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ISO 9001, ISO 14001 Certified



ELECTRIC LINEAR ACTUATOR HL-SERIES

**Weather proof
Explosion proof
Special options**

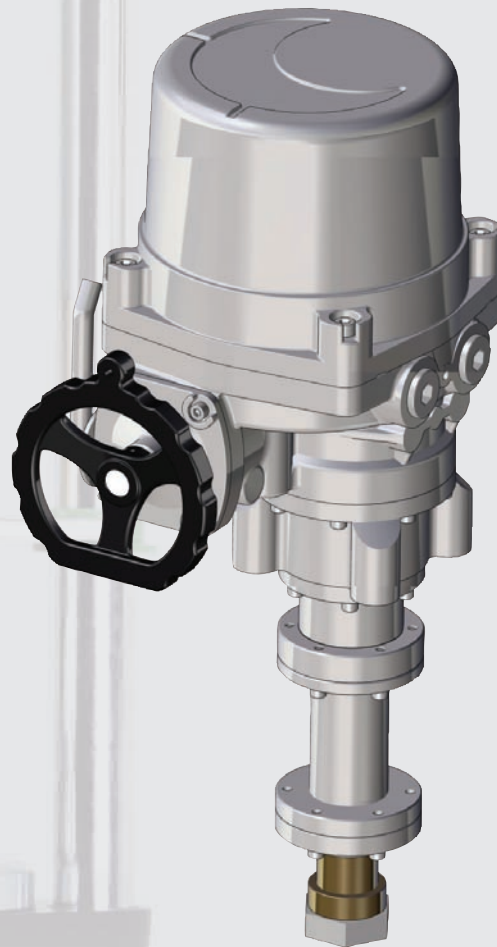




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DESCRIPTION

- HL series electric actuator is specially designed for linear operating valves such as globe valves and similar usages.
- Wide range of output force and control options fit your specific requirements.
- High reliability and performance for valve automation system.



STANDARD

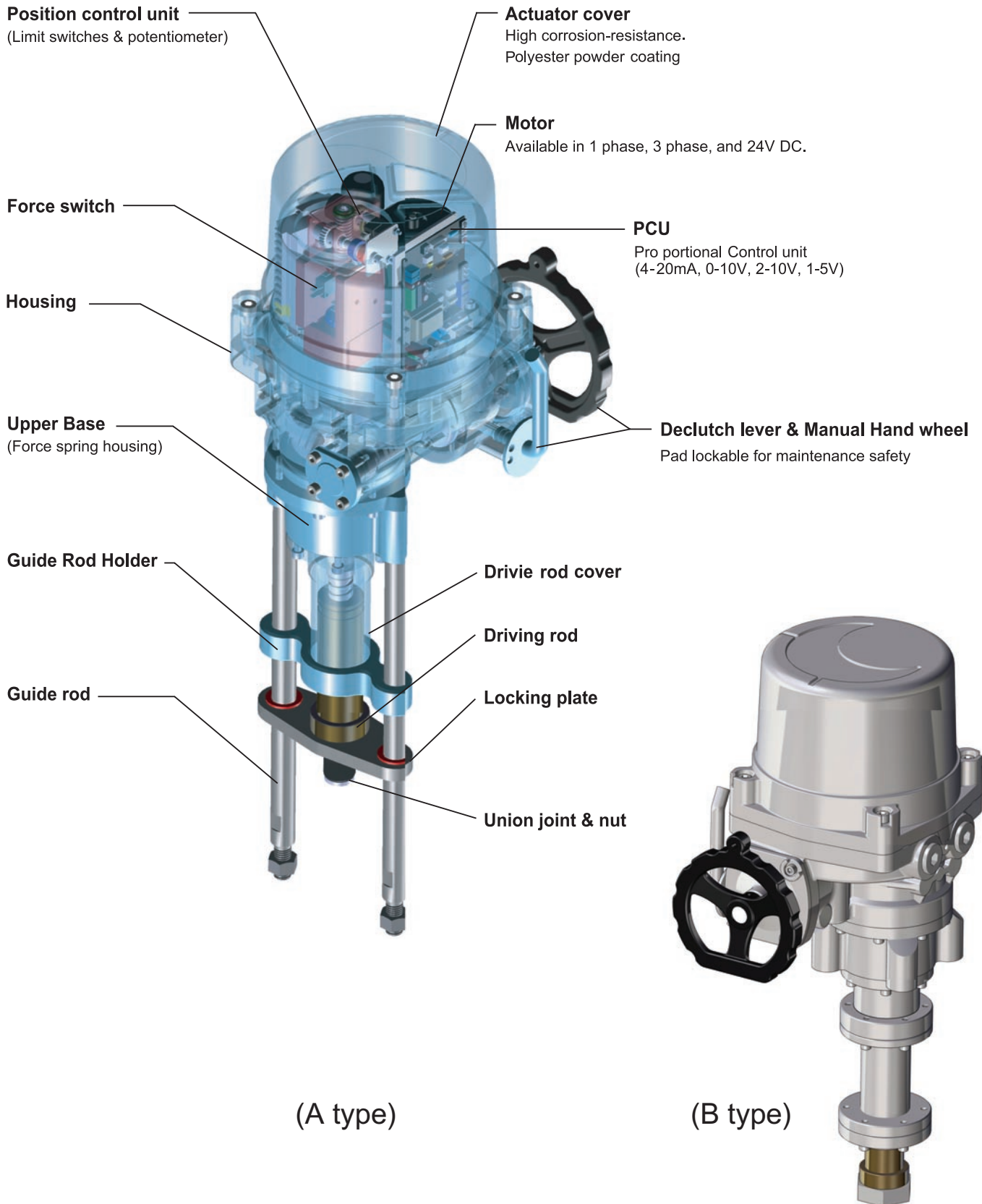
FEATURES

- Compact and light weight.
- High corrosion resistance.
- Self locking with minimum backlash.
- Rugged construction with o-ring system for water proof and explosion proof.
- Handwheel for manual operation.
- limit switches.
- Force switche.
- Space heater with thermostat for preventing overheat.
- Various output force from 5KN to 25KN.
- Wide range of voltage available.



OPTIONS

Design Construction



Performance

Type	Max. output force	Stem speed (mm/sec)	Max. Stroke	Duty cycle	Rated current(A) 50/60Hz						Number of handle turn	Weight
					IEC34-1	1 Phase		3 Phase				
	KN	50/60HZ	mm	S4(%)	110 V	220 V	220 V	380 V	440 V	460 V	N	kg
HL-05KN	5	0.44/0.53	60	50	0.96/0.97	0.47/0.46	N/A	0.42/0.33	0.57/0.43	N/A	227	11
HL-07KN	7	0.44/0.53	60	50	0.96/0.97	0.47/0.46	N/A	0.42/0.33	0.57/0.43	N/A	227	11
HL-10KN	10	0.69/0.82	70	50	1.51/1.62	0.72/0.84	0.69/0.50	0.35/0.27	0.55/0.34	0.23/0.19	184	21
HL-12KN	12	0.69/0.82	70	50	1.51/1.62	0.72/0.84	0.69/0.50	0.35/0.27	0.55/0.34	0.23/0.19	184	21
HL-15KN	15	0.69/0.82	80	50	1.51/1.62	0.72/0.84	0.69/0.50	0.35/0.27	0.55/0.34	0.23/0.19	210	21
HL-18KN	18	0.69/0.83	100	50	1.37/1.67	0.68/0.81	0.49/0.41	0.33/0.27	0.43/0.30	0.27/0.24	260	33
HL-20KN	20	0.69/0.83	100	50	4.27/3.56	1.37/1.27	0.86/0.72	0.51/0.42	0.66/0.46	0.44/0.32	260	33
HL-25KN	25	0.69/0.83	100	50	4.27/3.56	1.37/1.27	0.86/0.72	0.51/0.42	0.66/0.46	0.44/0.32	260	33

Standard Specification

Enclosure	Weatherproof enclosure IP67
Power supply	110 / 220VAC1PH, 380 / 440VAC3PH 50 / 60Hz, ±10%
Duty cycle(on-off)	S2, 100%Max 30Min
Duty cycle(modulating)	S4, 50%Max 300~1600 start/hour
Motor	Induction motor (Reversible motor)
Limit switches	open / close, SPDT, 250VAC 15Arating
Additional limit switches	open / close, SPDT, 250VAC 15Arating (Except HL-5KN~7KN)
Force switches	open / close, SPDT, 250VAC 15Arating
Stall protection/operating temp	Built-in thermal protection, open 150°C±5°C/ close 97°C±15°C
Manual override	Declutching mechanism
Self locking	Provided by double worm gearing
Space heater	10W(110/220VAC) Anti-condensation
Cable entries	TWO PF3/4 Tap
Lubrication	Grease moly (EP type)
Terminal block	Spring loaded lever push type
Materials	Steel, Aluminium alloy, Albronze
Ambient temperature	-20~+70 (except option electronic board)
Ambient humidity	90%RHMax. (non-condensing)
External coating	Anodizing treatment before Dry powder, Polyester

Option Specification

EXA	Explosion proof enclosure (Exd IIBT4)
WTA	Watertight enclosure actuator (IP68 10M 72HR)
PIU	Potentiometer unit (0~1Kohm)
CPT	Current position transmitter (output 4~20mA DC)
PCU	Proportional control unit (input/output 4~20mA DC or 0~10V DC)
IMS	Integral magnetic starter (control power : 110/220VAC 1ph, 50/60Hz ±10%)
LCU-B	Local / Remote Control unit
LCU-C	Integral control unit (LCU + IMS + auto phase discriminator)
RBP	Rechargeable Battery Backup for ESD (Emergency shut down)
MSB	Mounting Support Base & Driving Rod

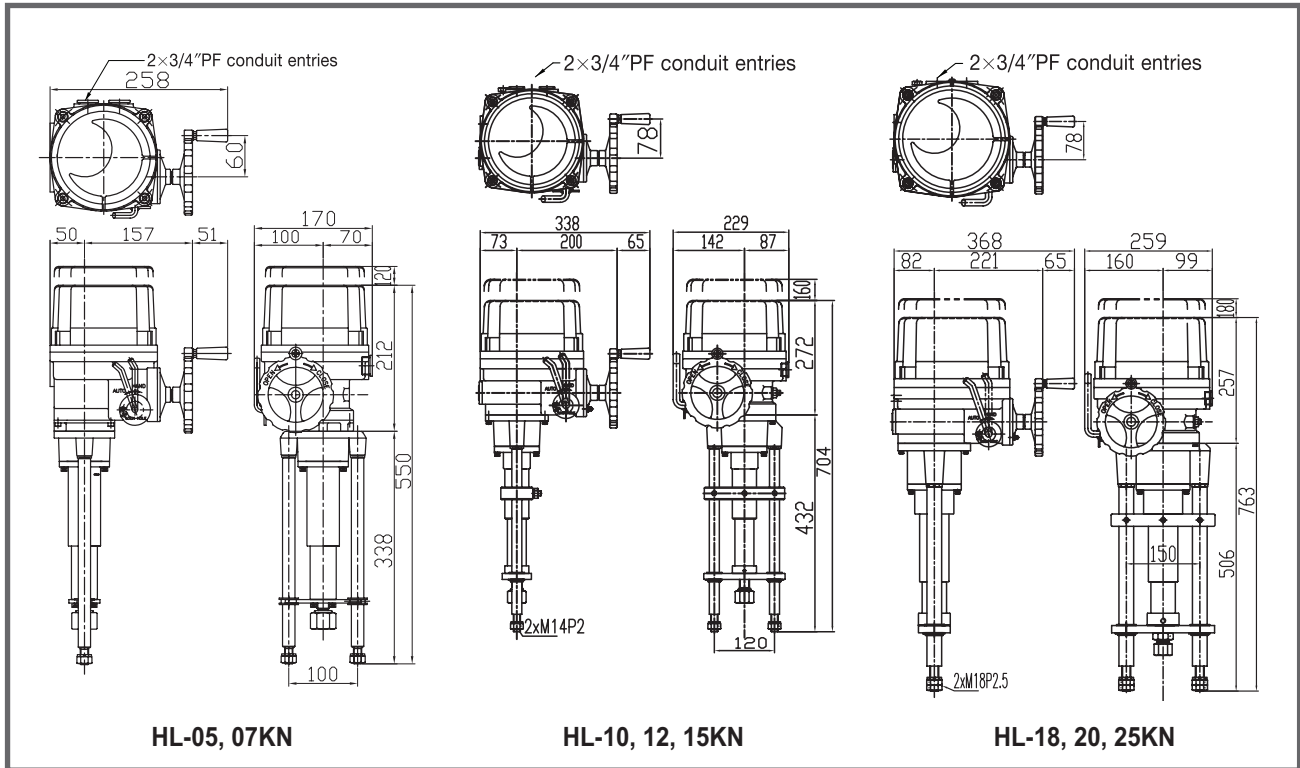
※ Consult with the supplier for more details.

Dimension & Wiring Connection

On/Off Control

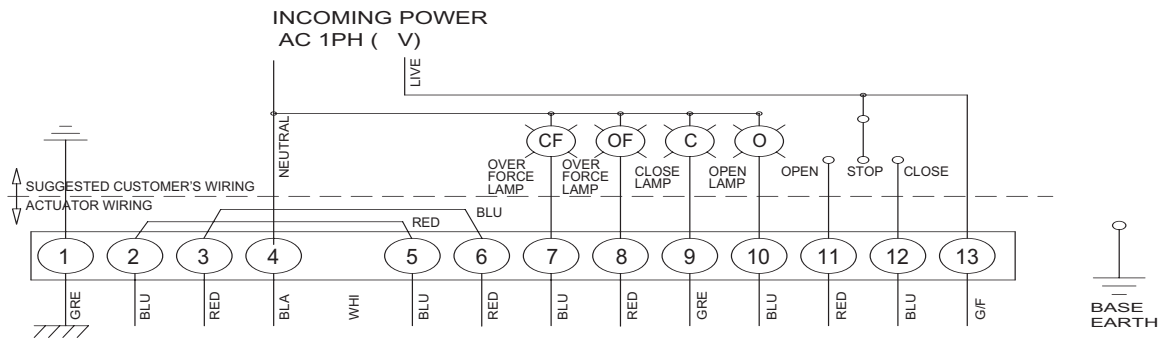
Dimensional Drawing

Unit:mm

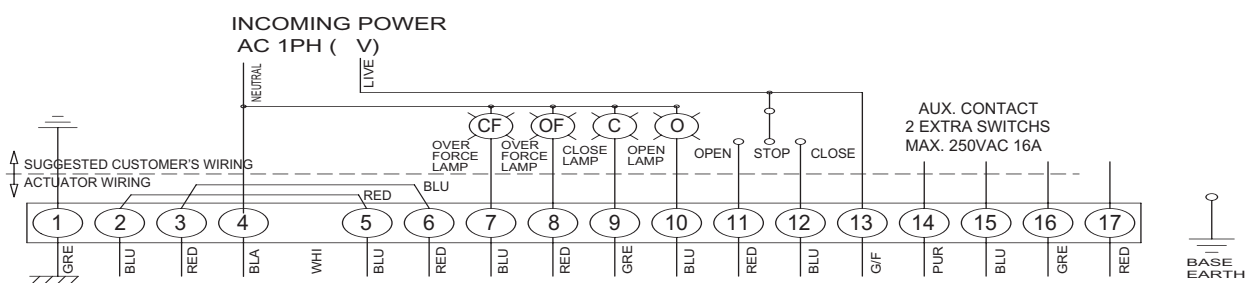


Wiring Diagram

ON-OFF CONTROL FOR 1-PHASE ELECTRICITY (HL-05KN, 07KN)



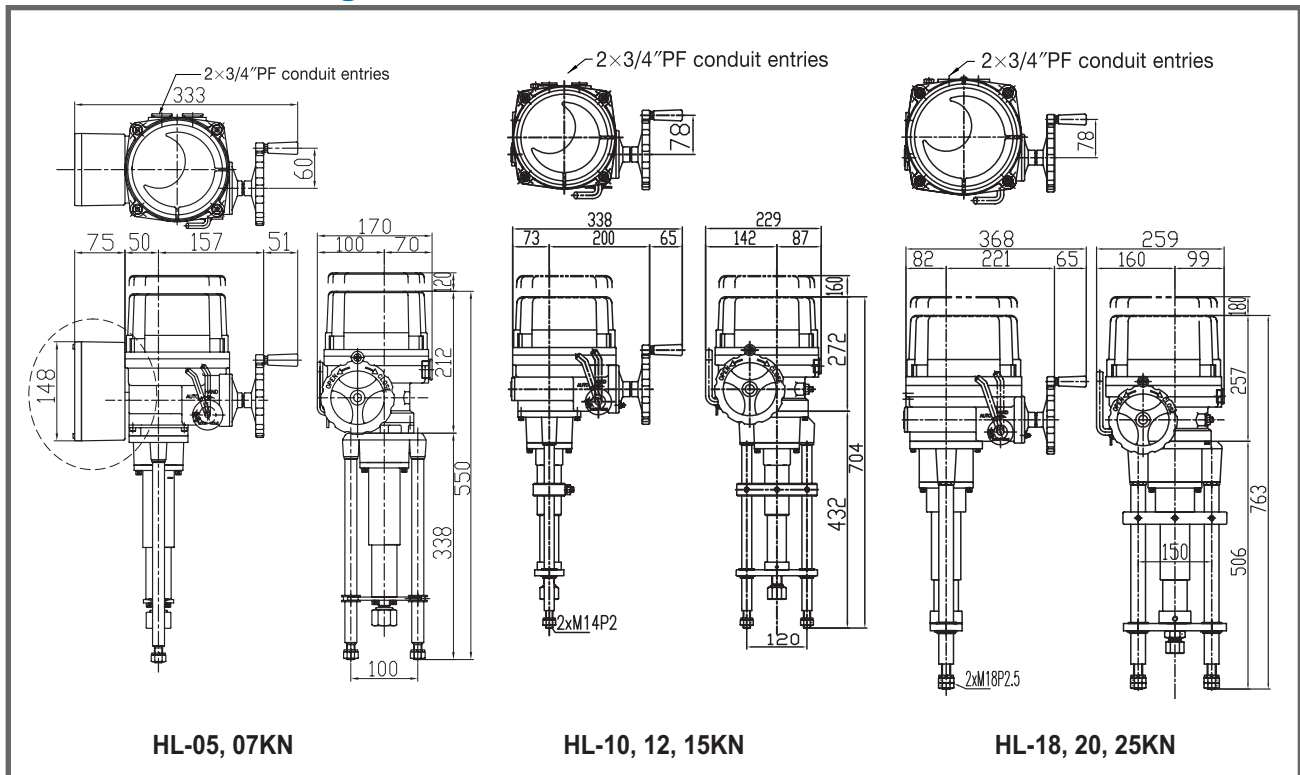
ON-OFF CONTROL FOR 1-PHASE ELECTRICITY (HL-10KN, 12KN, 15KN, 18KN, 20KN, 25KN)



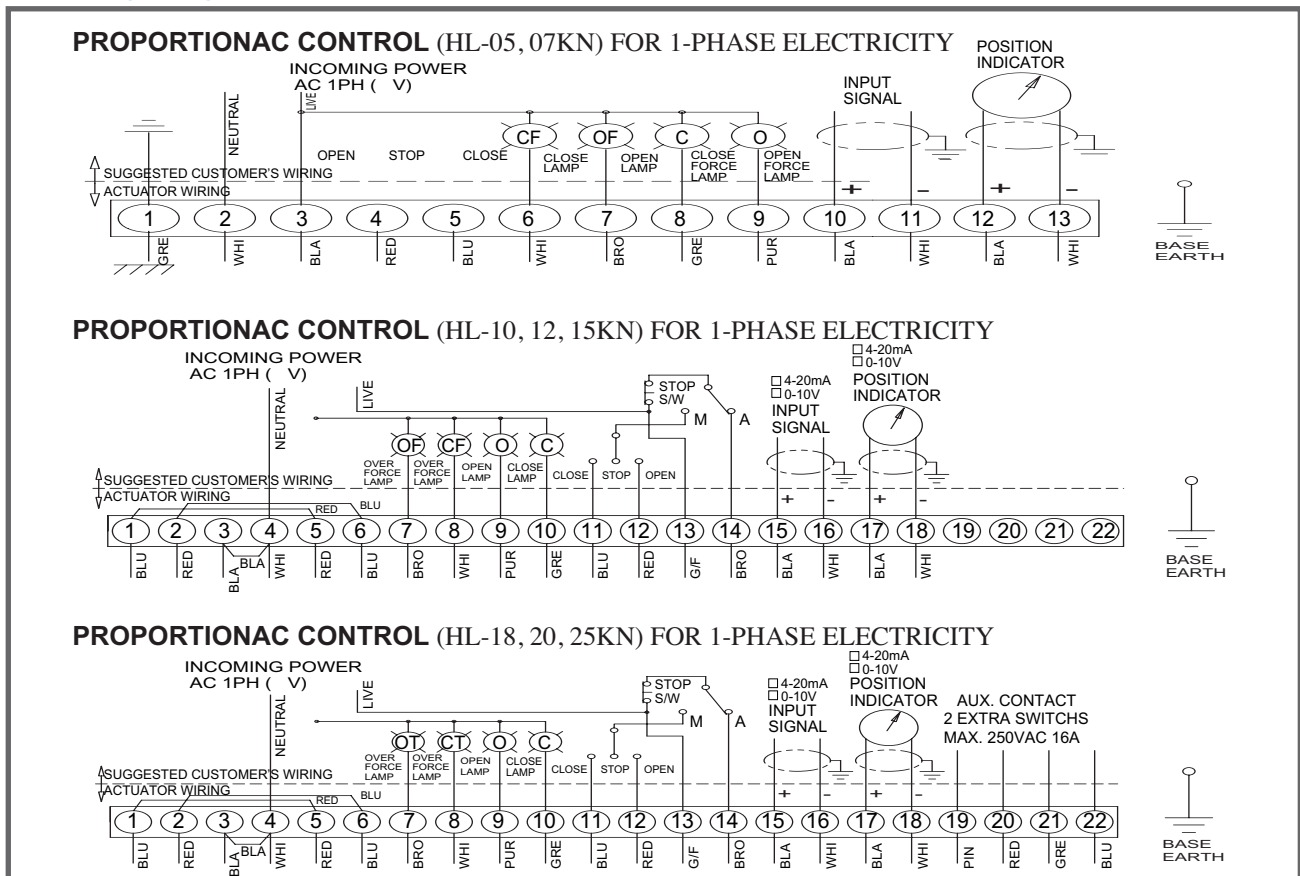
Proportional Control

Dimensional Drawing

Unit:mm



Wiring Diagram

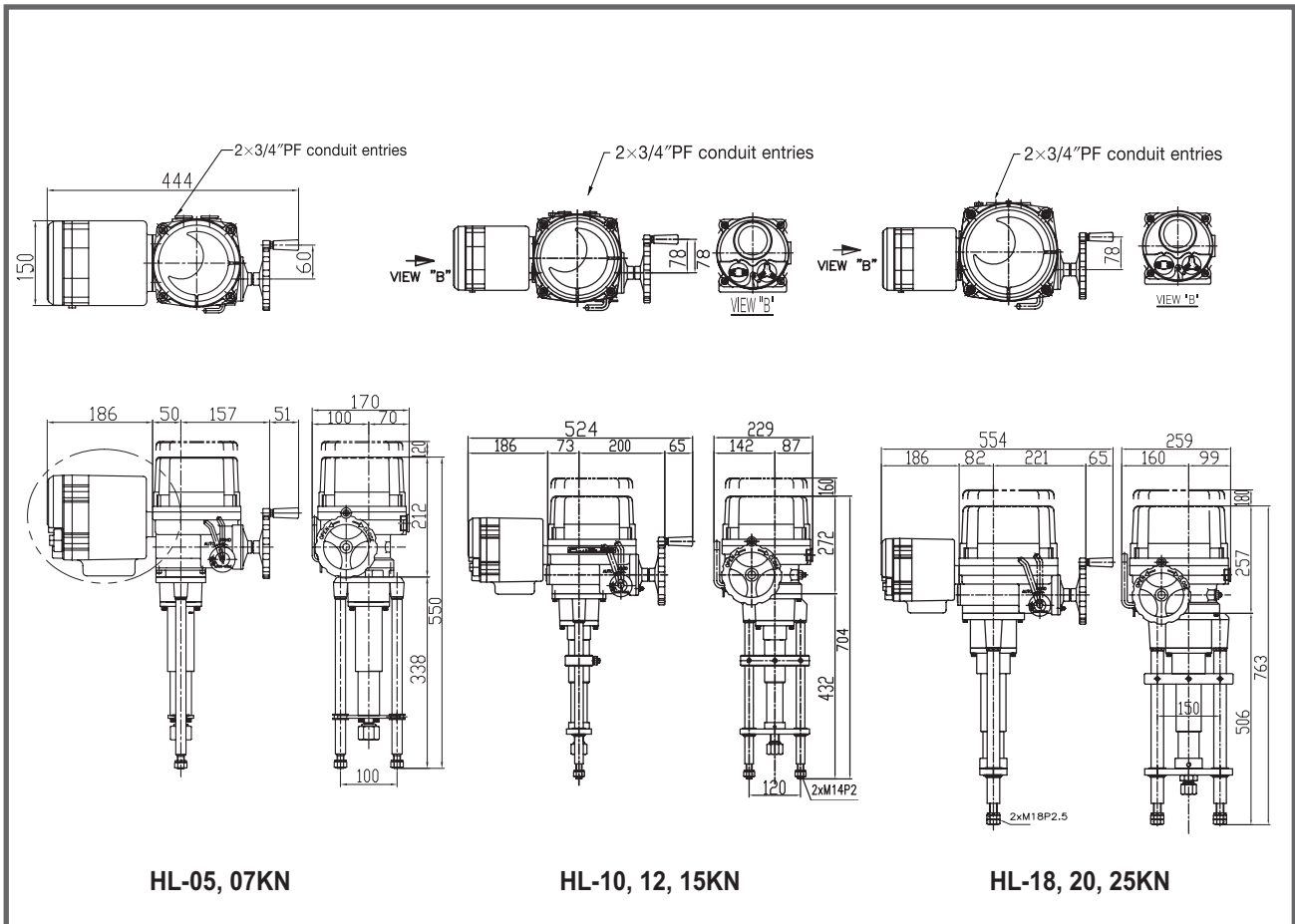


Dimension & Wiring Connection

Local/Remote Control

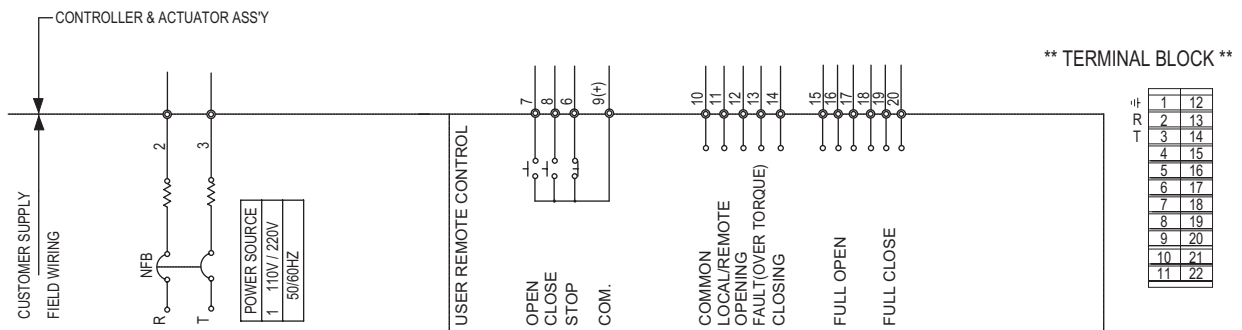
Dimensional Drawing

Unit:mm



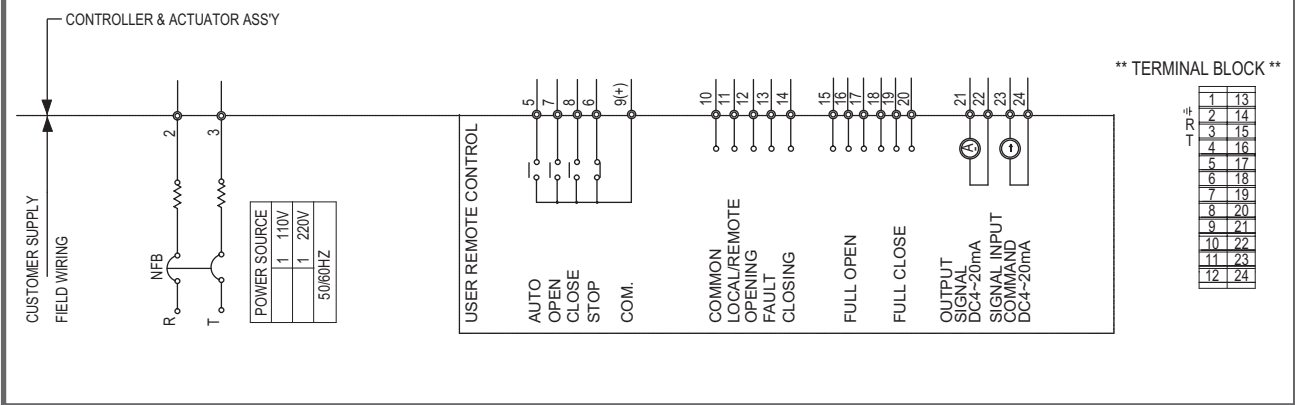
Wiring Diagram

ON-OFF CONTROL WITH LCU-B FOR 1-PHASE ELECTRICITY (HL-05, 07, 10, 12, 15, 18, 20, 25KN)

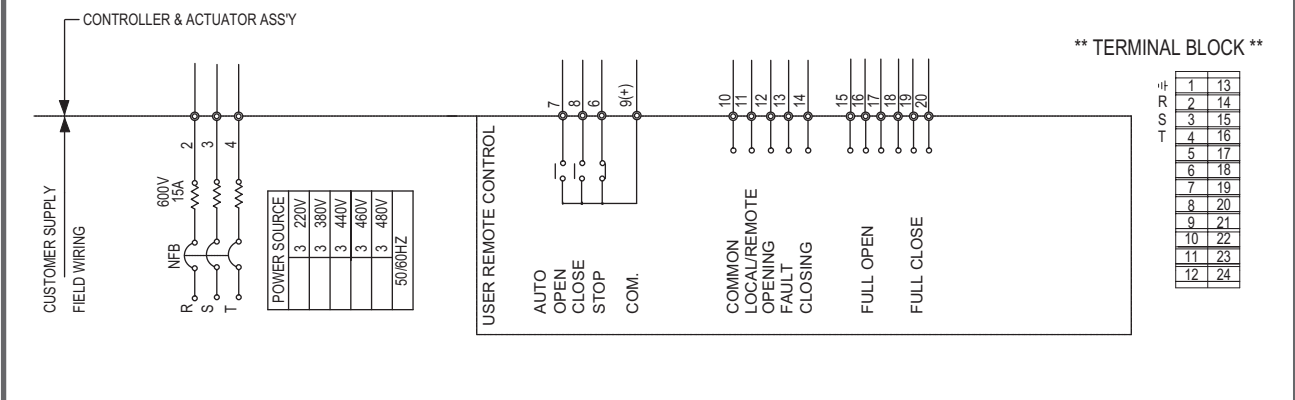


Dimension & Wiring Connection

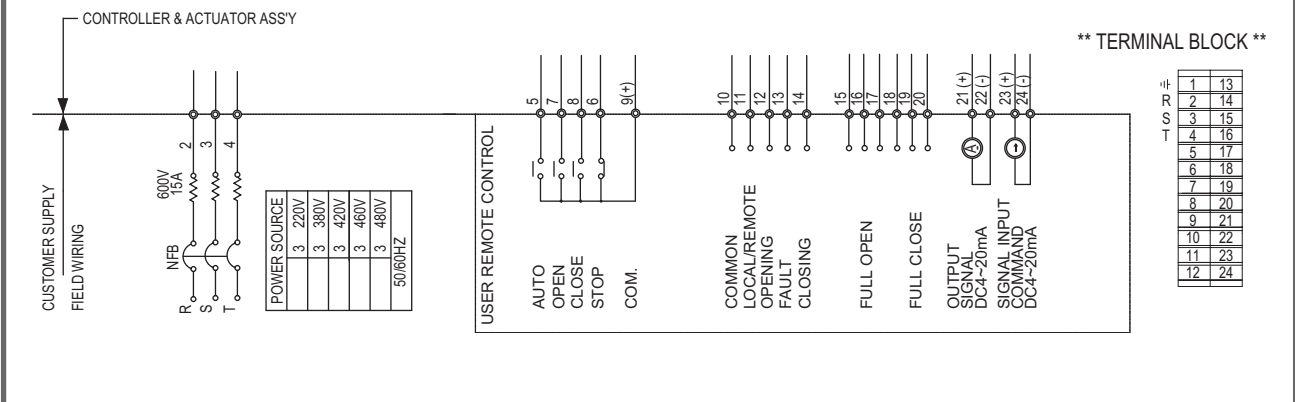
PROPORTIONAC CONTROL WITH LCU-B1 FOR 1-PHASE ELECTRICITY (HL-10, 12, 15, 18, 20, 25KN)



ON-OFF CONTROL WITH LCU-B3 FOR 3-PHASE ELECTRICITY (HL-10, 12, 15, 18, 20, 25KN)



PROPORTIONAL CONTROL WITH LCU-B FOR 3-PHASE ELECTRICITY (HL-10, 12, 15, 18, 20, 25KN)

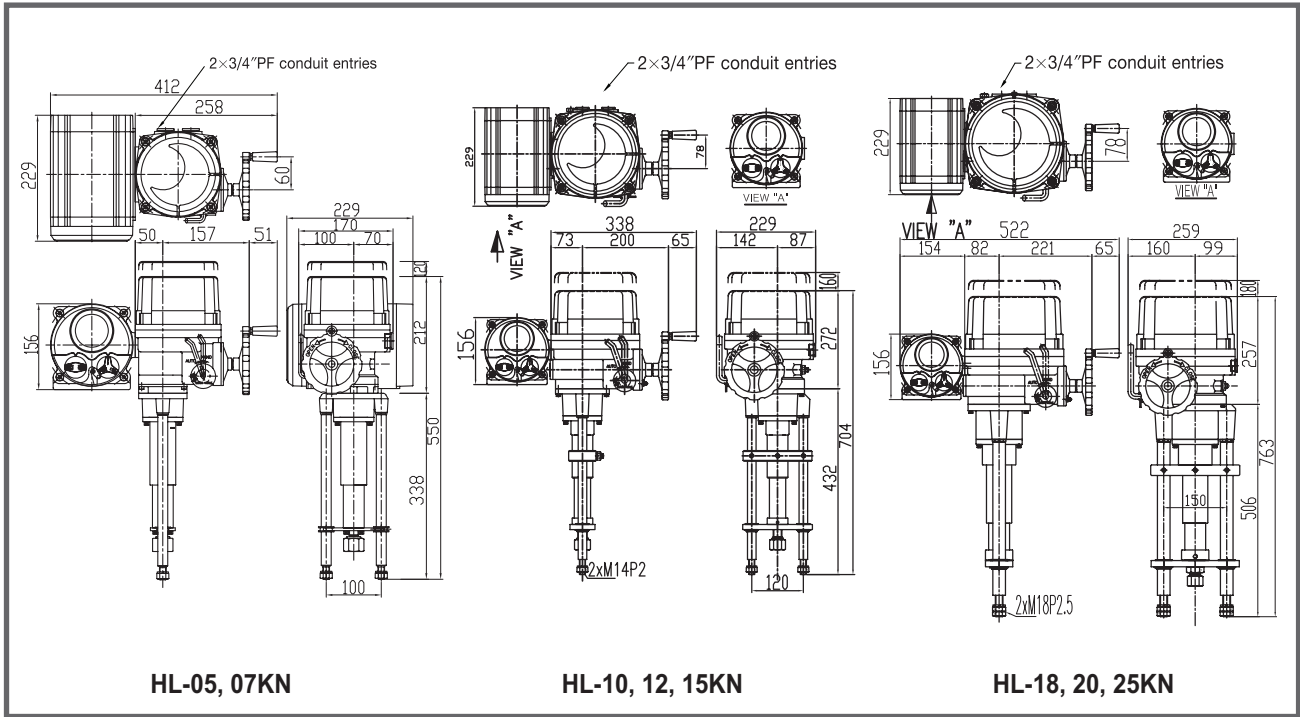


Dimension & Wiring Connection

RBP Type with Local/Remote Control

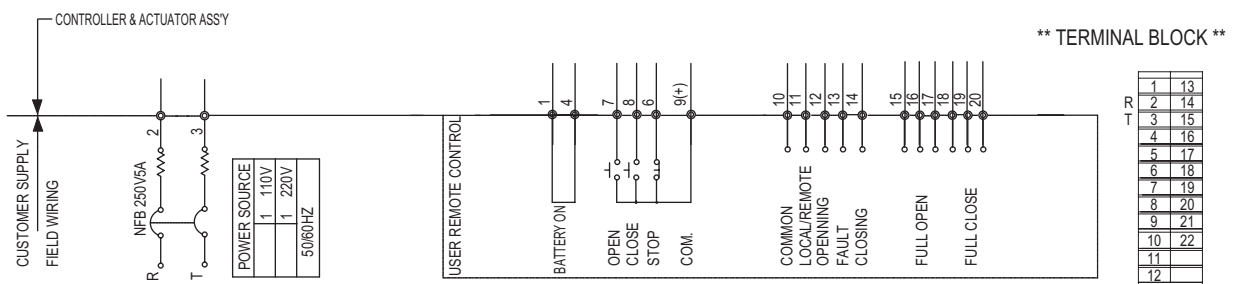
Dimensional Drawing

Unit:mm

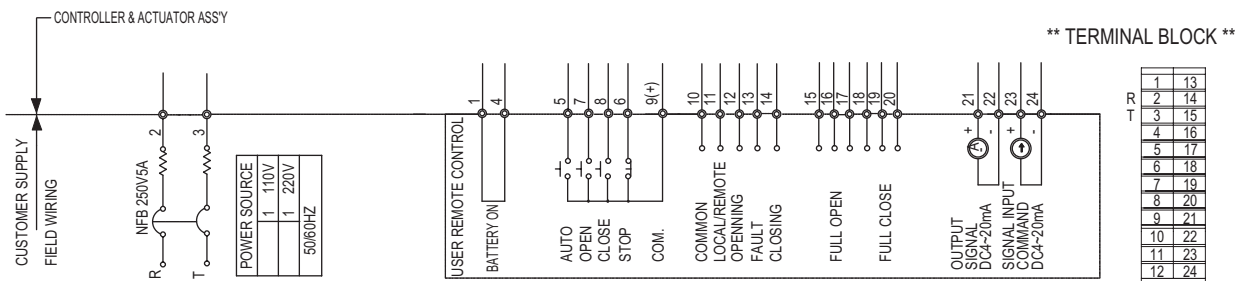


Wiring Diagram

ON-OFF CONTROL WITH RBP / LCU (HL-05, 07, 10, 12, 15, 18, 20, 25KN)



PROPORTIONAL CONTROL WITH RBP / LCU (HL-10, 12, 15, 18, 20, 25KN)



Ordering Code System

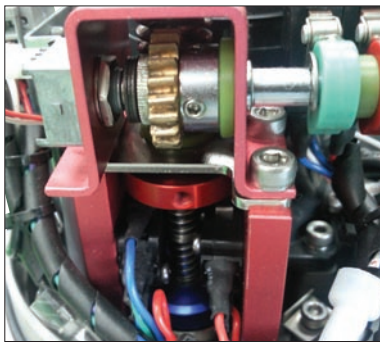
Unit:mm

HL - XX X X X X X

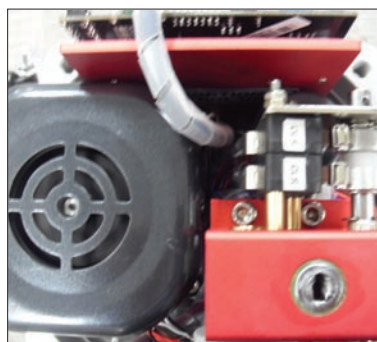
SIZE	ENCLOSURE	MOTOR VOLTAGE	OPTION 1	OPTION 2	OPTION 3
05 : 5KN	1 : Weather proof (IP67)	1 : 110V AC / 1Ph	0 : N/A	0 : N/A	0 : N/A (STD)
07 : 7KN	2 : Watertight (IP68)	2 : 220V AC / 1Ph	1 : PIU	1 : LCU-D	1 : MBS
10 : 10KN	3 : EX type	3 : 220V AC / 3Ph	2 : CPT	2 : LCU-B	
12 : 12KN		4 : 380V AC / 3Ph	3 : PCU	3 : RBP	
15 : 15KN		5 : 440V AC / 3Ph		4 : LCU-C	
18 : 18KN		6 : 460V AC / 3Ph			
20 : 20KN		7 : 24V DC			
25 : 25KN					

Remarks

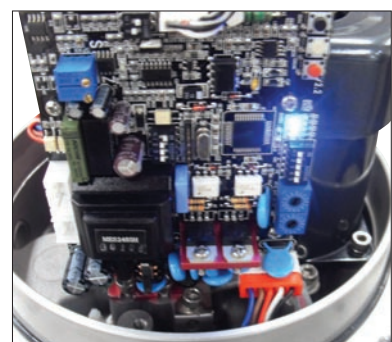
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Torque S/W



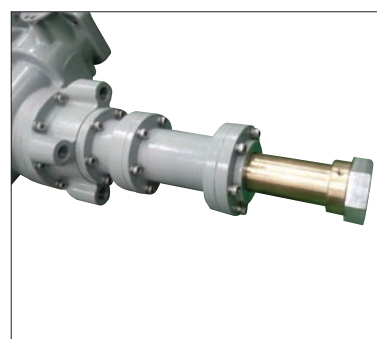
Limit S/W



PCU



Motor Ass'y



Drive bush & joint



PIU