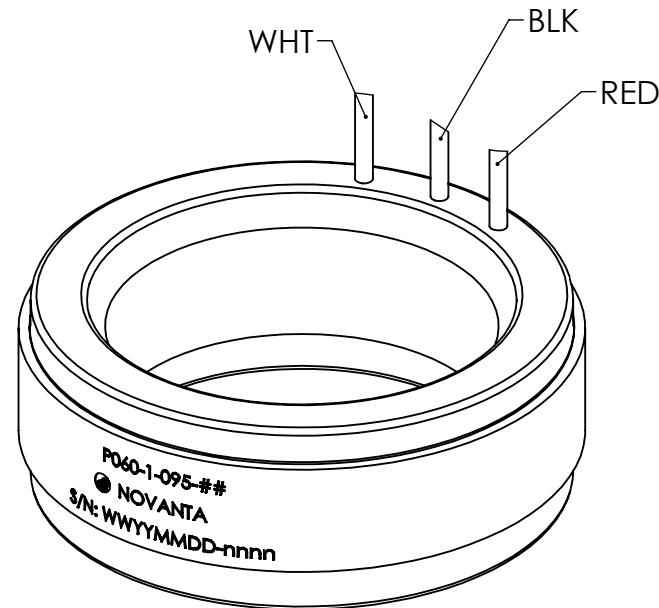
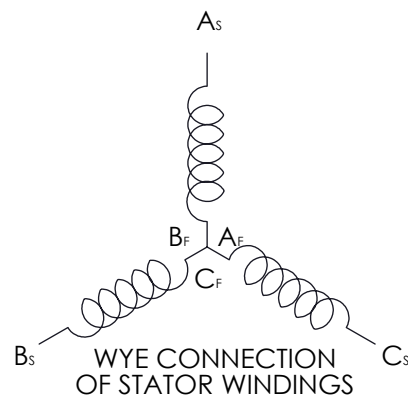


THIS SHEET APPLIES TO MODELS WITHOUT HALLS

LEAD COLOR CODE

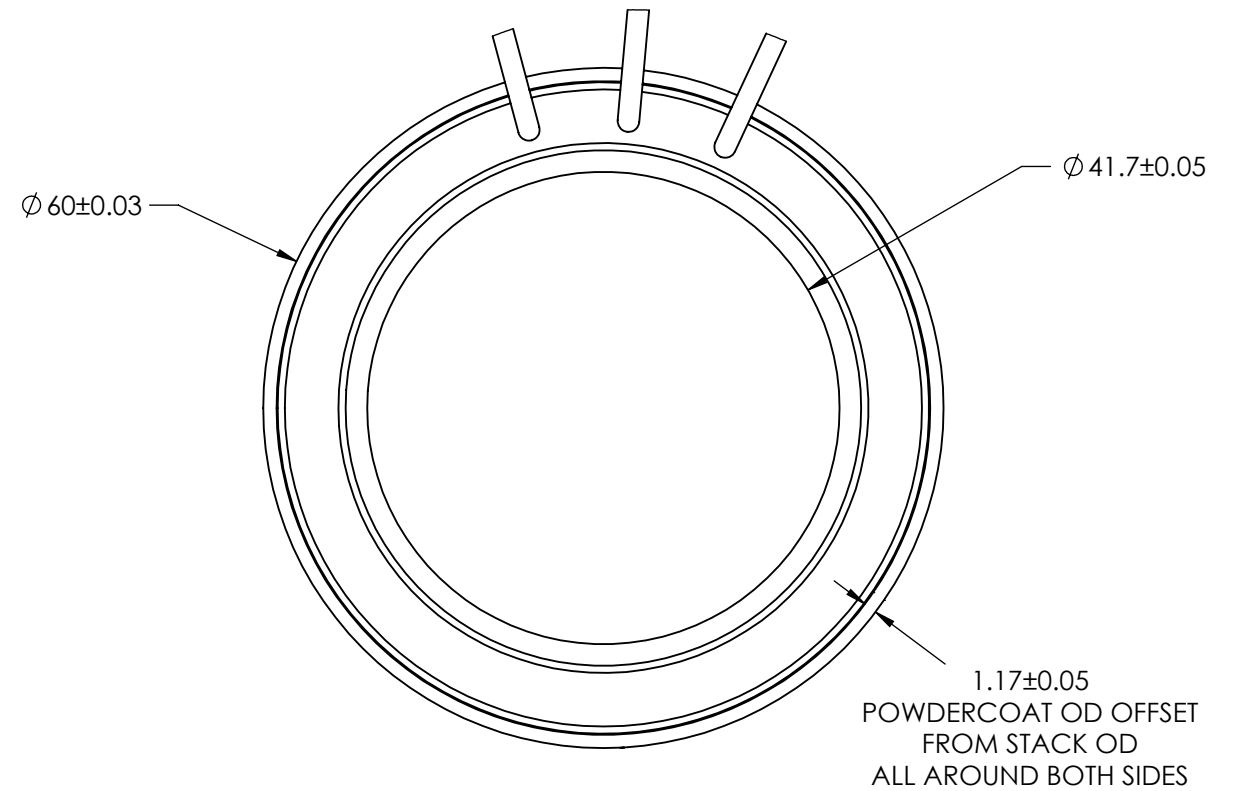
POWER LEADS

16 AWG, M22759/11 TEFLON COATED  
 762 mm MIN LENGTH, FLYING LEADS  
 BLK - PHASE A  
 RED - PHASE B  
 WHT - PHASE C



NOTES:

1. STATOR MOUNTING REQUIREMENTS, REFER TO P060-1-051-01 DOCUMENT.
2. STATOR PERFORMANCE REFER TO P060-1-052-01 DOCUMENT. STATOR PERFORMANCE IS ACHIEVED WITH ASSOCIATED ROTOR LISTED IN TABULATION TABLE ON SHEET 3
3. STATOR IS REACH AND ROHS COMPLIANT TO LATEST REGULATORY SPECIFICATIONS

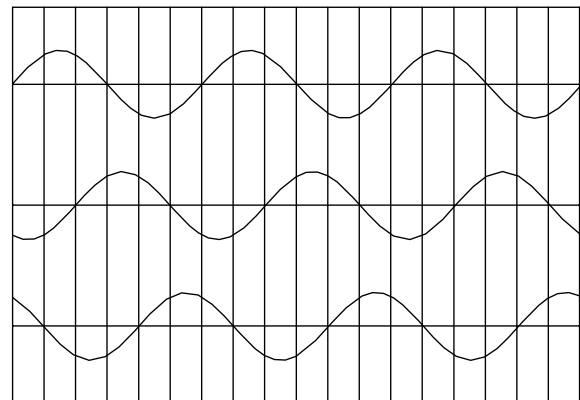


PHASE RELATION OF BACK EMF PHASE-TO-PHASE VOLTAGES DURING CW ROTATION OF MOTOR VIEWED FROM LEAD END

V<sub>bemf</sub> PHASES A+/B-

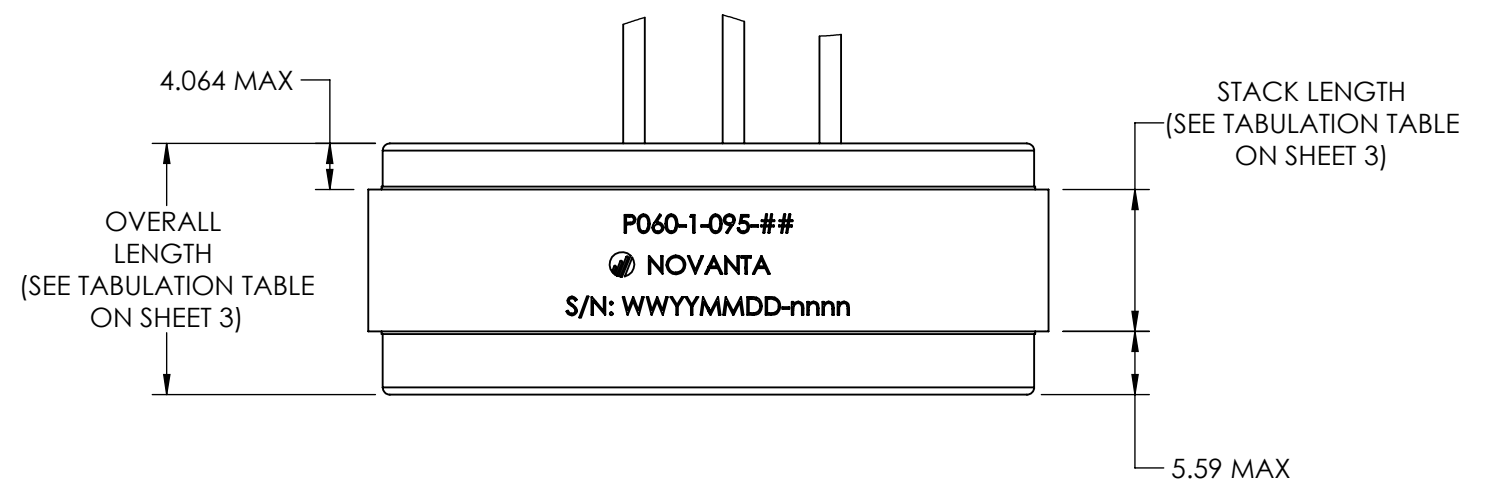
V<sub>bemf</sub> PHASES B+/C-

V<sub>bemf</sub> PHASES C+/A-



CW ROTATION OF ROTOR WHEN ENERGIZED WITH DC SUPPLY IN SEQUENCE SHOWN IN CHART BELOW

	A	B	C
1	+	-	
2	+		-
3		+	-
4	-	+	
5	-		+
6		-	+



REV	DCN	DESCRIPTION OF CHANGE	DATE	SIGN
E	007805	SEE DCN	2021-DEC-20	RMH
D	007730	ADDED PART NUMBERS TO TAB BLOCK, MOVED TO SHEET 3, ROHS AND ESD TO NOTES, LEADS STRAIGHT	2021-AUG-30	AFT
C	007626	ADDED OPH-060013-C000 TO TABULATION BLOCK	2021-MAY-12	SMP

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**Celera** A Novanta Company  
 MATERIAL: NA  
 TREATMENT: NA  
 SURFACE FINISH: NA

DRAWN IAW ASME Y14.5-2009 X. ± 1.25 X.XX ± 0.125 X.X ± 0.25 X.XXX ± 0.0125 ANGULAR: X ± 1° UNITS **MM**  
 TITLE: **STATOR INTERFACE DRAWING**  
 DRWN: **A LARKEY** 2/5/2021 DRAWING NUMBER: **P060-1-095-XX** REV **E**  
 CHKD: **S DAWSON** 2/5/2021  
 APPVD: **S DAWSON** 2/5/2021 SCALE: **1:1** SIZE: **B** SHEET **1** of **3**

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONTROLLED

THIS SHEET APPLIES TO MODELS WITH HALLS/COMMUTATION

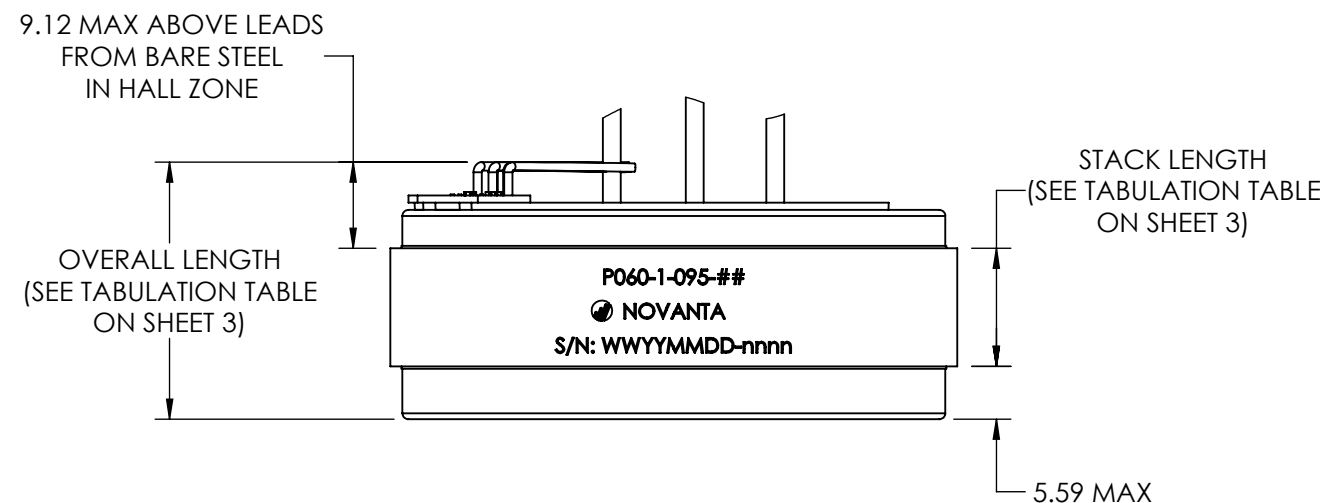
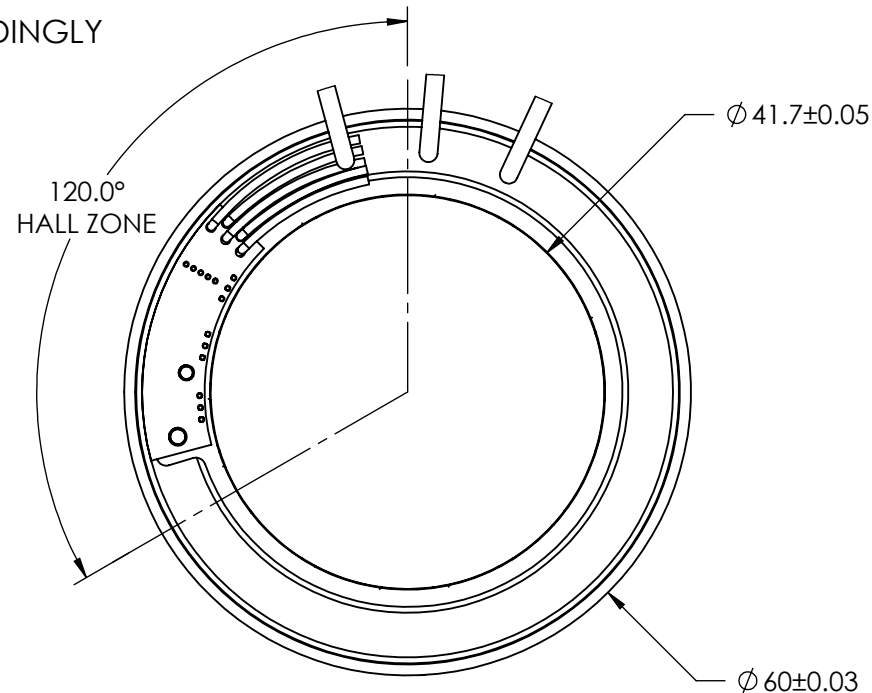
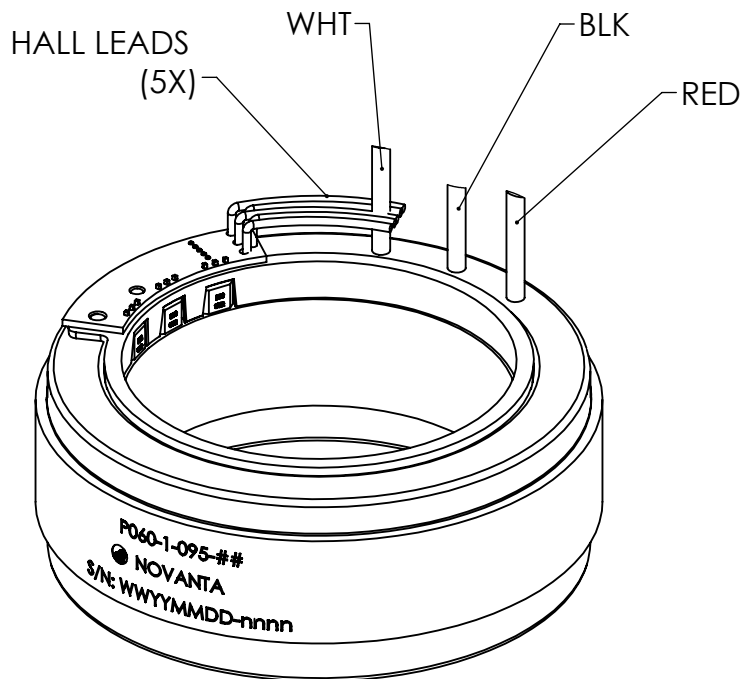
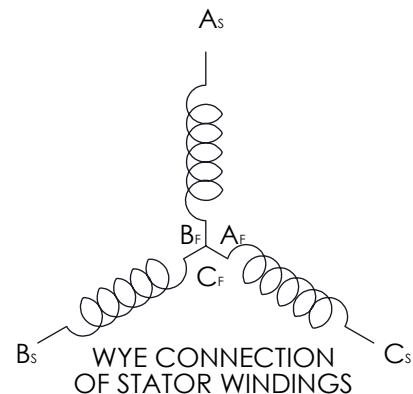
LEAD COLOR CODE

POWER LEADS

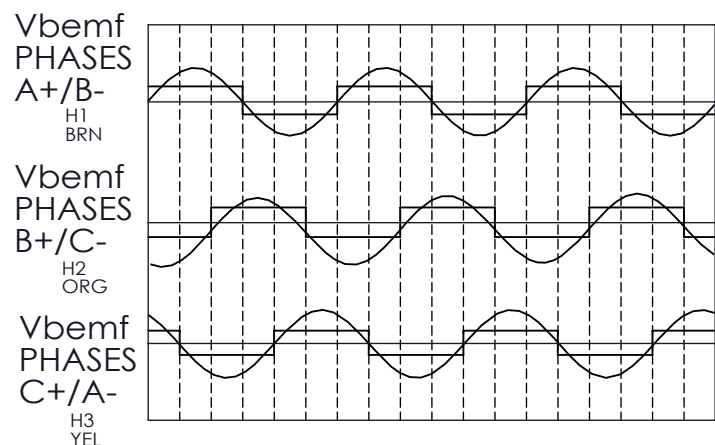
16 AWG, M22759/11 TEFLON COATED  
762 mm MIN LENGTH, FLYING LEADS  
BLK - PHASE A  
RED - PHASE B  
WHT - PHASE C

HALL LEADS

28 AWG, M22759/11 TEFLON COATED  
762 mm MIN LENGTH, FLYING LEADS  
NOTE: HALL DEVICES ARE OPEN COLLECTOR  
AND REQUIRE PULL-UP RESISTORS TO OPERATE.  
BLK - RETURN  
RED - POWER (3.5 TO 27 VDC)  
BRN - HALL 1  
ORG - HALL 2  
YEL - HALL 3



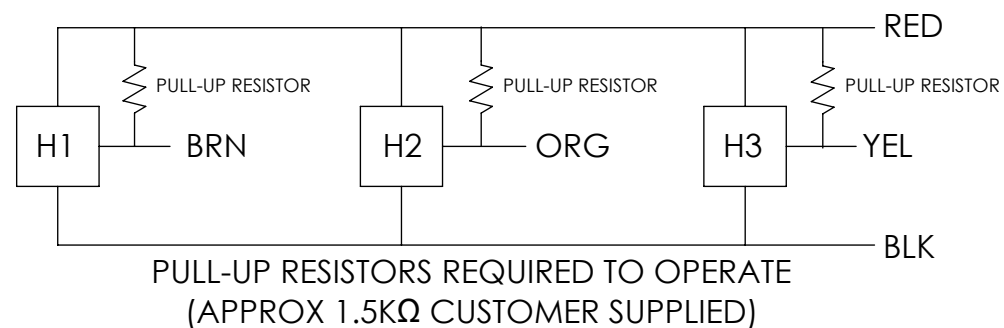
PHASE RELATION OF BACK EMF PHASE-TO-PHASE VOLTAGES DURING CW ROTATION OF MOTOR VIEWED FROM LEAD END



CW ROTATION OF ROTOR WHEN ENERGIZED WITH DC SUPPLY IN SEQUENCE SHOWN IN CHART BELOW

	A	B	C
1	+	-	-
2	+	-	-
3	-	+	-
4	-	+	+
5	-	-	+
6	-	-	+

HALL DEVICE CIRCUIT DIAGRAM



NOTES:

1. STATOR MOUNTING REQUIREMENTS, REFER TO P060-1-051-01 DOCUMENT.
2. STATOR PERFORMANCE REFER TO P060-1-052-01 DOCUMENT. STATOR PERFORMANCE IS ACHIEVED WITH ASSOCIATED ROTOR LISTED IN TABULATION TABLE ON SHEET 3
3. STATOR IS REACH AND ROHS COMPLIANT TO LATEST REGULATORY SPECIFICATIONS.
4. ESD SENSITIVE DEVICE, HANDLE ACCORDINGLY

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**Celera** A Novanta Company  
MOTION

DRAWING NUMBER: **P060-1-095-XX** REV **E**  
SCALE: 1:1 SIZE: B SHEET 2 of 3

### TABULATION BLOCK

MODEL NUMBER	STATOR DRAWING NUMBER	ASSOCIATED ROTOR DRAWING NUMBER	STACK LENGTH	OVERALL LENGTH
OPN-060013-A000	P060-1-095-01	P060-1-096-01	12.5 ±.13	22.3 MAX
OPN-060013-B000	P060-1-095-03			
OPN-060013-C000	P060-1-095-05			
OPN-060013-D000	P060-1-095-07			
OPN-060025-A000	P060-1-095-09	P060-1-096-02	25.0 ±.13	34.8 MAX
OPN-060025-B000	P060-1-095-11			
OPN-060025-C000	P060-1-095-13			
OPN-060050-A000	P060-1-095-15	P060-1-096-03	50.0 ±.13	59.8 MAX
OPN-060050-B000	P060-1-095-17			
OPN-060050-C000	P060-1-095-19			
OPH-060013-A000	P060-1-095-21	P060-1-096-01	12.5 ±.13	27.4 MAX
OPH-060013-B000	P060-1-095-23			
OPH-060013-C000	P060-1-095-25			
OPH-060013-D000	P060-1-095-27			
OPH-060025-A000	P060-1-095-29	P060-1-096-02	25.0 ±.13	39.9 MAX
OPH-060025-B000	P060-1-095-31			
OPH-060025-C000	P060-1-095-33			
OPH-060050-A000	P060-1-095-35	P060-1-096-03	50.0 ±.13	64.9 MAX
OPH-060050-B000	P060-1-095-37			
OPH-060050-C000	P060-1-095-39			

D  
C  
B  
A

D  
C  
B  
A

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A Novanta Company

DRAWING NUMBER: **P060-1-095-XX** REV **E**

SCALE: 1:1 SIZE: B SHEET 3 of 3