



Power-Tronics, Inc.

Electrical Power Control Systems

Power-Tronics Voltage Regulator Model Crossover Chart

Common Basler Models

Original Basler Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
AVC63-4	63/105	4	XR8	XC4	63/105	8/4	
AVC63-7	63/105	7	XR8		63/105	8	
AVC63-12	63/105	7	XR8 + SEM250A	SE300A	63/105	30	
AVC125-10	125/200	10	XR8 + SEM250B	SE300B	125/210	30	
VR63-4	63/105	4	XR8	XC4	63/105	8/4	
APR63-5	63/100	5	XR8	XC4	63/105	8/4	
APR125-5	125/200	5	XR8		125/210	8	
SSR32-12	32/50	12	XR8 + SEM250A	SE300A	32/52	30	
SSR63-12	63/100	12	XR8 + SEM250A	SE300A	63/105	30	
SSR125-12	125/200	12	XR8 + SEM250B	SE300B	125/210	30	
AEC63-7	63/103	7	XR8		63/105	8	
AEC42-7	42/90	7	XR8		63/105	8	
SR4A	63/90	7	XR8		63/105	8	Use 240V Input Power
SR8A	125/180	7	XR8		125/210	8/4	DO NOT USE 277V Input Power!
SR32A/H	32/45	20	SE300A	XR8 + SEM250A	32/52	30	Use 120V Input Power
SR32E	32/45	36	SE500A	XR8 + 2 SEM250As	32/52	50	Use 120V Input Power
SR6A	63/90	7	XR8		63/105	8	Use 240V Input Power
SR9A	125/180	7	XR8		125/210	8	DO NOT USE 277V Input Power!
SR63H	63/90	20	SE300A	XR8 + SEM250A	63/105	30	DO NOT USE 277V Input Power!
SR63E	63/90	36	SE500A	XR8 + 2 SEM250As	63/105	50	DO NOT USE 277V Input Power!
SR125H	125/180	20	SE300B	XR8 + SEM250B	125/210	30	DO NOT USE 277V Input Power!
SR125E	125/180	36	SE500B	XR8 + 2 SEM250Bs	125/210	50	DO NOT USE 277V Input Power!
KR2F/FM/FF/FFM	32/45	12	XR8 + SEM250A	SE300A	32/52	30	Use 120V Input Power
KR4F/FM/FF/FFM	63/90	3.5	XR8	XC4	63/105	8/4	Use 240V Input Power
KR7F/FM/FF/FFM	125/180	5	XR8		125/210	8	DO NOT USE 277V Input Power!
KT1, 2, 3	125/180	2	XR8		125/210	8	Convert Exciter to 4-Wire
XR2004	63/90	3.5	XR8	XC4	63/105	8/4	

Common Caterpillar Models

Original Caterpillar Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
VR1-6	32/50	12	XR8 + SEM250A	SE300A	63/105	30	Use 240V Input Power
SR43P (Transformer Type)	32/50	12	XR8 + SEM250A	SE300A	63/105	30	Use 240V Input Power
318 Series (Shunt-Wound)	125/180	3	XR8		125/210	8	Convert Exciter to 4-Wire
318 Series (Rotor-Fed)	125/180	40	SE500B	XR8 + 2 SEM250Bs + AFM5X	125/210	50	Direct Feeding of Slip-Rings (Eliminates Rotary Exciter)
SRSE	63/90	60	SE1000A		63/105	100	Tray Type Regulator (On Top of Cabinet)
SRCR Model A	52/80	40	SE500A		63/105	50	Lift-Down Door on Side of Cabinet
SRCR (B-D)	63/80	80	SE1000A		63/105	100	Drawer Type Regulator (Above Generator Can Inside Cabinet)
SRCR (E-F)	115/180	80	SE1000B		125/210	100	Drawer Type Regulator (Above Generator Can Inside Cabinet)
Olympian (Non-Integrated)	63/100	4	XR8	XC4	63/105	8/4	
Olympian (Integrated)	63/100	4	-	-	-	-	Integrated Models Cannot Be Replaced
CDVR	63/100	12	XR8 + SEM250A	SE300A	63/105	30	Isolate and Insulate PMG Leads (Not Used)

Common Delco/Gen-Power Models

Original Delco Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
H18000 Series	125/180	1.8	XR8		125/210	8	
H3500 Series	63/105	3.5	XR8	XC4	63/105	8/4	
H7000 Series	125/180	3.5	XR8		125/210	8	Over-Volt Breaker Trip & Under-Freq Light Will Be Unavailable
H9000 Series	125/180	3.5	XR8		125/210	8	

Common Electric-Machinery (EM) Models

Original EM Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
VR65	32/45	12	XR8 + SEM250A	SE300A	32/52	30	Use 120V Input Power
AMPAC Series	Varies	Varies	Call Us For Sizing		-	-	Brush-Type Unit, Shunt-Wound or Direct Rotor-Fed
BEMAC I & II	32/45	12	XR8 + SEM250A	SE300A	32/52	30	Use 120V Input Power, Typically Field Resistance < 3.5Ω
BEMAC III	Varies	12-15	Call Us For Sizing		-	30	Has Field Resistance > 5Ω, Excitation Can Be 63 or 125VDC

Common Generac Models

Note: Go by Generator Configuration and Field Resistance. Do Not Use Generac Part Numbers.

Original Kohler Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
Brushless or Brush-Type >5Ω	40/90	10-15	XR8 + SEM250A + AFM5X	SE300A	63/105	30	Flashing Module Required
PTO Generators >5Ω	40/90	10-15	XR8 + SEM250A	SE300A	63/105	30	PTO Generators Typically Do Not Need Flashing
Residential "Guardian"	63/90	4-6	XR8 + AFM5X		63/105	8	Flashing Module Required

Common General Electric Models

Original GE Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
All Brushless Gensets	12/32	12	XR8 + SEM250A	SE300A	32/52	30	Use 120V Input Power

Common Kato-Light/MTU Models

Original Kato Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
KCR-360	65/90	5	XR8	XC4	63/105	8/4	
KCR-760	65/90	10	XR8 + SEM250A	SE300A	63/105	30	
K65-12B	65/100	25	XR8 + SEM250A	SE300A	63/105	30	
K125-10B	125/200	20	XR8 + SEM250B	SE300B	125/210	30	

Common Kohler Models

Note: Go by Generator Configuration and Field Resistance. Do Not Use Kohler Part Numbers.

Original Kohler Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
Brushless or Brush-Type >3Ω	63/90	15-25	XR8 + SEM250A + AFM5X	SE300A	63/105	30	
Brush-Type <3Ω	63/90	20-40	XR8 + 2 SEM250A + AFM5X	SE500A	63/105	50	
Fast-Response (Optical)	-	-	-	-	-	-	Dealer Only. Proprietary Design.

Common Leroy-Somer Models

Original Leroy-Somer Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
R220	63/90	8	XR8		63/105	8	
R230	63/90	8	XR8		63/105	8	
R438	63/90	8	XR8		63/105	8	Isolate and Insulate PMG or AREP Leads (Not Used)
R448	63/90	10	XR8 + SEM250A	SE300A	63/105	30	Isolate and Insulate PMG or AREP Leads (Not Used)
R449	63/90	7	XR8		63/105	8	Isolate and Insulate PMG or AREP Leads (Not Used)

Common Marathon Models

Original Marathon Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
SE100	63/90	2	XR8	XC4	63/105	8/4	
SE350	63/90	3.5	XR8	XC4	63/105	8/4	
VR63-4	63/105	4	XR8	XC4	63/105	8/4	
DVR2000	63/90	3.5	XR8	XC4	63/105	8/4	Isolate and Insulate PMG Leads (Not Used)
G-741D	125/180	25	SE300B	XR8 + SEM250B + AFM5X	125/210	30	Can Use Original Transformer if Intact
G-1121D	125/180	40	SE500B	XR8 + 2 SEM250B + AFM5X	125/210	50	Can Use Original Transformer if Intact

Common Marelli Models

Original Marelli Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
All Brushless Gensets	18-60	4-6	XR8		63/105	8	Use Hookup Connection B

Common Mecc-Alte Models

Original GE Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
All Brushless Gensets	14-32	3.5-5	XR8	XC4	32/52	8/4	Use Hookup Connection C or 120V Input Power

Common **Onan (Pre-Cummins)** Models

Original Onan Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
VR21 (Brushless)	32/50	3.5	XR8	XC4	63/105	8/4	Use 120 or 240V Input Power
VR22	32/90	5	XR8	XC4	63/105	8/4	Use 240V Input Power
Magneciter (All)	63/90	15	XR8 + SEM250A	SE300A	63/105	30	Use 240V Input Power

Previous Generation **Power-Tronics** Models

Original Rating			New Rating				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
A50	32/52 or 63/105	5	XC4	XR8	32/52 or 63/105	4/8	XR8 Hookup Connection B (240V) or C (120V) XR5C Offers Manual Stability Control
VR250	32/52 or 63/105	2.5	XC4	XR8	32/52 or 63/105	4/8	XR8 Hookup Connection B (240V) or C (120V) XR5C Offers Manual Stability Control
VR500	32/52 or 63/105	5	XR8	XR5C	32/52 or 63/105	8/5	XR8 Hookup Connection B (240V) or C (120V) XR5C Offers Manual Stability Control
VR504A	32/52 or 63/105	5	XR8	XR5C	32/52 or 63/105	8/5	XR8 Hookup Connection B (240V) or C (120V) XR5C Offers Manual Stability Control
VR505A	125/210	5	XR8	XR5C	125/210	8/5	XR8 Hookup Connection A (240V) XR5C Offers Manual Stability Control
VR758	32/52 or 63/105	8	XR8		32/52 or 63/105	8	XR8 Hookup Connection B (240V) or C (120V)
UVR500	32/52 or 63/105 or 125/210	5	XR8	XR5C	32/52 or 63/105 or 125/210	8/5	XR5C Offers Manual Stability Control
UVR501	32/52 or 63/105 or 125/210	5	XR8	XR5C	32/52 or 63/105 or 125/210	8/5	XR5C Offers Manual Stability Control
XR500B	32/52 or 63/105 or 125/210	5	XR8	XR5C	32/52 or 63/105 or 125/210	8/5	XR5C Offers Manual Stability Control
XR500C	32/52 or 63/105 or 125/210	5	XR8	XR5C	32/52 or 63/105 or 125/210	8/5	XR5C Offers Manual Stability Control
XR500D	32/52 or 63/105 or 125/210	5	XR8		32/52 or 63/105 or 125/210	8	

Common **Stamford, Newage, Cummins-Onan** Models

Original Newage/Stamford Ratings			Power-Tronics Ratings				
Model	Excitation Volts	Excitation Amps	Model	Alternate Model	Excitation Volts	Excitation Amps	Installation Notes
AS440	63/82	4	XR8	XC4	63/105	8/4	
AS480	45/82	4	XR8	XC4	63/105	8/4	
DM110	63/90	7	XR8 + SEM250A	SE300A	63/105	30	Isolate and Insulate PMG Leads (Not Used)
MA330	125/180	6	XR8 + SEM250B	SE300B	125/210	30	
MX321	63/120	3.5	XR8	XC4	63/105	8/4	Isolate and Insulate PMG Leads (Not Used)
MX341	63/120	2.7	XR8	XC4	63/105	8/4	Isolate and Insulate PMG Leads (Not Used)
SX440	63/90	4	XR8	XC4	63/105	8/4	
SX460	63/90	4	XR8	XC4	63/105	8/4	
G-741D	125/180	25	SE300B	XR8 + SEM250B + AFM5X	125/210	30	Can Use Original Transformer if Intact
G-1121D	125/180	40	SE500B	XR8 + 2 SEM250B + AFM5X	125/210	50	Can Use Original Transformer if Intact
VR21 (Brush-Type)	63/90	5	XR8 + AFM5X		63/105	8	

Unusual or Mechanical Models

Original Ratings			Power-Tronics Ratings			
Model	Excitation Volts	Excitation Amps	Model	Excitation Volts	Excitation Amps	Installation Notes
Carbon-Pile Regulator	32/63/125	<3	XR8	32/63/105	8	Convert Exciter to 4-Wire (See Instruction Manual)
Reg-Ohm (Multi-Tap)	125	<3	XR8	125/210	8	Convert Exciter to 4-Wire (See Instruction Manual)
Rocking-Armature Regulators	125	<5	XR8	125/210	8	Convert Exciter to 4-Wire (See Instruction Manual)
Westinghouse Silverstat	125	3	XR8	125/210	8	Convert Exciter to 4-Wire (See Instruction Manual)
Simplex VR-1	125	2	XR8	125/210	8	Convert Exciter to 4-Wire (See Instruction Manual)
Manual-Rheostat	32/63/125	<2	XR8	32/63/125	8	Convert Exciter to 4-Wire (See Instruction Manual)
Most Military Gensets***	32/50	<25	XR8 + SEM250A + AFM5X	32/52	30	Use 120V Input Power, Battery-Flash Typically Required
Aircraft 400Hz GPU	63/125	<5	XR5B-400	63/125	5	Compatible With All PTI Static Exciter Modules & Accessories
Aircraft 28VDC GPU (50/60Hz)	63/125	<8	SPXR500-28VDC	63/125	8	Compatible With All PTI Static Exciter Modules & Accessories
Aircraft 28VDC GPU (400Hz)	63/125	<8	SPXR500-28VDC 400Hz	63/125	8	Compatible With All PTI Static Exciter Modules & Accessories

***Exceptions Exist for Military Gensets! Always Verify Exciter Field Resistance and Excitation Voltage! **400Hz Models CANNOT BE CONVERTED to 60Hz!**