# TYPICAL SUBMITTAL DATA

**BASE MODEL:** 742RSL4048 **Winding:** 740043 **Date:** 02/10/22

| Kilowatt ratings at | 1800 RPM | 60 Hertz | | 4 Bus Bars | |
|---|---|---|---|---|---|
| kW (kVA) | 3 Phase | 0.8 Power Factor | | Dripproof or Open Enclosure | |
| | CONTINUOUS [1, 2] | | | STANDBY [1, 2] | |
| Voltage* | NEMA B / 80 °C | NEMA F / 105 °C | NEMA H / 125 °C | NEMA F / 130 °C | NEMA H / 150 °C |
| 480 | 1000 (1250) | 1200 (1500) | 1260 (1575) | 1300 (1625) | 1300 (1625) |
| 440 | 1000 (1250) | 1140 (1425) | 1220 (1525) | 1240 (1550) | 1280 (1600) |
| 416 | 950 (1188) | 1100 (1375) | 1160 (1450) | 1180 (1475) | 1250 (1563) |
| 400 | 928 (1160) | 1069 (1336) | 1102 (1378) | 1112 (1390) | 1149 (1436) |
| 380 | 900 (1125) | 1030 (1288) | 1030 (1288) | 1030 (1288) | 1030 (1288) |

① Rise by resistance method, Mil-Std-705, Method 680.1b. ② Machine rated for Max Ambient of 40 °C, Max Altitude 3300 ft

***Submittal Data: 416 Volts*, 1180 kW, 1475 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase*** **High Wye CONNECTION**

| Mil-Std-705B Method | Description | Value | Units | Mil-Std-705C Method | Description | Value | Units |
|---|---|---|---|---|---|---|---|
| 301.1b | Insulation Resistance | >1.5 Meg | Ohms | 505.3b | Overspeed | 2250 | RPM |
| 302.1a | High Potential Test | | | 507.1c | Phase Sequence CCW-ODE | ABC | |
| | Main Stator | 1960 | Volts | 508.1c | Voltage Balance, L-L or L-N | 0.2% | |
| | Main Rotor | 1500 | Volts | 601.4a | L-L Harmonic Max - Total (Distortion Factor) | 5.0% | |
| | Exciter Stator | 1500 | Volts | | | | |
| | Exciter Rotor | 1500 | Volts | 601.4a | L-L Harmonic Max - Single | 3.0% | |
| | PMG Stator | 1500 | Volts | 601.1c | Deviation Factor | 5.0% | |
| 401.1a | Stator Resistance, Line to Line High Wye Connection | 0.00300 | Ohms | --- | TIF (1960 Weightings) | <50 | |
| | | | | --- | THF (IEC, BS & NEMA Weightings) | <2% | |
| | Rotor Resistance | 0.776 | Ohms | --- | Winding Pitch | 2/3 | |
| | Exciter Stator | 22 | Ohms | | | | |
| | Exciter Rotor | 0.043 | Ohms | | | | |
| | PMG Stator | 2.1 | Ohms | | | | |
| 410.1a | No Load Exciter Field Amps at 416 Volts Line to Line | 0.57 | A DC | **Additional Prototype Mil-Std Methods are Available on Request.** | | | |
| 420.1a | Short Circuit Ratio | 0.511 | | | | | |
| 421.1a | Xd Synchronous Reactance | 2.719 | PU | -- | Generator Frame | 742 | |
| | | 0.319 | Ohms | -- | Type | MagnaMax | |
| 422.1a | X2 Negative Sequence React. | 0.256 | PU | -- | Insulation | Class H | |
| | | 0.030 | Ohms | -- | Coupling - Single Bearing | Flexible | |
| 423.1a | X0 Zero Sequence Reactance | 0.076 | PU | -- | Amortisseur Windings | Full | |
| | | 0.009 | Ohms | -- | Excitation | Ext. Voltage Regulated, Brushless | |
| 425.1a | X'd Transient Reactance | 0.197 | PU | -- | Voltage Regulator | DVR2400 | |
| | | 0.023 | Ohms | -- | Voltage Regulation | 0.25% | |
| 426.1a | X''d Subtransient Reactance | 0.144 | PU | | | | |
| | | 0.017 | Ohms | | | | |
| -- | Xq Quadrature Synchronous Reactance | 1.329 | PU | -- | Cooling Air Volume | 3430 | CFM |
| | | 0.156 | Ohms | -- | Heat rejection rate | 3237 | Btu's/min |
| 427.1a | T'd Transient Short Circuit Time Constant | 0.162 | Sec | -- | Full load current | 2047.1 | Amps |
| | | | | -- | Minimum Input hp required | 1658 | HP |
| 428.1a | T''d Subtransient Short Circuit Time Constant | 0.011 | Sec | -- | Full load torque | 4836 | Lb-ft |
| | | | | -- | Efficiency at rated load : | 95.4% | |
| 430.1a | T'do Transient Open Circuit Time Constant | 2.55 | Sec | | | | |
| 432.1a | Ta Short Circuit Time Constant of Armature Winding | 0.027 | Sec | -- | Weight | 6300 | lbs |

** Voltages refer to wye (star) connection, unless otherwise specified.*

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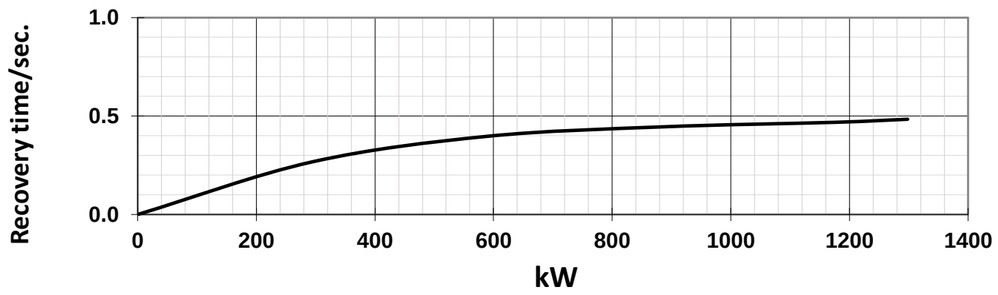
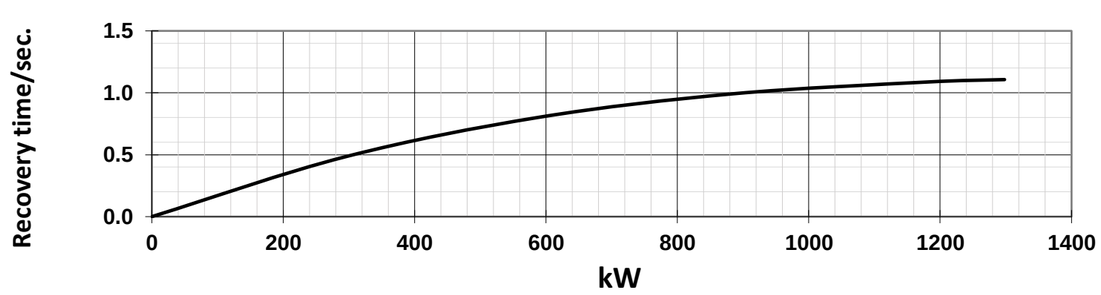
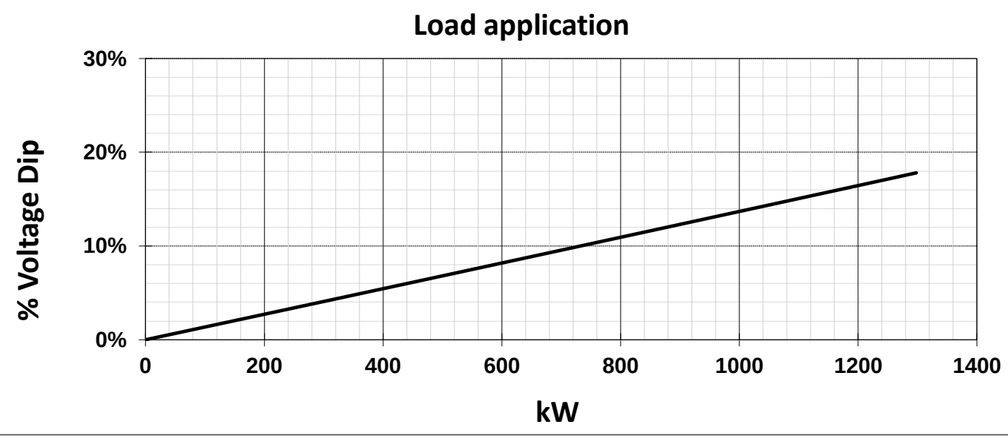
# TYPICAL DYNAMIC CHARACTERISTICS

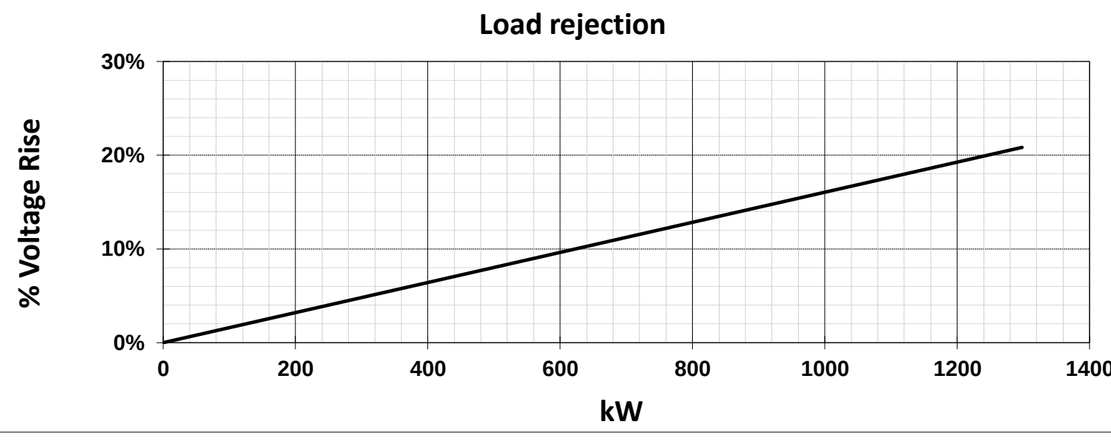
**BASE MODEL: 742RSL4048** **Date: 02/10/22**

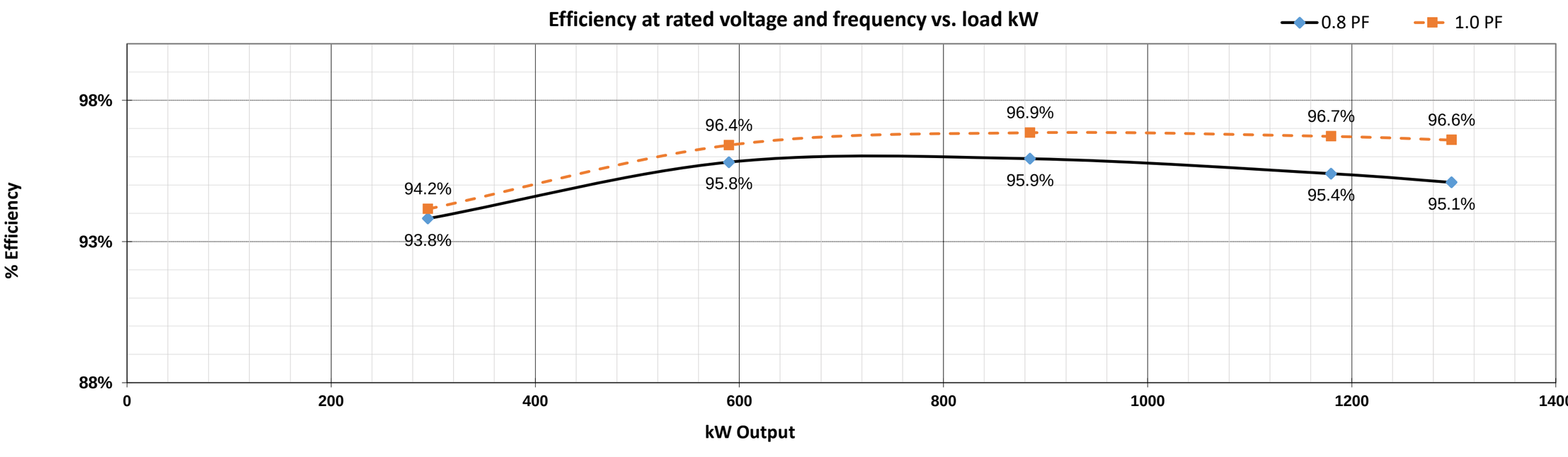
**Submittal Data: 416 Volts*, 1180 kW, 1475 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase**

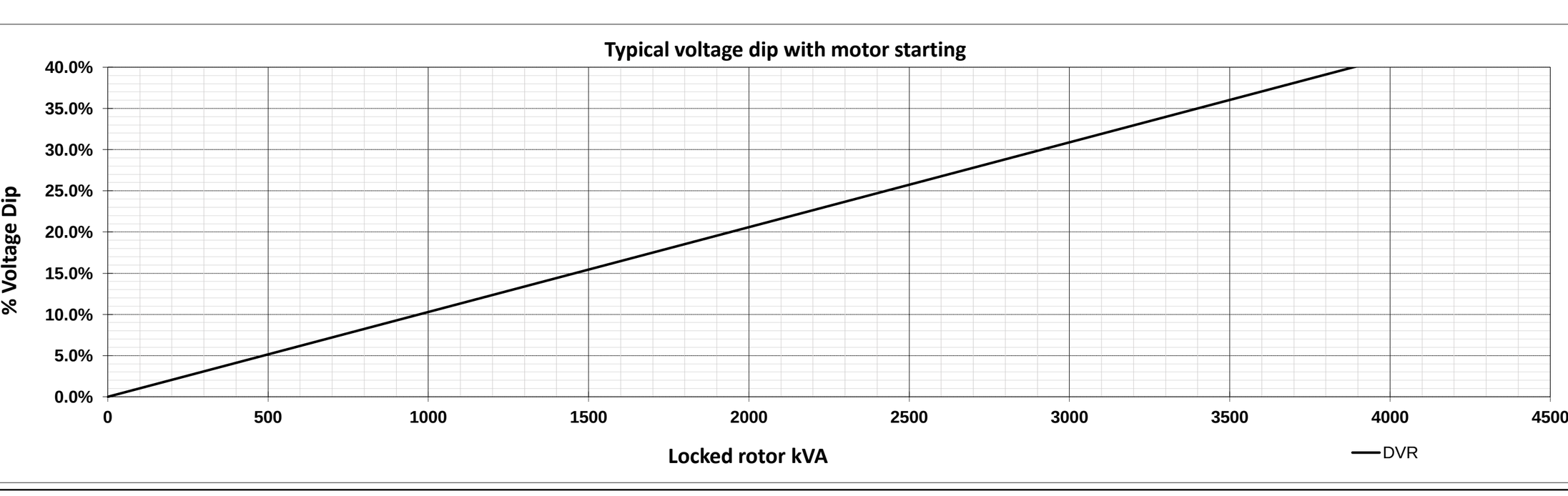


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## DECREMENT CURVE

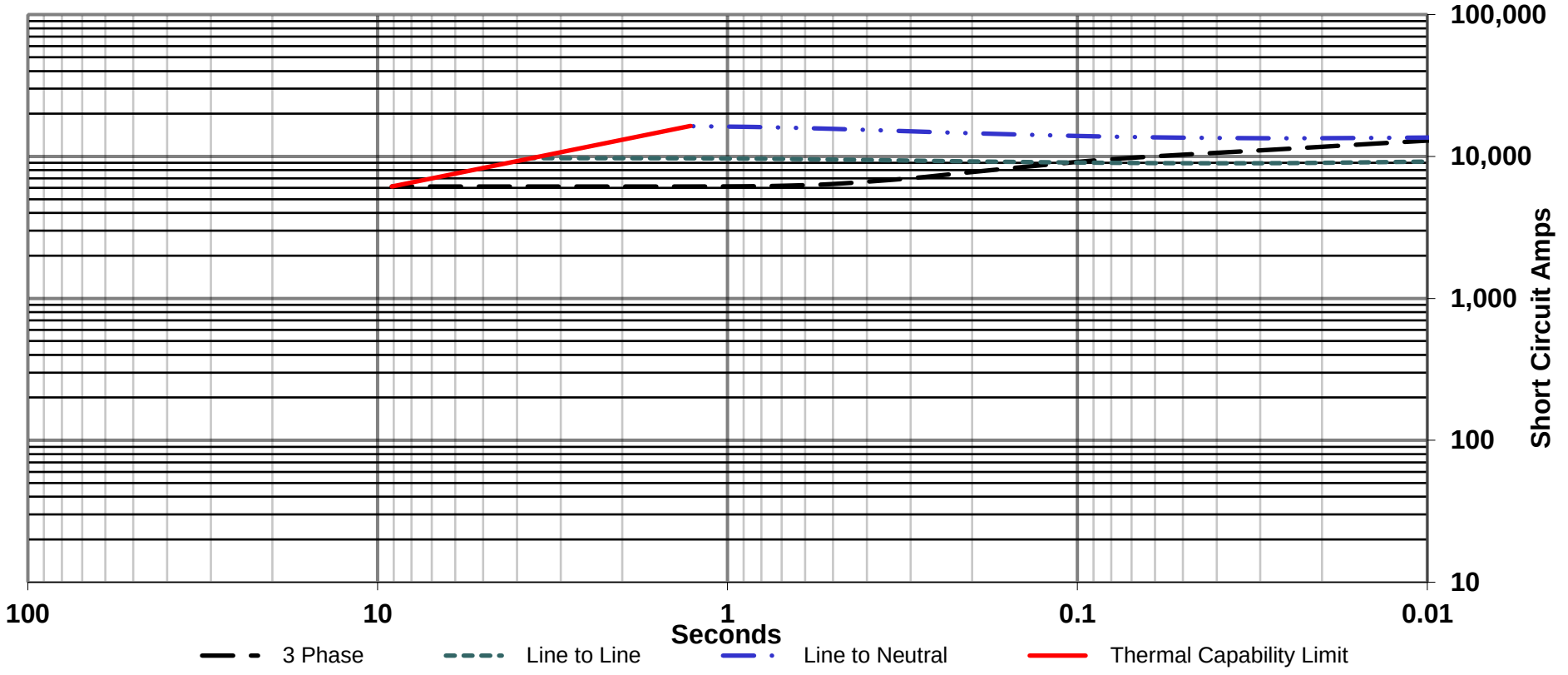
**BASE MODEL: 742RSL4048**

**Submittal Data: 416 Volts*, 1180 kW, 1475 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase** **Date : 02/10/22**

**Full Load Current : 2047.1 amps**
**Steady State S.C. Current : 6141.3 amps**

**Max. 3 ph. Symm. S.C. Current : 14235 amps**
**INCLUDES EXCITATION SUPPORT (PMG)**

Symmetrical Component values, Maximum Asymmetrical Values Are 1.732 Times Symmetrical Values

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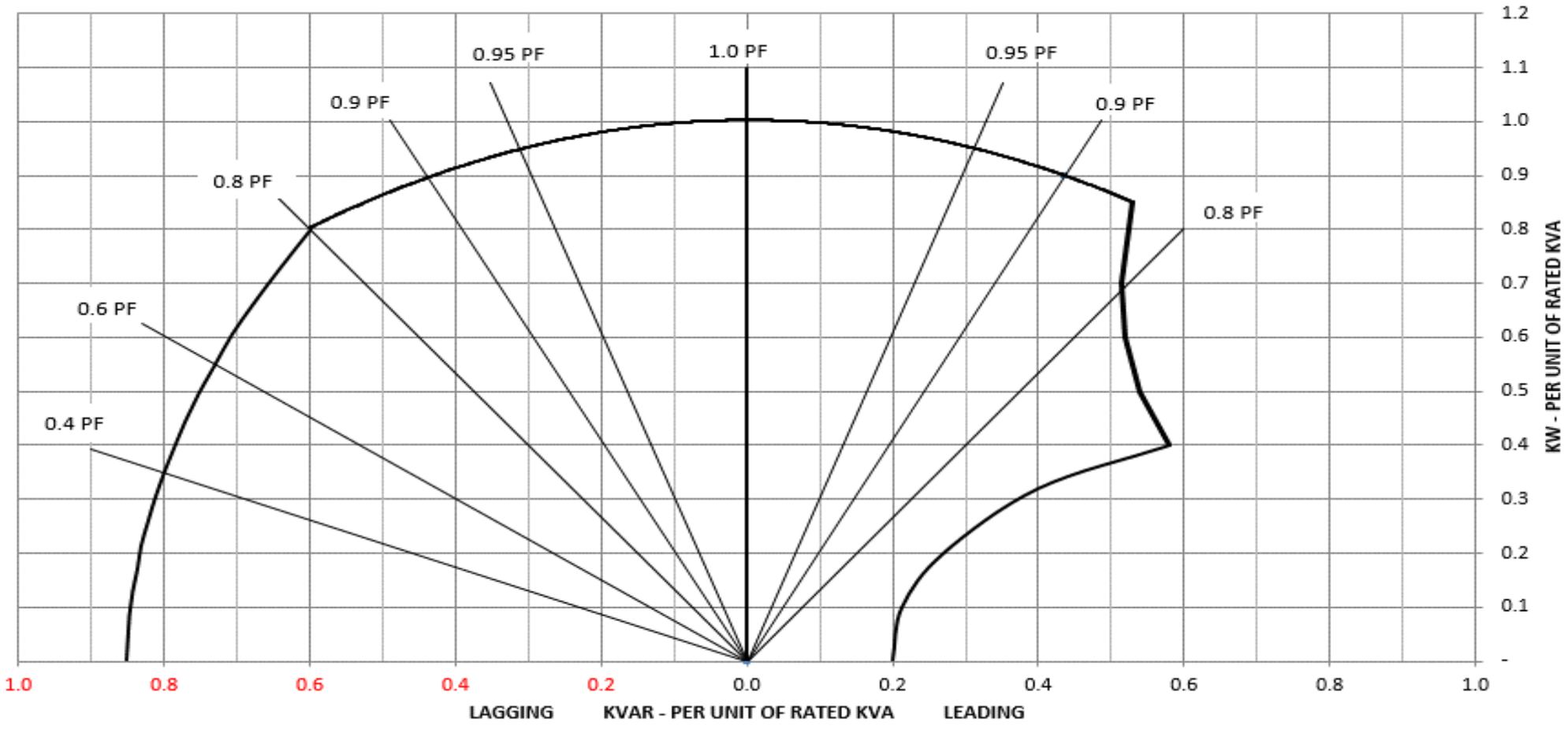
## Typical Reactive Capability Curve

**Date : 02/10/22**

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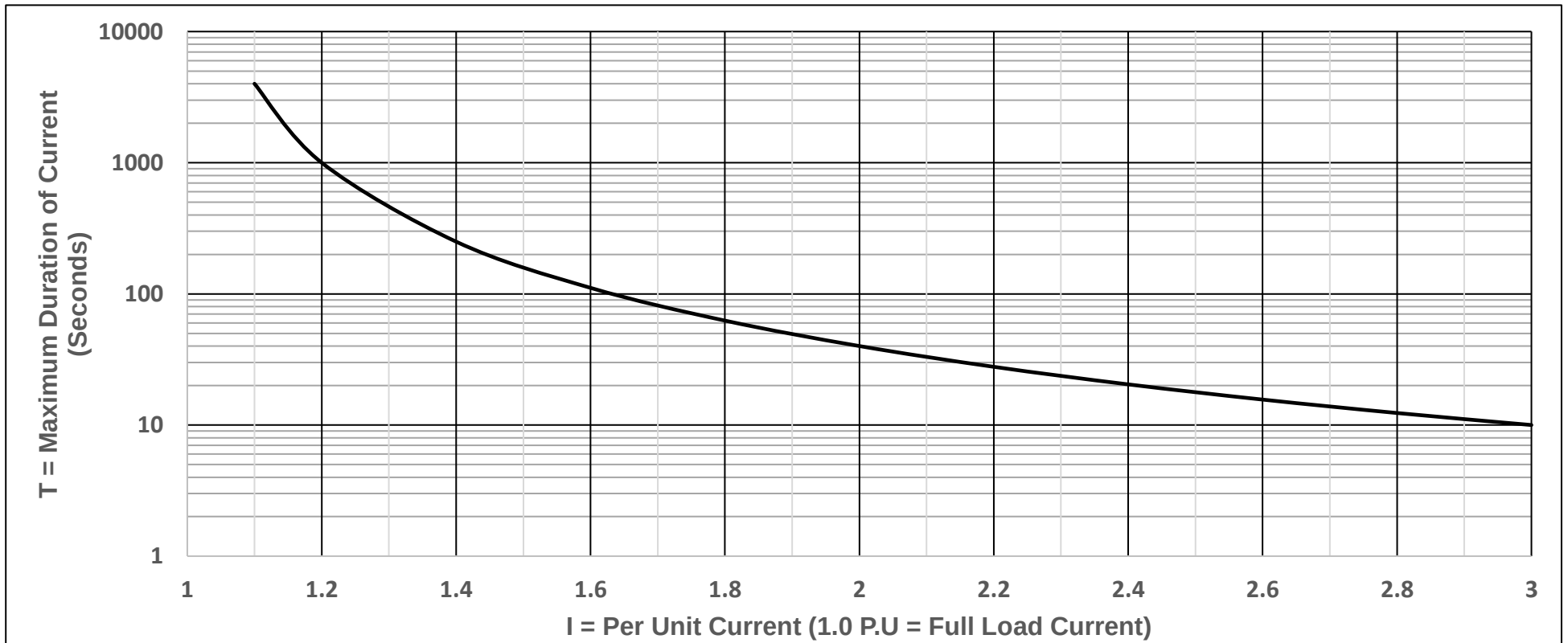
# THERMAL DAMAGE CURVE

**Date : 02/10/22**

*Base is 3.0 P.U. current for 10 seconds from T = 40/(I-1)^2*
*Windings at operating temperature*

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