

**BALDOR • RELIANCE**

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# Customer information packet

## EM2543T-12

50HP, 1775RPM, 3PH, 60HZ, 326T, 4256M, OPSB, F1

## Specifications

Enclosure	OPSB
Frame	326T
Frame Material	Steel
Frequency	60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	50.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA EEV NEMA PREMIUM NEMA_PREMIUM UR
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	122.000 A @ 230.0 V 61.000 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	61.0 a

## Part detail

Revision	AE
Type	AC
Mech. spec.	42F56
Base	
Status	PRD/A
Elec. spec.	42WGW480
Layout	42LYF056
Eff. date	06-27-2024
CD Diagram	CD0104
Poles	04
Leads	12#8
Proprietary	False
Created date	01-01-0001

<b>Insulation Class</b>	F
<b>Inverter Code</b>	Inverter Ready
<b>KVA Code</b>	H
<b>Lifting Lugs</b>	Standard Lifting Lugs
<b>Locked Bearing Indicator</b>	No Locked Bearing
<b>Motor Lead Exit</b>	Ko Box
<b>Motor Lead Quantity/Wire Size</b>	12 @ 8 AWG
<b>Motor Lead Termination</b>	Flying Leads
<b>Motor Standards</b>	NEMA
<b>Motor Type</b>	4256M
<b>Mounting Arrangement</b>	F1
<b>Number of Poles</b>	4
<b>Overall Length</b>	27.69 IN
<b>Power Factor</b>	81
<b>Product Family</b>	General Purpose
<b>Pulley End Bearing Type</b>	Ball
<b>Pulley Face Code</b>	Standard
<b>Pulley Shaft Indicator</b>	Standard
<b>Rodent Screen</b>	None
<b>Service Factor</b>	1.15
<b>Shaft Diameter</b>	2.125 IN
<b>Shaft Extension Location</b>	Pulley End
<b>Shaft Ground Indicator</b>	No Shaft Grounding
<b>Shaft Rotation</b>	Reversible
<b>Shaft Slinger Indicator</b>	No Slinger
<b>Speed</b>	1775 rpm
<b>Speed Code</b>	Single Speed
<b>Starting Method</b>	Wye Start - Delta Run
<b>Thermal Device - Bearing</b>	None
<b>Thermal Device - Winding</b>	None
<b>Vibration Sensor Indicator</b>	No Vibration Sensor
<b>Winding Thermal 1</b>	None
<b>Winding Thermal 2</b>	None

**Nameplate**

NP3554LUA										
<b>CAT.NO.</b>	EM2543T-12			<b>P/N</b>				<b>ENCL</b>		<b>OPSB</b>
<b>SPEC.</b>	42F056W480	<b>CC</b>	010A	<b>FRAME</b>		326T	<b>SER.NO.</b>			
<b>HP</b>	50	<b>CLASS</b>		F	<b>HZ</b>	60				
<b>RPM</b>	1775	<b>PH</b>	3	<b>DES</b>		B				
<b>VOLTS</b>	230/460			<b>CODE</b>		H	<b>ODE BRG</b>	6311	<b>DE BRG</b>	6312
<b>AMPS</b>	122/61									
<b>RATING</b>	40C AMB-CONT			<b>NEMA-NOM-EFF</b>		94.5	<b>GREASE</b>	POLYREX EM		
<b>PF</b>	81	<b>SER.F.</b>	1.15	<b>CT30-60(2:1) VT3-60(20:1)</b>						
<b>USABLE AT</b>	50HZ 50HP 190/380V 136/68A			<b>SF 1.0</b>						
<b>HTR-VOLTS</b>	<b>HTR-AMPS</b>	<b>MAX. SPACE HEATER TEMP.</b>								

## Parts list

Part number	Description	Quantity
SA100841	SA 42F056W480	1.000 ea
RA092914	RA 42F056W480	1.000 ea
HA6360	LIFTING LUG FOR 42 FRAME MOTORS.	2.000 ea
HA6017	CAST ADAPTER, 40,42 KOBX	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	2.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 ea
WD1000B25	GND LUG, BURNDY L125HP OR T&B L125HP-BB	1.000 ea
19XW3118G08	.31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN	1.000 ea
10CB3001	CONDUIT BOX CAST W/2.500 LEAD HOLE	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 ea
42EP3200A01	FR ENDPLATE, MACH	1.000 ea
HW5100A13	W4627-047 WVY WSHR	1.000 ea
42EP3200B02	PU ENDPLATE, MACH	1.000 ea
XY5013A12	NUT,1/2-13,HEX,STEEL,ZINCPLATED	8.000 ea
10CB3500SP	CONDUIT BOX LID, CAST	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW2501H33	KEY, 1/2 SQ X 3.875	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500bx)4/22	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
42AD2001A01	BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.030 lb
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
42AD2001A01	BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HA3151A03	THRUBOLT STUD 1/2-13 X 20.5	4.000 ea
MG1050Y01	CELEROL BALDOR GOLD *** NLA IN 5 GALLON	0.080 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea

LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0104A01	CONNECTION DIAGRAM	1.000 ea
NP3554LUA	SS SUPER-E VPWM INV READY,CURUS-EEV,PREM	1.000 ea
40PA1000	PACKAGING GROUP	1.000 ea

**AC Induction Motor Performance Data**

Record # 13699

Typical performance - not guaranteed values

Winding: 42WGW480-R001		Type: 4256M	Enclosure: OPSB	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>	
Rated Output (HP)	50	Full Load Torque	148 LB-FT	
Volts	230/460	Start Configuration	direct on line	
Full Load Amps	122/61	Breakdown Torque	524 LB-FT	
R.P.M.	1775	Pull-up Torque	357 LB-FT	
Hz	60 Phase	3	Locked-rotor Torque	328 LB-FT
NEMA Design Code	B KVA Code	H	Starting Current	422 A
Service Factor (S.F.)	1.15	No-load Current	25.9 A	
NEMA Nom. Eff.	94.5 Power Factor	81	Line-line Res. @ 25°C	0.112 Ω
Rating - Duty	40C AMB-CONT	Temp. Rise @ Rated Load	18°C	
S.F. Amps		Temp. Rise @ S.F. Load	21°C	
		Locked-rotor Power Factor	27	
		Rotor inertia	7.46 LB-FT <sup>2</sup>	

**Load Characteristics 460 V, 60 Hz, 50 HP**

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	45	67	77	82	84	84	83
Efficiency	89.6	93.5	94.4	94.5	94.1	93.7	94.3
Speed	1794	1789	1784	1779	1772	1767	1775
Line amperes	29.4	37.6	48.4	60.8	74.3	88.9	68.9

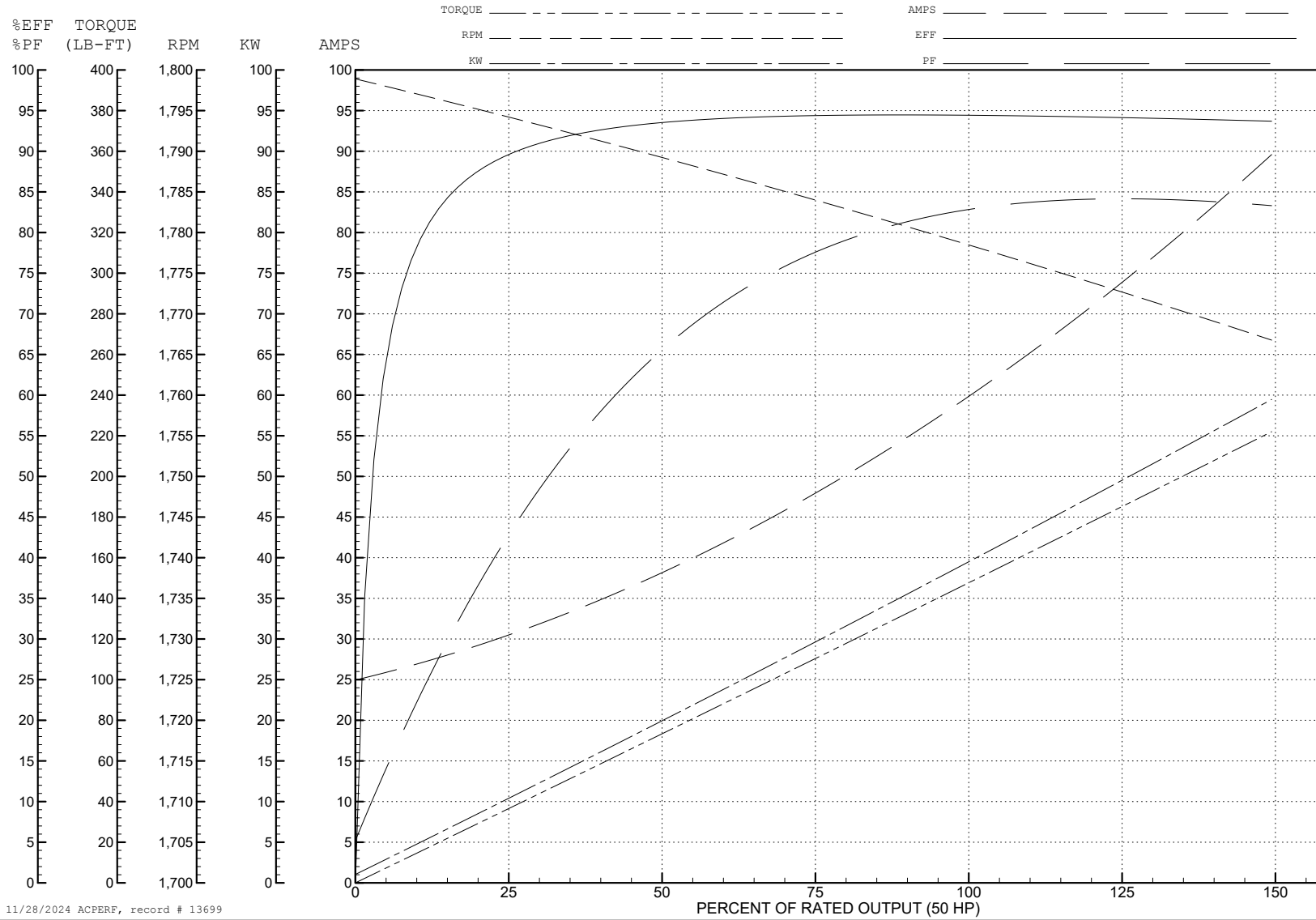
ABB Motors and Mechanical Inc.

WINDING # 42WGW480

50 HP 3 PH 60 HZ 1775 RPM 460 V 4256M

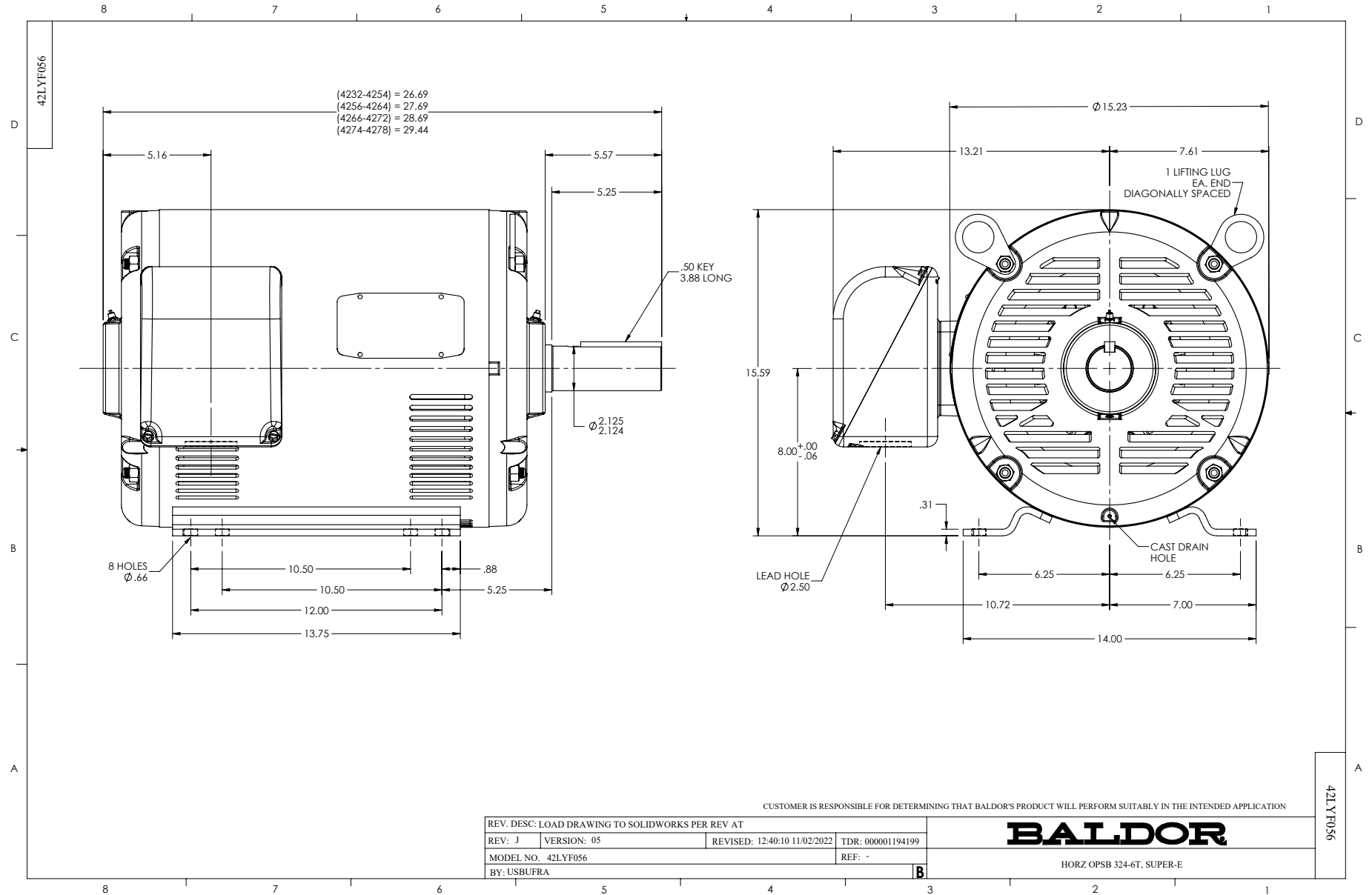
Typical performance - not guaranteed values.

TORQUES (LB-FT): PO=524 PU=357 LR=328 LRA=422

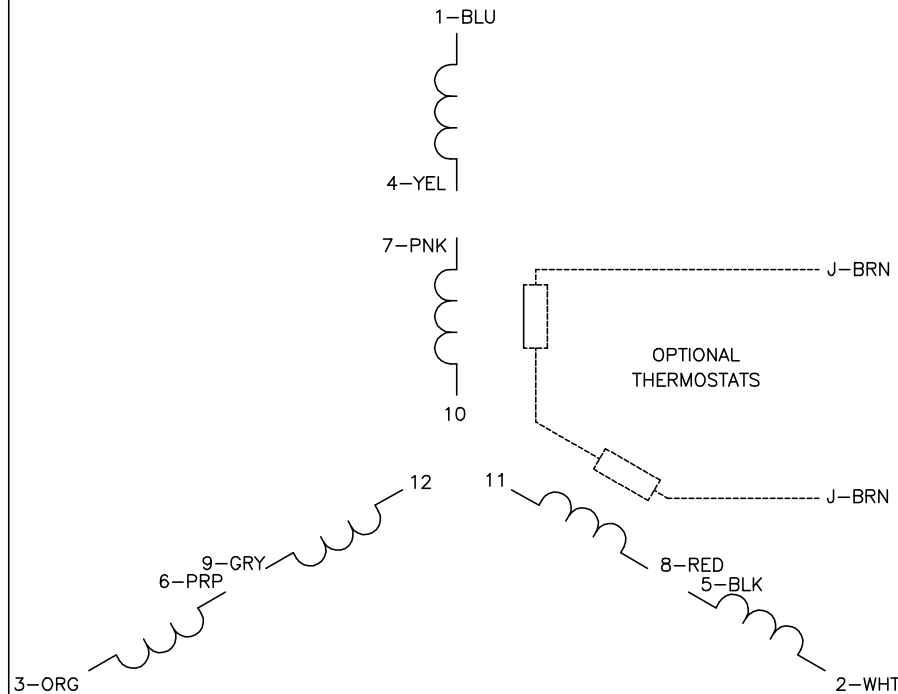


11/28/2024 ACPERF, record # 13699



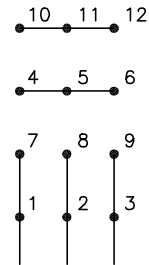


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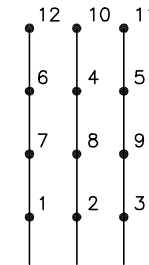
LOW VOLTAGE

START (2Y)



LINE

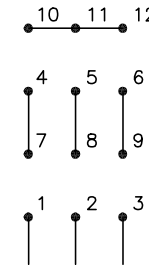
RUN (2D)



LINE

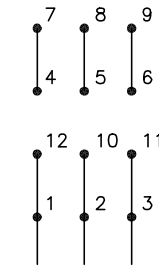
HIGH VOLTAGE

START (1Y)



LINE

RUN (1D)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0104

REV. DESC: ADD CLASS CONN00000007		
REV. LTR: D	VERSION: 01	TDR: 000001099922
FILE: \AAA\00008\377	REVISED: 09:02:55 02/19/2019	BY: ENBRIRO
MTL: -	© □	

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3PH, DV, 12 LEADS, Y START/D RUN

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