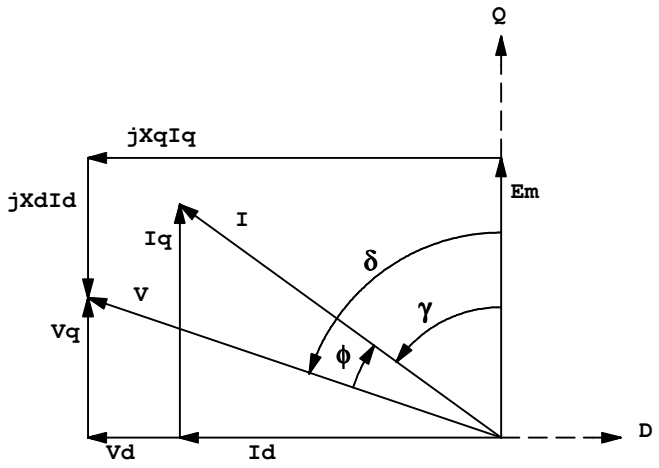
S.O. 0	VOLTS 460	TYPE IPM	STATOR RES.@ 25 °C 1.303
FRAME FL1831	AMPS 10.3	ENCLOSURE TEBC	OHMS (BETWEEN LINES)
HP 10	DUTY CONT	MAX SAFE RPM 7200	
BASE SPEED 1800	S.F. 1.0	WK^2 ($Lb-Ft^2$) .46	
PHASE/HERTZ 3/60	AMB °C/INSUL 40/H	MAX INSTANTANEOUS OVERLOAD AMPS 30.9	

VARIABLE SPEED PERFORMANCE

HP	AMPS (rms)	RPM	GAMMA*	POWER FACT.	EFF.	VOLTS (L-L) (rms)	Em (L-N) (rms)	Lq (mH)	Ld (mH)
OpenCkt**	N/A	1800	5.0	N/A	N/A	N/A	196	N/A	N/A
OpenCkt,hot	N/A	1800	5.0	N/A	N/A	N/A	179	N/A	N/A
2.03	2.6	1800	28.5	98.1	90.5	382	179	164	23.8
4.57	5.2	1800	39.0	97.9	92.8	420	179	123	23.3
7.20	7.7	1800	44.2	97.4	93.8	439	179	100	22.7
10.0	10.3	1800	49.5	97.1	94.0	458	179	91.1	22.1

Remarks: TYPICAL DATA
CONSTANT TORQUE 0-1800 RPM, CONSTANT POWER 1800-3000 RPM
200% OVERLOAD BELOW BASE SPEED TAPERED TO 100% AT 3000 RPM



*Gamma is the current angle relative to counter emf, defined to be positive when current leads counter emf.

Equivalently, Gamma is positive when Id is negative.

**Data at 25°C - all other data at rated temperature

BALDOR	DR. BY CD CK. BY RM APP. BY RM DATE 11/23/09	IPM MOTOR PERFORMANCE DATA PM3923A ISSUE DATE 11/23/09

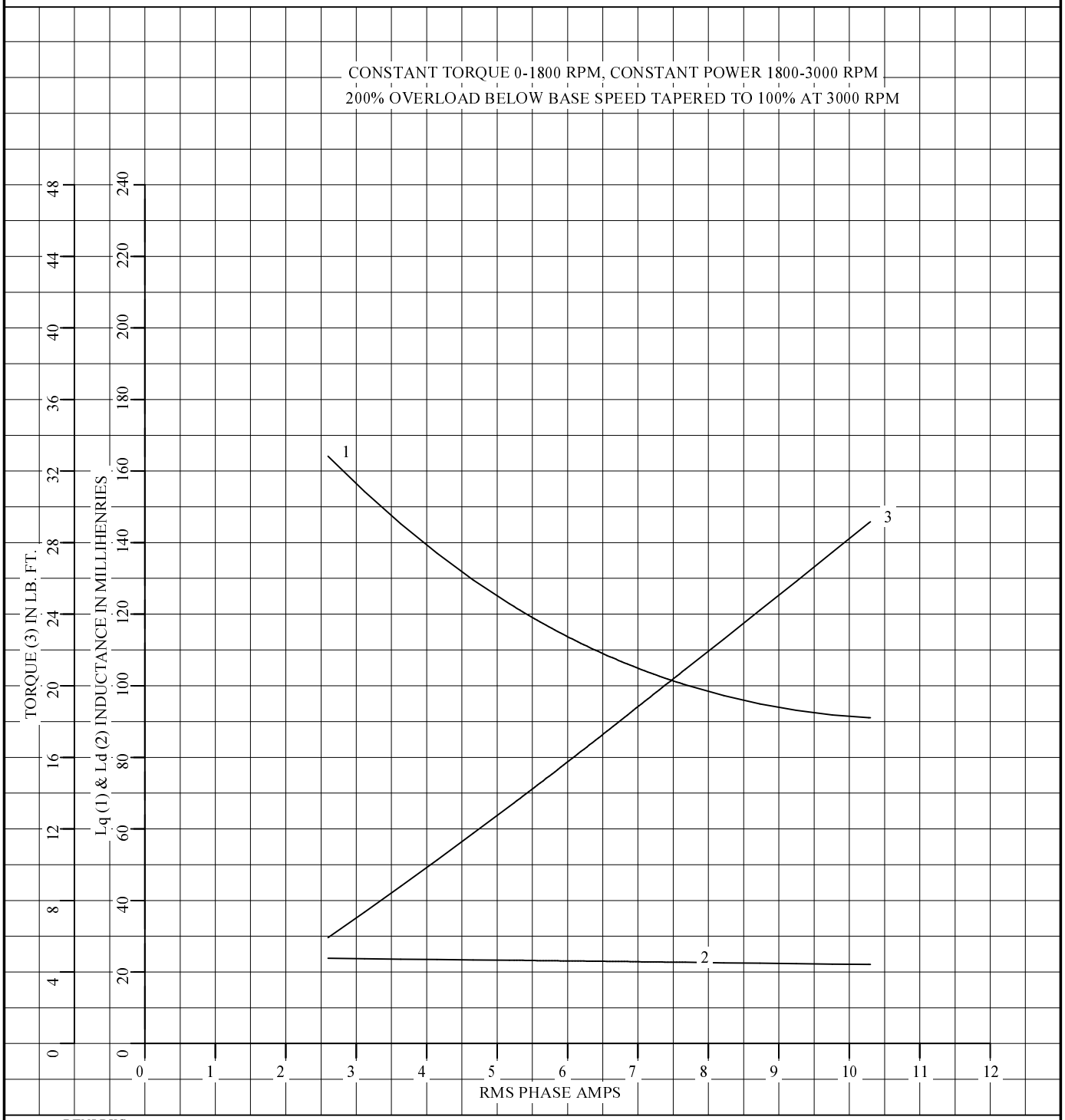
S.O. 0	VOLTS 460	TYPE IPM	STATOR RES.@ 25 °C 1.303
FRAME FL1831	AMPS 10.3	ENCLOSURE TEBC	OHMS (BETWEEN LINES)
HP 10	DUTY CONT	MAX SAFE RPM 7200	
BASE SPEED 1800	S.F. 1.0	WK^2 ($Lb-Ft^2$) .46	
PHASE/HERTZ 3/60	AMB °C/INSUL 40/H	MAX INSTANTANEOUS OVERLOAD AMPS 30.9	

CUSTOM MOTOR BLOCK PARAMETERS

Parameter Name	Value	Units	Description
Motor Rated HP	10.0	HP	Horsepower rating of the motor
Motor Rated Volt	460.0	V	Motor rated volts at full speed and load
Motor Rated Spd	1800.	RPM	Motor rated speed at full load
Motor Rated Freq	60.00	Hz	Motor rated speed frequency
Motor Rated Amps	10.3	A	Motor rated amps at full load and speed
Motor Peak Amps	30.9	A	Maximum current level that can be applied to motor
Stator R	.651	Ohms	Line-to-Neutral stator resistance
Voltage Constant	172.1	V/KRPM	RMS line-to-line EMF at 1000 RPM
Stator Ld	22.100	mH	D-axis stator inductance
Stator Lq	91.100	mH	Q-axis stator inductance
Lq @ 2.0 Hp	164.100	mH	Q-axis inductance at lowest partial load
Lq @ 4.6 Hp	122.600	mH	Q-axis inductance at mid partial load
Lq @ 7.2 Hp	100.100	mH	Q-axis inductance at highest partial load
Iq @ 2.0 Hp	2.3	A	Optimum Q-axis current at lowest partial load
Iq @ 4.6 Hp	4.0	A	Optimum Q-axis current at mid partial load
Iq @ 7.2 Hp	5.5	A	Optimum Q-axis current at highest partial load
Iq @ 10.0 Hp	6.7	A	Optimum Q-axis current at rated load

S.O. 0	VOLTS 460	TYPE IPM	STATOR RES.@ 25 °C 1.303
FRAME FL1831	AMPS 10.3	ENCLOSURE TEBC	OHMS (BETWEEN LINES)
HP 10	DUTY CONT	MAX SAFE RPM 7200	
BASE SPEED 1800	S.F. 1.0	WK^2 (Lb-Ft^2) .46	
PHASE/HERTZ 3/60	AMB °C/INSUL 40/H	MAX INSTANTANEOUS OVERLOAD AMPS 30.9	

Lq, Ld, & Torque vs. RMS Phase Amps



REMARKS: TYPICAL DATA

BALDOR

DR. BY	CD
CK. BY	RM
APP. BY	RM
DATE	11/23/09

IPM MOTOR PERFORMANCE DATA

PM3923A

ISSUE DATE 11/23/09