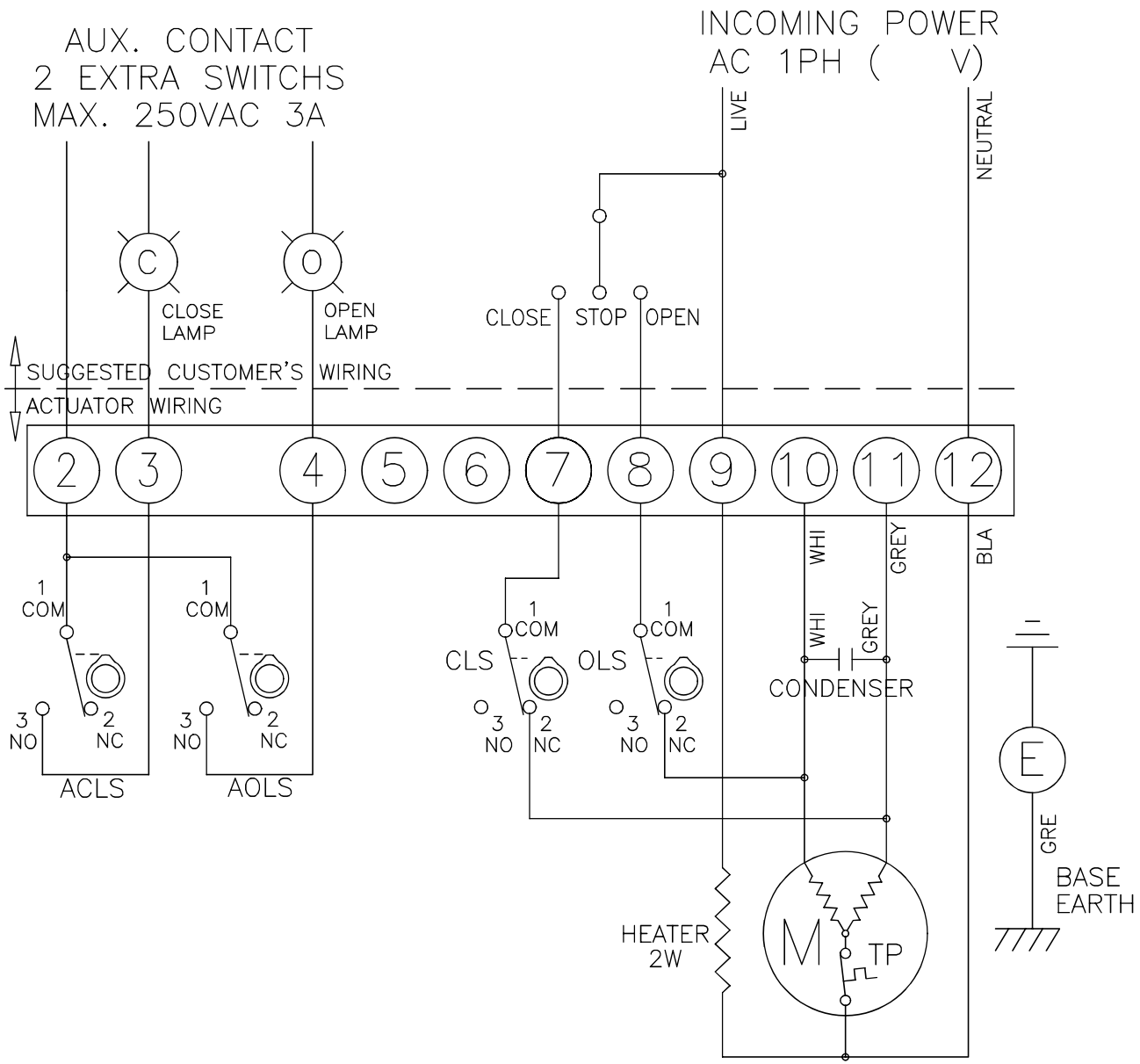


TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1–2	
CLS 1–3	
OLS 1–2	
OLS 1–3	
ACLS1–2	
ACLS1–3	
AOLS1–2	
AOLS1–3	

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A
TP	THERMAL PROTECTOR	250VAC 15A

*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: 1PH WIRING DIAGRAM STANDARD

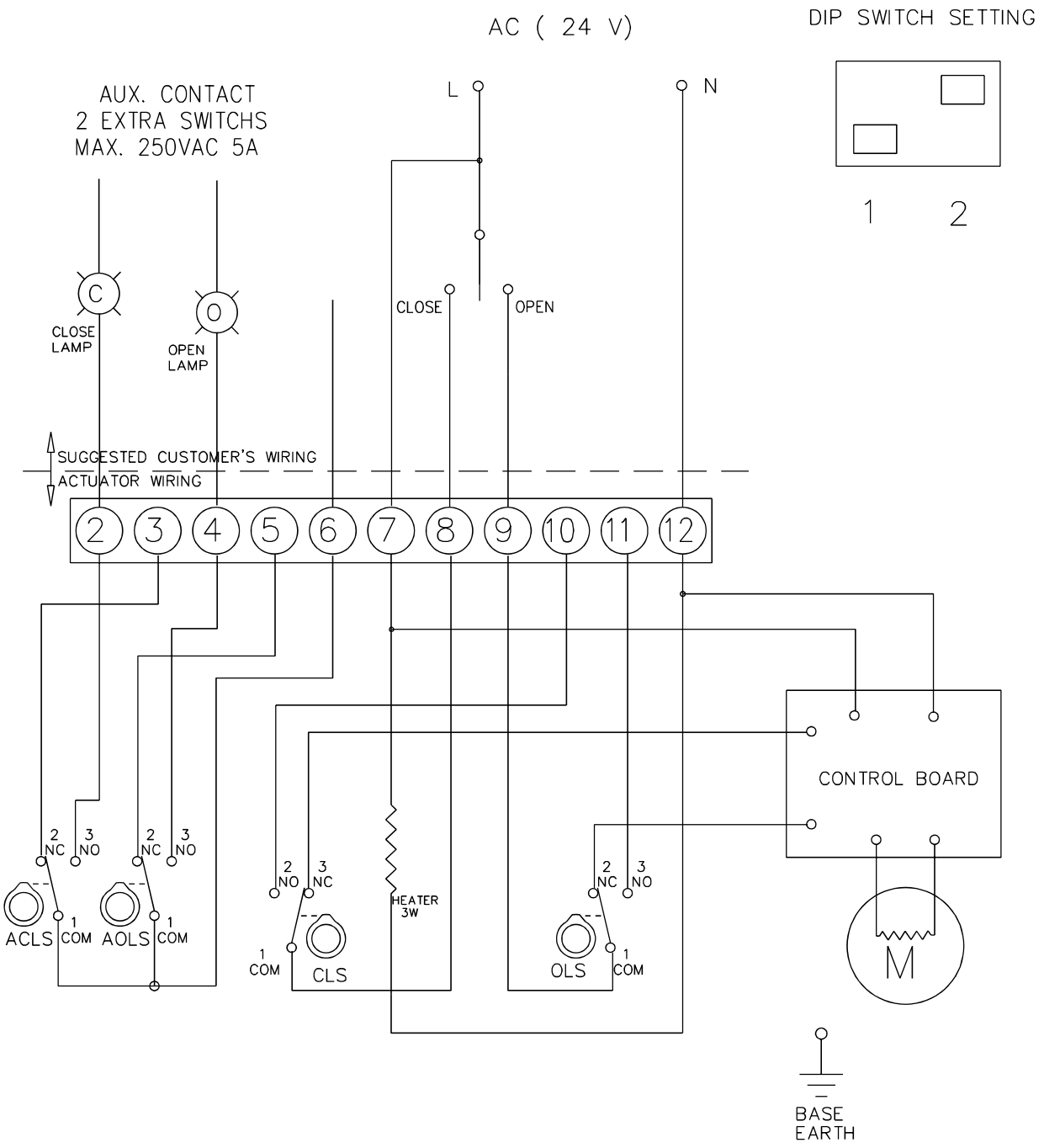
DWG. NO: HQ–110–B

DATE 2001.05.10 | ISSUE REF: B

HQ–004
HQ–006
APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD–01 1–09–2008



TORQUE AND LIMIT SWITCH OPERATION

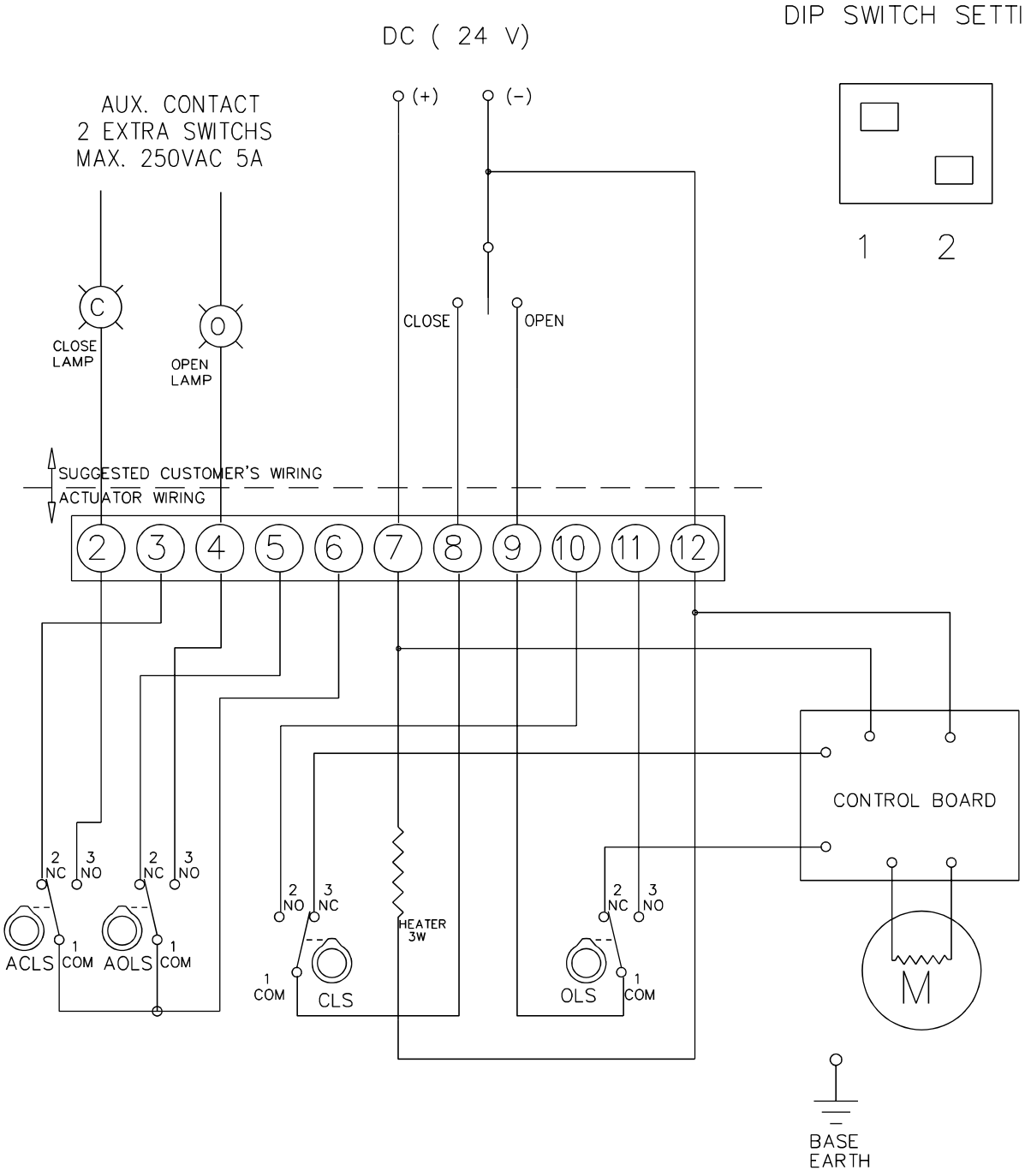
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1–2			
CLS 1–3			
OLS 1–2			
OLS 1–3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A

*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	AC WIRING DIAGRAM STANDARD(AC 24V)
DWG. NO	HQ–740–B
DATE 2004.12.01	ISSUE REF: B
HQ–006	ACTUATED SOLUTIONS LTD
HQ–004	TEL: (01243) 827469
APPLICATION	FAX: (01243) 829418

DOC : WD–01 1–09–2008



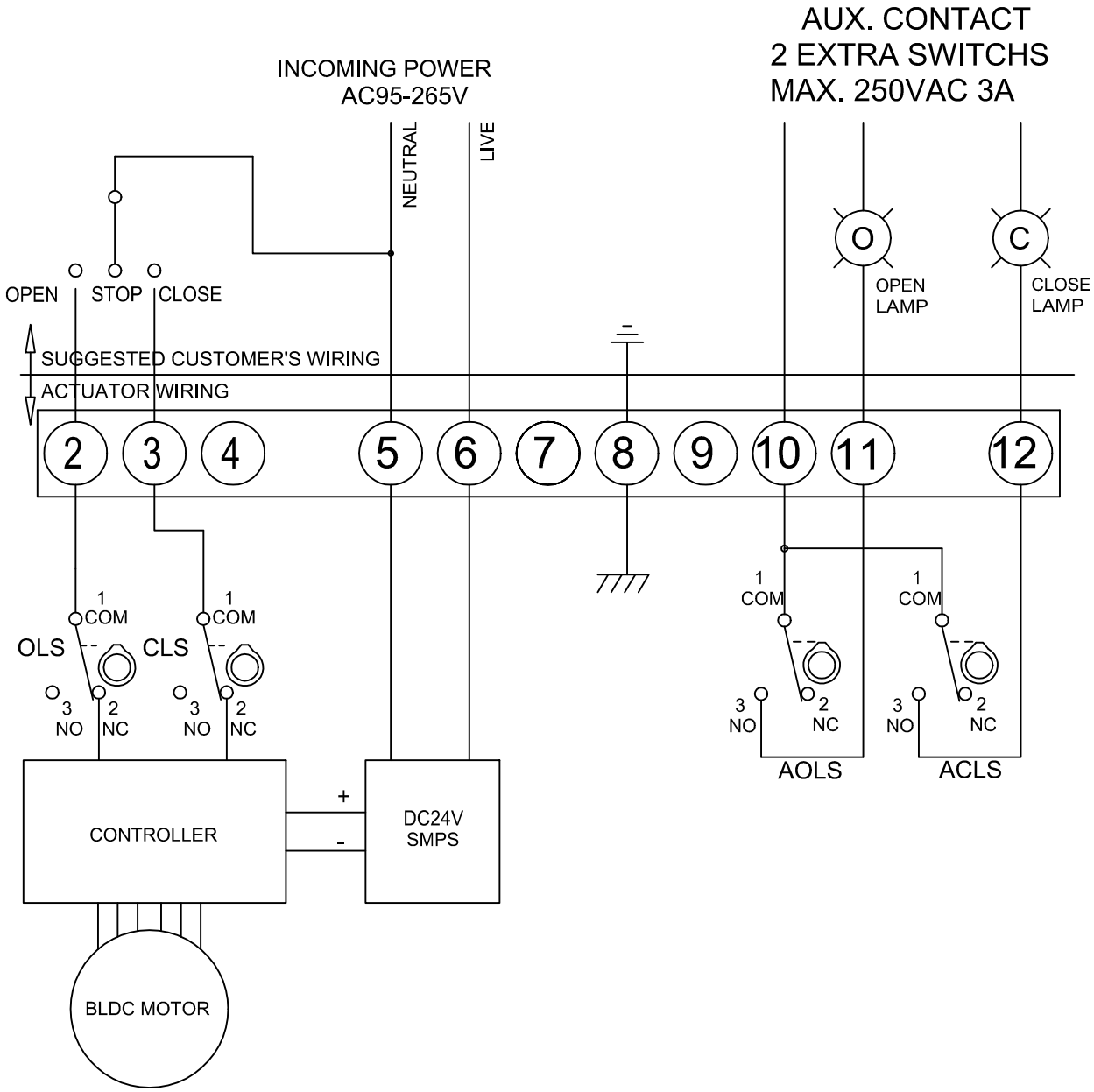
TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1–2			
CLS 1–3			
OLS 1–2			
OLS 1–3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A

*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(DC 24V)
DWG. NO	HQ–840–B
DATE 2004.12.01	ISSUE REF: B
HQ–006	ACTUATED SOLUTIONS LTD
HQ–004	TEL: (01243) 827469
APPLICATION	FAX: (01243) 829418

DOC : WD–01 1–09–2008



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A

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

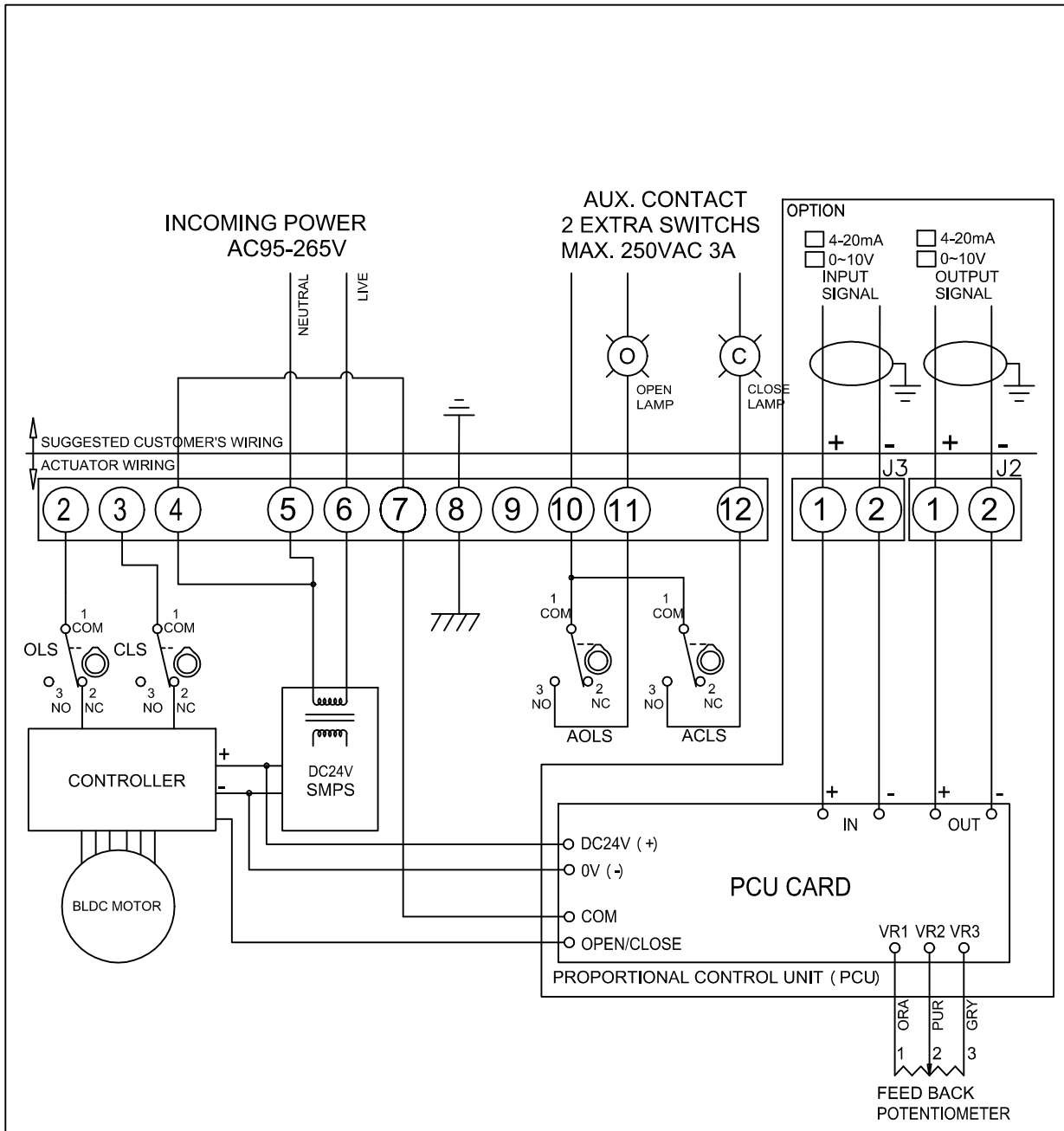
DRAW	J.K.CHOI	CHECK	
DESIGN	S.G.KANG	APPR.	

PART NAME	BLDC WIRING DIAGRAM AC95-265V STANDARD
DWG. NO	HQ-203-B
ISSU. DEPT. HADR	DATE 2015.07.01

HQ-005

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418



TORQUE AND LIMIT SWITCH OPERATION

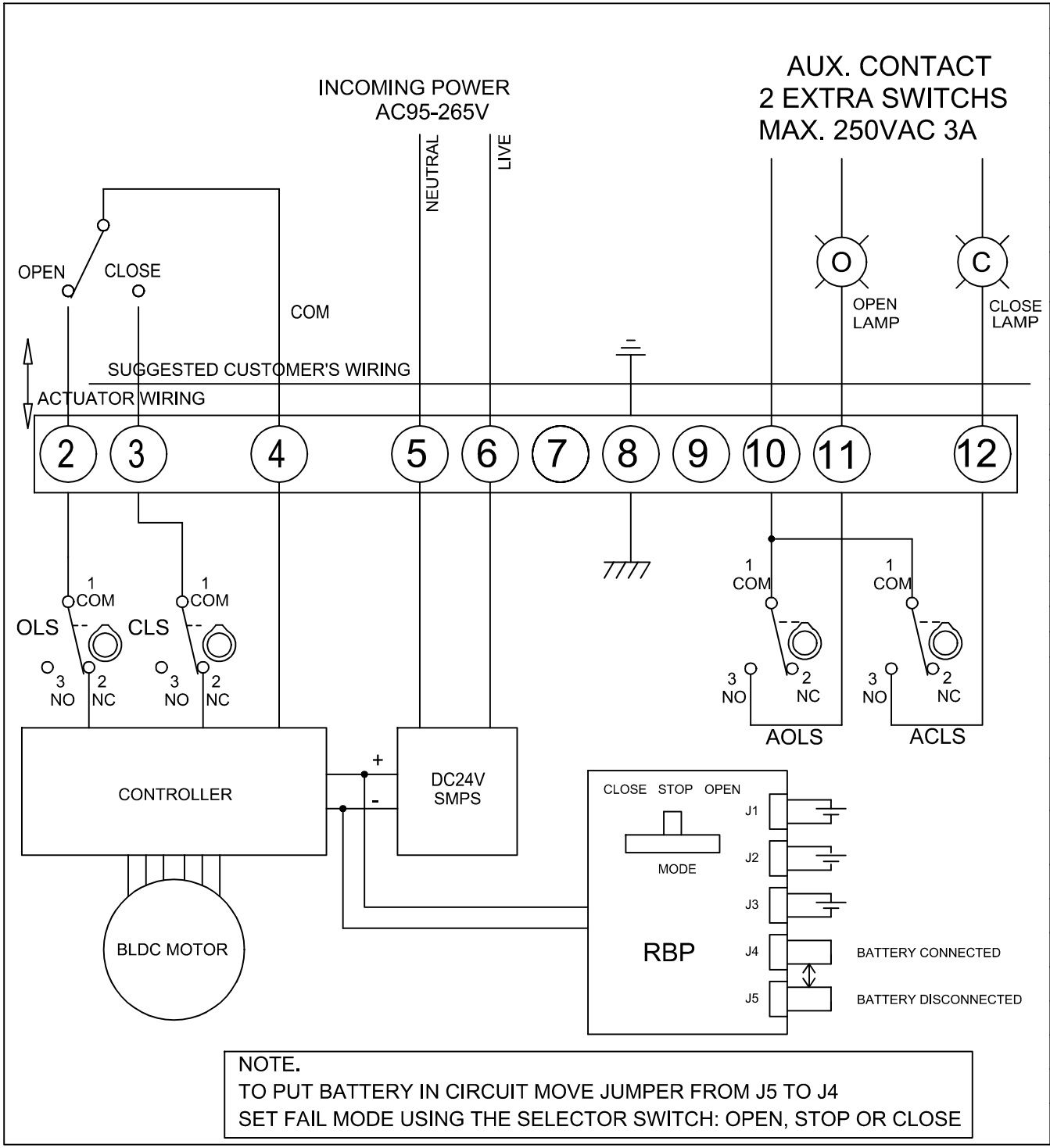
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A

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

DRAW	J.S.KIM	CHECK	
DESIGN	S.G.KANG	APPR.	

PART NAME	BLDC WIRING DIAGRAM AC 95-265V + PCU
DWG. NO	HQ-254-B
ISSU. DEPT. HADR	DATE 2016.03.08
HQ-005	ACTUATED SOLUTIONS LTD
APPLICATION	TEL: (01243) 827469
	FAX: (01243) 829418



NOTE.
TO PUT BATTERY IN CIRCUIT MOVE JUMPER FROM J5 TO J4
SET FAIL MODE USING THE SELECTOR SWITCH: OPEN, STOP OR CLOSE

TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A

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

DRAW	J.S.KIM	CHECK	
DESIGN	S.G.KANG	APPR.	

PART NAME: BLDC WIRING DIAGRAM RBP

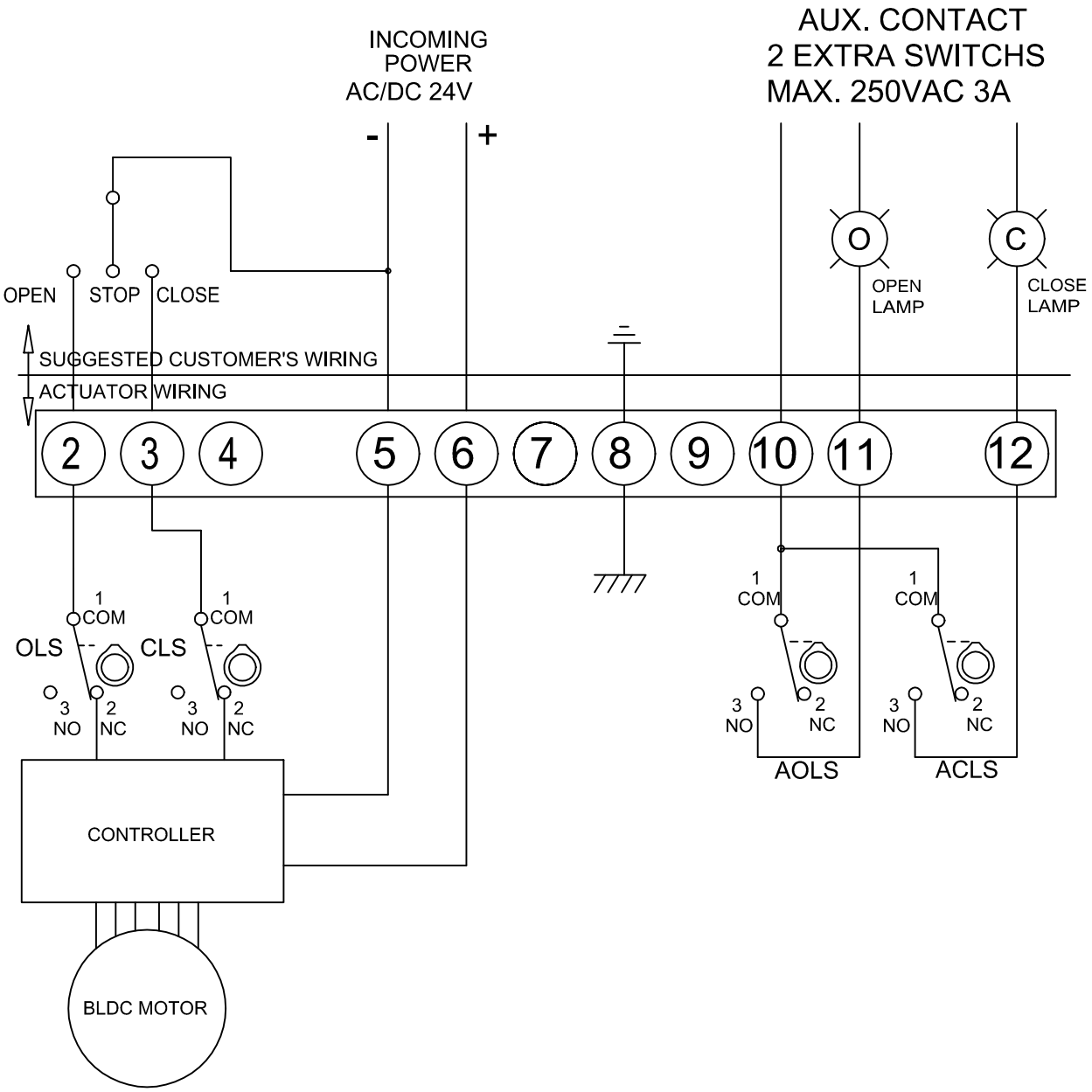
DWG. NO: HQ-203-AR

DATE: 2020.04.09 | ISSUE REF: A

HQ-005

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A

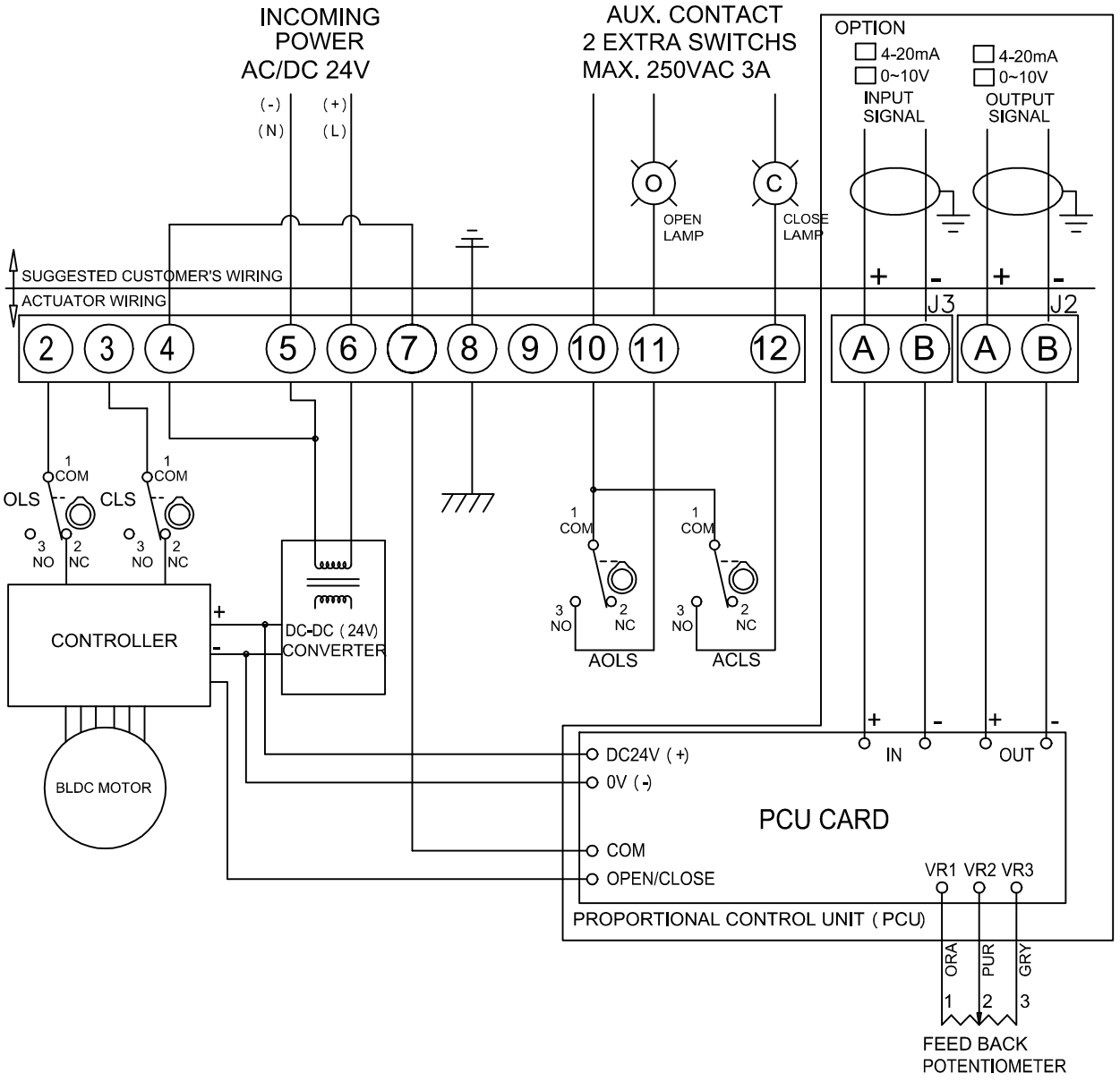
*EACH ACTUATOR SHOULD BE POWERED THROUGH IT'S OWN INDIVIDUAL SWITCH OR RELAY CONTACTS TO PREVENT CROSS FEED BETWEEN TWO OR MORE ACTUATORS.

DRAW	J.K.CHOI	CHECK	
DESIGN	S.G.KANG	APPR.	

PART NAME	BLDC WIRING DIAGRAM 24V AC/DC STANDARD
DWG. NO	HQ-203-D-D
DATE 3/5/2015	ISSUE REF: D

HQ-005
APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A

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

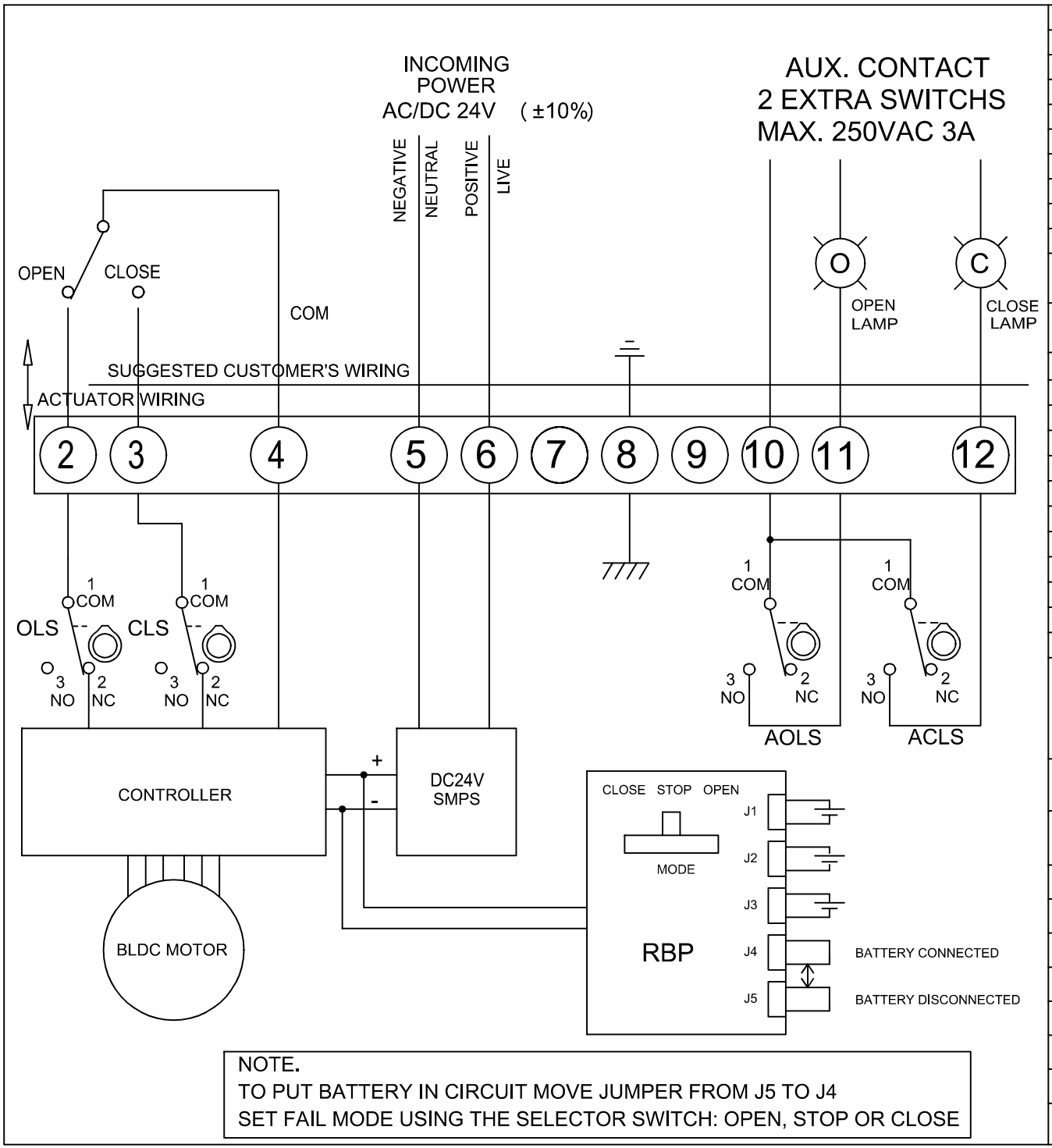
DRAW	J.S.KIM	CHECK	
DESIGN	S.G.KANG	APPR.	

PART NAME	BLDC WIRING DIAGRAM 24v AC/DC + PCU
DWG. NO	HQ-253-D
ISSU. DEPT. HADR	DATE 2016.03.08

HQ-005

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418



NOTE.
TO PUT BATTERY IN CIRCUIT MOVE JUMPER FROM J5 TO J4
SET FAIL MODE USING THE SELECTOR SWITCH: OPEN, STOP OR CLOSE

TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 5A
OLS	OPEN LIMIT SWITCH	250VAC 5A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 5A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 5A

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

DRAW	J.S.KIM	CHECK	
DESIGN	S.G.KANG	APPR.	

PART NAME: BLDC WIRING DIAGRAM RBP

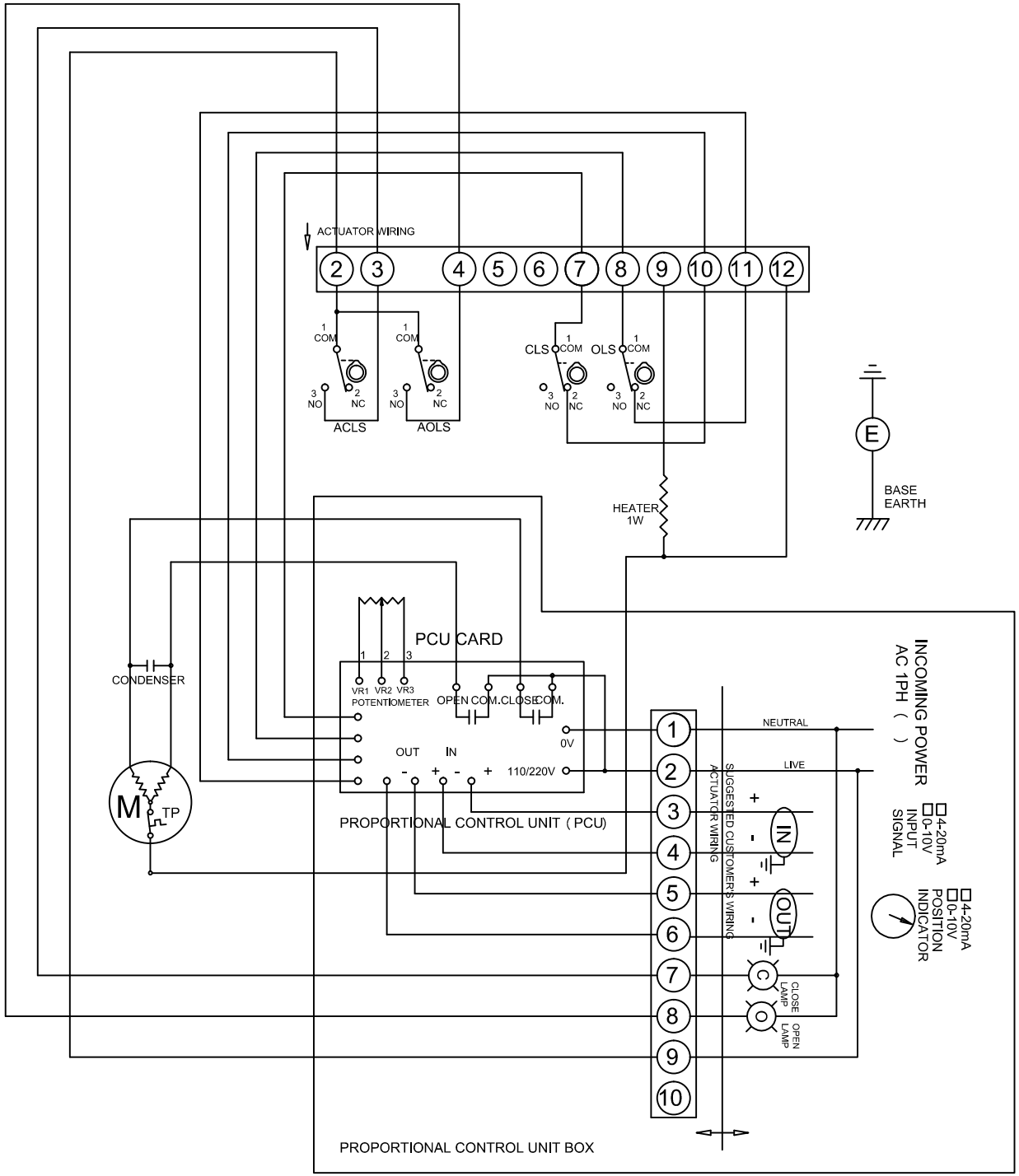
DWG. NO: HQ-203-DR

DATE 2020.04.09 | ISSUE REF: A

HQ-005

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1–2			
CLS 1–3			
OLS 1–2			
OLS 1–3			
ACLS 1–2			
ACLS 1–3			
AOLS 1–2			
AOLS 1–3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A

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

1PH WIRING DIAGRAM
PCU

DWG. NO HQ–150–D

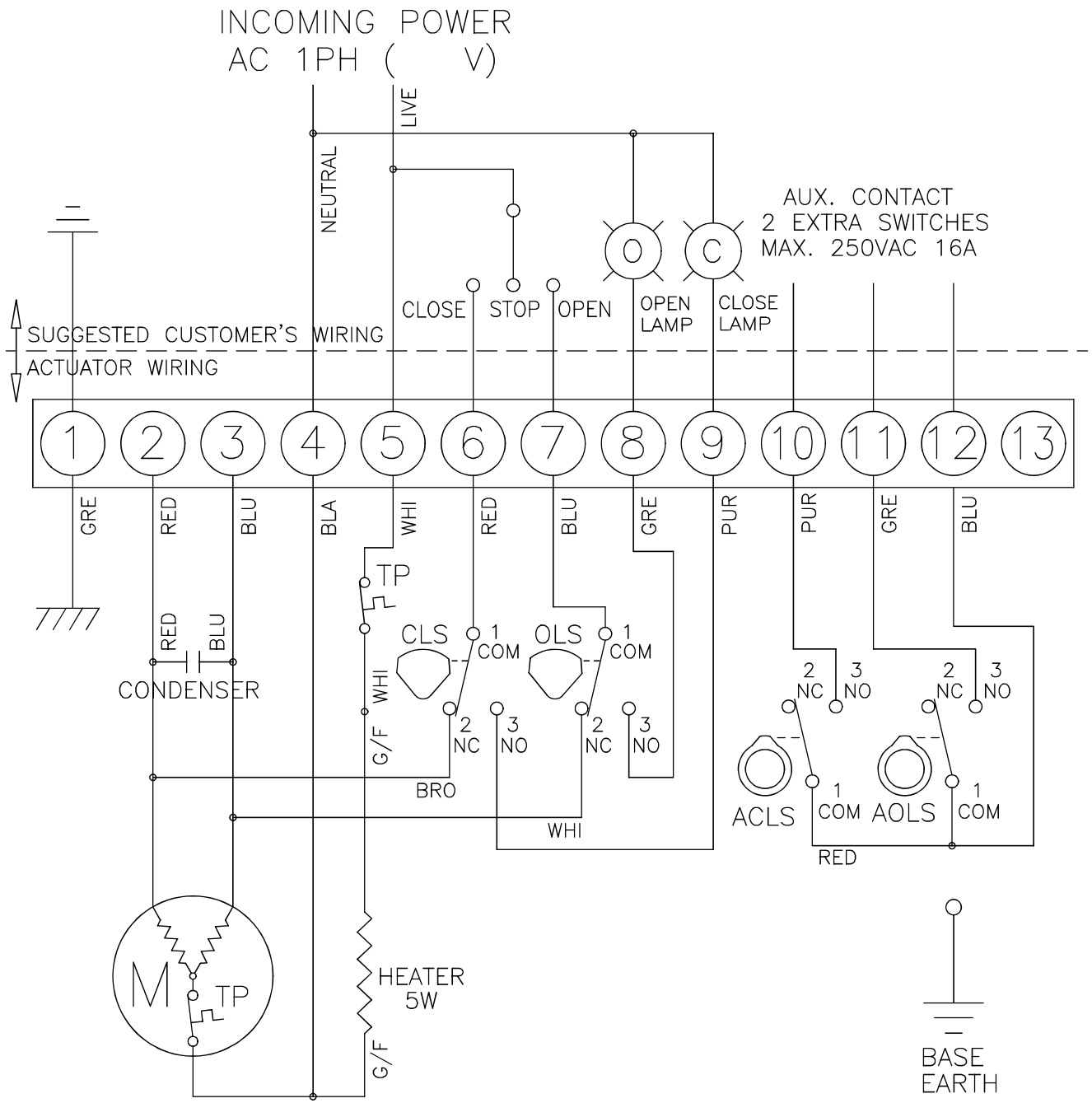
DATE 2018.2.21 | ISSUE REF: D

HQ–006

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD–01 1–09–2008



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1–2	
CLS 1–3	
OLS 1–2	
OLS 1–3	
ACLS 1–2	
ACLS 1–3	
AOLS 1–2	
AOLS 1–3	

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

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

1 PHASE WIRING DIAGRAM
STANDARD

DWG. NO HQ–1200–A

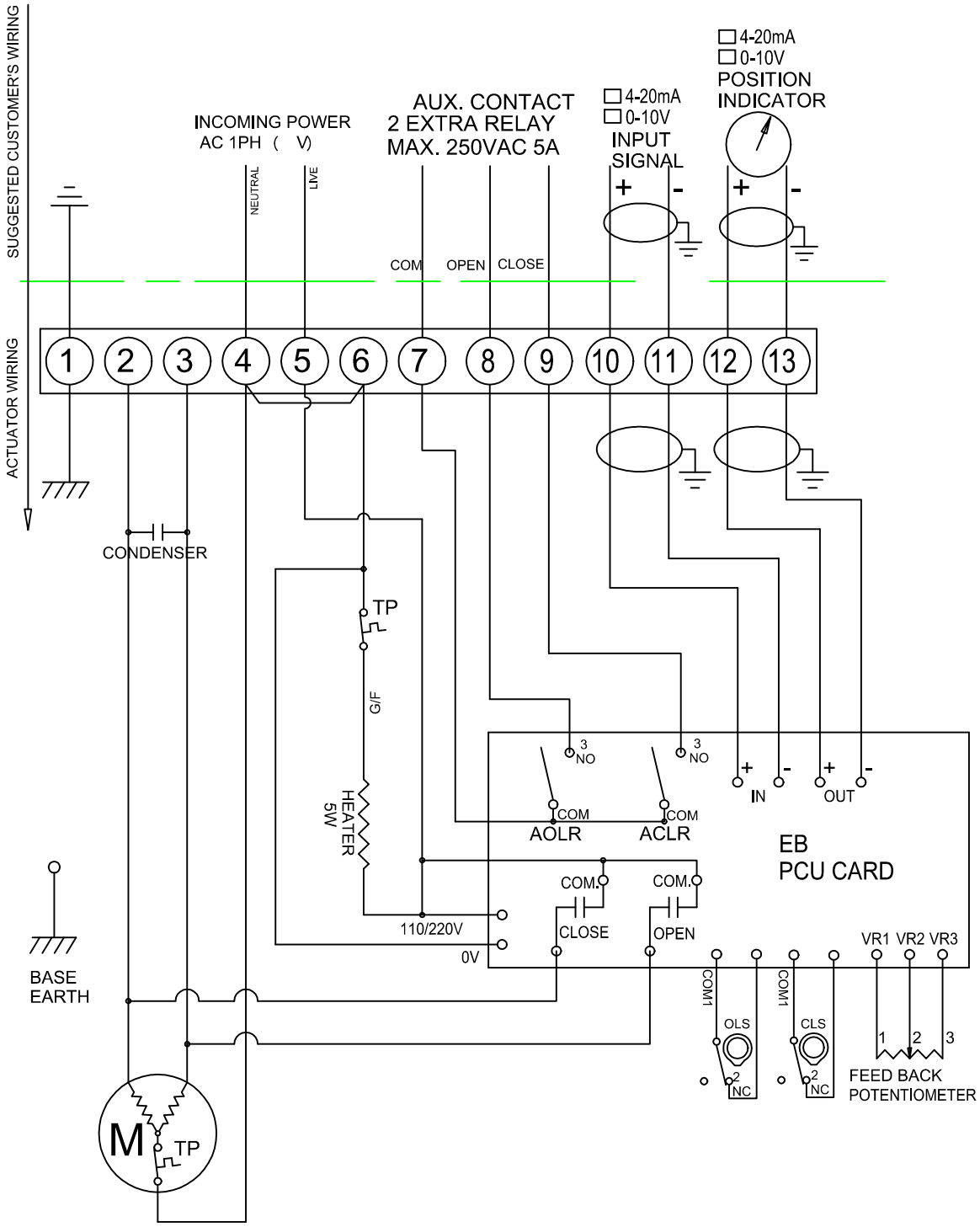
DATE 20/12/2003 | ISSUE REF: A

HQ–008

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD–01 1–09–2008



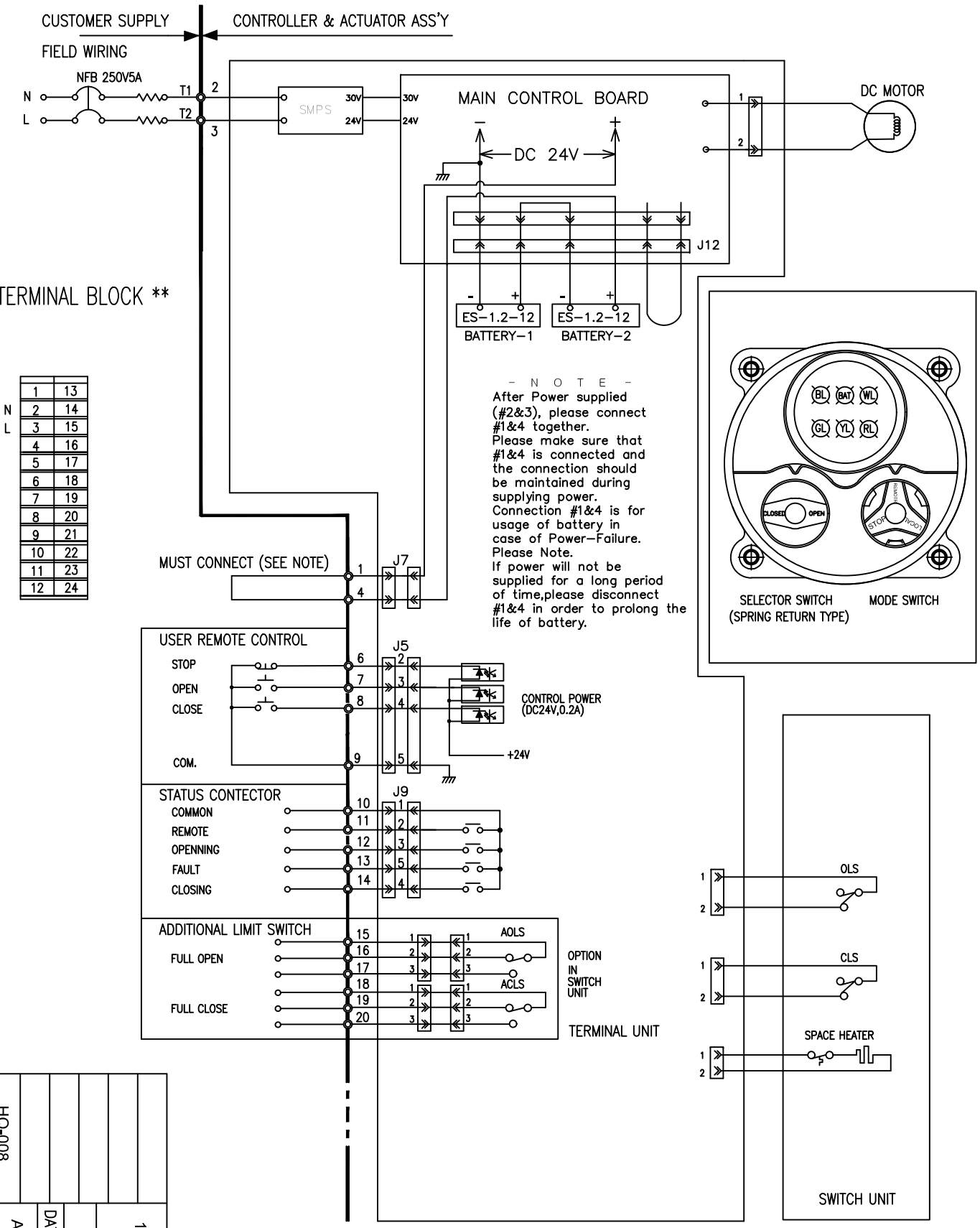
TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
TP	THERMAL PROTECTOR	250VAC 15A

*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	1PH WIRING DIAGRAM STANDARD+PCU
DWG. NO	HQ-1500-E
DATE 22/11/18	ISSUE REF: E
HQ-008	ACTUATED SOLUTIONS LTD
APPLICATION	TEL: (01243) 827469
	FAX: (01243) 829418

DOC : WD-01 1-09-2008



1	13
2	14
3	15
4	16
5	17
6	18
7	19
8	20
9	21
10	22
11	23
12	24

N
L

** NOTE **
Technical Explanation

OLS : OPEN LIMIT SWITCH
CLS : CLOSE LIMIT SWITCH

BAT : BATTERY LAMP MODE
GL : GREEN LAMP FULL RECHARGE
BL : BLUE LAMP MID RECHARGE
RL : RED LAMP LOW RECHARGE

RL : RED LAMP FOR OPEN
GL : GREEN LAMP FOR CLOSE
YL : YELLOW LAMP FOR FAULT
◎ : MARKS FOR TERMINAL

WL : WHITE LAMP FOR POWER
BL : BLUE LAMP FOR REMOTE

** LIMIT SWITCH CONTACT POSITIONS **

ROTOR	CON-TACT	VALVE OPENING (%) 0	100
OPEN (OLS)	1-3		
	1-2		
CLOSE (CLS)	1-3		
	1-2		

—— : CONTACT ON --- : CONTACT OFF

DOC : WD-01 1-09-2008

APPLICATION | HQ-008

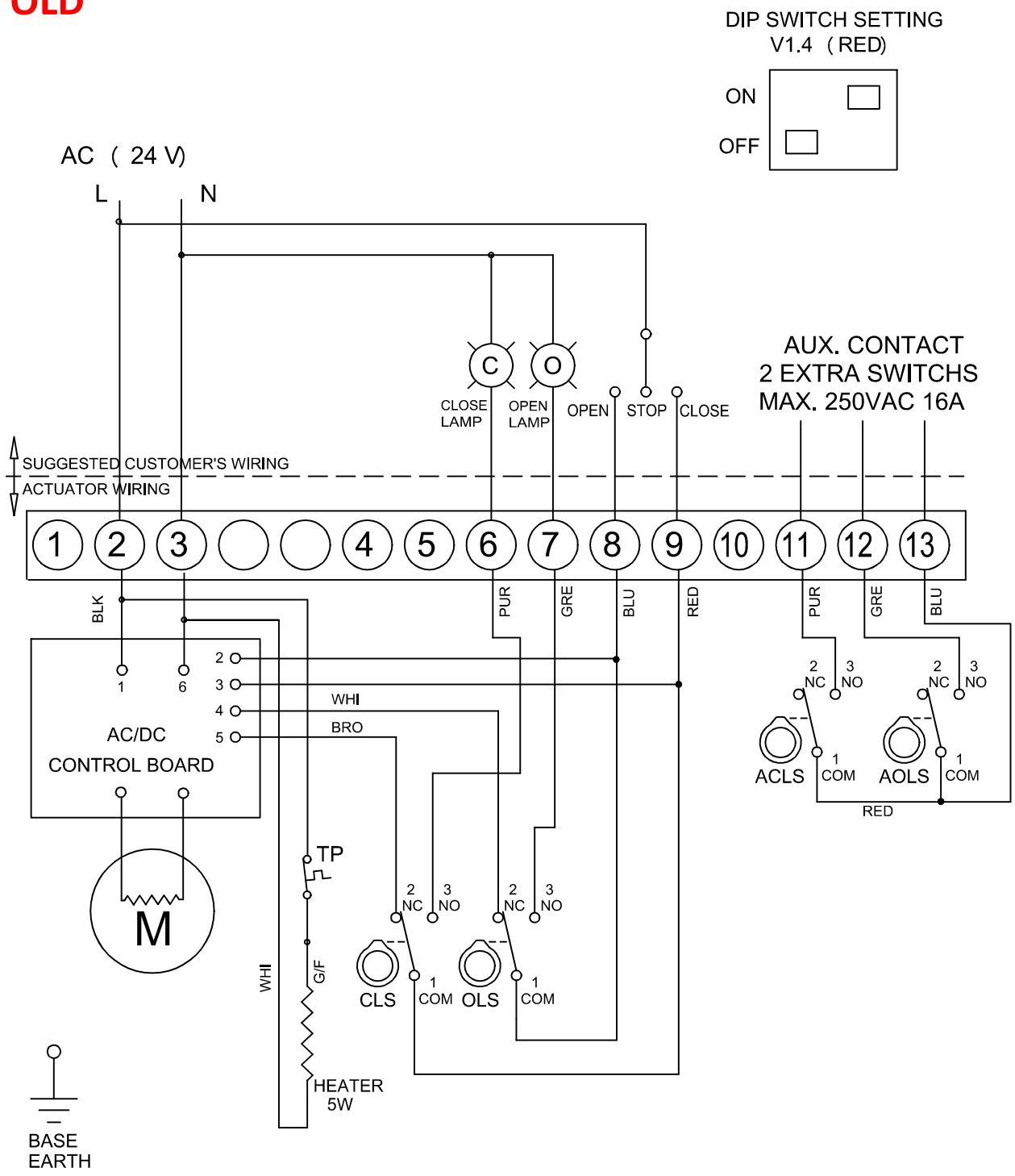
ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DATE 16.10.2014 | ISSUE E

DWG. NO HQ - 9600-E

1 PHASE WIRING DIAGRAM + RBP + ALS

OLD



TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

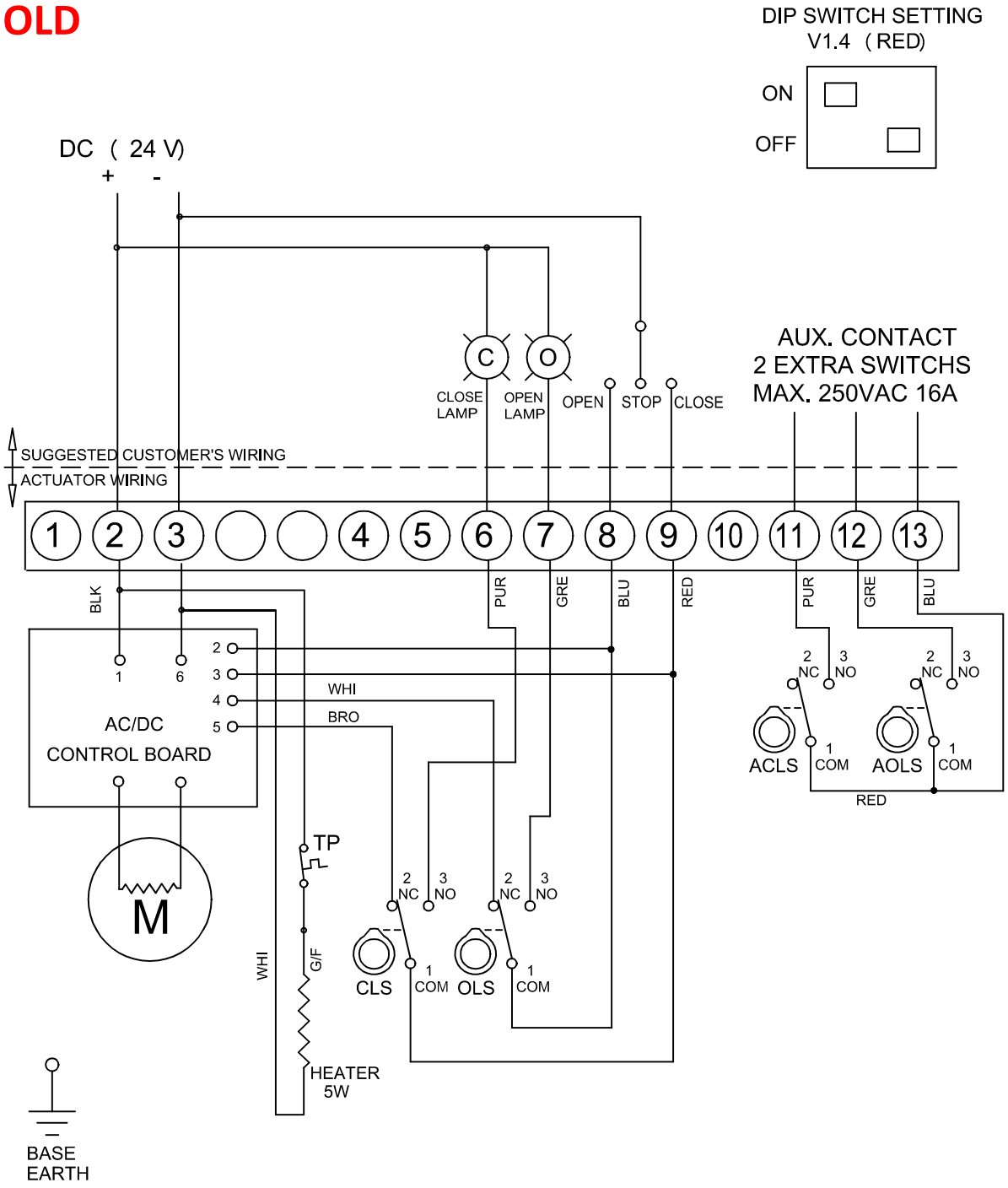
SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

*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	AC WIRING DIAGRAM STANDARD
DWG. NO	HQ-7420-B
DATE 9.4.2024	ISSUE REF: B
HQ-008	ACTUATED SOLUTIONS LTD
APPLICATION	TEL: (01243) 827469
	FAX: (01243) 829418

DOC : WD-01 1-09-2008

OLD



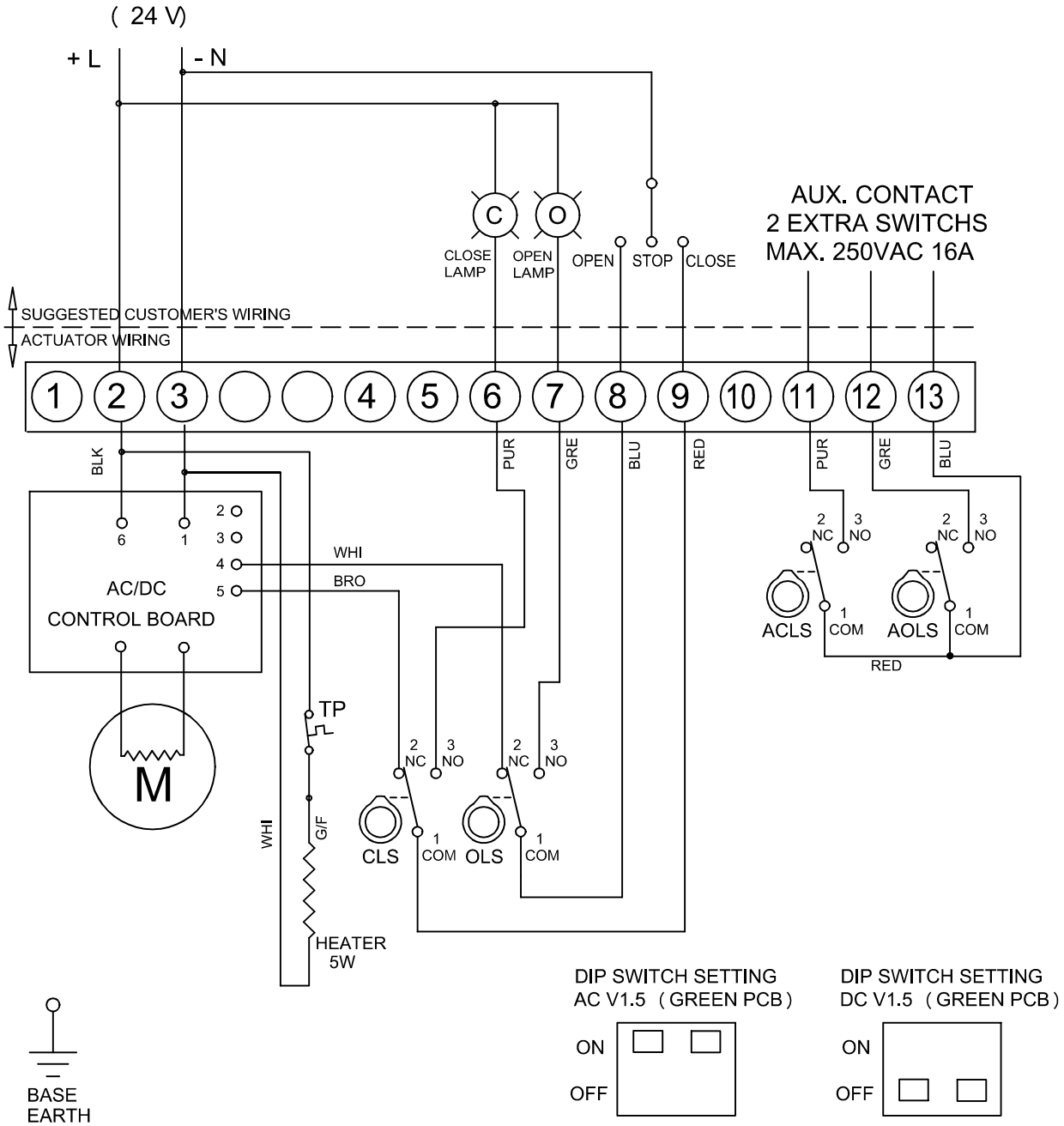
TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

*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-8420-B
DATE 9.4.2024	ISSUE REF: B
HQ-008	ACTUATED SOLUTIONS LTD
APPLICATION	TEL: (01243) 827469
	FAX: (01243) 829418

DOC : WD-01 1-09-2008



TORQUE AND LIMIT SWITCH OPERATION

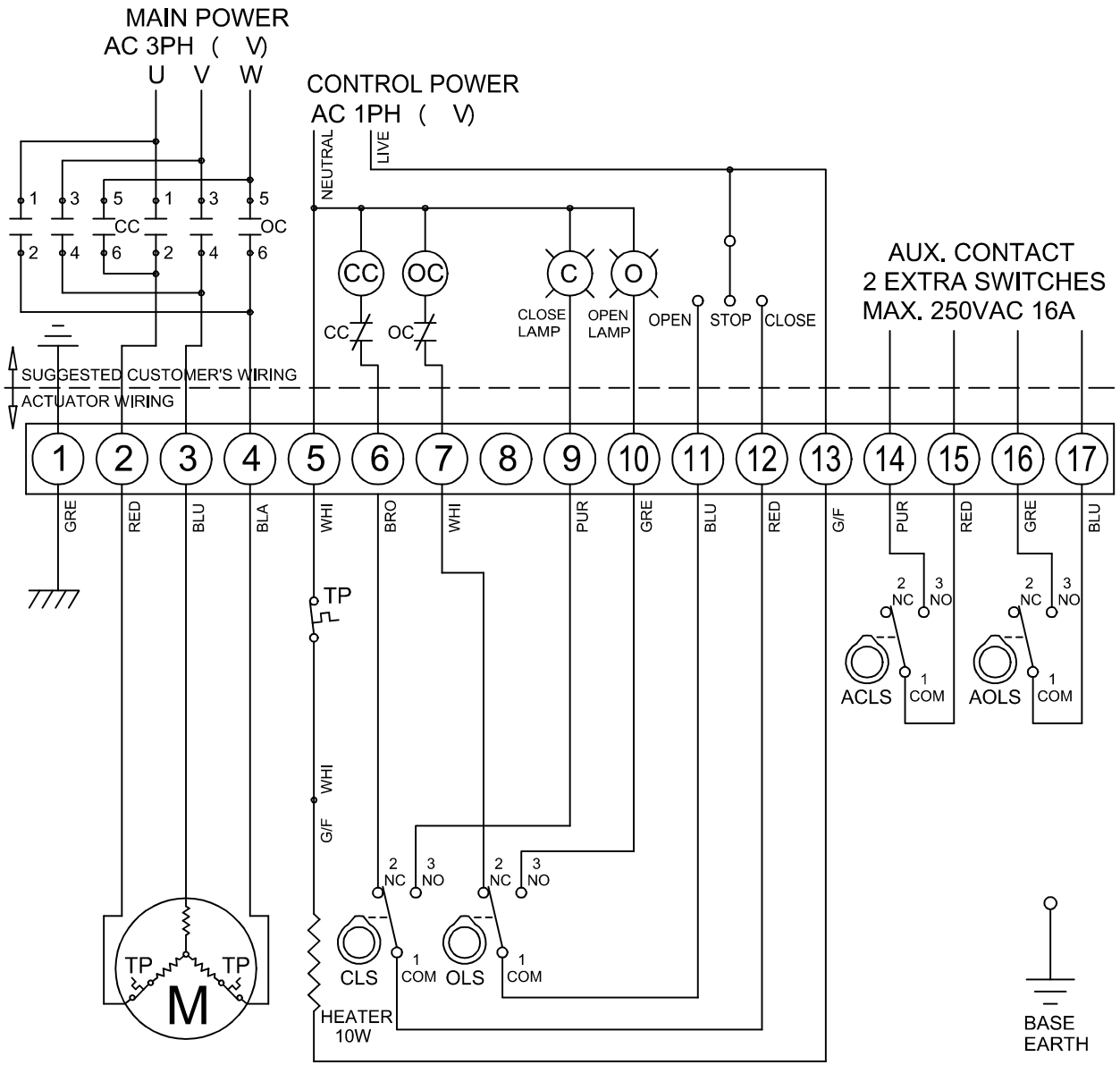
SWITCH	CLOSE ◄	INTERMEDIATE	► OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

*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	AC/DC WIRING DIAGRAM STANDARD
DWG. NO	HQ-8420-V1.5
DATE 21.5.2024	ISSUE REF: A
HQ-008	ACTUATED SOLUTIONS LTD
APPLICATION	TEL: (01243) 827469
	FAX: (01243) 829418

DOC : WD-01 1-09-2008



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1-2	
CLS 1-3	
OLS 1-2	
OLS 1-3	
ACLS 1-2	
ACLS 1-3	
AOLS 1-2	
AOLS 1-3	
CTS 1-3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
OTS 1-3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
CC	CLOSE MAGNETIC COIL	
OC	OPEN MAGNETIC COIL	
TP	THERMAL PROTECTOR	250VAC 15A

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

3 PHASE WIRING DIAGRAM
STANDARD

DWG. NO HQ-3200-A

DATE 1/4/2010 ISSUE REF: A

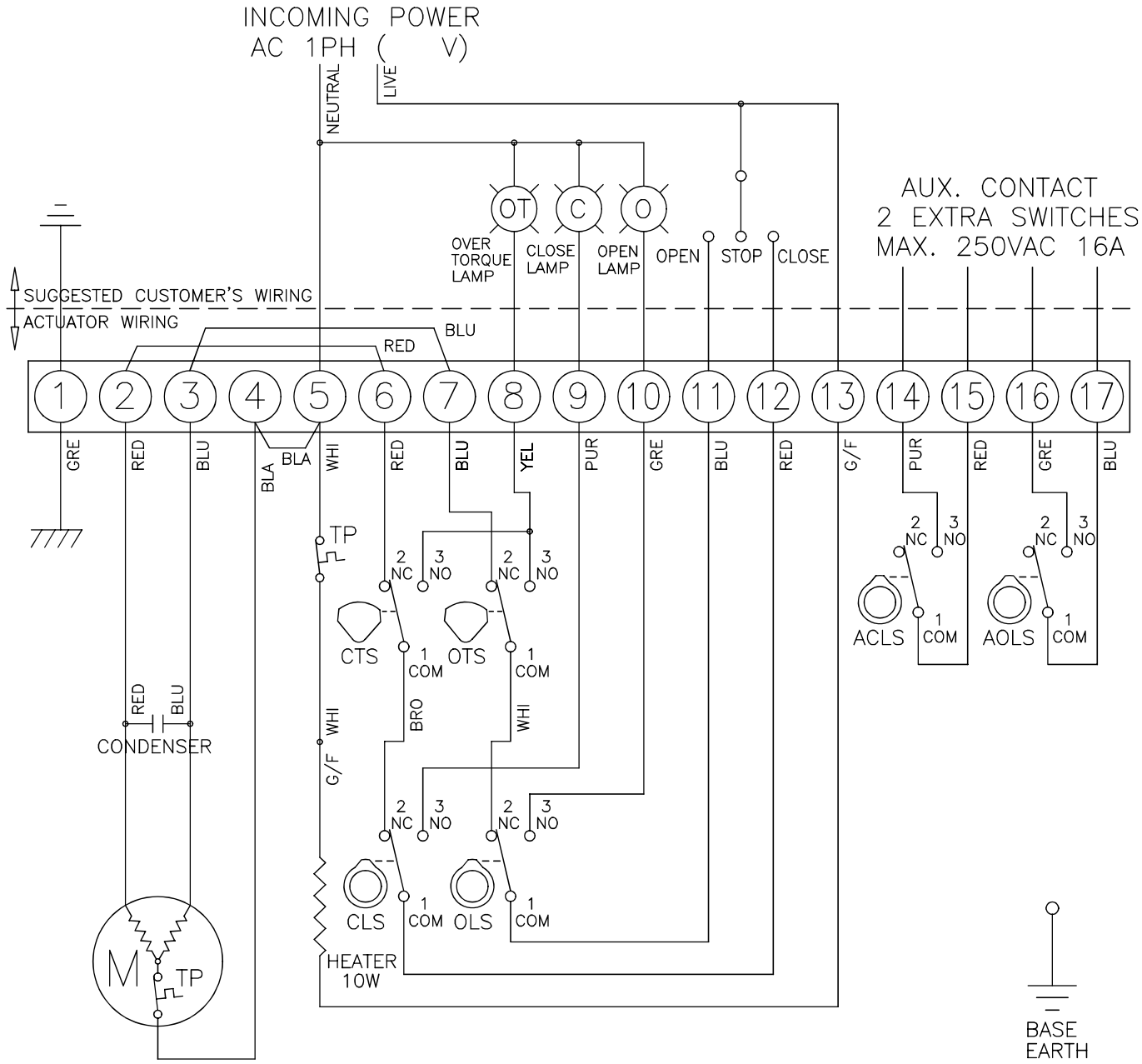
HQ-010

HQ-008

APPLICATION

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD-01 1-09-2008



TORQUE AND LIMIT SWITCH OPERATION

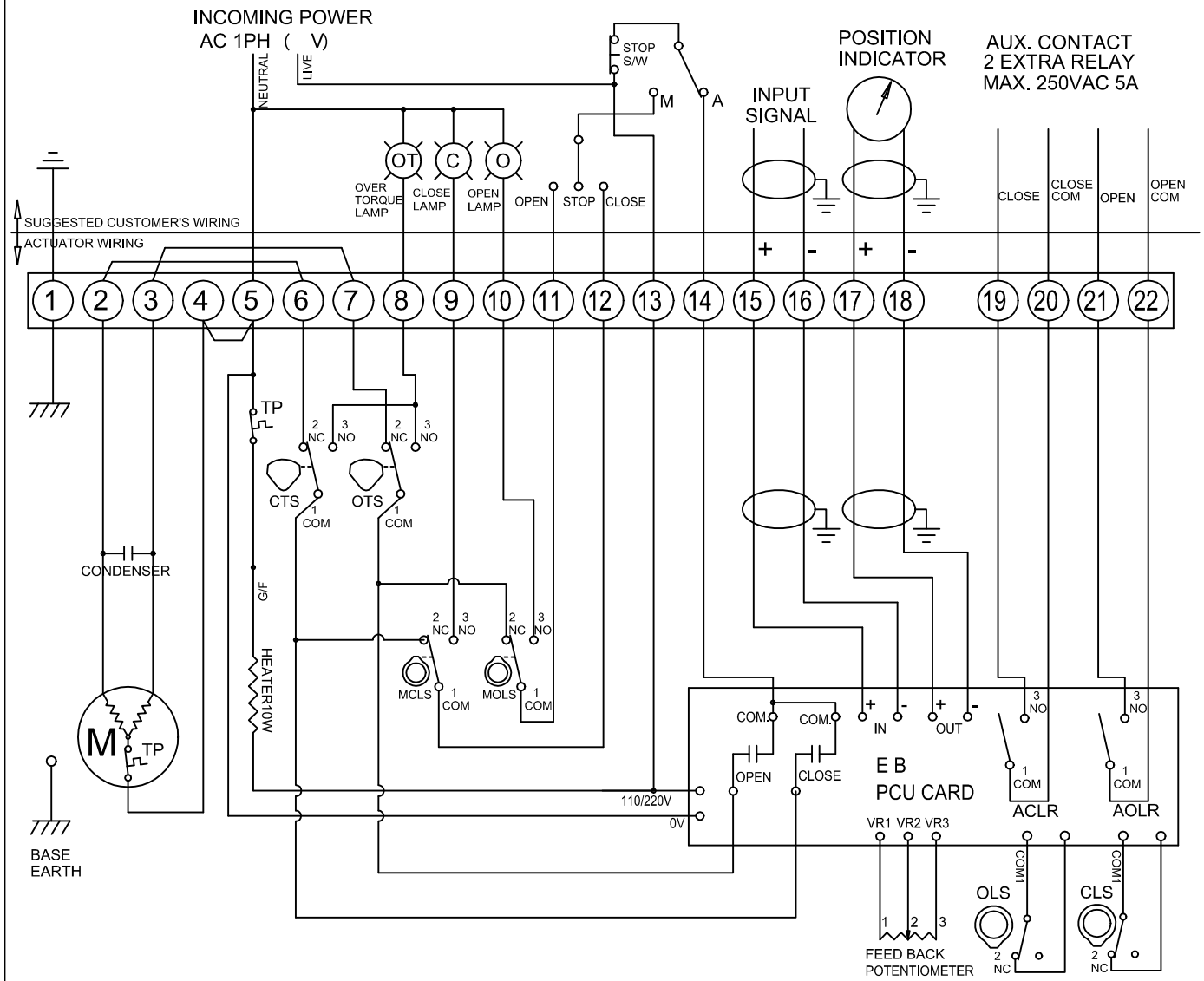
SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1–2	
CLS 1–3	
OLS 1–2	
OLS 1–3	
ACLS 1–2	
ACLS 1–3	
AOLS 1–2	
AOLS 1–3	
CTS 1–3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
OTS 1–3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
CTS	CLOSE TORQUE SWITCH	250VAC 10A
OTS	OPEN TORQUE SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

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

HQ–300 HQ–200 HQ–120	1 PHASE WIRING DIAGRAM STANDARD
HQ–080 HQ–060	DWG. NO HQ–11000–A
HQ–050	DATE 10/5/2001 ISSUE REF: A
HQ–030 HQ–020 HQ–015 APPLICATION	ACTUATED SOLUTIONS LTD TEL: (01243) 827469 FAX: (01243) 829418

DOC : WD–01 1–09–2008



TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
OLS 1-2			
MCLS1-2			
MCLS1-3			
MOLS1-2			
MOLS1-3			
ACLR1-3			
AOLR1-3			
CTS 1-3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE		
OTS 1-3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE		

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
CTS	CLOSE TORQUE SWITCH	250VAC 10A
OTS	OPEN TORQUE SWITCH	250VAC 10A
ACLR	AUX. CLOSE LIMIT RELAY	250VAC 5A
AOLR	AUX. OPEN LIMIT RELAY	250VAC 5A
TP	THERMAL PROTECTOR	250VAC 15A
MCLS	MANUAL CLOSE LIMIT SWITCH	250VAC 10A
MOLS	MANUAL OPEN LIMIT SWITCH	250VAC 10A

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

HQ-300
HQ-200
HQ-120
HQ-080
HQ-060
HQ-050
HQ-030
HQ-020
HQ-015
APPLICATION

1PH WIRING DIAGRAM
PCU

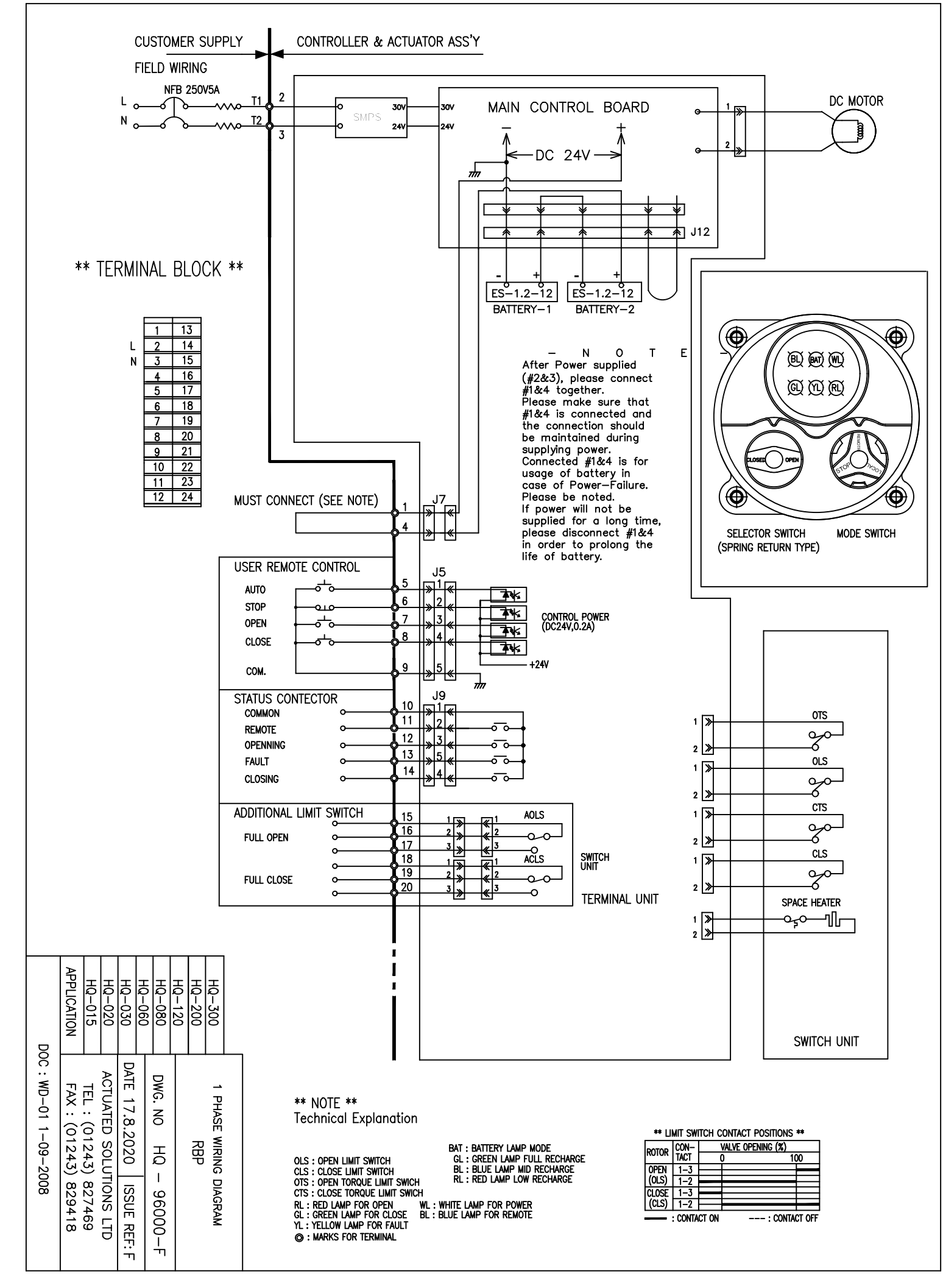
DWG. NO HQ-15000-E

DATE 12/11/18

ISSUE REF: E

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD-012 1-09-2008



L	1 13
	2 14
N	3 15
	4 16
	5 17
	6 18
	7 19
	8 20
	9 21
	10 22
	11 23
	12 24

** NOTE **
Technical Explanation

OLS : OPEN LIMIT SWITCH
CLS : CLOSE LIMIT SWITCH
OTS : OPEN TORQUE LIMIT SWICH
CTS : CLOSE TORQUE LIMIT SWICH
RL : RED LAMP FOR OPEN
GL : GREEN LAMP FOR CLOSE
YL : YELLOW LAMP FOR FAULT
◎ : MARKS FOR TERMINAL

BAT : BATTERY LAMP MODE
GL : GREEN LAMP FULL RECHARGE
BL : BLUE LAMP MID RECHARGE
RL : RED LAMP LOW RECHARGE

WL : WHITE LAMP FOR POWER
BL : BLUE LAMP FOR REMOTE

** LIMIT SWITCH CONTACT POSITIONS **

ROTOR	CON-TACT	VALVE OPENING (%) 0	100
OPEN (OLS)	1-3		
	1-2		
CLOSE (CLS)	1-3		
	1-2		

—— : CONTACT ON --- : CONTACT OFF

APPLICATION
HQ-015
HQ-020
HQ-030
HQ-060
HQ-080
HQ-120
HQ-200
HQ-300

ACTUATED SOLUTIONS LTD
TEL : (01243) 827469
FAX : (01243) 829418

DATE 17.8.2020 | ISSUE REF: F

DWG. NO HQ - 96000-F

1 PHASE WIRING DIAGRAM
RBP

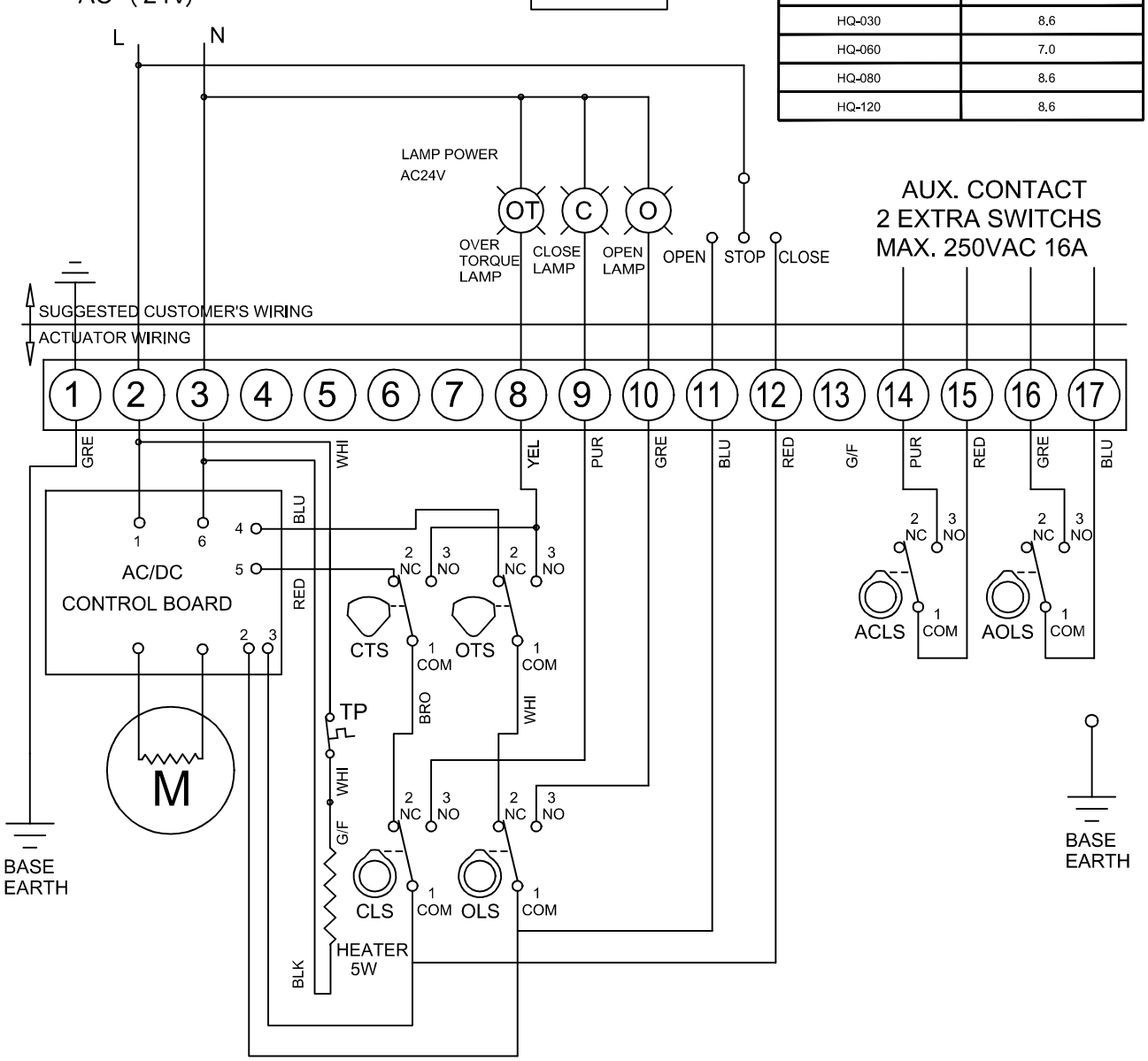
DOC : WD-01 1-09-2008

OLD

DIP SWITCH SETTING
V1.4 (RED)

ON
OFF

IMPORTANT NOTE: ENSURE THAT ADEQUATE POWER IS AVAILABLE. FAILURE TO DO SO WILL RESULT IN DAMAGE TO THE ELECTRONICS.	
MODEL	MINIMUM AMPS
HQ-015	5.3
HQ-020	6.5
HQ-030	8.6
HQ-060	7.0
HQ-080	8.6
HQ-120	8.6



TORQUE AND LIMIT SWITCH OPERATION			
SWITCH	CLOSE ←	INTERMEDIATE	→ OPEN
CLS 1-2			
CLS 1-3			
OLS 1-2			
OLS 1-3			
ACLS 1-2			
ACLS 1-3			
AOLS 1-2			
AOLS 1-3			
CTS 1-3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE		
OTS 1-3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE		

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
CTS	CLOSE TORQUE SWITCH	250VAC 10A
OTS	OPEN TORQUE SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	24VAC/DC

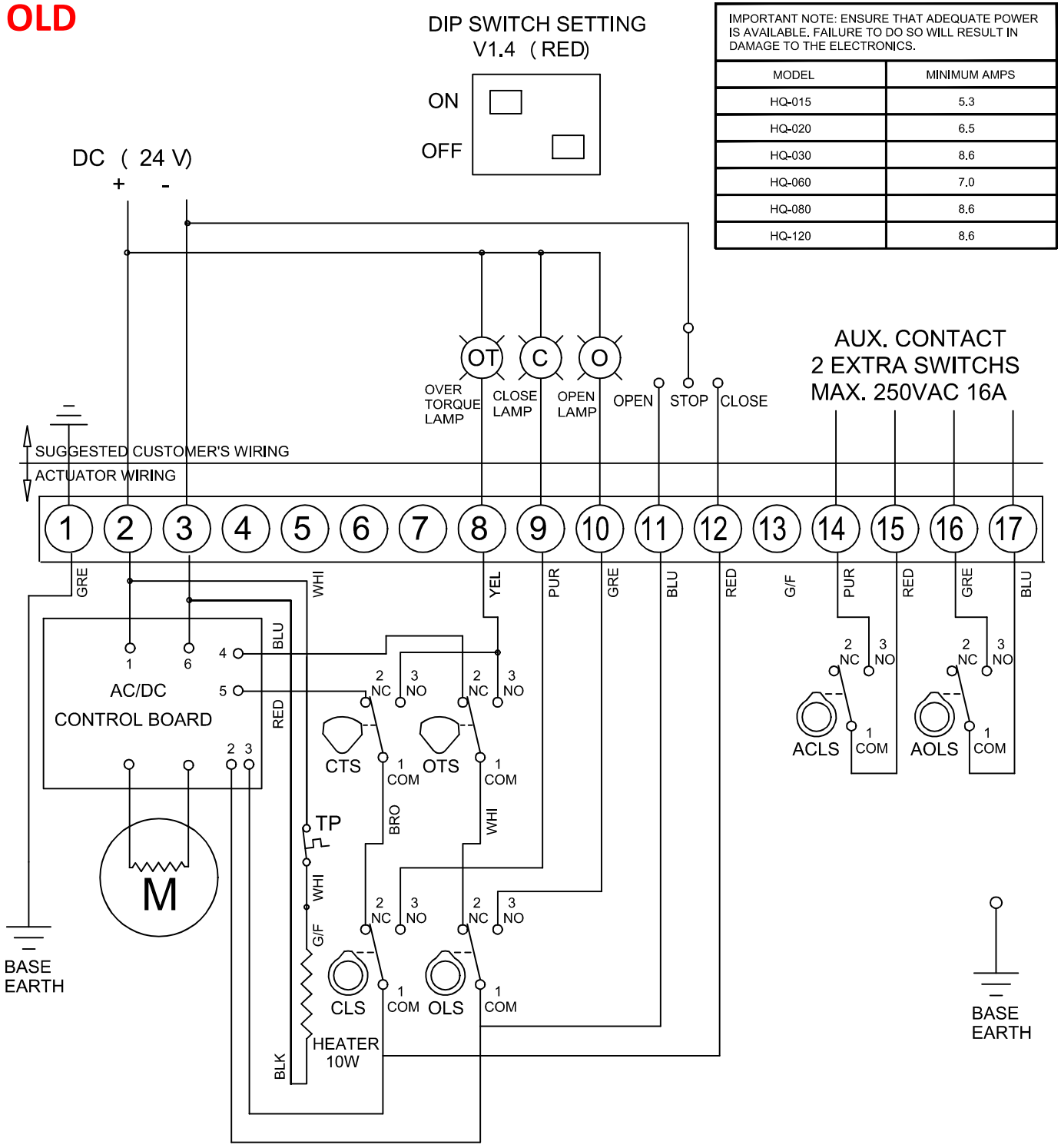
*EACH ACTUATOR SHOULD BE POWERED THROUGH IT'S OWN INDIVIDUAL SWITCH OR RELAY CONTACTS TO PREVENT CROSS FEED BETWEEN TWO OR MORE ACTUATORS.

HQ-120	PART NAME	AC WIRING DIAGRAM 24v STANDARD
HQ-080	DWG. NO	HQ-74000-B
HQ-060		
HQ-030	DATE 17.8.2020	ISSUE REF: B
HQ-020		
HQ-015		
APPLICATION		

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD-01 1-09-2008

OLD



IMPORTANT NOTE: ENSURE THAT ADEQUATE POWER IS AVAILABLE. FAILURE TO DO SO WILL RESULT IN DAMAGE TO THE ELECTRONICS.	
MODEL	MINIMUM AMPS
HQ-015	5.3
HQ-020	6.5
HQ-030	8.6
HQ-060	7.0
HQ-080	8.6
HQ-120	8.6

TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1-2	
CLS 1-3	
OLS 1-2	
OLS 1-3	
ACLS 1-2	
ACLS 1-3	
AOLS 1-2	
AOLS 1-3	
CTS 1-3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
OTS 1-3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

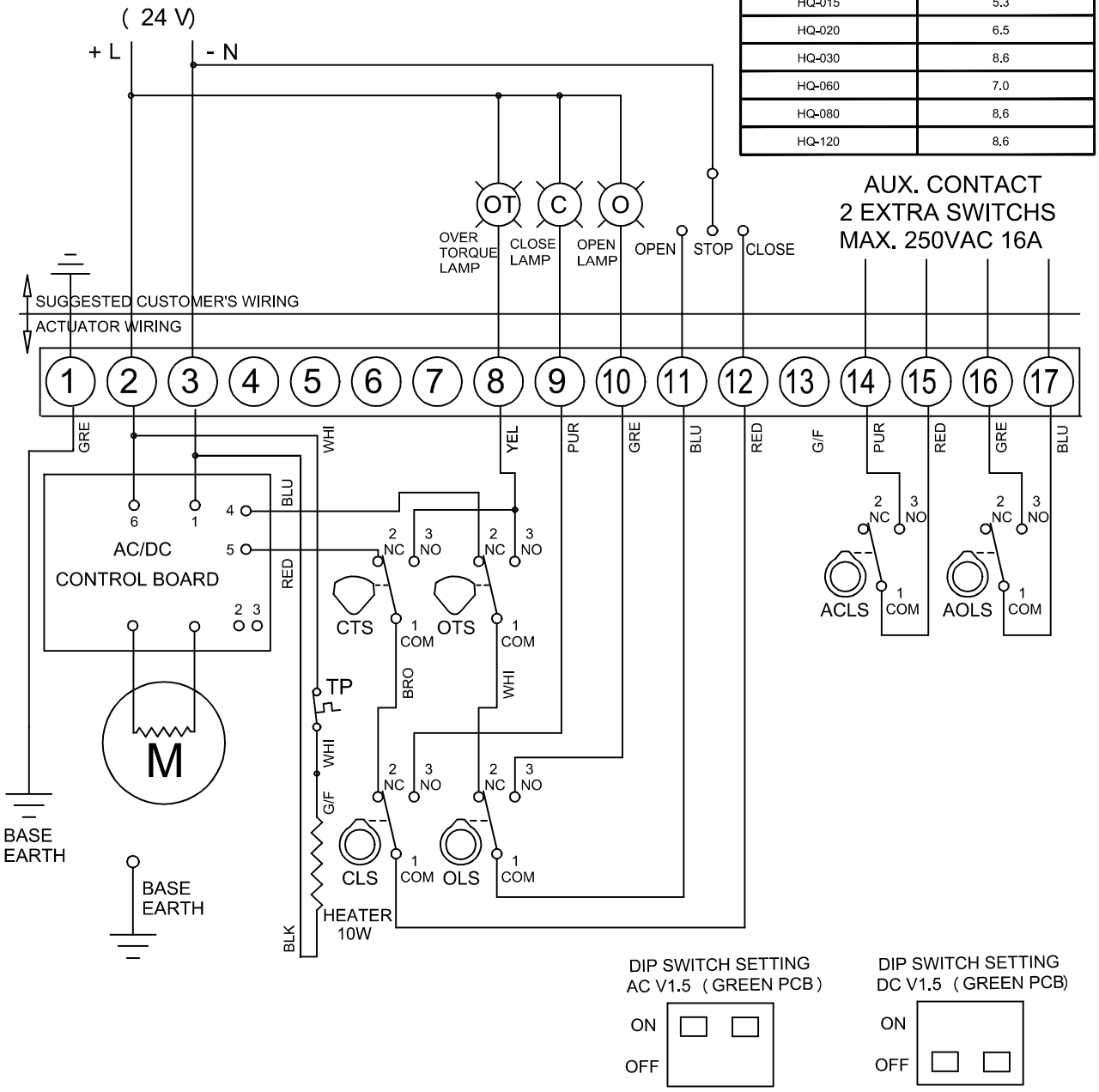
SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
CTS	CLOSE TORQUE SWITCH	250VAC 10A
OTS	OPEN TORQUE SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

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

HQ-120	PART NAME	DC WIRING DIAGRAM STANDARD
HQ-080	DWG. NO	HQ-84000-B
HQ-060		
HQ-030	DATE 17.8.2020	ISSUE REF: B
HQ-020		
HQ-015		
APPLICATION		

ACTUATED SOLUTIONS LTD
TEL: (01243) 827469
FAX: (01243) 829418

DOC : WD-01 1-09-2008



IMPORTANT NOTE: ENSURE THAT ADEQUATE POWER IS AVAILABLE. FAILURE TO DO SO WILL RESULT IN DAMAGE TO THE ELECTRONICS.

MODEL	MINIMUM AMPS
HQ-015	5.3
HQ-020	6.5
HQ-030	8.6
HQ-060	7.0
HQ-080	8.6
HQ-120	8.6

TORQUE AND LIMIT SWITCH OPERATION

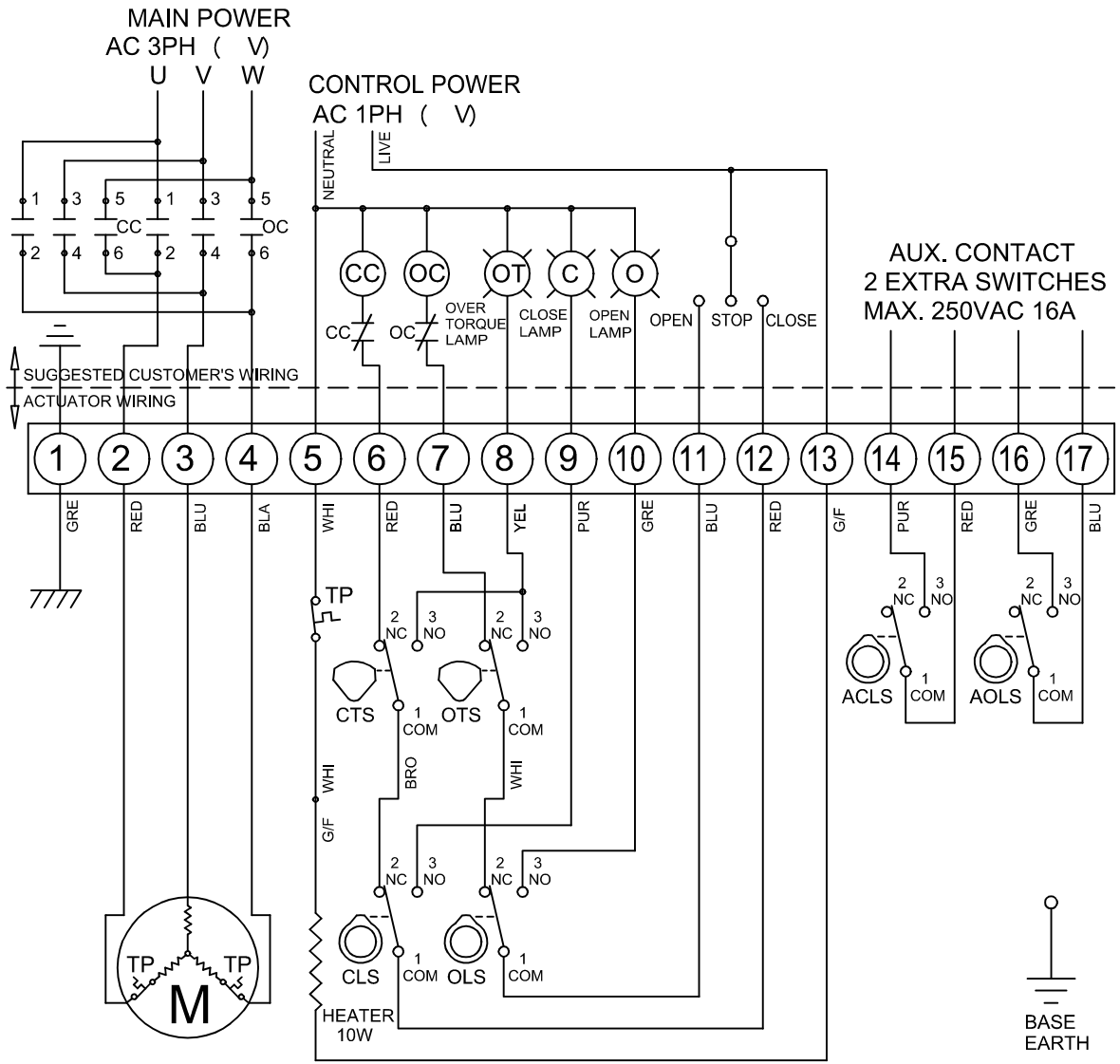
SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1-2	
CLS 1-3	
OLS 1-2	
OLS 1-3	
ACLS 1-2	
ACLS 1-3	
AOLS 1-2	
AOLS 1-3	
CTS 1-3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
OTS 1-3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
CTS	CLOSE TORQUE SWITCH	250VAC 10A
OTS	OPEN TORQUE SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
TP	THERMAL PROTECTOR	250VAC 15A

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

HQ-120	PART NAME	AC/DC WIRING DIAGRAM STANDARD
HQ-080	DWG. NO	HQ-84000-V1.5
HQ-060		
HQ-030	DATE 21.5.2024	ISSUE REF: A
HQ-020	ACTUATED SOLUTIONS LTD	
HQ-015	TEL: (01243) 827469	
APPLICATION	FAX: (01243) 829418	

DOC : WD-01 1-09-2008



TORQUE AND LIMIT SWITCH OPERATION

SWITCH	CLOSE ← INTERMEDIATE → OPEN
CLS 1-2	
CLS 1-3	
OLS 1-2	
OLS 1-3	
ACLS 1-2	
ACLS 1-3	
AOLS 1-2	
AOLS 1-3	
CTS 1-3	* CLOSING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE
OTS 1-3	* OPENING TORQUE SWITCH INTERRUPTS CONTROL IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE

SYMBOL	DESCRIPTION	RATING
CLS	CLOSE LIMIT SWITCH	250VAC 10A
OLS	OPEN LIMIT SWITCH	250VAC 10A
CTS	CLOSE TORQUE SWITCH	250VAC 10A
OTS	OPEN TORQUE SWITCH	250VAC 10A
ACLS	AUX. CLOSE LIMIT SWITCH	250VAC 16A
AOLS	AUX. OPEN LIMIT SWITCH	250VAC 16A
CC	CLOSE MAGNETIC COIL	
OC	OPEN MAGNETIC COIL	
TP	THERMAL PROTECTOR	250VAC 15A

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

HQ-300 HQ-200 HQ-120 HQ-080	3 PHASE WIRING DIAGRAM STANDARD
HQ-060 HQ-050	DWG. NO HQ-31000-A
HQ-030	DATE 10/5/2001 ISSUE REF: A
HQ-020 HQ-015 APPLICATION	ACTUATED SOLUTIONS LTD TEL: (01243) 827469 FAX: (01243) 829418

DOC : WD-01 1-09-2008