



Catálogo #: 20BD248A0ANNANCO

Acionamento PowerFlex 700 CA 20B

Status do ciclo de vida: Fim da vida útil

A Rockwell Automation anuncia que, a partir de 30 de novembro de 2023, o PowerFlex 700 AC Drive 20B será descontinuado e não estará mais disponível para venda. Os clientes são incentivados a remover referências ao(s) produto(s) afetado(s).

Data descontinuada: 30 de novembro de 2023
Categoria de substituição: Substituição de Engenharia
Produto de substituição:

[Acionamentos PowerFlex 755TS](https://www.rockwellautomation.com/en-dk/products/details.PowerFlex%20755TS%20Drives.html)
[[https://www.rockwellautomation.com/en-dk/products/details.PowerFlex 755TS Drives.html](https://www.rockwellautomation.com/en-dk/products/details.PowerFlex%20755TS%20Drives.html)]

Technical Specifications

Mecânico

Grau de proteção (PI)	IP20
Choque	Pico de 15 G para duração de 11 ms (±1,0 ms)
Frequência PWM	2 kHz @ 480V AC
Vibração	0,152 mm (0,006 polegadas) de deslocamento, pico de 1 G

Elétrico

Número de saídas analógicas	2
Tensão de rede	480 V
Resistência à ruptura integrada	Não
Freio IGBT	Sem freio IGBT
Módulo de comunicação interna	Sem módulo de comunicação
Classificação de tensão de entrada	480V AC, 3 fases, 60 Hz
Viagem de subtensão de entrada AC	280V AC @ 480V
Tensão do barramento, nom	648V DC @ 480V
Desligamento/falha de subtensão do barramento	305V DC @ 480V

Viagem de sobretensão de ônibus	810V DC @ 480V
Classificação de tensão de saída	0...460V AC @ 480V AC, 1 fase
Classificação de corrente do disjuntor, max	700 A @ 480V AC, 3 fases, serviço normal
Classificação de corrente do protetor do circuito do motor, max	400 A @ 480V AC, 3 fases, serviço normal
Corrente de saída nominal, contínua	248 A @ 480V AC, 3 fases, serviço normal
Classificação de corrente de saída, 1 min	273 A @ 480V AC, 3 fases, serviço normal
Classificação de corrente de saída, 3 seg	372 A @ 480V AC, 3 fases, serviço normal
Logic control ride-thru	0.5 seconds minimum, 2 seconds typical
Brake resistor	No internal brake resistor
Input current rating	233 A @ 480V AC, 3-phase
Documentation	Manual
Carrier frequency	2, 4, 8, and 10 kHz. Drive rating based on 4 kHz
Encoder quadrature	90 degrees, ± 27 degrees at 25 °C (77 °F)
AC input overvoltage trip	570V AC @ 480V
Input power rating	194 kVA @ 480V AC, 3-phase, normal duty
Dual element time delay fuse current rating	300...550 A @ 480V AC, 3-phase, normal duty
Non-time delay fuse current rating	330...700 A @ 480V AC, 3-phase, normal duty
Digital input latency, typical	9.2 ms @ stop signal for SVC motor control
Heat sink thermistor	Monitored by microprocessor overtemp trip
Digital input latency	9.2...16.0 ms @ start signal for SVC motor control
Drive to motor power ratio, max	Recommended not greater than 2:1 ratio
Stop modes	Multiple programmable stop modes including – Ramp, Coast, DC-brake, Fast brake, Ramp-to-hold and S-curve
Frequency accuracy	Digital input: within $\pm 0.01\%$ of set output frequency
Acceleration/deceleration	Two independently programmable accel and decel times. Each time can be programmed from 0...3600 seconds in 0.1 second increments
Analog input latency, typical	6.4 ms @ speed signal for SVC motor control
Number of digital inputs	6
Number of digital outputs	3
Number of analogue inputs	2
Internal watts loss	583 W @ 480V, 200 Hp normal duty (IP20, NEMA/UL Type 1)
Motor voltage, nom	460V @ 380...480V drive rating, 480V nominal line

	voltage
Supporting protocol for DeviceNet	Yes
Human interface model	No HIM (blank plate inserted)
Max. output frequency	420 Hz
External watts loss	2100 W @ 480V, 200 Hp normal duty (IP54, NEMA/UL Type 12)
Total watts loss	2513 W @ 480V, 200 Hp normal duty (IP54, NEMA/UL Type 12)
Supporting protocol for EtherNet/IP	Yes
Line voltage, nom	480V @ 380...480V drive rating, 460V nominal motor voltage
Mains frequency	60 Hz
Actual short circuit rating	Determined by AIC rating of installed fuse/circuit breaker
Internal EMC filtering	With EMC filter with common mode choke
Custom drive/firmware	No custom firmware
Feedback option	No feedback
Analog input latency	4.8...12.4 ms @ speed signal for SVC motor control
Drive full power range	460...528V @ 380...480V drive rating
Drive operating range	342...528V @ 380...480V drive rating
Torque regulation	Without feedback: $\pm 5\%$, 600 rad/sec bandwidth
Enclosure type	IP20/NEMA/UL Type 1
Output current rating	248 amps, 200 Hp normal duty, 150 Hp heavy duty, frame 6
Control options	Vector control with 24V DC I/O
Drive overcurrent trip	Instantaneous current limit: 220...300% of rated current (dependent on drive rating)
Efficiency	97.5% at rated amps, nominal line volts
Encoder supply	12V, 250 mA. 12V, 10 mA minimum inputs isolated with differential transmitter, 250 kHz maximum
Speed control-speed regulation	Without feedback (Vector Control Mode): 0.1 % of base speed across 120:1 speed range, 120:1 operating range, 50 rad/sec bandwidth
Current limit capability	Proactive current limit programmable from 20...160% of rated output current, Independently programmable proportional and integral gain
Selectable motor control	Sensorless vector with full tuning. Standards V/Hz with full custom capability and vector control
Frequency control-speed regulation	With slip compensation (Volts per Hertz mode): 0.5% of base speed across 40:1 speed range, 40:1 operating

	range, 10 rad/sec bandwidth
Input phases	3-phase input provides full rating for all drives. 1-phase operation possible on certain drives and provides 50 % of rated current. Frames 0...6: drive can be supplied as 6 pulse or 18 pulse in an engineered package.
Control method	Sine coded PWM with programmable carrier frequency, ratings apply to all drives, the drive can be supplied as 6 pulse or 18 pulse in an engineered solution
Encoder requirements	Encoders must be line driver type, quadrature (dual channel) or pulse (single channel), 8...15V DC output (4...6V DC when jumpers are in 5V position), single-ended or differential and capable of supplying a min. of 10 mA per channel, maximum input frequen
Number of phases output	3
Number of phases input	3
Relative symmetric net voltage tolerance	10 %
With control element	Yes
Supporting protocol for LON	Yes
Supporting protocol for TCP/IP	Yes
Supporting protocol for PROFIBUS	Yes
Supporting protocol for CAN	Yes
Supporting protocol for Modbus	Yes
Motor overload protection	Frames 0...6 vector control: powerflex 700 drives with vector control, which is identified by a C or D in position 15 of the catalog number, provide class 10 motor overload protection according to NEC article 430 and motor overtemperature protection acco
Input frequency tolerance	47 Hz
Encoder duty cycle	50% ±10%
Displacement power factor (all drives)	0.98 across speed range
Short circuit rating, max	200000 amps symmetrical
Output voltage range	0 to rated motor voltage
Encoder type	Incremental, dual channel
Power ride-thru	15 milliseconds at full load
Short circuit trip	Phase-to-phase on drive output
Ground fault trip	Phase-to-ground on drive output
Drive to motor power ratio, min	Recommended not less than 1:2 ratio
Control logic noise immunity	Showering arc transients upto 1500V peak
Line transients	Up to 6000 volts peak per IEEE C62.41-1991

Construction

Intermittent overload	110% overload capability for up to 1 minute, 150% overload capability for up to 3 seconds
Height, approx	IP54, NEMA type 12 standalone: 1828.8 mm
Depth, approx	IP54, NEMA type 12 standalone: 487.8 mm
Width, approx	IP54, NEMA type 12 standalone: 711.3 mm
Weight, approx	IP54, NEMA type 12 standalone: 229.07 kg (drive and packaging weight)

Environmental

Sound level	Frame 6: 72 dB @ 300 CFM fan velocity
Altitude	1000 m (3300 ft.) maximum without derating
Degree of protection (NEMA)	1
Surrounding air temperature	IP20, NEMA/UL type 1 (with top label): 0...50 °C (0...122 °F) @ frames 5...6, most ratings
Atmosphere	Drive must not be installed in an area where the ambient atmosphere contains volatile or corrosive gas, vapors or dust. If the drive is not going to be installed immediately, store the drive where it is not exposed to a corrosive atmosphere
Operating temperature	50 °C @ 480V AC, 150 Hp heavy duty
Storage temperature	-40 °C
Relative humidity	5...95% noncondensing
Pollution degree 1 according to EN 61800-5-1	No pollution occurs, only dry non-conductive pollution occurs, and has no influence
Pollution degree 4 according to EN 61800-5-1	The pollution generates persistent conductivity caused, for example, by conductive dust, rain or snow
Pollution degree 3 according to EN 61800-5-1	Conductive pollution occurs, dry non-conductive pollution occurs and becomes conductive due to condensation
Pollution degree 2 according to EN 61800-5-1	Normally only non-conductive pollution occurs, Occasionally a temporary conductivity, caused by condensation is expected when the drive is out of operation
Surrounding environment pollution degree	All enclosures are acceptable for pollution degree 1 and 2, an enclosure that meets or exceeds IP54, NEMA/UL Type 12, is required for pollution degree 3 and 4

