



Fronius **CL**

PV central inverter with Fronius MIX™ concept

The Fronius CL combines high-yield power electronics with the unique, modular system design of up to 15 identical power stages in the MIX™ concept. Maximum yield and the highest stability are the advantages of this sophisticated system. This makes the Fronius CL the optimal central inverter for PV systems of up to several hundred kilowatts. Other features include the exact MPP tracking of the module manager, the automatic transformer switching function and much more. This makes the Fronius CL a distinctive multi-featured device that guarantees continual high performance.



Fronius CL Technical Data

INPUT DATA	Fronius CL	33.3 _{Delta}	36.0 _{WYE277}	44.4 _{Delta}	48.0 _{WYE277}	55.5 _{Delta}	60.0 _{WYE277}
Recommended PV-power		28.3 - 39.0 kWp	30.6 - 42.1 kWp	37.8 - 52.0 kWp	40.8 - 56.2 kWp	47.2 - 65.0 kWp	51.0 - 70.2 kWp
MPPT-voltage range		230 ... 500 V					
Max. input voltage (at 1000 W/m ² 14 °F in open circuit operation)		600 V					
Nominal input voltage		390 V					
Nominal input current		90.8 A	98.2 A	121.1 A	130.9 A	151.4 A	163.7 A
Max. usable input current		154.0 A	166.5 A	205.4 A	222.0 A	256.7 A	277.5 A
DC startup voltage		245 V					
Admissible conductor size (DC)		350 MCM					
No. of DC input terminals		2x M12 (1/2") lug per hole					
No. of MPP trackers		1					

OUTPUT DATA	Fronius CL	33.3 _{Delta}	36.0 _{WYE277}	44.4 _{Delta}	48.0 _{WYE277}	55.5 _{Delta}	60.0 _{WYE277}
Nominal output power (P _{AC,nom})		33300 W	36000 W	44400 W	48000 W	55500 W	60000 W
Max. continuous output power (40°C)	208 V	33300 W	n.a	44400 W	n.a	55500 W	n.a
	240 V	33300 W	n.a	44400 W	n.a	55500 W	n.a
	277 V	n.a	36000 W	n.a	48000 W	n.a	60000 W
Nominal AC output voltage		208/240 V	277 V	208/240 V	277 V	208/240 V	277 V
Operating AC voltage range default	208 V	183 - 229 V	n.a	183 - 229 V	n.a	183 - 229 V	n.a
	240 V	211 - 264 V	n.a	211 - 264 V	n.a	211 - 264 V	n.a
	277 V	n.a	244 - 305 V	n.a	244 - 305 V	n.a	244 - 305 V
Nominal output current	208 V	92.4 A	n.a	123.2 A	n.a	154.0 A	n.a
	240 V	80.1 A	n.a	106.8 A	n.a	133.5 A	n.a
	277 V	n.a	43.3 A	n.a	57.8 A	n.a	72.2 A
Number of phases		3					
Admissible conductor size (AC)		350 MCM					
No. of AC terminals		2x M10 (7/16") lug per hole					
Max. continuous utility backfeed current		0 A					
Nominal output frequency		60 Hz					
Operating frequency range		59.3 - 60.5 Hz					
Total harmonic distortion		< 3 %					
Power factor		1					

GENERAL DATA	Fronius CL	33.3 _{Delta}	36.0 _{WYE277}	44.4 _{Delta}	48.0 _{WYE277}	55.5 _{Delta}	60.0 _{WYE277}
Max. efficiency		95.9 %					
CEC efficiency	208 V	94.5 %	n.a	94.5 %	n.a	94.5 %	n.a
	240 V	95.0 %	n.a	95.0 %	n.a	95.0 %	n.a
	277 V	n.a	95.5 %	n.a	95.5 %	n.a	95.5 %
Consumption in standby (night)		< 15 W		< 15 W		< 15 W	
Consumption during operation		65 W		95 W		110 W	
Cooling		Controlled forced ventilation, variable speed fan					
Enclosure type		NEMA 3R, Powder Coated Aluminum Enclosure (standard)					
Unit dimensions (w/socket) (W x H x D)		43.5 x 76.6 x 31.4 inch (1105 x 1945 x 797 mm)					
Inverter weight (w/socket)		661 lbs (300 kg)		721 lbs (327 kg)		783 lbs (355 kg)	
Admissible ambient temperature		-13 °F ... +122 °F (-25 °C ... +50 °C)					
Rel. humidity		0 ... 95 % (non condensing)					
AC- & DC-disconnects		integrated					
Compliance		UL 1741-2005, IEEE 1547-2003, IEEE 1547.1, ANSI/IEEE C62.41, FCC Part 15 B, NEC Article 690, C22. 2 No. 107.1-01 (September 2001), California Solar Initiative - Program Handbook - Appendix C: Inverter Integral 5 % Meter Performance Specification					

PROTECTION DEVICES	Fronius CL	33.3 _{Delta}	36.0 _{WYE277}	44.4 _{Delta}	48.0 _{WYE277}	55.5 _{Delta}	60.0 _{WYE277}
Ground fault protection		internal GFDI (Ground Fault Detector/Interruptor); in accordance with UL 1741-2005 and NEC Art. 690					
DC reverse polarity protection		internal diode					
Islanding protection		internal; in accordance with UL 1741-2005, IEEE 1547-2003 and NEC					
Over temperature		output power derating/active cooling					



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