



ATEX II 2G
Eexd IIB T4



Electric Actuator Type EXA Explosion Proof Enclosure

- Output torques of 80 to 1200 Nm
- Explosion Proof Enclosure
- ATEX II 2G Eexd IIB T4
- IP67 weatherproof
- Two M20 cable entries
- Manual override
- Anti-condensation heater
- Four limit switch

Can be used with



Description

The HQ008 to HQ1200 range of explosion proof electric actuators are specially designed for quarter turn, on/off and modulating applications for use with ball and butterfly valves. Suitable for hazardous locations the actuators are certified ATEX/IECEX Ex d IIB T4 Gb, IP67. A wide range of voltages are available to meet your specific requirements. High Quality electrical components, gearing and various torque options are offered to ensure reliability and extended life span.

Standard Features:

Visual position indicator, Torque switches
Anti-condensation heater and thermostat,
Two auxiliary limit switches,
Self-locking gear train,
Manual declutchable handwheel,
Available motor voltages: 12VDC, 24VDC,
24VAC, 120VAC & 220VAC



Description

The EXA series HQ008 - HQ120 are rotary quarter turn electric actuators specially designed for applications in hazardous applications for use with ball and butterfly valves. Equipped with many extras that are fitted as standard, this compact yet powerful unit offers repeatability with long life. Power supply in many voltages. Certified to ATEX/IECEX Ex d IIB T4 Gb, IP67.



Beschreibung

Die EXA-Serie HQ008 - HQ120 sind elektrische Schwenkantriebe mit Viertelumdringung, die speziell für Anwendungen in explosionsgefährdeten Bereichen für Kugel- und Absperrklappen entwickelt wurden. Mit vielen serienmäßigen Extras ausgestattet, bietet dieses kompakte und dennoch leistungsstarke Gerät Wiederholgenauigkeit mit langer Lebensdauer. Stromversorgung in vielen Spannungen. Zertifiziert nach ATEX / IECEX Ex d IIB T4 GB, IP67.



Descripción

La serie EXA HQ008 - HQ120 son actuadores eléctricos giratorios de un cuarto de vuelta diseñados especialmente para aplicaciones en aplicaciones peligrosas para uso con válvulas de bola y mariposa. Equipada con muchos extras que vienen de serie, esta unidad compacta y potente ofrece repetibilidad con una larga vida útil. Fuente de alimentación en muchos voltajes. Certificado a ATEX / IECEX Ex d IIB T4 Gb, IP67.



Description

Les séries EXA HQ008 - HQ120 sont des actionneurs électriques rotatifs quart de tour spécialement conçus pour les applications dans les applications dangereuses pour une utilisation avec les vannes à boisseau sphérique et à papillon. Équipé de nombreux suppléments montés en standard, cet appareil compact mais puissant offre une répétabilité et une longue durée de vie. Alimentation en plusieurs tensions. Certifié ATEX / IECEX Ex d IIB T4 Gb, IP67.

Standard Actuator Specification

Enclosure	:	Weatherproof IP67
Power Supply	:	110/220V 1PH, 24VAC/24VDC 380/440V AC 3PH
Operating Time	:	see chart
Limit Switches	:	4 x SPDT, 250V AC 10A
Space Heater	:	10W (110/240V AC)Anti Condensation
Manual Override	:	Handwheel Declutchable
Duty Cycle (on/off)	:	S4, 70% standard, 100% for Max 30 Mins
Travel Angle	:	90°
Conduit Entries	:	2 x M25 (PG13.5 or 1/2"NPT Option)
Ambient Temperature	:	-20 °C to + 70 °C
External Coating	:	Dry Powder, Polyester

OPTION SPECIFICATION

PIU	:	Potentiometer Unit (1K – 10K)
PCU	:	Proportional Control Unit (In/Out: 0-10VDC, 4-20mA)
CPT	:	Current Position Transmitter (Output 4-20mA)
LCU	:	Local Control Unit (Remote/Open/Stop/Close Switch)
EXA	:	Explosion Proof Enclosure. ATEX II 2G Eexd IIB T4
FPA	:	Fire Proof Actuator. 250°C/150 min

PERFORMANCE

MODEL	HQ008	HQ015	HQ020	HQ030	HQ050	HQ060	HQ080	HQ120
TORQUE(Nm)	80	150	200	300	500	600	800	1200
SPEED 90° 50/60Hz	16/13	25/21	25/21	31/26	31/26	31/26	34/28	34/28
CURRENT 110/1/50	1.1	1.65	1.67	1.86	3.62	3.62	4.1	4.2
(A) 220/1/50	0.55	0.88	0.89	0.92	1.58	1.62	2.2	2.35
MAX 380/3/50	N/A	0.31	0.31	0.35	0.59	0.6	0.85	0.87
WEIGHT	7.4	16.6	16.6	22	23	23	29	29
MAX.SQ.DRIVE	17	19	19	30	30	30	40	40

Various options, including:

EXA - ATEX Eexd Enclosure to ATEX EX II 2 G, Exd IIB T4

PCU - 4-20mA or 0-10v Modulating positioner card

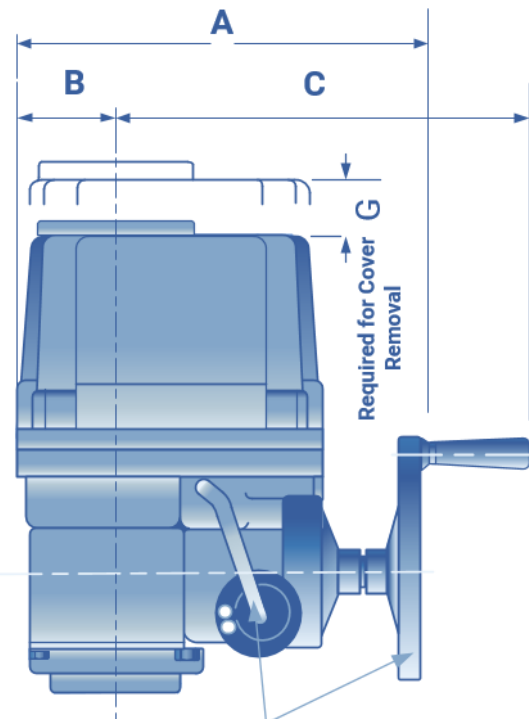
WTA - IP68 waterproof housing (10m / 72 Hr)

SICU - Local control unit with local/remote switch

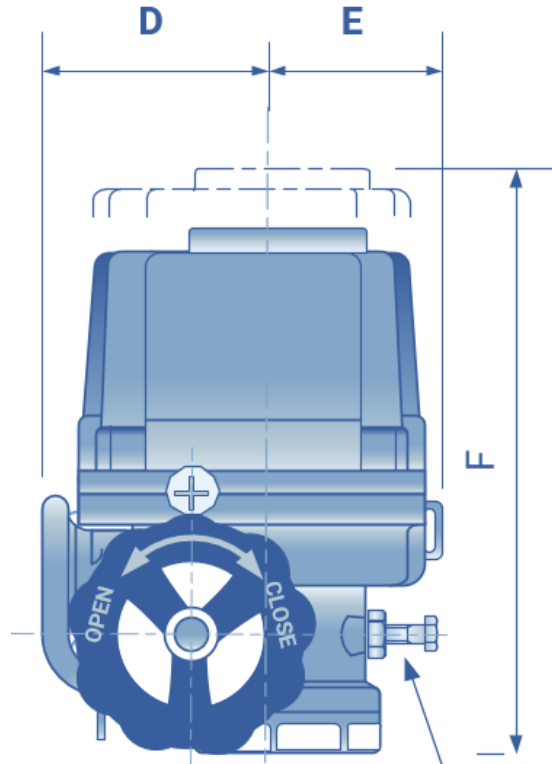
MRCT - Speed control card

RBP - Failsafe battery backup (HQ008 to HQ030 only)

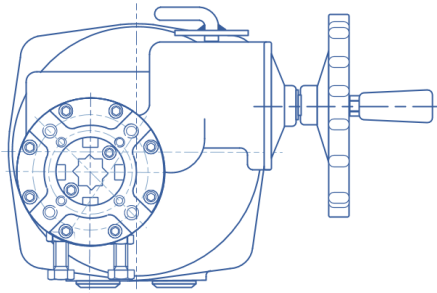
FPA - High temp fire protection.



Manual Override with
Declutch Mechanism



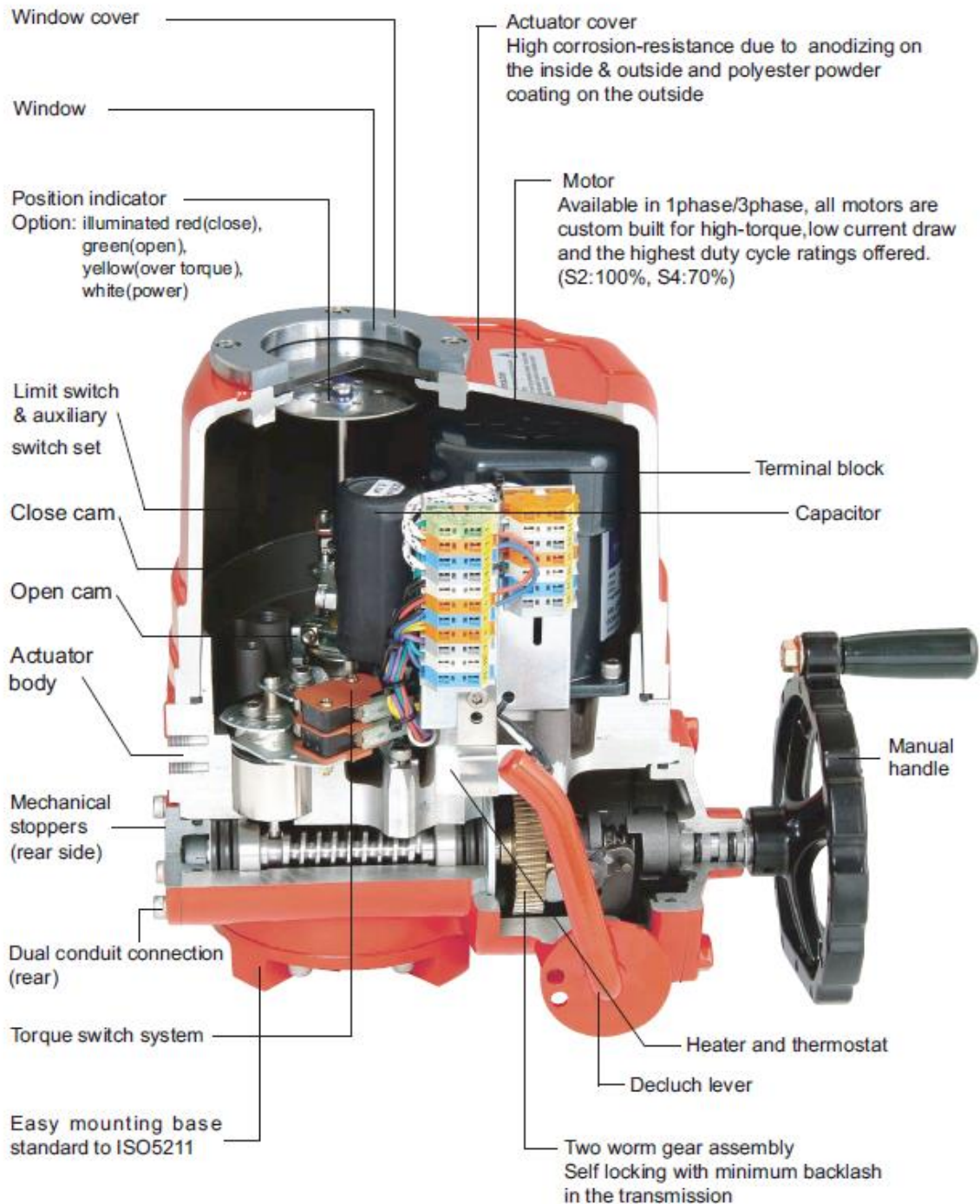
2 x Mechanical Limit
Switches



DIMENSIONS

Model	Base	A	B	C	D	E	F	G	H*	J
HQ008	F07	258	50	157	100	235	120	120	14	35
HQ015	F07/F10	338	73	200	142	268	160	160	17	45
HQ020	F07/F10	338	73	200	142	268	160	160	17	45
HQ030	F10/F12	368	82	221	160	290	180	180	22	52
HQ050	F10/F12	368	82	221	160	290	180	180	22	52
HQ060	F10/F12	368	82	221	160	290	180	180	27	52
HQ080	F12/F14	410	103	242	186	330	210	210	27	60
HQ120	F12/F14	410	103	242	186	330	210	210	36	60

Construction



■ Standard Configuration



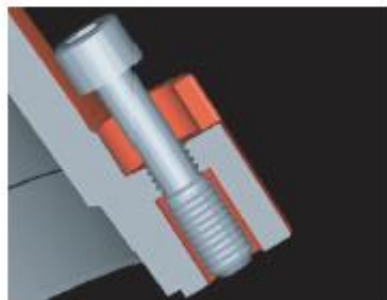
● Terminal block

- Enough number of terminal strips for customer's convenience
- Proven reliability and tight wiring connection.
- Stripped length: 8-9 mm / 0.33 in (2.5mm²)
- Terminal dimensions: 10 × 22 × 32mm



● Heater

- Ceramic housing with thermostat to prevent over heat comparing with set temperature.
- No risk of electricity leakage.



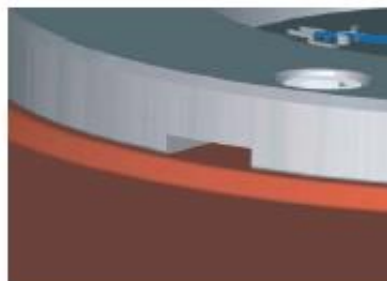
● Captive cover bolt

- Cover bolts are specially designed to prevent losing it during maintenance or installation.
- All external bolts are stainless steel for rust prevention.



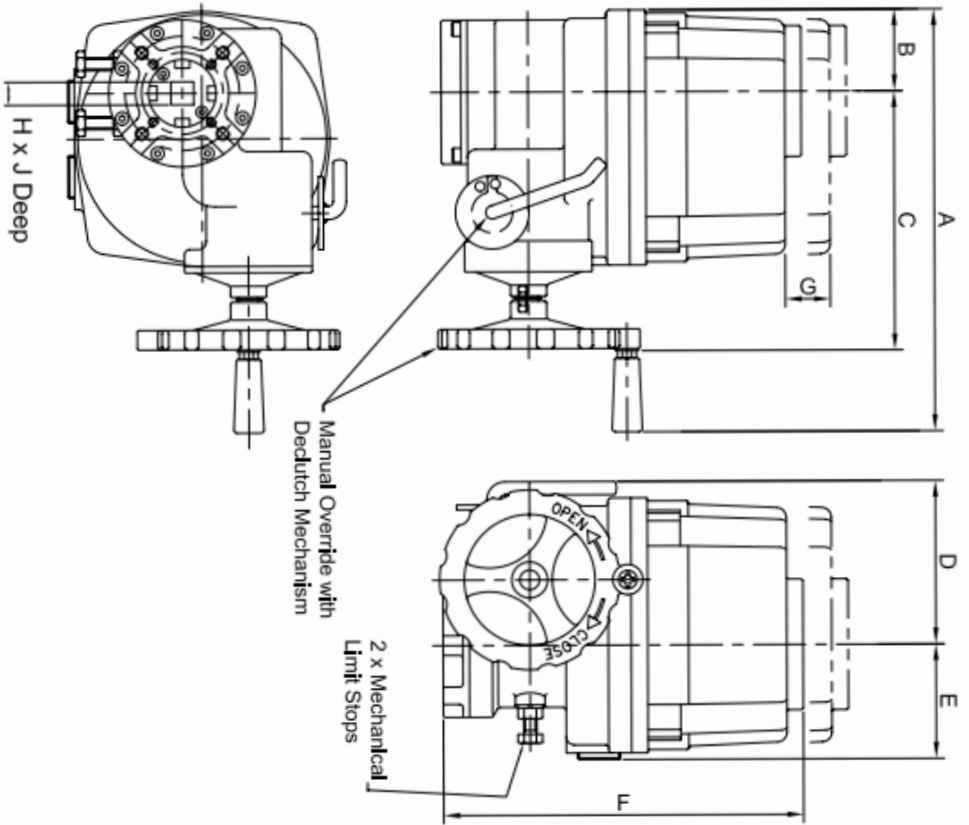
● Indicator sustained by spring

- Direction of visual indicator is set by factory.
- In case of changing it's direction, just grip the indicator plate and change the position.
- Spring beneath indicator plate sustains the set position unchanged.
- No need to loose screw and tight it again at all !



● Slot on window cover for draining rainwater

- Rainwater inside of window cover may affect the sealing of window.
- To prevent this, drain slot is useful to prevent this effect.



Dimensions:

MODEL	BASE	A	B	C	D	E	F	G	H*	J
HQ008	F07	258	50	157	100	70	235	120	14	35
HQ015	F07/F-10	338	73	200	142	87	268	160	17	45
HQ020	F07/F-10	338	73	200	142	87	268	160	17	45
HQ030	F10/F-12	368	82	221	160	99	290	180	22	52
HQ050	F10/F-12	368	82	221	160	99	290	180	22	52
HQ060	F10/F-12	368	82	221	160	99	290	180	27	52
HQ080	F12/F-14	410	103	242	186	111	330	210	27	60
HQ120	F12/F-14	410	103	242	186	111	330	210	36	60

* CAN BE MACHINED TO SUIT MOST VALVE STEMS (ON REQUEST)

Description:

The HQ008 to HQ120 electric actuators are specially designed for quarter turn applications such as ball, butterfly, plug valves and dampers. With a wide range of output torques and control options the HQ series electric actuator can be configured to meet the demands of any site specification. High quality electrical components, alloy gearing and a high pressure die cast aluminium housing ensure reliability and extended life span.

Standard Specification:

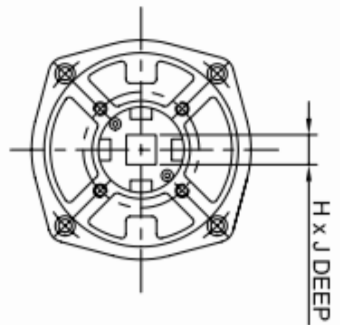
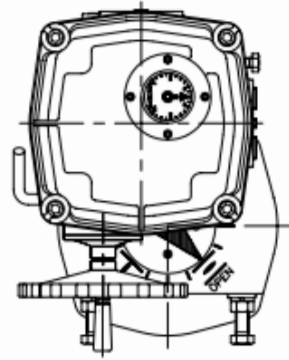
- Enclosure : Weatherproof IP67 (IP68 Option)
- Power Supply : 110/220v 50/60Hz, 24VAC/DC, 380/440V 3Phase
- Duty Cycle (On/Off Duty) : S4, 70% Standard, 100% for max 30 mins
- Motor : Squirrel Caged Induction Motor
- Limit Switches : 4 x SPDT, 250V AC 10A
- Torque Switches : 2 x SPDT, 250VAC 10A (HQ015-HQ120)
- Space Heater : 10W(110/220VAC) Anti Condensation
- Conduit Entries : 2 x M25 (PG13.5 OR 1/2"NPT OPTION)
- Travel Angle : 90° ± 5°
- Ambient Temperature : -20°C to +70°C
- External Coating : Anodised before Dry Powder Polyester Coating

Option Specification:

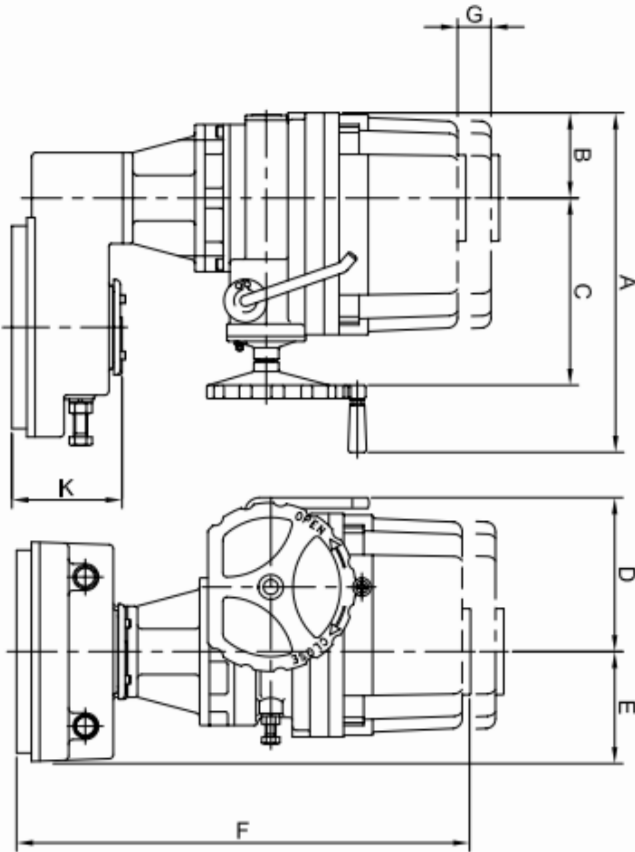
- PIU : Potentiometer Unit (1K - 10K)
- PCU : Proportional Control Unit. (In/Out: 0-10VDC, 4-20mA)
- CPT : Current Position Transmitter (Output 4-20mA)
- LCU : Local Control Unit (Remote/Open/Stop/Close switch)
- EXA : Explosion Proof Enclosure. ATEX II 2G Exe II B T4
- FPA : Fire Proof Actuator. 250°C/150 mih

Performance:

MODEL	HQ008	HQ015	HQ020	HQ030	HQ050	HQ060	HQ080	HQ120
TORQUE (Nm)	80	150	200	300	500	600	800	1200
SPEED 90° 50/60Hz	16/13	25/21	25/21	31/26	31/26	31/26	34/28	34/28
CURRENT 110/1/50 (A)	1.10	1.65	1.67	1.86	3.62	3.62	4.10	4.20
MAX 220/1/50 (A)	0.55	0.88	0.89	0.92	1.58	1.62	2.20	2.35
MAX 380/3/50 (A)	N/A	0.31	0.31	0.35	0.59	0.60	0.85	0.87
WEIGHT (Kg)	7.4	16.6	16.6	22	23	23	29	29
MAX. SQ. DRIVE	17	19	19	30	30	30	40	40



BASE ISO5211



Dimensions:

MODEL	BASE	A	B	C	D	E	F	G	H**	J	K
HQ200	F14*/F16	410	103	242	186	133	563	210	36	95	133
HQ300	F14*/F16	410	103	242	186	133	563	210	46	95	133

* ON REQUEST

** CAN BE MACHINED TO SUIT MOST VALVE STEMS (ON REQUEST)

Description:

The HQ200 and HQ300 electric actuators are specially designed for quarter turn applications such as ball, butterfly, plug valves and dampers. With a wide range of control options the HQ series electric actuator can be configured to meet the demands of any site specification. High quality electrical components, alloy gearing and a high pressure die cast aluminium housing ensure reliability and extended life span.

Standard Specification:

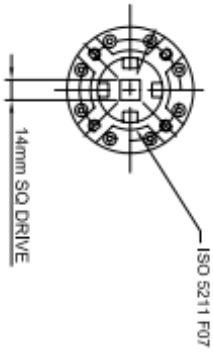
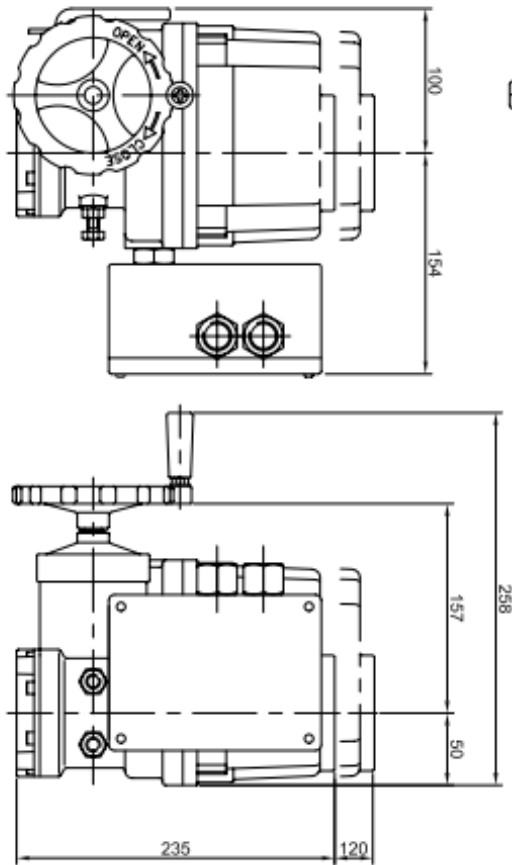
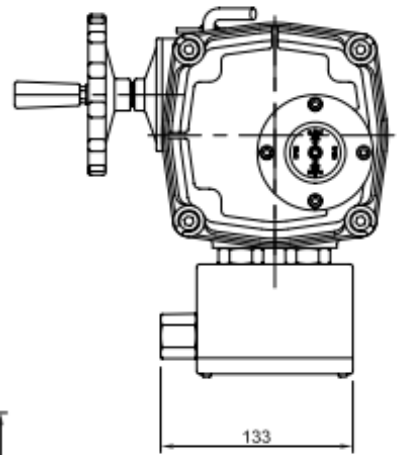
- Enclosure : Weatherproof IP67 (IP68 Option)
- Power Supply : 110/220v 50/60Hz, 380/440V 3Phase
- Duty Cycle (On/Off Duty) : S2, 20 - 50% Max 10 - 30 Min
- Motor : Squirrel Caged Induction Motor
- Limit Switches : 4 x SPDT, 250V AC 10A
- Torque Switches : 2 x SPDT, 250VAC 10A
- Space Heater : 20W(110/220VAC) Anti Condensation
- Conduit Entries : 2 x M25 (PG13.5 OR 1/2"NPT OPTION)
- Travel Angle : 90° ± 5°
- Ambient Temperature : -20°C to +70°C
- External Coating : Anodised before Dry Powder Polyester Coating
- Manual Override : Handwheel with Dedutch Mechanism

Option Specification:

- PIU : Potentiometer Unit (1K - 10K)
- PCU : Proportional Control Unit (In/Out: 0-10VDC, 4-20mA)
- CPT : Current Position Transmitter (Output 4-20mA)
- LCU : Local Control Unit (Remote/Open/Stop/Close switch)
- EXA : Explosion Proof Enclosure. ATEX II 2G Eexd IIB T4
- FPA : Fire Proof Actuator. 250°C/150 min

Performance:

MODEL	HQ200	HQ300
TORQUE (Nm)	2000	3000
SPEED 90° 50/60Hz	112/93	112/93
CURRENT 110/1/50	4.10	4.20
CURRENT 220/1/50	2.30	2.35
(A) MAX	380/3/50	0.85
WEIGHT (Kg)	75	75
MAX. SQ. DRIVE	55	55



Description:

The HQ-008 electric actuators are specially designed for quarter turn applications such as small ball, butterfly, plug valves and dampers. Small, light and compact design with high output torques. This variation is fitted with a proportional control unit (PCU) providing modulating control from an incoming signal.

The combination of electronic positioner, position transmitter and microprocessor technology provides extremely high reliability and performance.

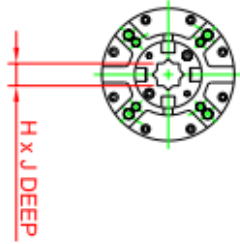
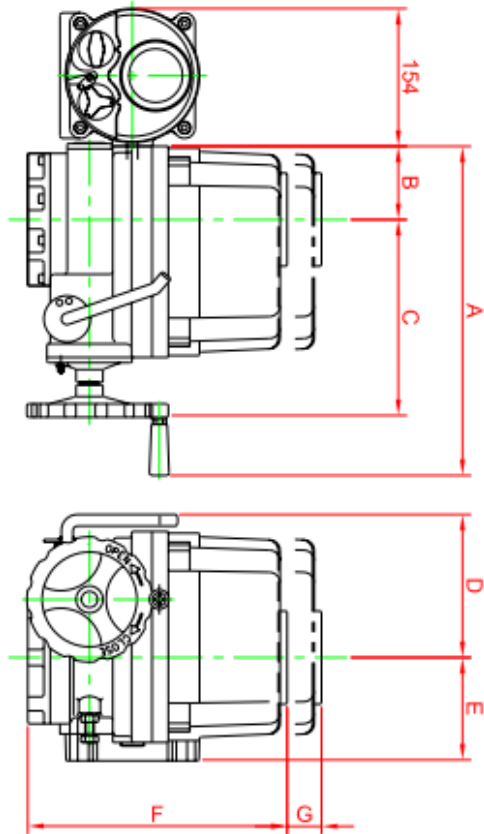
An auto calibration feature provides the user with easy set up and installation by pressing one button.

Standard Specification:

Enclosure	:	Weatherproof IP67
Power Supply	:	110/220v 50/60Hz
Duty Cycle (Modulating)	:	S4 30-50%
Motor	:	Reversible Motor
Limit Switches	:	2 x SPDT, 250V AC 10A
Space Heater	:	20W (110/220V AC)
Manual Override	:	Declutchable
Conduit Entries	:	2 x M25
Ambient Temperature	:	-20°C to +70°C
External Coating	:	Dry Powder, Polyester
Input Signal	:	4-20mA, 0-20mA, 0-10VDC, 1-5VDC
Output Signal	:	4-20mA, 0-10VDC
Adjustable Range	:	Zero 8mA, Open 16mA
Input Resistance	:	250 ohm, Feedback Signal: 1k-10k ohm
Load Resistance	:	Max 750 ohm
Resolution	:	Min 1/1000

Performance

TYPE (MODEL)	MAXIMUM OUTPUT TORQUE	OPERATING TIME 50/60Hz	MOTOR CLASS F FRAME SIZE	RATED CURRENT (A)		WEIGHT
				AC 1PH .50/60Hz	220V	
HQ-008	80Nm	16/13 SECS	W * F	0.95/1.10	0.54/0.55	7.4 Kg



Description:

The HQ008 to HQ030 electric actuators with the addition of an integral failsafe battery backup module. The actuators can be configured to fail close or fail open on loss of power. The power pack has sufficient reserve to allow up to five operations within one hour of the power loss. The integral battery module also includes controls for local operation with a padlockable Remote/Local selector, the front panel incorporates LED indicators for the battery charge status and valve close/open position.

Standard Specification:

Enclosure	: Weatherproof IP67 (IP68 Option)
Power Supply	: 110/220v 50/60Hz
Duty Cycle (On/Off Duty)	: S4, 70% Standard, 100% for max 30 mins
Motor	: Squirrel Caged Induction Motor
Limit Switches	: 4 x SPDT, 250V AC 10A
Torque Switches	: 2 x SPDT, 250VAC 10A (HQ015-HQ030)
Space Heater	: 10W(110/220VAC) Anti Condensation
Conduit Entries	: 2 x M25 (PG13.5 OR 1/2" NPT OPTION)
Travel Angle	: 90° ± 5°
Ambient Temperature	: -20°C to +60°C
External Coating	: Anodised before Dry Powder Polyester Coating

Option Specification:

PIU	: Potentiometer Unit (1K - 10K)
PCU	: Proportional Control Unit (In/Out 0-10VDC, 4-20mA)
CPT	: Current Position Transmitter (Output 4-20mA)
FPA	: Fire Proof Actuator, 250°C/150 min

Performance:

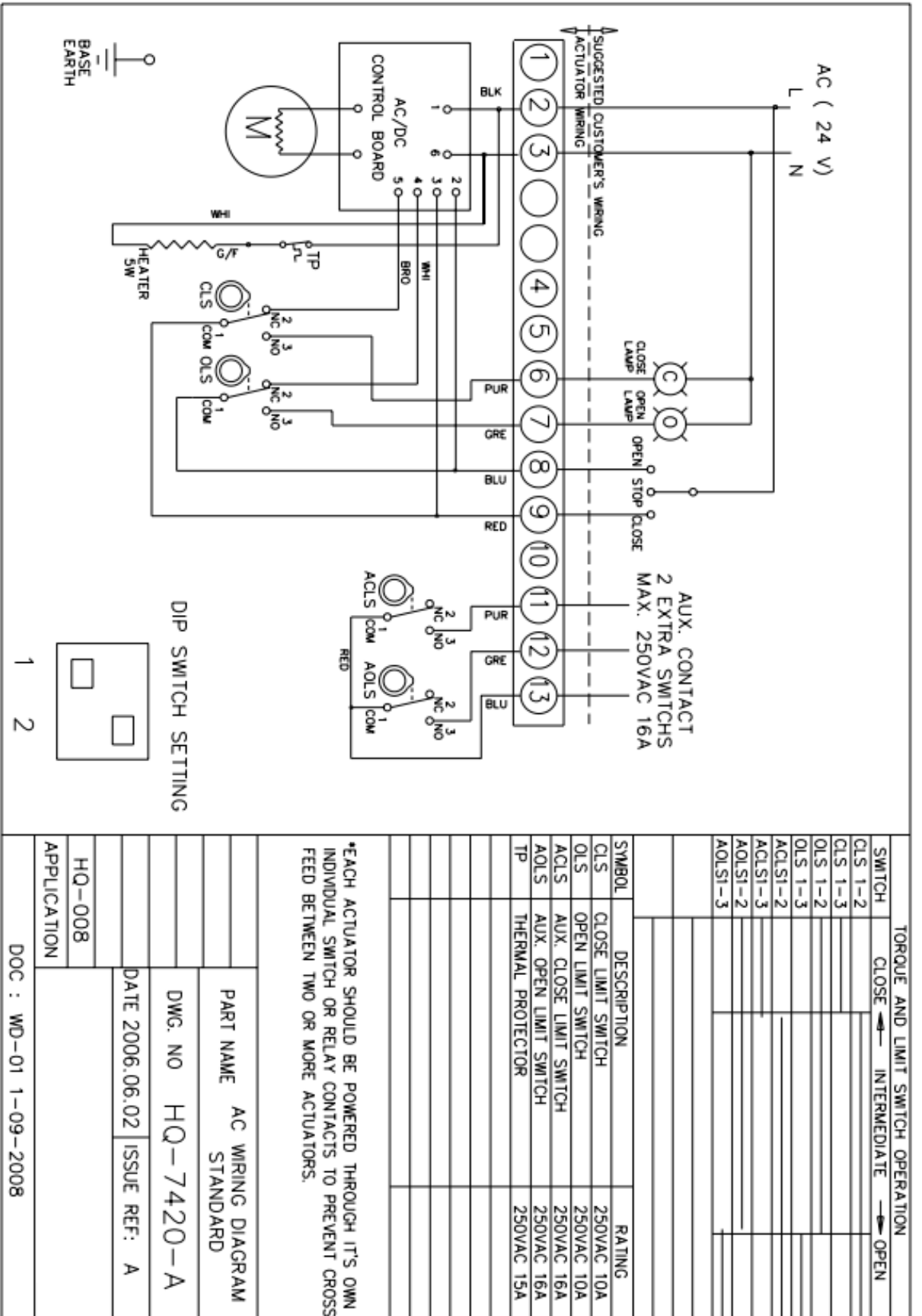
MODEL	HQ008	HQ015	HQ020	HQ030
TORQUE (Nm)	80	150	200	300
SPEED 90° 50/60Hz	16/13	25/21	25/21	31/26
CURRENT 110/150 (A)	1.10	1.65	1.67	1.86
MAX 220/150 (A)	0.55	0.88	0.89	0.92
WEIGHT (Kg)	15	23	23	28
MAX. SQ. DRIVE	17	19	19	30

Dimensions:

MODEL	BASE	A	B	C	D	E	F	G	H*	J
HQ008	F07	258	50	157	100	70	235	120	14	35
HQ015	F07/F10	338	73	200	142	87	268	160	17	45
HQ020	F07/F10	338	73	200	142	87	268	160	17	45
HQ030	F10/F12	368	82	221	160	99	290	180	22	52

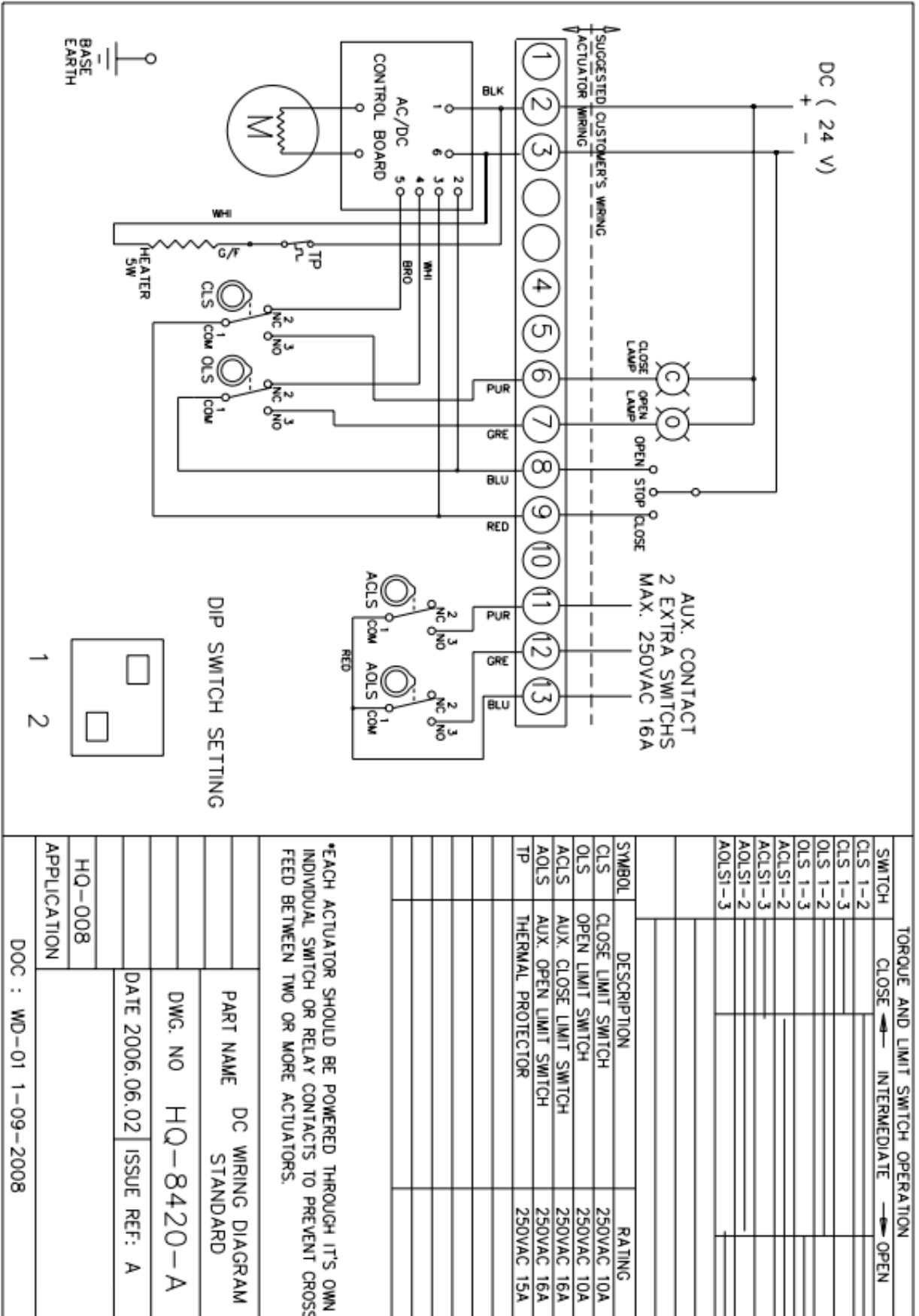
* CAN BE MACHINED TO SUIT MOST VALVE STEMS (ON REQUEST)

HQ008 AC STANDARD



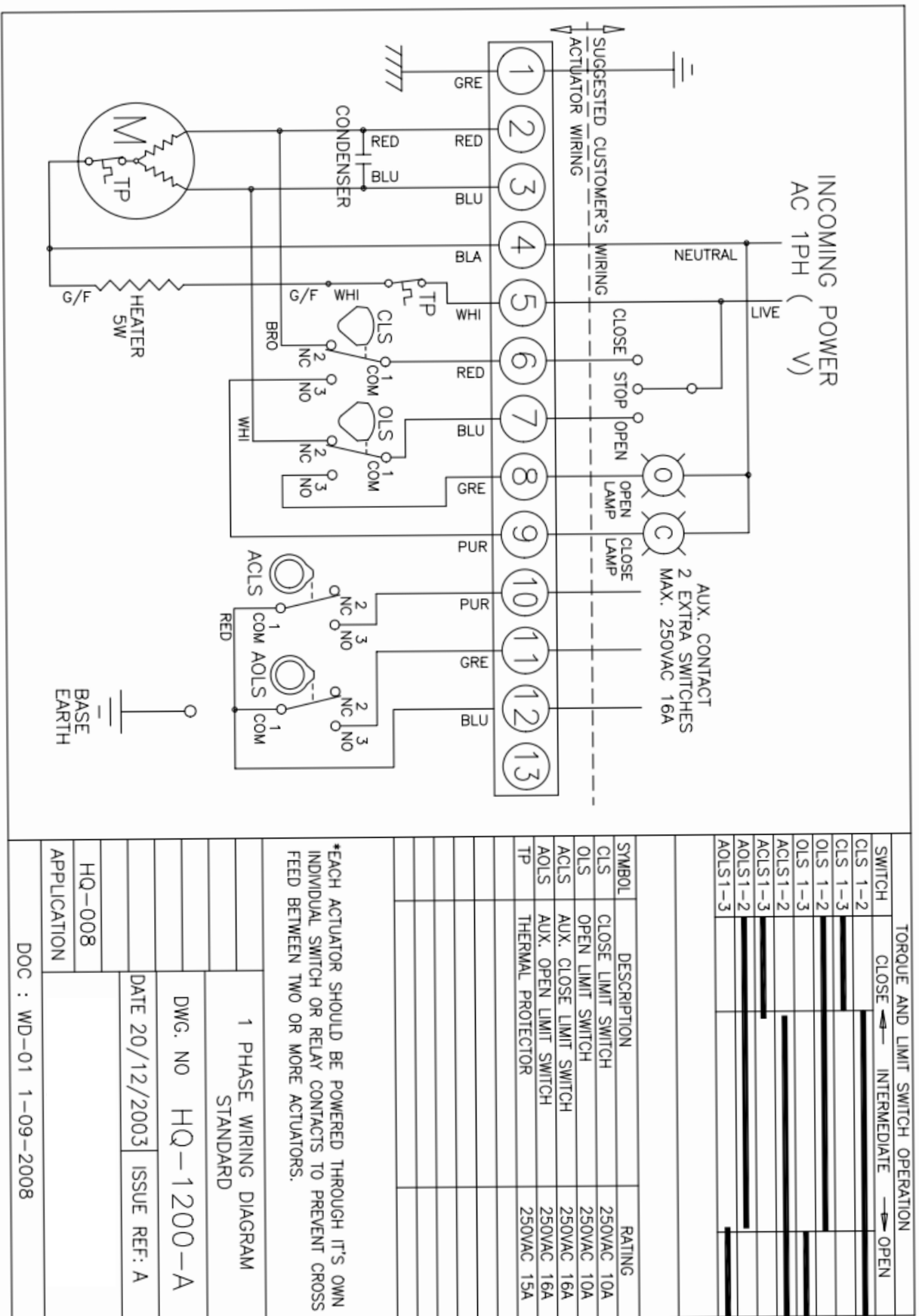
WIRING DIAGRAM

HQ008 DC STANDARD



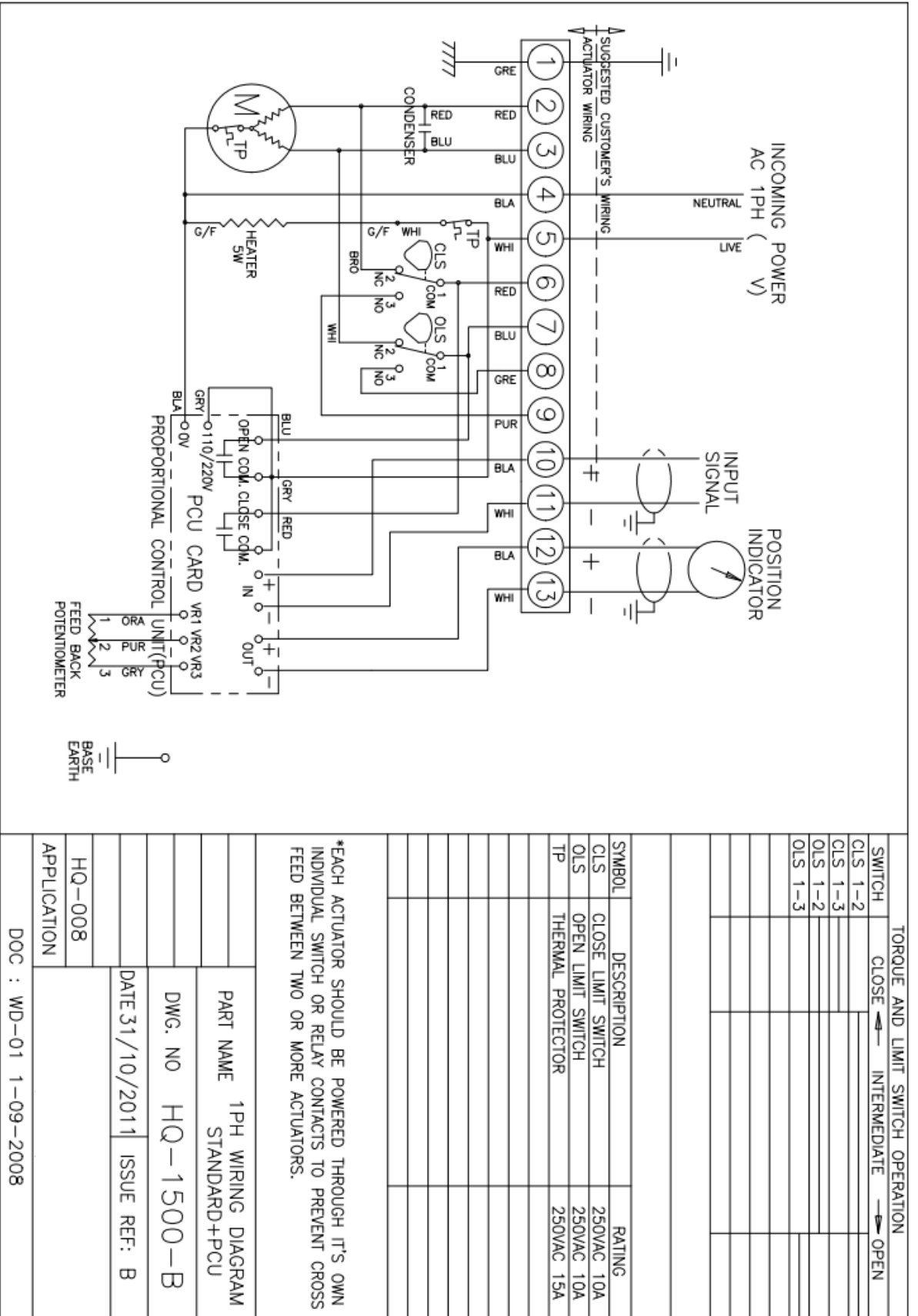
WIRING DIAGRAM

HQ008 SINGLE PHASE STANDARD



WIRING DIAGRAM

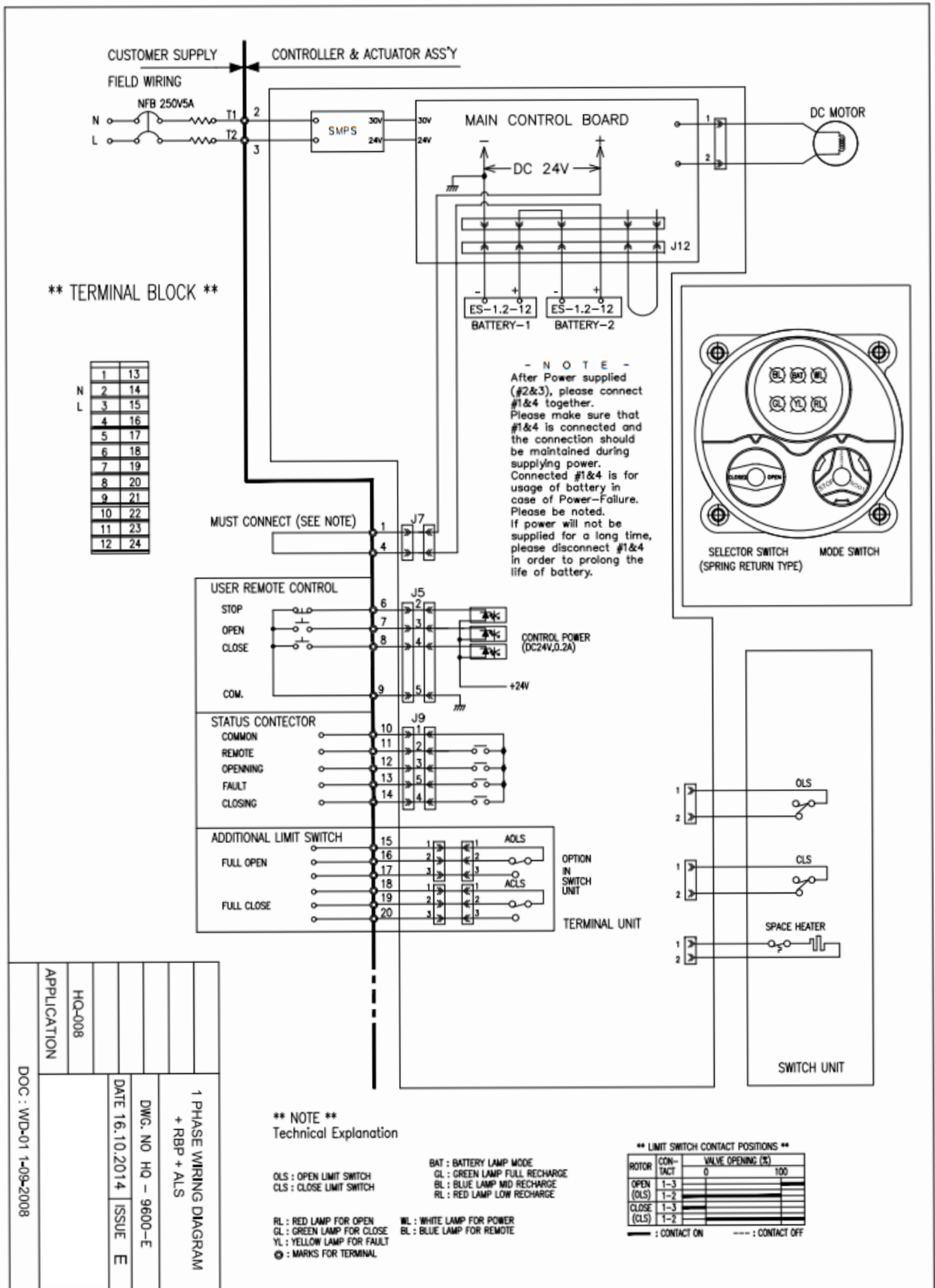
HQ008 1 PHASE STANDARD + PCU



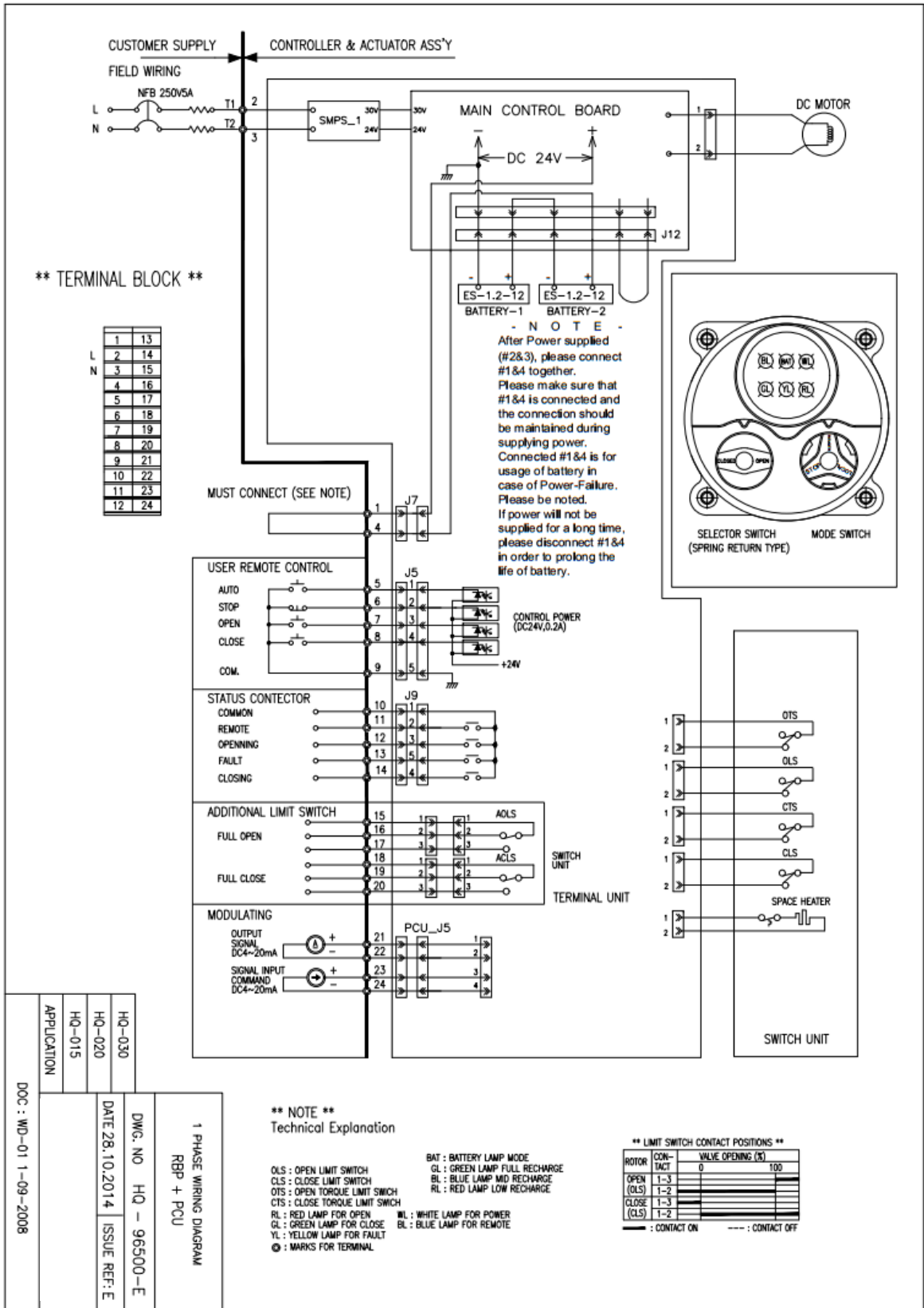
WIRING DIAGRAM

WIRING DIAGRAM

HQ008 1 PHASE WIRING + RBP + ALS

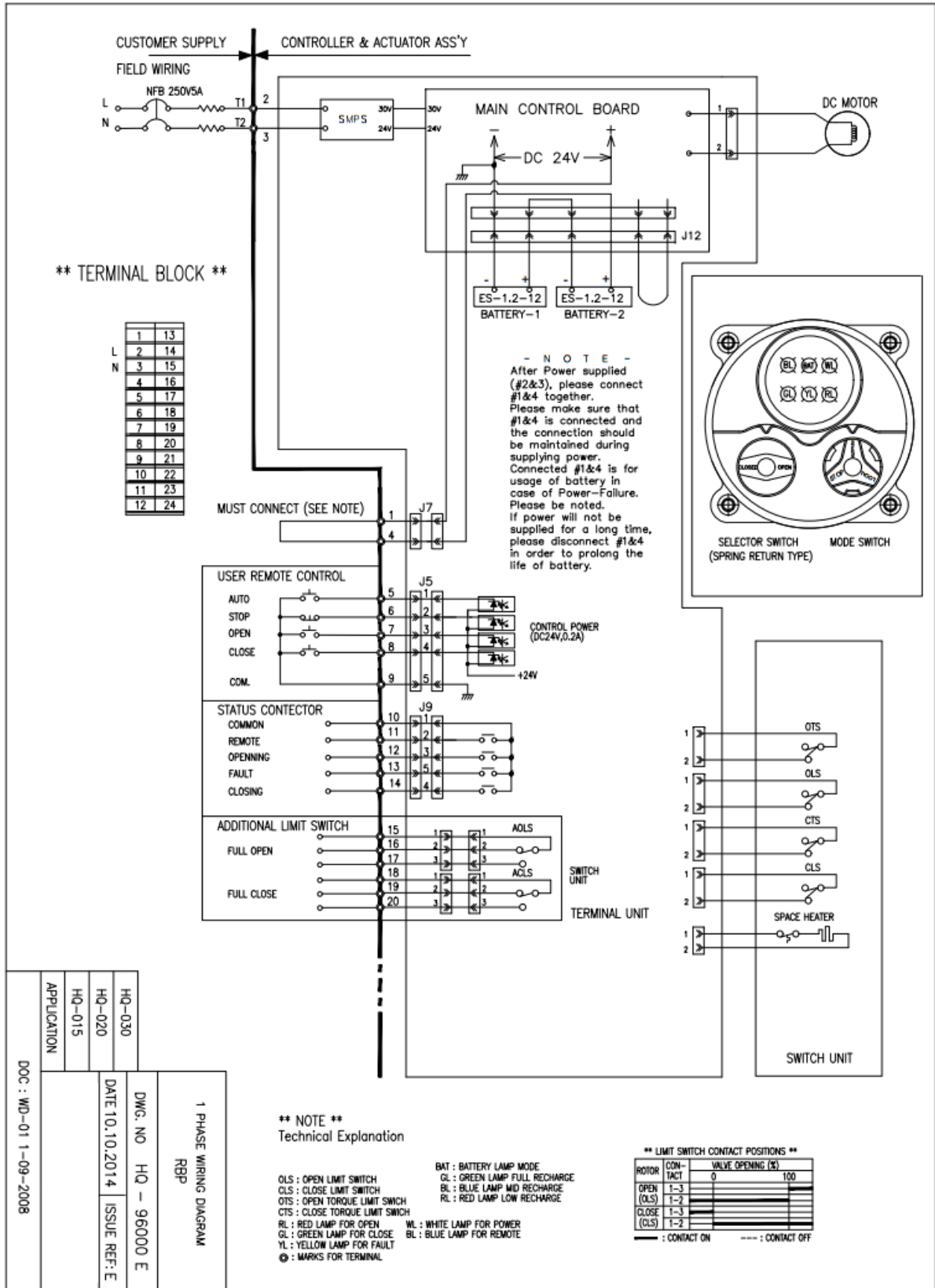


WIRING DIAGRAM

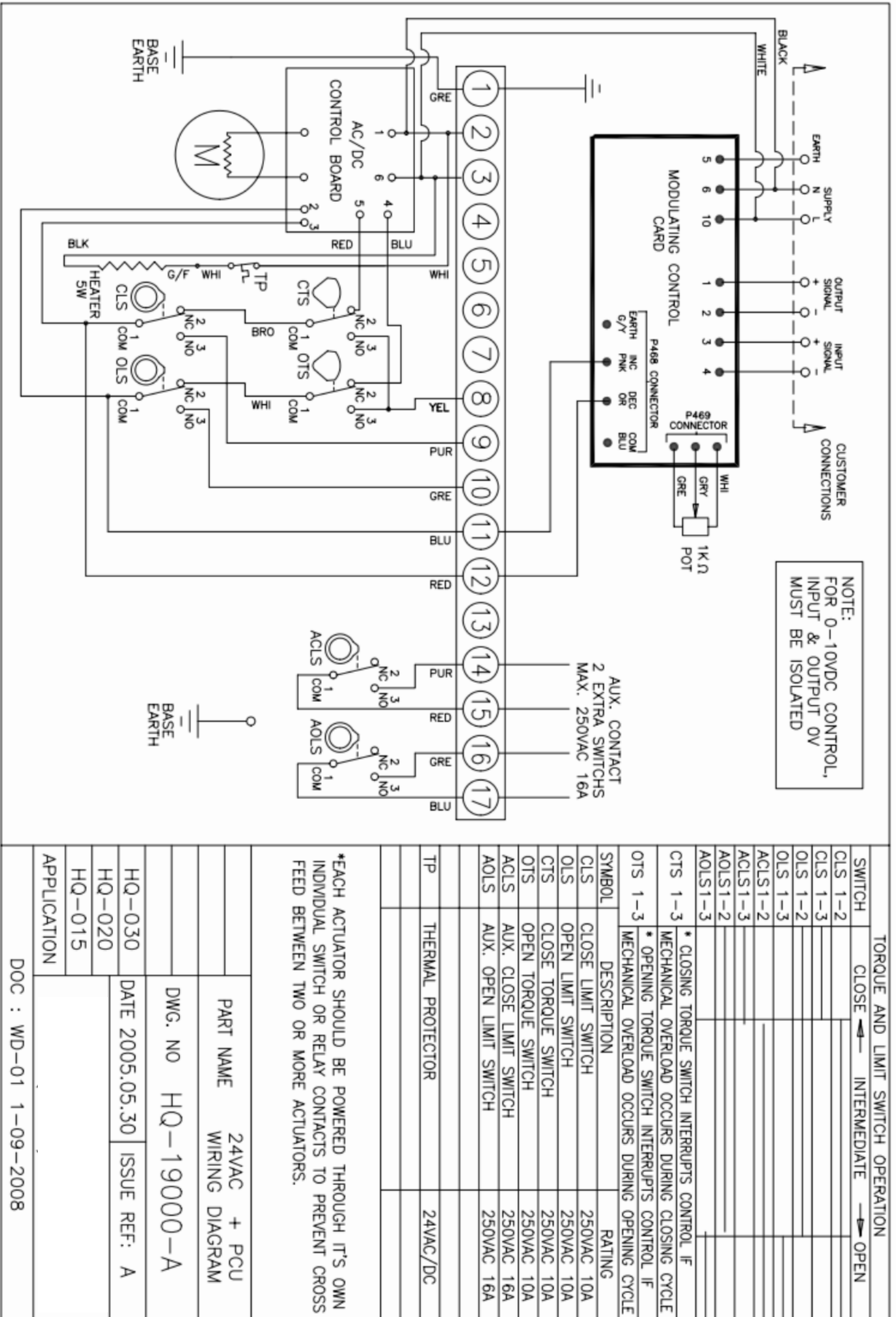


WIRING DIAGRAM

HQ015, HQ020, HQ030 1 PHASE WIRING RBP

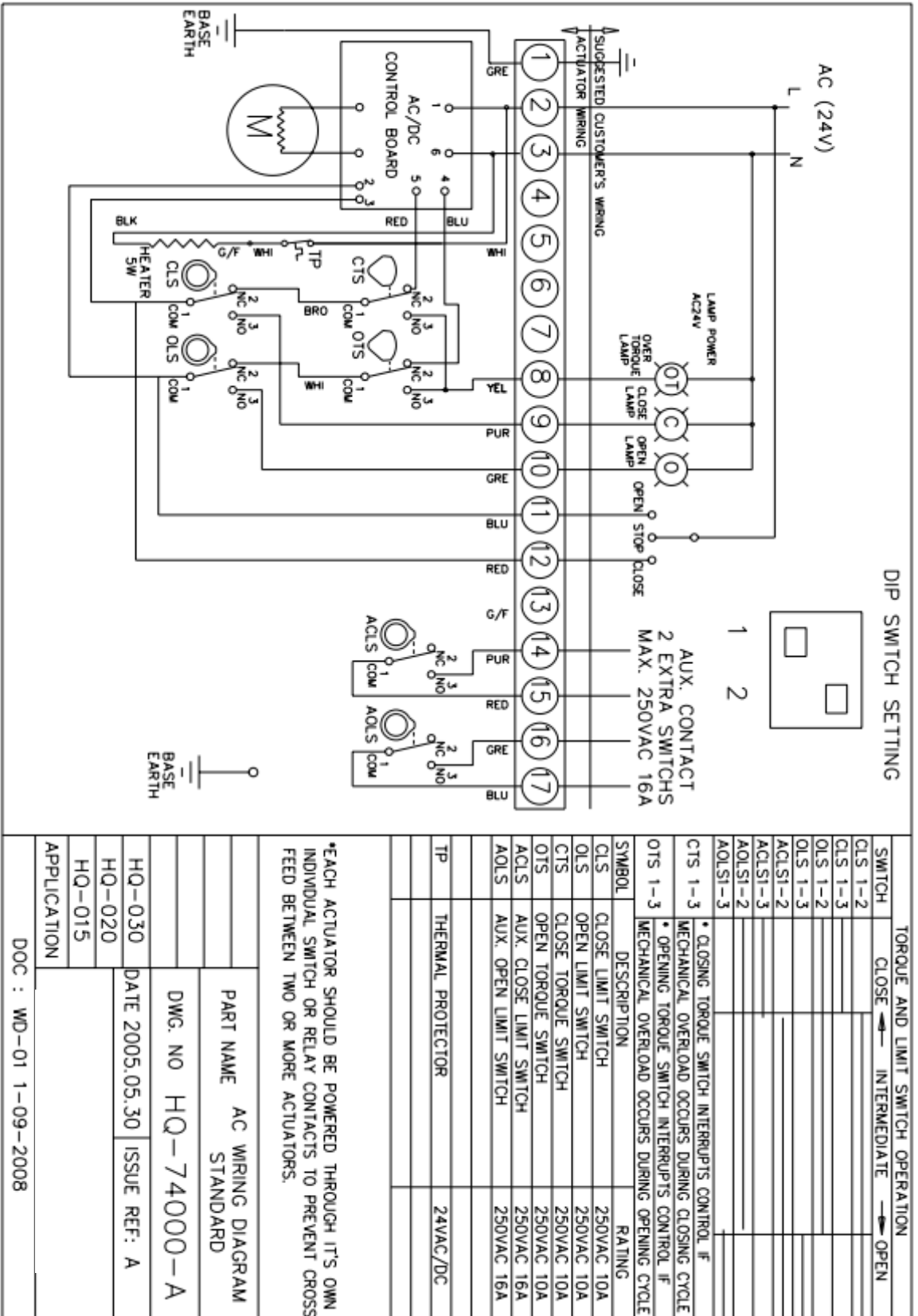


HQ015, HQ020, HQ030 WIRING + 24VAC + PCU



WIRING DIAGRAM

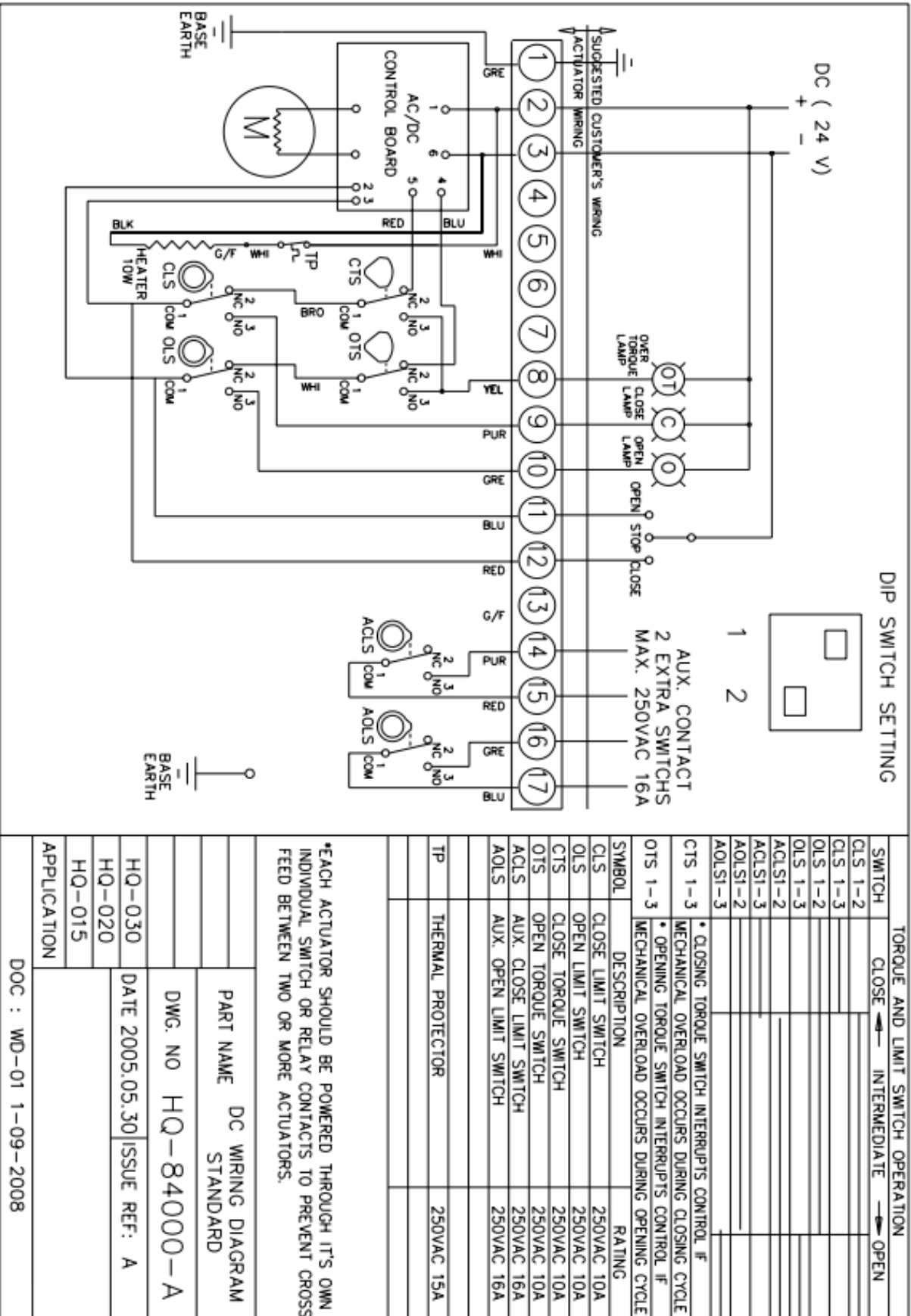
HQ015, HQ020, HQ030 AC WIRING STANDARD



WIRING DIAGRAM

PART NAME		AC WIRING DIAGRAM
STANDARD		
DWG. NO		HQ-74000-A
HQ-030	DATE 2005.05.30	ISSUE REF: A
HQ-020		
HQ-015		
APPLICATION		
DOC :		WD-01 1-09-2008

HQ015, HQ020, HQ030 DC WIRING STANDARD



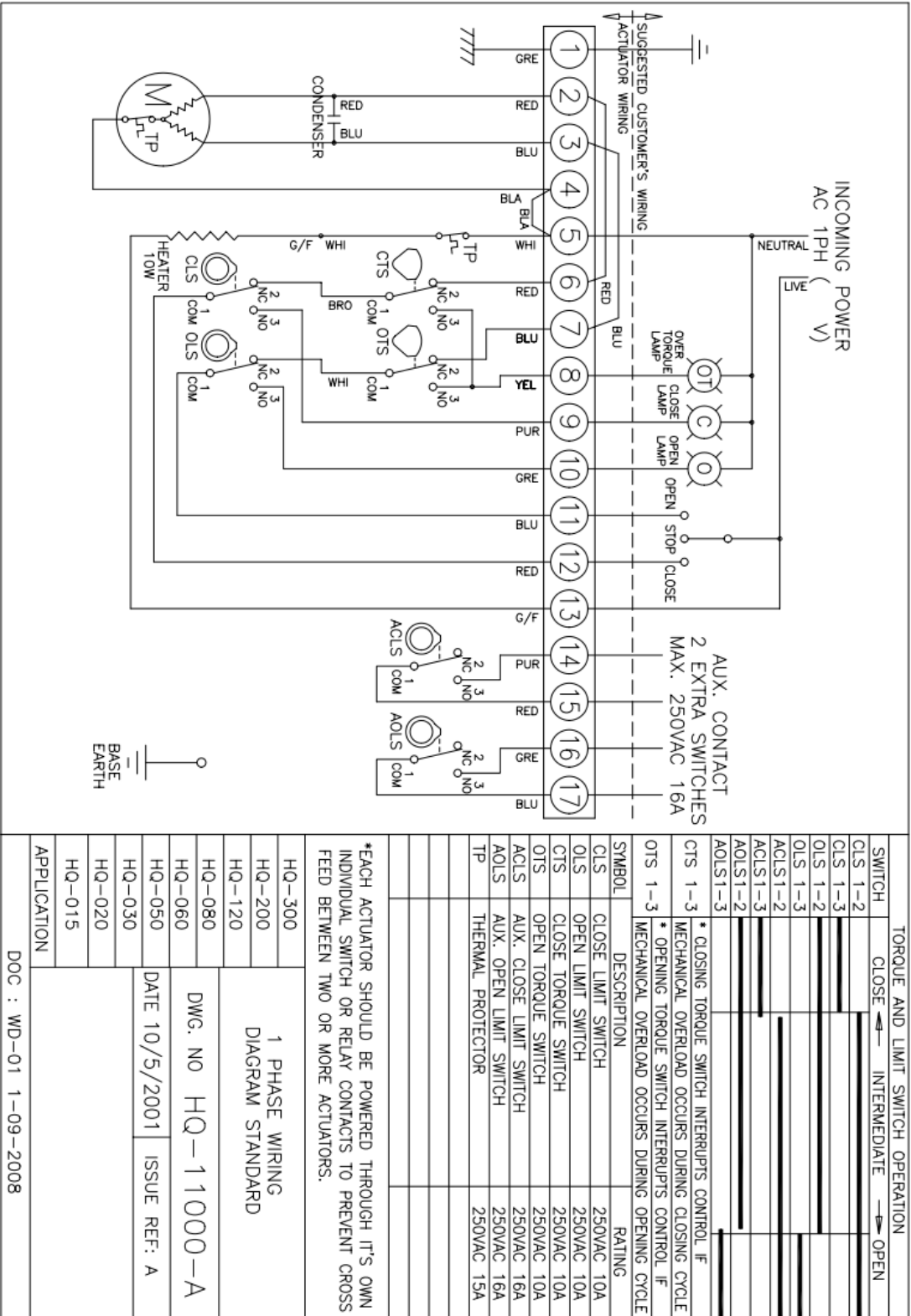
*EACH ACTUATOR SHOULD BE POWERED THROUGH IT'S OWN INDIVIDUAL SWITCH OR RELAY CONTACTS TO PREVENT CROSS FEED BETWEEN TWO OR MORE ACTUATORS.

PART NAME	DC WIRING DIAGRAM STANDARD	
DWG. NO	HQ-84000-A	
DATE	2005.05.30	ISSUE REF: A
APPLICATION		

DOC : WD-01 1-09-2008

WIRING DIAGRAM

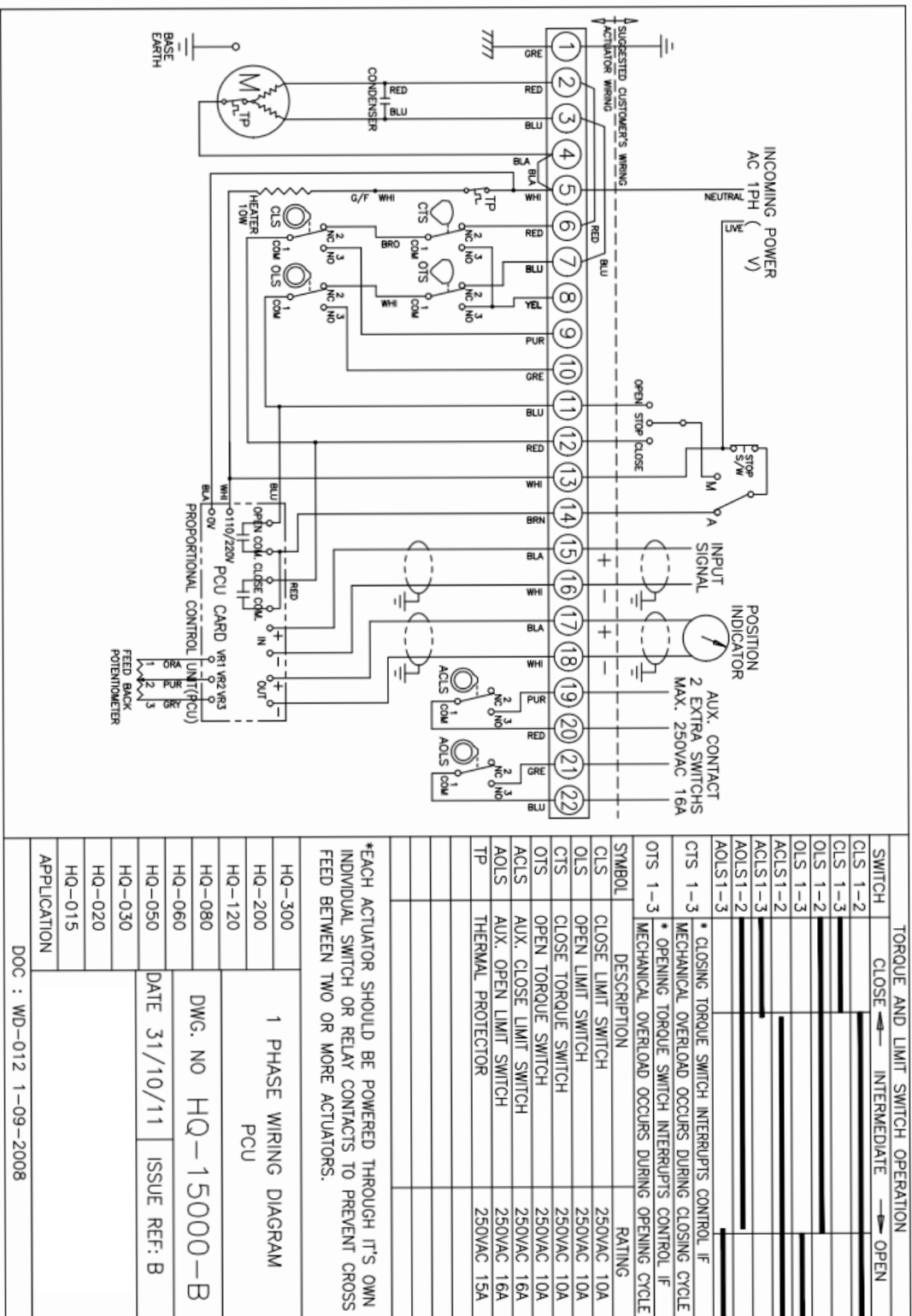
1 PHASE WIRING STANDARD



WIRING DIAGRAM

- HQ015
- HQ020
- HQ030
- HQ050
- HQ060
- HQ080
- HQ120
- HQ200
- HQ300

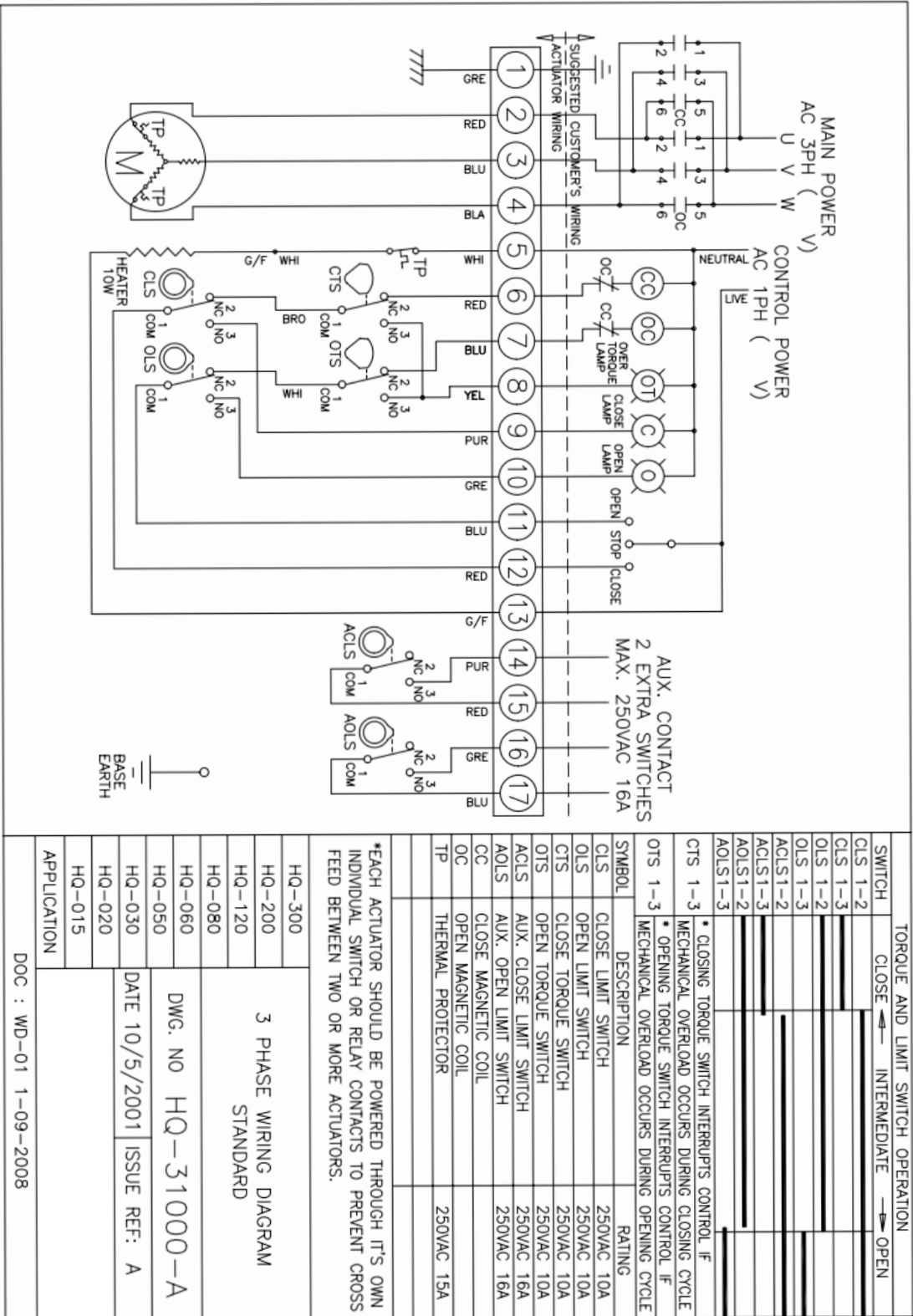
1 PHASE WIRING PCU



WIRING DIAGRAM

HQ015
 HQ020
 HQ030
 HQ050
 HQ060
 HQ080
 HQ120
 HQ200
 HQ300

3 PHASE WIRING DIAGRAM STANDARD



WIRING DIAGRAM

HQ015
 HQ020
 HQ030
 HQ050
 HQ060
 HQ080
 HQ120
 HQ200
 HQ300