

ABB BALDOR RELIANCE III

Customer information packet

VEM3770T-5

7.5HP, 1770RPM, 3PH, 60HZ, 213TC, 0738M, TEFC

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	213TC
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	7.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	NEMA PREMIUM CURUSEEV NEMA PREMIUM (OLD LOGO)
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	7.500 A @ 575.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.7 %
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	7.5 a
Insulation Class	F

Part Detail

Revision	Y
Type	AC
Mech. spec.	07G082
Base	
Status	PRD/A
Elec. spec.	07WGX817
Layout	07LYG082
Eff. date	05-28-2025
CD Diagram	CD0006
Poles	04
Leads	3#14
Proprietary	False
Created date	03-20-2009

Inverter Code	Inverter Ready
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	3 @ 14 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0738M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	19.20 IN
Power Factor	81
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	1.375 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1770 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP3441L											
CAT.NO.		VEM3770T-5									
SPEC.		07G082X817									
HP		7.5									
VOLTS		575									
AMP		7.5									
RPM		1770									
FRAME		213TC		HZ		60		PH		3	
SER.F.		1.15	CODE		J	DES		A	CL		F
NEMA-NOM-EFF		91.7	PF		81						
RATING		40C AMB-CONT									
CC		010A									
DE		6307	ODE		6206						
ENCL		TEFC	SN								
VPWM INVERTER READY											
CT6-60H(10:1)VT3-60H(20:1											
SFA 8.7											

Parts List

Part number	Description	Quantity
SA180782	SA 07G082X817	1.000 ea
RA168734	RA 07G082X817	1.000 ea
37FN3002C01	EXFN, PLASTIC, 6.00 OD, 1.155 ID	1.000 ea
HW3201A05	3/8-16 EYEBOLT	1.000 ea
09CB3002SP	CB W/1.38 LEAD HOLE FOR 37, 39, 307 & 30	1.000 ea
09GS1000	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 ea
37EP1100A41	FR ENDPLATE MACH FOR GREASER & RELIEF	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A06	W2420-025 WVY WSHR (WB)	1.000 ea
37EP1300A10	FACE MTD EP,307BRG,213-5TC,GRSR,RELIEF &	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
10XN2520A30	HEX HD CAP SCREW-STD THD-.25 X 20 THD PE	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
XY3118A12	5/16-18 HEX NUT DIRECTIONAL SERRATION	4.000 ea
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 ea
07FH4007SP	PRIMED	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 ea
09GS1013SP	GS FOR 09CB3501, 12CB1500 & 12CB1503 LID	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
HW2501F21	KEY, 5/16 SQ X 2.375	1.000 ea
HA7000A02	KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
HA3104A32	THRUBOLT- 5/16-18 X12.750	4.000 ea

MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.036 ga
LC0006	CONNECTION LABEL	1.000 ea
NP3441L	ALUM SUPER-E VPWM INVERTER READY UL EEV	1.000 ea
07PA1011	PKG GRP, 07 CAST IRON PK1181	1.000 ea
07PA1095	PKG GRP, VER 07 CAST IRON	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
FE-0000001	ZRTG FE ASSEMBLY	1.000 ea
PE-0000001	ZRTG PE ASSEMBLY	1.000 ea

AC Induction Motor Performance Data

Record # 26661

Typical performance - not guaranteed values

Winding: 07WGX817-R001				Type: 0738M		Enclosure: TEFC		
Nameplate Data				575 V, 60 Hz: Single Voltage Motor				
Rated Output (HP)		7.5		Full Load Torque		22.1 LB-FT		
Volts		575		Start Configuration		direct on line		
Full Load Amps		7.5		Breakdown Torque		73 LB-FT		
R.P.M.		1770		Pull-up Torque		33.7 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		44.4 LB-FT		
NEMA Design Code		A	KVA Code	J		Starting Current		58.7 A
Service Factor (S.F.)		1.15		No-load Current		3.66 A		
NEMA Nom. Eff.		91.7	Power Factor	81		Line-line Res. @ 25°C		2.23 Ω
Rating - Duty		40C		AMB-CONT		Temp. Rise @ Rated Load		42°C
S.F. Amps						Temp. Rise @ S.F. Load		51°C
						Locked-rotor Power Factor		37.9
						Rotor inertia		0.934 LB-FT2

Load Characteristics 575 V, 60 Hz, 7.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	40	62	73	79	82	84	82
Efficiency	86.9	91.4	92.2	91.7	90.9	89.7	90.9
Speed	1793	1786	1779	1771	1761	1751	1764
Line amperes	4.07	4.98	6.23	7.7	9.4	11.2	8.58

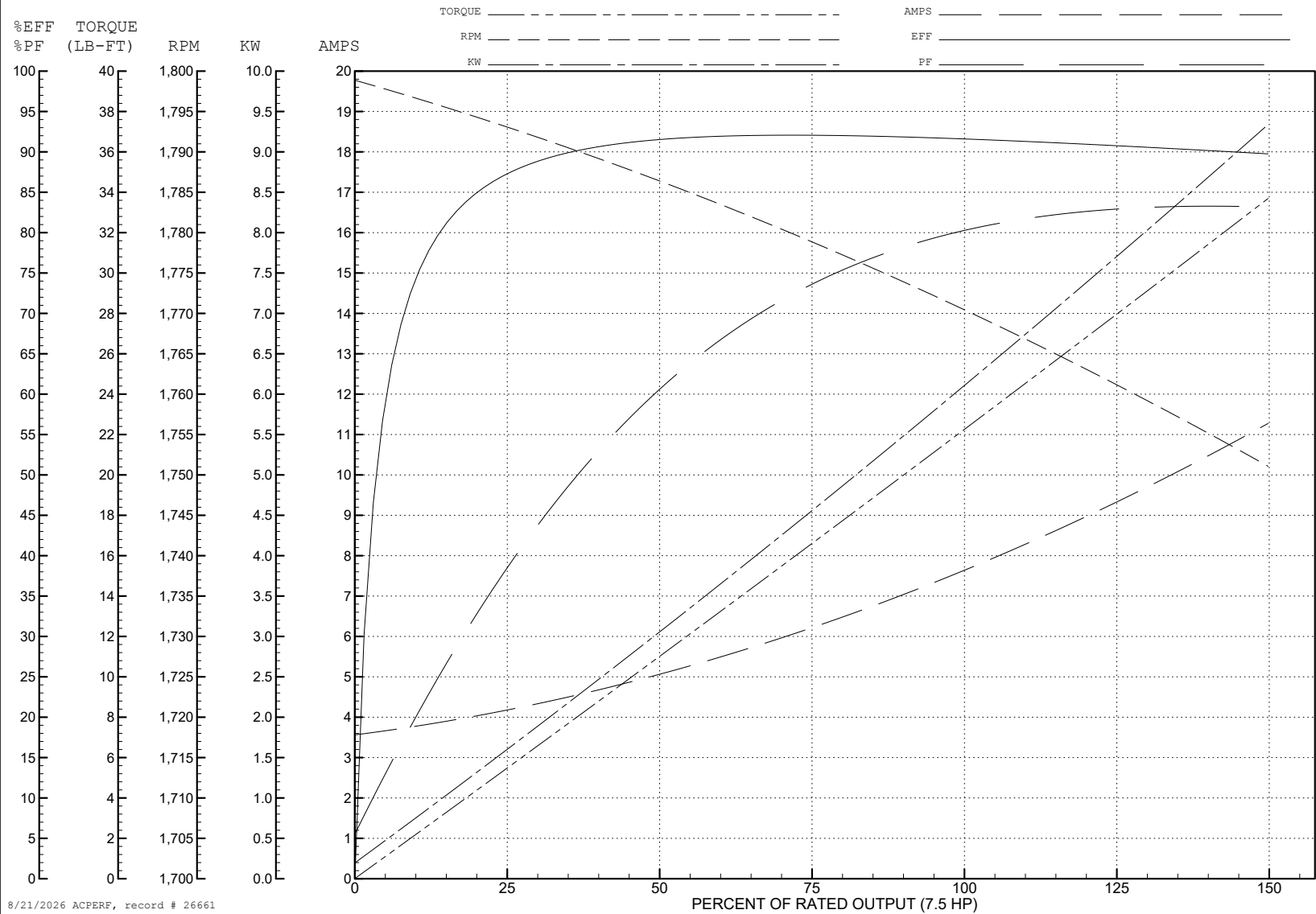
ABB Motors and Mechanical Inc.

WINDING # 07WGX817

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 1770 RPM 575 V 0738M

TORQUES (LB-FT): PO=73 PU=33.7 LR=44.4 LRA=58.7



AC Induction Motor Performance Data

Record # 44991

Typical performance - not guaranteed values

Winding: 07WGX817-R001			Type: 0738M		Enclosure: TEFC		
Nameplate Data			550 V, 50 Hz: Single Voltage Motor				
Rated Output (HP)		7.5	Full Load Torque		26.6 LB-FT		
Volts		550	Start Configuration		direct on line		
Full Load Amps		9.1	Breakdown Torque		95.8 LB-FT		
R.P.M.		1450	Pull-up Torque		50.5 LB-FT		
Hz	50	Phase	3	Locked-rotor Torque		66.5 LB-FT	
NEMA Design Code		A	KVA Code	K	Starting Current		69.3 A
Service Factor (S.F.)		1.15	No-load Current		5.77 A		
NEMA Nom. Eff.		89.5	Power Factor	71	Line-line Res. @ 25°C		2.23 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		56°C	
S.F. Amps				Temp. Rise @ S.F. Load		67°C	
				Locked-rotor Power Factor		44.1	
				Rotor inertia		0.934 LB-FT2	

Load Characteristics 550 V, 50 Hz, 7.5 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	29	48	61	70	75	78	74
Efficiency	83.2	89.2	90.1	90.2	89.6	88.6	89.4
Speed	1494	1487	1480	1473	1464	1456	1466
Line amperes	6.09	6.83	7.9	9.29	10.9	12.7	10.1

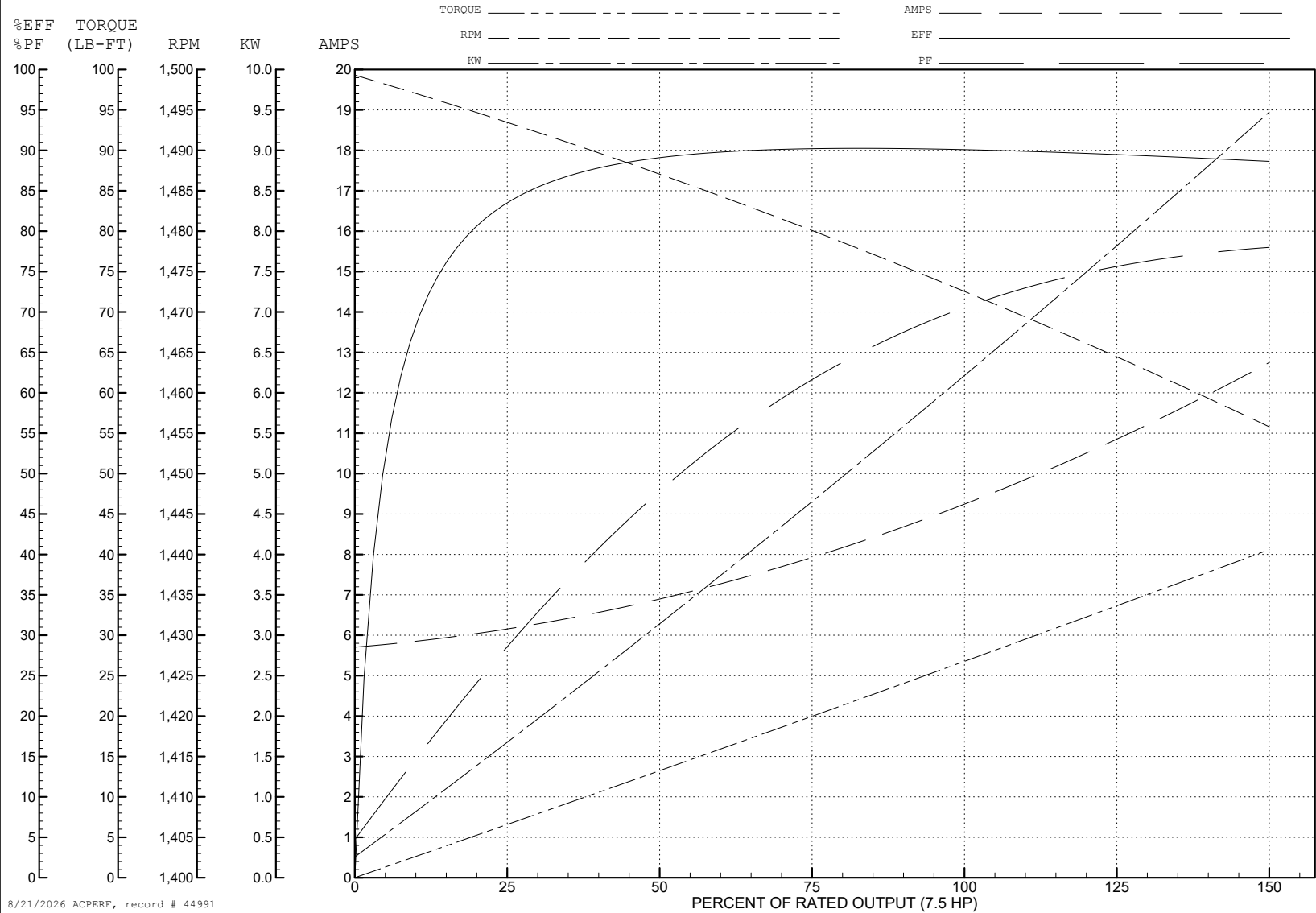
ABB Motors and Mechanical Inc.

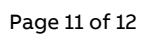
WINDING # 07WGX817

Typical performance - not guaranteed values.

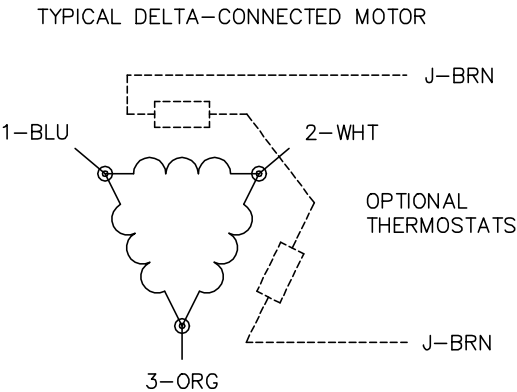
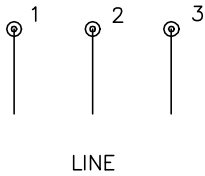
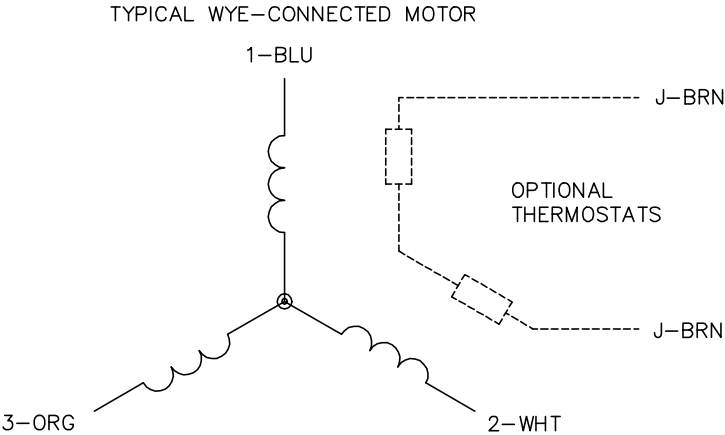
7.5 HP 3 PH 50 HZ 1450 RPM 550 V 0738M

TORQUES (LB-FT): PO=95.8 PU=50.5 LR=66.5 LRA=69.3





CD0006



- NOTES:
- 1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
 - 2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
 - 3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
 - 4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
 - 5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

REV. DESC: ADD CLASS CONN00000007		
REV. LTR: E	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\141	REVISED: 10: 24: 49 02/19/2019	BY: ENBRIRO
MTL: —		

BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1