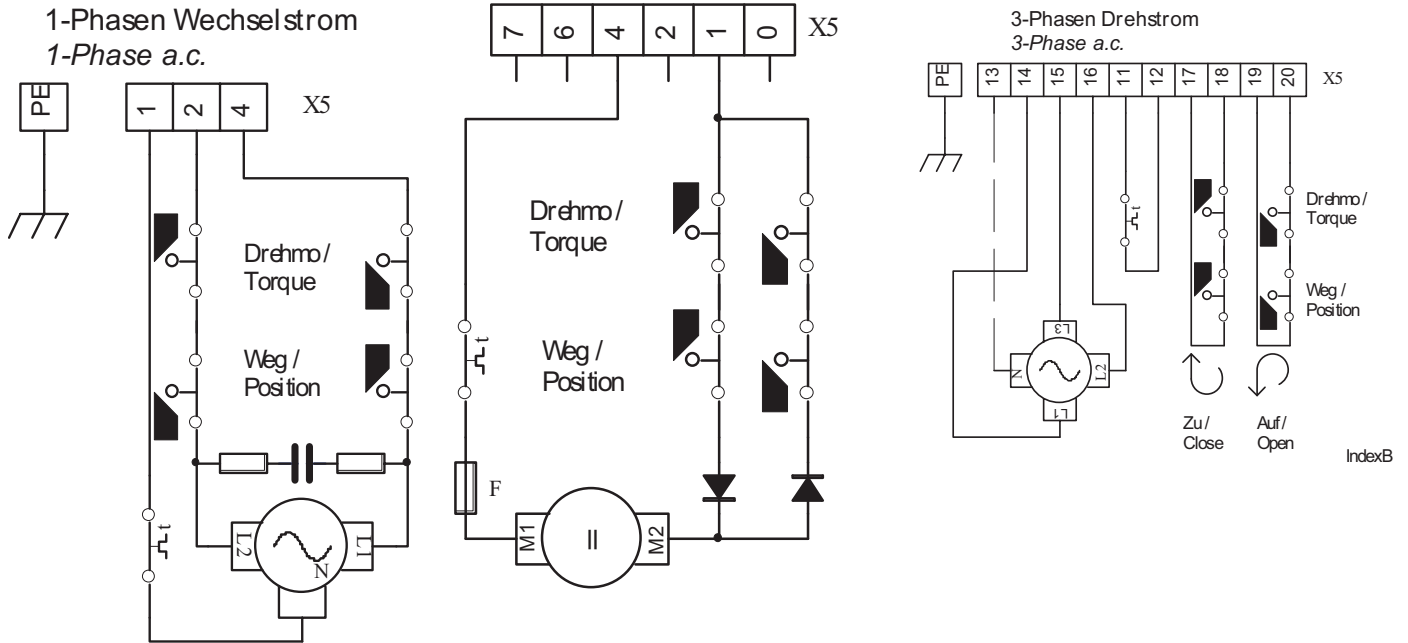
	ISO 5211	F07	F10
D2	47	47	47
H	60	60	60
h1	35	35	35
M	M8	M8	M10
B	16	16	20

## Electric wiring diagram

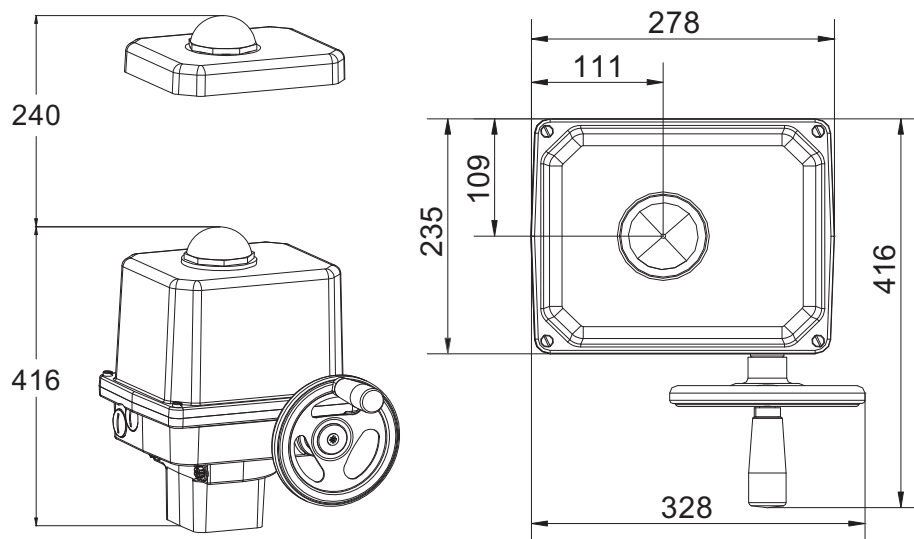
230,115,24 VAC 1 ~

24 VDC

400 VAC



## MH-Q502/93



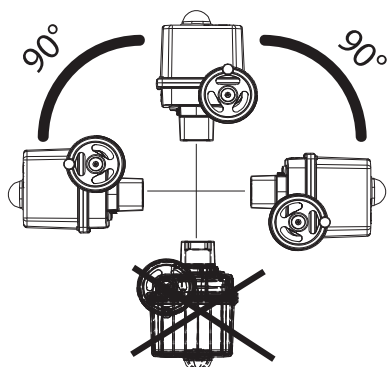
Operating time/90°		93 s (50Hz) - 77 s (60Hz)			
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC 1~	400 VAC 3~	
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	
Rated Current (A)	0.37	0.87	3.5	0.18	
Max current (A)	0.44	1.0	4.2	0.22	
Power consumption (W)	83	98	82	75	
Switching torque <sup>1</sup>	500 Nm				
Flange	F10 or F12 according to ISO 5211				
Modulating actuator	Class C according to EN 15714-2				
<b>Standard equipment</b>					
Duty cycle IEC 60034-1	S2 - 15 min / S4 50% ED -1200 c/h				
Ambient temperature (°C)	-20°C to +80°C (S2) / -20°C to +60°C (S4)				
Motor protection	Thermo switch <sup>2</sup>				
Overvoltage category	II				

\* 24 Volt - 115 Volt disponibile su richiesta  
 \* 24 Volt - 115 Volt available on request  
 \* 24 Volt - 115 Volt erhältlich auf Anfrage  
 \* 24 Volt - 115 Disponible sur demande  
 \* 24 Volt - 115 Volt под заказ

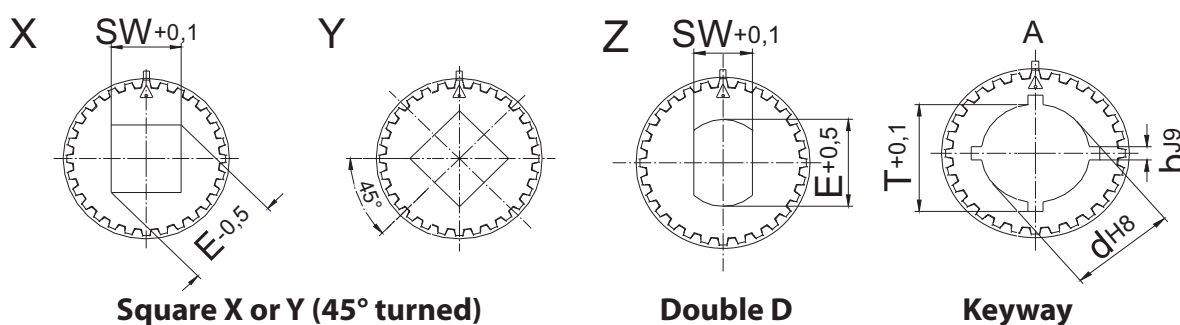
<sup>1</sup> 250 Nm modulating torque

<sup>2</sup> Thermo switch must be wired externally at 400 VAC 3~

## Mounting position



## Drive bush



Square X or Y (45° turned)

Double D

Keyway

### Square X or Y

SW (mm)	10	11	12	14	16	17	22
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### Double D

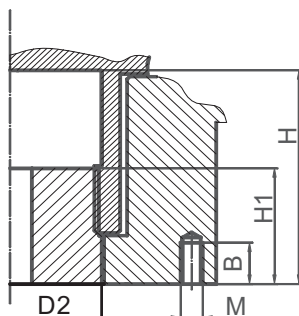
SW (mm)	9	11	14	17
E (mm)	12.1	14.1	18.1	22.2

### Keyway

(DIN 6885/1-J9)

d (mm)	10	12	14	16	18	20	22	23	24	25
b (mm)	3	4	5	5	6	6	6	8	8	8

## ISO Flange



	ISO 5211	F10	F12
D2	66	66	66
H	80	80	80
h1	48	48	48
M	M10	M12	M12
B	18	18	18

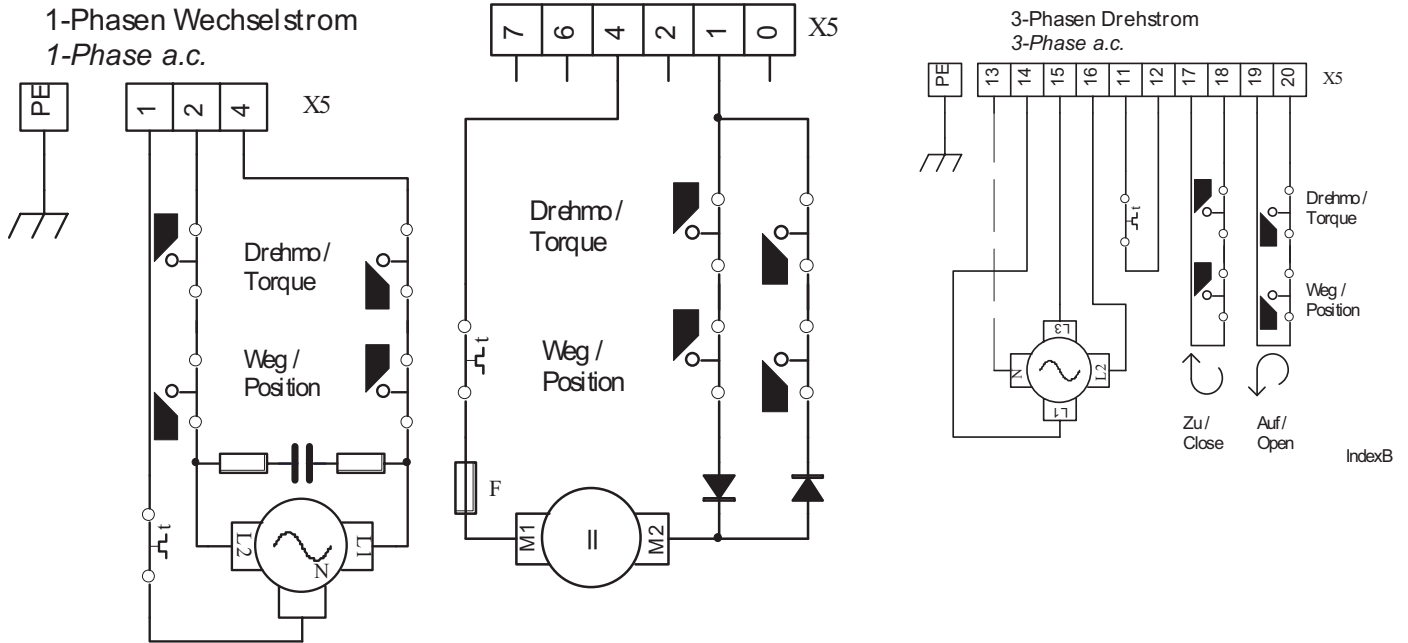


## Electric wiring diagram

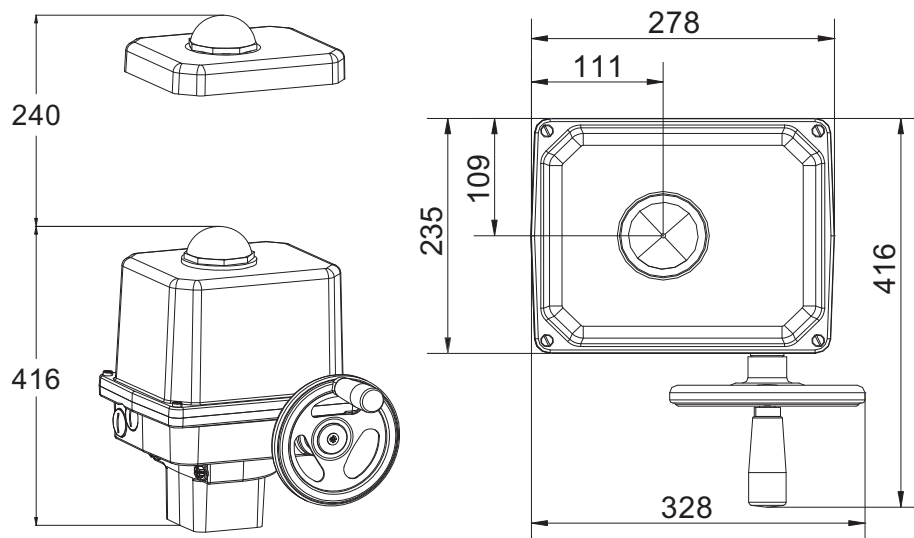
230,115,24 VAC 1 ~

24 VDC

400 VAC



## MH-Q702/93



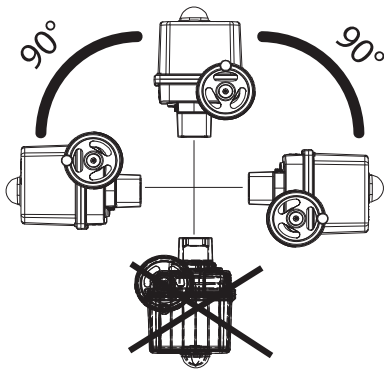
Operating time/90°		93 s (50Hz) - 77 s (60Hz)			
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC 1~	400 VAC 3~	
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	
Rated Current (A)	0.37	0.07	3.5	0.18	
Max current (A)	0.44	0.08	4.2	0.22	
Power consumption (W)	83	98	82	83	
Switching torque <sup>1</sup>	700 Nm				
Flange	F10 or F12 according to ISO 5211				
Modulating actuator	Class C according to EN 15714-2				
<b>Standard equipment</b>					
Duty cycle IEC 60034-1	S2 - 30 min / S4 50% ED - 1200 c/h				
Ambient temperature (°C)	-20°C to + 80°C (S2) / -20°C to +60°C (S4)				
Motor protection	Thermo switch <sup>2</sup>				
Overvoltage category	II				

\* 24 Volt - 115 Volt disponibile su richiesta  
 \* 24 Volt - 115 Volt available on request  
 \* 24 Volt - 115 Volt erhältlich auf Anfrage  
 \* 24 Volt - 115 Disponible sur demande  
 \* 24 Volt - 115 Volt под заказ

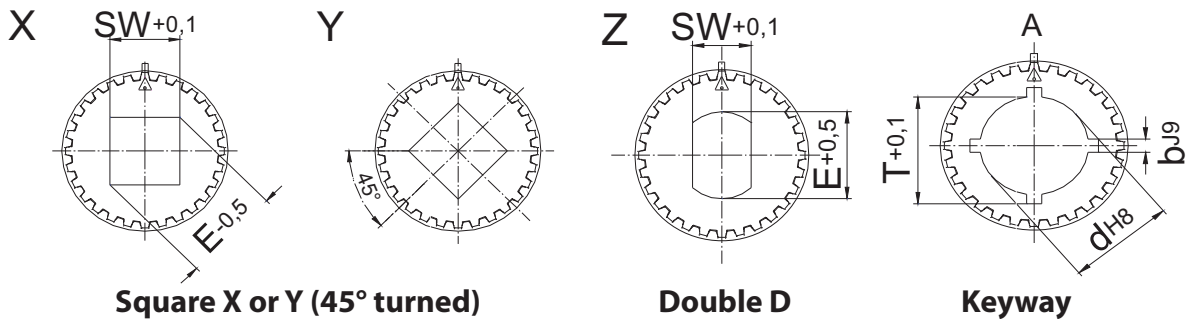
<sup>1</sup> 350 Nm modulating torque

<sup>2</sup> Thermo switch must be wired externally at 400 VAC 3~

## Mounting position



## Drive bush



**Square X or Y (45° turned)**

**Double D**

**Keyway**

### Square X or Y

SW (mm)	10	11	12	14	16	17	22
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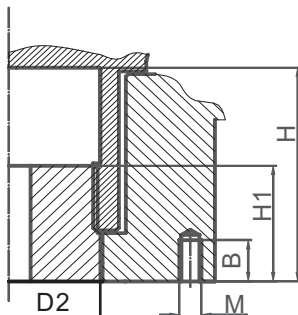
### Double D

SW (mm)	9	11	14	17
E (mm)	12.1	14.1	18.1	22.2

### Keyway (DIN 6885/1-J9)

d (mm)	10	12	14	16	18	20	22	23	24	25
b (mm)	3	4	5	5	6	6	6	8	8	8

## ISO Flange



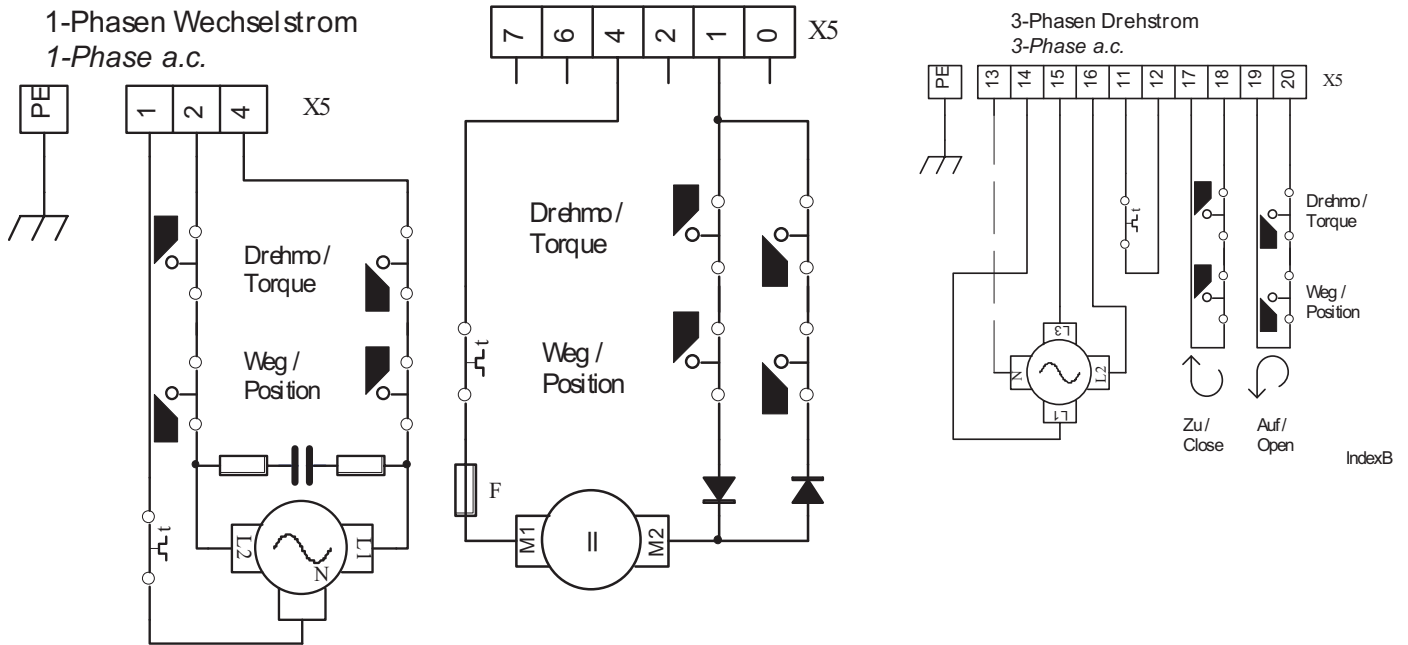
	ISO 5211	F10	F12
D2		66	66
H		80	80
h1		48	48
M		M10	M12
B		18	18

## Electric wiring diagram

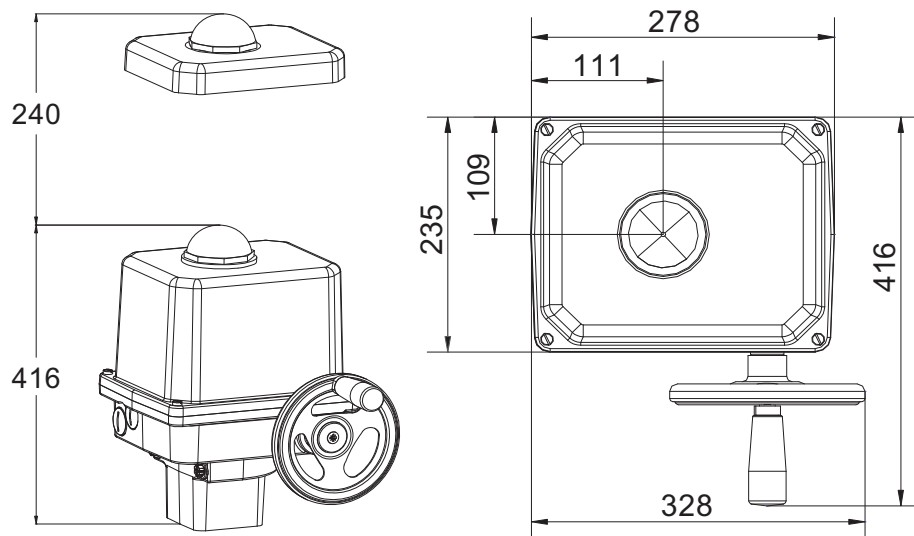
230,115,24 VAC 1 ~

24 VDC

400 VAC



## MH-Q1002/93



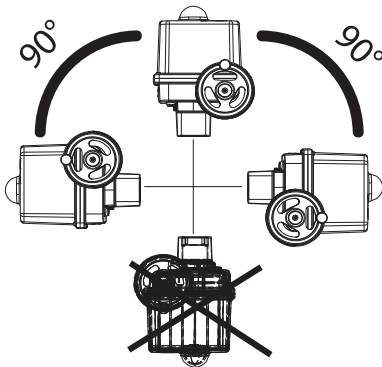
Operating time/90°	93 s (50Hz) - 77 s (60Hz)				120 s
Power supply (V)	230 VAC 1~	*115 VAC 1~	*24 VAC 1~	400 VAC 3~	24 VDC
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	-
Rated Current (A)	0.7	1.4	6	0.23	4
Max current (A)	1.3	2.6	8	0.27	8
Power consumption (W)	160	160	140	107	100
Switching torque <sup>1</sup>	1000 Nm				
Flange	F12 or F14 according to ISO 5211				
Modulating actuator	Class C according to EN 15714-2				
<b>Standard equipment</b>					
Duty cycle IEC 60034-1	S2 - 30 min / S4 50% ED -1200 c/h				
Ambient temperature (°C)	-20°C to +80°C (S2) / -20°C to +60°C (S4)				
Motor protection	Thermo switch <sup>2</sup>				
Overvoltage category	II				

\* 24 Volt - 115 Volt disponibile su richiesta  
 \* 24 Volt - 115 Volt available on request  
 \* 24 Volt - 115 Volt erhältlich auf Anfrage  
 \* 24 Volt - 115 Disponible sur demande  
 \* 24 Volt - 115 Volt под заказ

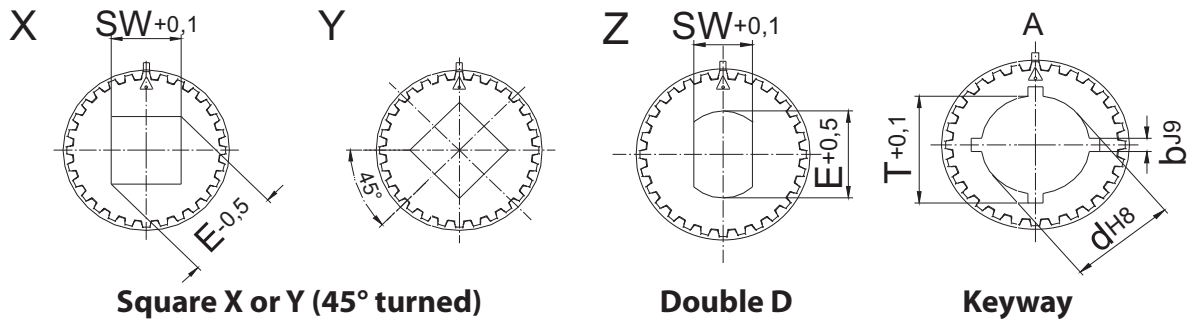
<sup>1</sup> 500 Nm modulating torque

<sup>2</sup> Thermo switch must be wired externally at 400 VAC 3~

## Mounting position



## Drive bush

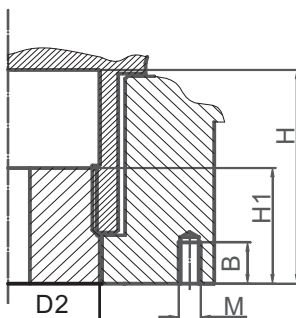


Square X or Y							
SW (mm)	10	11	12	14	16	17	22

Double D				
SW (mm)	9	11	14	17
E (mm)	12.1	14.1	18.1	22.2

Keyway (DIN 6885/1-J9)										
d (mm)	10	12	14	16	18	20	22	23	24	25
b (mm)	3	4	5	5	6	6	6	8	8	8

## ISO Flange



	ISO 5211	F12	F14
D2	66	66	66
H	80	80	80
h1	48	48	48
M	M12	M16	M16
B	18	24	24

## Electric wiring diagram

230,115,24 VAC 1 ~

24 VDC

400 VAC

