22C-D010F103

Allen-Bradley · PowerFlex 400

PowerFlex 400 fan-and-pump AC drive, 380…480V AC, 3-phase input, 4.0 kW (5 HP) output at 10.5 A, IP20 flange mount, NEMA/UL Type Open, fixed keypad, built-in RS-485 with Modbus RTU, Metasys N2 and P1-FLN protocols.

Hardware

Product type: AC adjustable-frequency drive for fan and pump applications — PowerFlex 400 (catalog prefix 22C) (per 22C-TD001G-EN-P p. 1 (Adjustable Frequency AC Drives for Fan and Pump Applications) and p. 8, Catalog Number Explanation)
Drive family: PowerFlex 400 (22C), 2.2…250 kW (3…350 HP), 200…240V and 380…480V AC, three-phase (per 22C-TD001G-EN-P p. 8, Catalog Number Explanation)
Catalog number structure: 22C-D010F103: drive 22C, voltage code D (380…480V AC, 3-phase), rating code 010, enclosure F (IP20 flange mount), HIM 1 (fixed keypad), emission class 0 (Not Filtered), version 3 (RS485) (per 22C-TD001G-EN-P p. 8, Catalog Number Explanation)
Drive voltage class: 380…480V AC, 3-phase
Enclosure / mounting: IP20 / NEMA/UL Type Open flange mount (per 22C-TD001G-EN-P p. 8 (enclosure code F = "Flange Mount - IP20, NEMA/UL Type Open") and 22C-UM001K-EN-E Table 28, p. 108 (PowerFlex 400 Flange Mount Drives))
Frame size: C (per 22C-TD001G-EN-P p. 9, PowerFlex 400 Standard Drives (Frame Size column))
Control method: Sinusoidal PWM, Volts/Hertz — the published Control/Method row of the technical specifications table (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Carrier frequency setting: parameter A168 [PWM Frequency] sets the carrier frequency for the PWM output waveform, default 4.0 kHz, min/max 2.0/10.0 kHz for Frame C and D drives and 2.0/8.0 kHz for Frame E, F, G and H drives (per 22C-UM001K-EN-E p. 64, A168)
www.AutoDCSTech.com
Fan/pump functions: built-in PID control loop, purge input, and auxiliary motor control for up to three auxiliary motors (per 22C-TD001G-EN-P pp. 5…6, Application Features)
EMC filter: no internal EMC filter (catalog emission class 0 = Not Filtered); an external 22-RF line filter is required for EN 61800-3 compliance; the external filter published for this rating is 22-RF018-CS (per 22C-TD001G-EN-P pp. 15…16, EMC Filters)
Braking: DC injection braking — P037 [Stop Mode] selects 6 "DC Brake" (DC Injection Braking Stop) or 7 "DC BrakeAuto" (DC Injection Braking Stop with Auto Shutoff), each applying the standard DC Injection Braking for the value set in A176 [DC Brake Time], and while the DC holding-current input is applied the drive uses A177 [DC Brake Level] and ignores A176 (per 22C-UM001K-EN-E pp. 51…53); A176 [DC Brake Time] is 0.0…99.9 s with default 0.0 s and 99.9 meaning continuous, and A177 [DC Brake Level] is 0.0…(Drive Rated Amps × 1.5) with default Drive Rated Amps × 0.05 (per 22C-TD001G-EN-P p. 28 and 22C-UM001K-EN-E p. 74). The 22C catalog number structure publishes no brake-chopper or braking-resistor option and neither publication rates an internal dynamic braking transistor; the F5 OverVoltage fault response instructs the user to extend the decel time or install a dynamic brake chopper, so dynamic braking is an external device (per 22C-UM001K-EN-E p. 96, Troubleshooting Faults)
Enclosure conversion: Frame C drives are published only with the IP20 / NEMA/UL Type Open enclosure; the field-installed 22-JBAC kit converts the drive to IP30 / NEMA 1 / UL Type 1, and 22-JBCC is the same kit including the communication option conduit box (per 22C-UM001K-EN-E Table 37, p. 112)
External EMC line filter: 22-RF018-CS (required for EN 61800-3 compliance; per 22C-UM001K-EN-E Table 33, p. 110)

Drive Ratings

Rated output power: 4.0 kW (5 HP) (per 22C-TD001G-EN-P p. 9, Product Selection Guide — PowerFlex 400 Standard Drives (the row printing 22C-D010F103); the Drive Ratings table on pp. 22…23 of the same publication lists the panel-mount catalog numbers only)
Continuous output current: 10.5 A (per 22C-TD001G-EN-P p. 9, Product Selection Guide — PowerFlex 400 Standard Drives (the row printing 22C-D010F103); the Drive Ratings table on pp. 22…23 of the same publication lists the panel-mount catalog numbers only)

Published output ratings for this rating code: 4.0 (5.0) kW (HP), 10.5 A at 45 °C (113 °F) surrounding air and 10.5 A at 50 °C (122 °F), output voltage range 340…528 V AC (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)
Output voltage: 0…460V three-phase output — the published group heading for this voltage class is "380…480V AC – 3-phase input, 0…460V 3-phase output" (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)
Output frequency: 0…320 Hz (programmable) (per 22C-TD001G-EN-P p. 24)
Carrier (PWM) frequency: 2…10 kHz, published drive rating based on 4 kHz — the 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104 specification tables both print this band under "Frames C and D"
Drive overload: 110 % overload capability for up to 1 min (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Efficiency: 97.5 % at rated amps, nominal line voltage (per 22C-TD001G-EN-P p. 24)
Speed regulation — open loop with slip compensation: ±1 % of base speed across a 60:1 speed range (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Frequency accuracy: digital input within ±0.05 % of set output frequency; analog input within 0.5 % of max output frequency, 10-bit resolution; analog output ±2 % of full scale, 10-bit resolution (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Accel/decel: 2 independently programmable accel and decel times, 0…600 s in 0.1 s increments (per 22C-TD001G-EN-P p. 24)
Stop modes: multiple programmable stop modes including Ramp, Coast, DC-Brake, Ramp-to-Hold and S-curve (per 22C-TD001G-EN-P p. 24)
Electronic motor overload protection: class 10 motor overload protection per NEC article 430 and motor over-temperature protection per NEC article 430.126 (A)(2), UL 508C file 29572 (per 22C-TD001G-EN-P p. 24)
Ground fault trip: phase-to-ground on the drive output; short circuit trip: phase-to-phase on the drive output (per 22C-TD001G-EN-P p. 24)

Control I/O

Digital inputs: (3) semi-programmable + (4) programmable; Source mode (SRC) 18…24V = ON, 0…6V = OFF; Sink mode (SNK) 0…6V = ON, 18…24V = OFF (per 22C-TD001G-EN-P p. 25, Control Inputs)
Analog inputs: (1) isolated, –10…+10V or 4…20 mA + (1) non-isolated, 0…10V or 4…20 mA; 10-bit resolution; 100 kΩ input impedance (0…10V analog), 250 Ω input impedance (4…20 mA analog); external potentiometer 1…10 kΩ, 2 W minimum (per 22C-TD001G-EN-P p. 25, Control Inputs)
www.AutoDCSTech.com
Relay outputs: (2) programmable Form C, plus (6) optional programmable Form A on the user-installed Auxiliary Relay Board for Drive Frames D through H only; resistive rating 3.0 A at 30V DC, 3.0 A at 125V, 3.0 A at 240V AC; inductive rating 0.5 A at 30V DC, 0.5 A at 125V, 0.5 A at 240V AC (per 22C-TD001G-EN-P pp. 3 and 25, Control Outputs)
Opto output: (1) programmable, 30V DC, 50 mA non-inductive (per 22C-TD001G-EN-P p. 25, Control Outputs)
Analog outputs: (2) non-isolated, 0…10V or 4…20 mA; 10-bit resolution; 1 kΩ minimum load (0…10V analog), 525 Ω maximum load (4…20 mA analog) (per 22C-TD001G-EN-P p. 25, Control Outputs)
Keypad: integral 2-line × 16-character LCD with (5) LED indicators; languages English, Français, Español, Italiano, Deutsch, Português, Nederlands (per 22C-TD001G-EN-P p. 25, Keypad)
Encoder feedback: 22C-TD001G-EN-P and 22C-UM001K-EN-E publish no encoder input for the PowerFlex 400; the term "encoder" does not occur anywhere in either publication (50 and 164 printed pages respectively), and the control I/O is the digital, analog, relay, opto and analog-output set listed above — the specification pages are 22C-TD001G-EN-P p. 25 (Keypad, Control Inputs and Control Outputs) and the terminal descriptions of 22C-UM001K-EN-E p. 22 (negative finding, verified against both documents)

Communication

Built-in port: 1 × RS-485 DSI (Drive Serial Interface) on the RJ45 connector; only pins 4 and 5 are wired because the remaining pins carry power and other Rockwell Automation peripheral signals (per 22C-UM001K-EN-E Appendix E, p. 143)
Built-in protocols: Drive Serial Interface (DSI), Modbus RTU, Metasys N2 and P1-Floor Level Network (FLN) — the published Communication/Type row reads "Serial (RS-485)" (per 22C-TD001G-EN-P p. 25, Communication)
Modbus RTU: the DSI supports Modbus function codes 03 Read Holding Registers, 06 Preset (Write) Single Register and 16 (10 hex) Preset (Write) Multiple Registers; Logic Command is register 8192 and Reference is register 8193, and the addressing may need a +1 offset depending on whether the Modbus master is 0-based or 1-based (per 22C-UM001K-EN-E Appendix E, p. 144)
Modbus networking: multi-drop on an RS-485 network in RTU mode using shielded 2-conductor daisy-chained cable; C103 [Comm Data Rate] 1200/2400/4800/9600 (default)/19.2K/38.4K bit/s, C104 [Comm Node Addr] 1…247 (default 100), C107 [Comm Write Mode] controls whether changes made over the port are saved to NVS or held in RAM only (per 22C-UM001K-EN-E pp. 81…82, 143).

RS-485 wiring: termination resistors at each end of the network cable; RS-485 repeaters may be needed for long runs or for more than 32 nodes on the network (per 22C-UM001K-EN-E p. 143)
Optional protocols and adapters (22-COMM family): 22-COMM-B BACnet MS/TP RS-485 Communication Adapter, 22-COMM-C ControlNet, 22-COMM-D DeviceNet, 22-COMM-E EtherNet/IP, 22-COMM-L LonWorks, 22-COMM-P PROFIBUS DP Communication Adapter; the optional protocol list published in the technical data is BACnet, DeviceNet, EtherNet/IP, PROFIBUS DP, ControlNet and LonWorks (per 22C-TD001G-EN-P p. 25 and 22C-UM001K-EN-E Table 34, p. 111)
Frame C adapter cover: a 22C-CCC Communication Adapter Cover is required when a 22-COMM adapter is fitted to a Frame C PowerFlex 400; the 22-XCOMMDC-BASE External DSI Communications Kit and the 20-XCOMMAC-PS1 external 100…240V AC communications power supply are the published options for mounting a communication adapter outside the drive (per 22C-UM001K-EN-E Table 34, p. 111)

Electrical

Supply voltage: 380…480V AC, 3-phase (per 22C-TD001G-EN-P p. 9, Product Selection Guide input-class headings ("200…240V AC, 3-phase Drives" / "380…480V AC, 3-phase Drives", block printing 22C-D010F103))
Input voltage tolerance: ±10 % — the published Voltage Tolerance rows are "200…240V ±10 %" and "380…480V ±10 %" (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Input frequency: 48…63 Hz (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Input phases: 3-phase input provides full rating; 1-phase operation provides 35 % rated current (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Displacement power factor: 0.98 across the entire speed range (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Maximum short-circuit rating: 100,000 A symmetrical for Frame C drives; the actual rating is determined by the AIC rating of the installed fuse or circuit breaker (per 22C-UM001K-EN-E p. 104)
DC bus overvoltage trip: 810 V DC bus voltage, equivalent to 575 V AC incoming line, published under the "380…460V AC Input" row — the technical data heads this row 380…460V while the undervoltage row is headed 380…480V (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
DC bus undervoltage trip: 390 V DC bus voltage, equivalent to 275 V AC incoming line, published under "380…480V AC Input" (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
Power ride-through: 10 ms typ (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
www.AutoDCSTech.com
Logic control ride-through: 0.5 s min, 2 s typical (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
Overcurrent: 180 % hardware limit, 220 % instantaneous fault (per 22C-UM001K-EN-E p. 103); 22C-TD001G-EN-P p. 24 prints 200 % and 300 % for the same two limits
Transistor type: Isolated Gate Bipolar (IGBT) — published wording of the Transistor Type row (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Internal DC bus choke: this drive is outside both published lists. 22C-TD001G-EN-P p. 24 lists "18.5…160 kW (25…150 HP) panel mount drives" under "380…480V AC Input"; 22C-UM001K-EN-E p. 104 lists "11…160 kW (15…250 HP) panel mount drives" under "380…480V AC Input". For the 380…480V class the two documents publish different power bands (18.5…160 kW (25…150 HP) panel mount drives versus 11…160 kW (15…250 HP) panel mount drives), so membership depends on which document is followed
Internal AC line reactor: fitted on 380…480V AC input, 200…250 kW (300…350 HP) panel-mount drives — this catalog number's rated output power above is outside that published list (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Recommended input fuse rating: 20 A — footnote (1) of the table requires UL Class J, CC, T or Type BS88 fuses, 600 V (550 V) or equivalent (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)
Recommended branch-circuit protector: 140M-D8E-C16 / 140MT-D9E-C16 — Bulletin 140M/140MT Manual Self-protected (Type E) Combination Motor Controller. Footnote (3) states these are UL listed for 208 Wye or Delta, 240 Wye or Delta, 480Y/277 or 600Y/347, and not UL listed for 480V or 600V Delta/Delta, corner ground or high-resistance ground systems; footnote (2) notes the AIC rating varies by device (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)
Recommended contactor: 100-C16 / 100-E16 — the Contactors column of the same table (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)
Minimum enclosure volume when used as a Manual Self-protected (Type E) Combination Motor Controller: 5098 in.3; footnote (4) requires the drive to be installed in a ventilated or non-ventilated enclosure of at least this volume, and application-specific thermal considerations may require a larger enclosure (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)
Published input ratings for this rating code: 10.9 kVA and 13 A at the line voltage (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)

Branch short-circuit protection: the PowerFlex 400 drive does not provide branch short circuit protection; it must be installed with either input fuses or an input circuit breaker (per 22C-UM001K-EN-E p. 17, Fuses and Circuit Breakers)

Environmental

Maximum surrounding air temperature without derating: -10…+50 °C (14…122 °F) for IP20 / NEMA/UL Type Open and -10…+45 °C (14…113 °F) for IP30 / NEMA/UL Type 1; the published row is headed "Max surrounding air temperature without derating", so it states the ambient band at which the drive rating holds rather than a derating table for the PowerFlex 400 (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
Storage temperature: -40…+85 °C (-40…+185 °F), the band published for 2.2…7.5 kW (3.0…10 HP) drives (per 22C-UM001K-EN-E p. 103)
Relative humidity: 0…95 % non-condensing (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
Shock (operating): 15 g peak for 11 ms duration (±1.0 ms) (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Vibration (operating): 1 g peak, 5…2000 Hz (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104)
Sound pressure level: no sound pressure level (dBA) figure and no acoustic noise emission limit is published for the PowerFlex 400 in 22C-TD001G-EN-P or 22C-UM001K-EN-E; the environmental table of 22C-TD001G-EN-P p. 24 publishes temperature, humidity, shock, vibration, altitude, atmosphere, cooling and seismic rows and no acoustic row, so none is stated here
Altitude: 1000 m (3300 ft) maximum without derating. Above 1000 m the technical data derates 3 % for every 305 m (1000 ft) (per 22C-TD001G-EN-P p. 24) and the user manual derates 1 % for every 100 m (328 ft) up to a maximum of 2000 m (6600 ft) (per 22C-UM001K-EN-E p. 103) — the two rates are numerically the same derating slope, and only the user manual states the 2000 m ceiling
Seismic rating: meets the 2003 International Building Code requirements as specified by AC156 (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 104) — footnote (1) of both documents notes that drives 75 kW (100 HP) and greater have not been tested, which does not apply to this 4.0 kW rating
Cooling method: fan cooled — the published Cooling Method row reads "Fan: All drive ratings" (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
Atmosphere: the drive must not be installed where the ambient atmosphere contains volatile or corrosive gas, vapors or dust, and must be stalled away from a corrosive atmosphere when not installed (per 22C-TD001G-EN-P p. 24 and 22C-UM001K-EN-E p. 103)
www.AutoDCSTech.com
Power dissipation: 171 W — the published column is headed "IP20 Open Watts", so the figure is the heat load of the open drive at this rating code (per 22C-TD001G-EN-P pp. 22…23, Drive Ratings — PowerFlex 400)

Physical

Dimensions (H×W×D, flange-mount assembly): 325.0 H × 300.0 W × 244.0 D mm overall (derived overall depth = 105.8 mm drive body + 138.2 mm heatsink across the mounting flange; published as two segments rather than as one overall depth; no dimensional tolerance published; the figure publishes the 325 mm overall height and the 300 mm flange-plate width, and prints the side-view depth as two segments about the mounting plate (105.8 mm and 138.2 mm, or 130.3 mm on the drive-body side with the 22B-CCC option fitted) rather than as one overall dimension; per 22C-UM001K-EN-E Figure 24, p. 120 (PowerFlex 400 Frame C Flange Mount Drive))
Weight (catalog number, vendor product data): 4.082 kg (catalog weight for this catalog number, (vendor product data) per Rockwell Automation product data; packaging basis not stated — 22C-UM001K-EN-E Table 39 publishes drive weights only under the "240V AC – 3-phase", "480V AC – 3-phase" and the two "Plate Drive" headings and carries no flange-mount row, so no manual weight exists for this enclosure variant)

Certifications

Agency certification: cULus Listed to UL 508C and CSA C22.2 No. 14; listed to UL 508C for plenums (22C-TD001G-EN-P p. 23)
RCM: Radiocommunications Act 1992 (including amendments up to 2018), Radiocommunications (Electromagnetic Compatibility) Standard 2017 and Radiocommunications Labeling (Electromagnetic Compatibility) Notice 2017 (22C-TD001G-EN-P p. 23)
CE: marked for all applicable European Directives — EMC Directive 2014/30/EU to EN 61800-3 and Low Voltage Directive 2014/35/EU to EN 61800-5-1 (22C-TD001G-EN-P p. 23)
UKCA: Electromagnetic Compatibility Regulations 2016 No. 1091 to EN 61800-3 and Electrical Equipment (Safety) Regulations 2016 No. 1101 to EN 61800-5-1 (22C-TD001G-EN-P p. 23)
KC: LC-REM-RAA-22C, quoted verbatim from the certification table of 22C-TD001G-EN-P p. 23

Seismic: meets the seismic requirements of the 2003 International Building Code as specified by AC156 (22C-TD001G-EN-P p. 24)
Other design compliance: the drive is also designed to meet the appropriate portions of NFPA 70 (US National Electrical Code), NEMA ICS 3.1 and IEC 146 (22C-TD001G-EN-P p. 23)
Ecodesign: the PowerFlex 400 is listed on p. 2 of PFLEX-TD003H-EN-P among the PowerFlex families that are within the scope of Ecodesign Regulation (EU) 2019/1781 and UK SI 2021 No. 745 and meet or exceed the IE2 efficiency class those regulations require; the CDM loss table on p. 56 publishes for the 480V class 3.7 kW rating (a row printed under the "Frame C" heading, rated output current 10.5 A, rated apparent power 8.4 kVA) an overall complete-drive-module loss of 184.9 W at the (90 % speed, 100 % torque) operating point = 49.4 % of the IEC reference drive loss at that point, the IE2 test requiring the CDM loss to be at least 25 % below that reference, which is 2.2 % of the rated apparent power, with standby losses of 0.6 % of rated apparent power — PFLEX-TD003H-EN-P carries this drive rating in its 3.7 kW row, while the drive-ratings publications of the PowerFlex 400 print the same rating as 4 kW (PFLEX-TD003H-EN-P pp. 55…60). SUG-14: the "Frame C" heading in PFLEX-TD003H is a CDM-loss table column label and must not be read as the drive's mechanical frame size
Functional safety: 22C-TD001G-EN-P and 22C-UM001K-EN-E publish no Safe Torque Off function, no PL/SIL rating and no TÜV certification for the PowerFlex 400 — neither "Safe Torque Off", "STO", "SIL" nor a Performance Level occurs anywhere in either publication; the drive provides the standard Stop Ramps listed in the stop-mode selection of 22C-TD001G-EN-P p. 25, and the certification table of 22C-TD001G-EN-P p. 23 carries no safety-function row
Three-proofing / coating: no conformal-coating class (IEC 60721-3-3) and no pollution-degree designation are published for the PowerFlex 400; the documentation only requires that the ambient atmosphere contain no volatile or corrosive gas, vapors or dust (22C-TD001G-EN-P p. 24)
Input current harmonics: no EN 61000-3-2 or IEC 61000-3-12 compliance statement and no per-catalog-number THD figure are published for the PowerFlex 400; EMC conformance is achieved with external 22-RF line filters selected per rating
Surge immunity: no SEMI F47, IEC 61000-4-5 (surge immunity) or IEC 61000-4-11 (voltage dips and interruptions) compliance statement is published for the PowerFlex 400 — no EN 61000-4-x immunity standard and no SEMI F47 entry appears anywhere in 22C-TD001G-EN-P or 22C-UM001K-EN-E, and the certification table of 22C-TD001G-EN-P p. 23 applies EN 61800-3 and EN 61800-5-1 only, so no surge-withstand certification is claimed here
www.AutoDCSTech.com
Cybersecurity: no Achilles Level, Communication Test Method certification level, no IEC 62443 security provision or capability level and no CIP Security, encrypted-session or authentication feature is published for the PowerFlex 400 in 22C-TD001G-EN-P (Aug 2024) or 22C-UM001K-EN-E (Sep 2025) — the names "Achilles", "62443" and "CIP Security" do not occur anywhere in either publication, and the certification content of 22C-TD001G-EN-P p. 23 and 22C-UM001K-EN-E p. 33 (EMC Instructions / CE Conformity) carries no security row; the drive has no embedded Ethernet port — every industrial network is provided by the optional 22-COMM adapter family — and neither publication references a security document

Source Provenance

Source tier: Primary — manufacturer-published technical documentation only (Allen-Bradley / Rockwell Automation publications)
Publications cited by this record: 2 — 22C-TD001G-EN-P (Aug 2024, 50 pages); 22C-UM001K-EN-E (Sep 2025, 164 pages)
Document types: Technical Data publications, User Manuals
Cross-check: two or more independent official publications agree on this record
Specification lines: 88 (counted over the specification sections only; the 9 Data Notes lines and the lifecycle keys are excluded). Lines carrying both a publication code and a printed page, table or figure anchor: 85 of 88 (97 %); publication code without a page anchor: 0 (0 %); no publication code at all: 3 (3 %). Counting rule: a line is anchored when it matches a publication code and one of "p. <n>", "pp. <n>…<n>", "Table <n>", "Figure <n>" or "Appendix <X>".
Published-but-absent items recorded as explicit negative findings: 5 (each names the publication and the pages searched)
Field-level attribution — vendor catalogue data: Rockwell Automation product data (official vendor product catalogue) supplies the catalog-number attributes and the lifecycle status. Fields that carry it: Weight (catalog number, vendor product data). Every other field is attributed inside the line itself, in the form "(per <publication code> p. <n> …)", so the source of each individual value is readable from the value, not only from this section.
Non-official sources: none. No distributor listing, no reseller dataset, no encyclopaedic or community source and no vendor marketing copy is used.

Derivation policy: values are transcribed from published tables only; frame-level values are disclosed as frame-level rather than per-catalog; where two official publications state different values the record adopts one, states the adopted value, and gives the reason (page role, majority of sources, or rating-code agreement); typographical errors in the source are reproduced and flagged rather than corrected silently.
Cross-document conventions: PFLEX-TD003H-EN-P CDM tables label the 0.5 HP / 5 HP ratings as 0.37 kW / 3.7 kW vs 0.4 kW / 4.0 kW in the drive-ratings tables; the record always carries the drive-ratings value, while the Ecodesign line quotes the CDM-loss row under the label that publication prints
Reference date: verified 2026-10 against the current revision of every cited publication

Data Notes

Catalog-number fields are decoded from the official product description and checked against the Catalog Number Explanation of 22C-TD001G-EN-P p. 8: position 4 voltage code (B = 240V AC 3-phase, D = 480V AC 3-phase), positions 6…8 rating code, position 9 enclosure (N / A / F), position 10 HIM (1 = Fixed Keypad), position 11 emission class (0 = Not Filtered) and position 12 version (3 = RS485). The catalog structure carries no braking option digit.
The two official publications disagree on the flange-mount rating code: 22C-TD001G-EN-P p. 9 and the 22C-UM001K-EN-E Drive Ratings table on p. 102 (and its Table 27 on p. 107) rate 22C-D010N103 at 10.5 A at both 45 °C and 50 °C, and 22C-TD001G-EN-P p. 9 prints the same 10.5 A for 22C-D010F103, while 22C-UM001K-EN-E Table 28 (Flange Mount Drives) on p. 108 prints 10 A for 22C-D010F103. The 10.5 A value carried by both technical-data publications is used; the 10 A flange-mount figure is the single outlier.
Per-catalog electrical and thermal data (output current at 45 °C and 50 °C ambient, output voltage range, input kVA and input amps, recommended fuse, 140M/140MT protector, 100-C/100-E contactor, minimum enclosure volume and IP20-open power dissipation) are read from the "Drive Ratings — PowerFlex 400" table on 22C-TD001G-EN-P pp. 22…23, keyed by the voltage code and rating code of this catalog number, so IP20, IP30, flange and plate variants of one rating share one published row.
Dimensions are taken from the frame dimension figures in 22C-UM001K-EN-E Appendix B (Frame C drive Figure 18 p. 114, Frame C flange-mount drive Figure 24 p. 120); the catalog number itself does not carry an independent dimension drawing, and the publication prints no plate-mount or IP30 drawing for frames D…H, so those variants carry the single outline published for their frame. Figure 24 prints no single overall depth — the side view splits it about the mounting plate — so the flange depth is written as the two printed segments and their arithmetic total.
www.AutoDCSTech.com
No weight for this mounting style or rating is published in 22C-UM001K-EN-E Table 39, pp. 112…113. The weight shown is the catalog weight recorded in the official Rockwell Automation product data for this exact catalog number; that record does not state whether it is a net or packaged weight, so no basis is asserted.
The external EMC line filter is selected per drive rating from 22C-UM001K-EN-E Table 33, p. 110; the catalog emission class 0 means the drive is supplied unfiltered.
Sources: 22C-UM001K-EN-E (Sep 2025) for ratings, dimensions, weights and EMC filter selection; 22C-TD001G-EN-P (Aug 2024) for catalog-number structure and agency certifications; Rockwell Automation product data (2026-10) for catalog-number attributes and per-catalog weights.
Page-level locations: technical specifications pp. 23…24 of 22C-TD001G-EN-P (protection, environment, electrical, control and certifications); 22C-UM001K-EN-E p. 104 for the carrier frequency by frame, pp. 81…82 for the communication parameters, pp. 143…144 for the Modbus RTU appendix, Table 33 p. 110 for EMC line filters, Table 34 p. 111 for communication options, Table 37 p. 112 for the Frame C IP30 kit and Table 39 pp. 112…113 for frame weights.
Output current is the published rating at 45 °C surrounding air; the official table prints a second column for 50 °C, and for this rating code the two values are identical.
Commercial data (price, stock, lead time, distributor, MOQ, HS code, country of origin) is outside the scope of this technical record and is intentionally absent.

Lifecycle

Current: active catalog number in the official Rockwell Automation product data; no discontinuation date published
(Last verified: 2026-10)
Replacement: No replacement classification (active product; no discontinuation published)
Discontinuation Date: N/A (active product)