

Technical data

	UNITROL 1005	UNITROL 1010	UNITROL 1020
POWER ELECTRONIC INPUT (AC/DC)			
AC nominal input voltage	16 to 250 V _{AC}	0 to 250 V _{AC}	0 to 250 V _{AC}
Frequency	25 to 600 Hz	25 to 600 Hz	25 to 600 Hz
DC nominal input voltage	18 to 300 V _{DC}	0 to 300 V _{DC}	0 to 300 V _{DC}
Max. peak input voltage (non sinusoidal)	420 V _p	420 V _p	420 V _p
Min. required start voltage	6 V _{AC} / 10 V _{DC}	N/A	N/A
AUXILIARY SUPPLY (CONTROLLER) INPUT			
AC nominal input voltage 3-phase	not supported	9 to 250 V _{AC}	9 to 250 V _{AC}
AC nominal input voltage 1-phase	not supported	16 to 250 V _{AC}	16 to 250 V _{AC}
Frequency	not supported	40 to 600 Hz	40 to 600 Hz
DC nominal input voltage	not supported	18 to 300 V _{DC}	18 to 300 V _{DC}
Max. peak input voltage (non sinusoidal)	not supported	420 V _p	420 V _p
EXCITATION OUTPUT			
Continuous current at 55 °C	8 A _{DC}	10 A _{DC}	15 A _{DC} 20 A _{DC} ¹⁾
Overload current for 10 sec. 55 °C	16 A _{DC}	25 A _{DC}	38 A _{DC}
EXCITER CURRENT MEASUREMENTS			
Full range	0 to 25 A	0 to 38 A	0 to 38 A
Accuracy / Resolution	< 1 % / < 20 mA	< 1 % / < 100 mA	< 1 % / < 100 mA
MACHINE AND NET MEASUREMENTS			
Machine voltage, 1-, 2- or 3-phase	up to 500 V _{AC}	up to 500 V _{AC} ²⁾	up to 500 V _{AC} ²⁾
Machine current, 1-phase	1 to 5 A _{AC}	1 to 5 A _{AC}	1 to 5 A _{AC}
Network voltage, 1-phase	up to 500 V _{AC}	up to 500 V _{AC}	up to 500 V _{AC}
Frequency range	10 to 150 Hz	10 to 150 Hz	10 to 150 Hz
Accuracy (-40° to 70°C / at 25°C)	± 1% / 0.1%	± 1% / 0.1%	± 1% / 0.1%
VOLTAGE REGULATION			
AVR response time (3-phase / 1-phase meas.)	< 20 ms / < 50 ms	< 20 ms / < 50 ms	< 20 ms / < 50 ms
PWM limitation	0.5 to 99 %	0.5 to 99 %	0.5 to 99 %
DIGITAL INPUTS AND OUTPUTS			
Numbers of digital inputs / outputs input only / in or out / output only	8 / 0 / 4	4 / 8 / 0	4 / 8 / 0
Digital IO voltage	24 V	24 V	24 V
ANALOG INPUTS AND OUTPUTS			
Number of analog inputs / outputs	2 / 0	3 / 2	3 / 2
Analog IO range	± 10 V / 0 ... 20 mA	± 10 V	± 10 V
COMMUNICATION INTERFACES			
Ethernet (cable length < 100 m)	10 / 100 MBit/s	10 / 100 MBit/s	10 / 100 MBit/s
USB version (cable length < 3 m)	1.0; 1.1; 2.0	1.0; 1.1; 2.0	1.0; 1.1; 2.0
CAN (cable length < 3 m)	not supported	Only for connections between UNITROL 1000 devices	Only for connections between UNITROL 1000 devices

1) 3-phase power supply and external 1 mF capacitor required to operate UNITROL 1020 between 15 A and 20 A nominal excitation current.

2) UNITROL 1010 and UNITROL 1020, machine voltage measurement above 250 VAC requires connection of machine star point to earth (PE).