

Fact Sheet

# VLT® Soft Starter MCD 600 delivers superior performance for fixed-speed applications



**Flexible installation:**

- Wide variety of Ethernet and serial-based communication option cards
- Application-dedicated smart cards

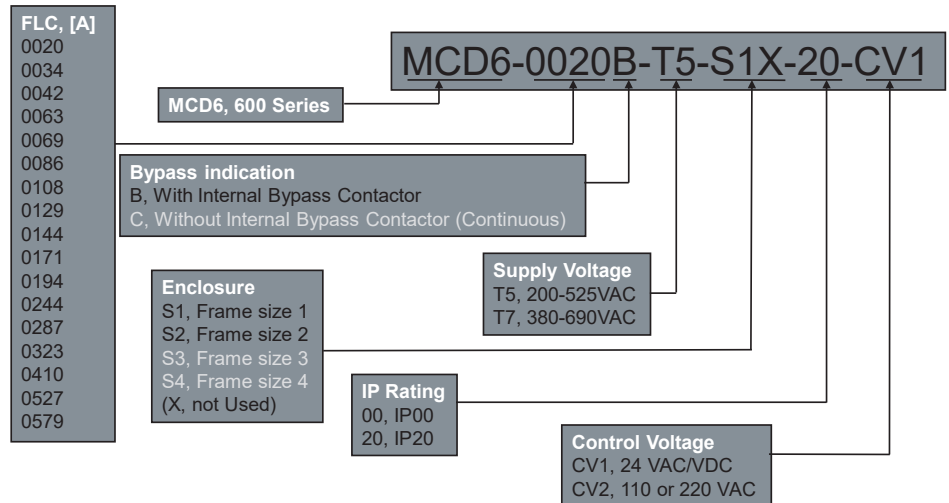
**Increased savings**

- Integrated bypass ensures both high efficiency and harmonic-free operation at full speed, reducing energy consumed and cooling requirements.

**Easier to operate with new capabilities:**

- Pump-clean function
- PowerThrough operation
- Calendar or run time-based scheduling
- Enhanced protection delivers increased uptime.
- Simulation mode with no power to the motor

Typecode selector



Dimensions

Current rating [A]	Weight [kg]	Height [mm]	Width [mm]	Depth [mm]	Enclosure size
21, 34	4.8	336	152	231	S1
42, 63, 69	4.9				
86, 108, 129	5.5				
144, 171, 194, 244	12.7	495	150	183	S2
87, 323, 410	15.5				
527, 579	19				

MCD600- Chassis Digital Soft Starter with Built in Bypass & Motor Overload Protection

Part Number	Encl	Maximum FLC Ratings		230VAC		460VAC		600VAC	
		Standard*	Heavy**	Standard*	Heavy**	Standard*	Heavy**	Standard*	Heavy**
				Motor HP (nom)	Motor HP (nom)	Motor HP (nom)	Motor HP (nom)	Motor HP (nom)	Motor HP (nom)
MCD6-0020B-xxx-xx-xx	IP20	17	14	5	3	10	10	15	10
MCD6-0034B-xxx-xx-xx		28	22	10	7.5	20	15	20	20
MCD6-0042B-xxx-xx-xx		35	28	10	10	25	20	30	25
MCD6-0063B-xxx-xx-xx		52	40	15	10	40	30	40	30
MCD6-0069B-xxx-xx-xx		59	46	20	15	40	30	50	40
MCD6-0086B-xxx-xx-xx		77	52	25	15	60	40	60	50
MCD6-0108B-xxx-xx-xx		81	65	30	20	60	50	75	60
MCD6-0129B-xxx-xx-xx		99	77	30	25	75	60	100	75
MCD6-0144B-xxx-xx-xx		124	96	40	30	100	75	125	75
MCD6-0171B-xxx-xx-xx	IP00	131	104	50	40	100	75	125	100
MCD6-0194B-xxx-xx-xx		156	124	60	40	125	100	150	125
MCD6-0244B-xxx-xx-xx		195	156	75	60	150	125	200	150
MCD6-0287B-xxx-xx-xx		240	180	75	60	200	150	200	150
MCD6-0323B-xxx-xx-xx		261	203	100	75	200	150	250	200
MCD6-0410B-xxx-xx-xx		377	302	150	100	300	250	350	300
MCD6-0527B-xxx-xx-xx		414	321	150	125	350	250	450	300
MCD6-0579B-xxx-xx-xx		477	361	200	150	400	300	500	350

\*Standard Duty- 350% current, 30 second ramp, 4 starts per hour  
 \*\*Heavy Duty- 450% current, 30 second ramp, 4 starts per hour  
 For light duty applications please consult factory

### Mains voltage range

- 3 x 200-525 VAC (T5)
- 3 x 380-690 VAC (T7)

### Current range and enclosure

- IP20: 20-129 A (nominal)
- IP00: 144-579 A (nominal)

### Additional features

- Advanced start, stop and protection features
- Auto start/stop clock
- Compact size
- DC injection braking
- 4-line graphical display
- Multiple programming setup menus

### Available options

- Fieldbus communication modules:
  - EtherNet/IP
  - PROFINET
  - Modbus TCP
  - PROFIBUS
  - DeviceNet
  - Modbus RTU
- Remote LCP Option
- Application card
  - Smart Pump
- PC software:
  - WinStart
  - VLT® Motion Control Tool MCT 10

Enclosed options available - consult factory



### VLT® Control Panel LCP 601

- Remote mountable option kit
  - IP65 enclosure class
  - 3 m cable included
- Features:
  - Graphical, multi-line display
  - Real-time graphing
  - Full parameter list, Quick Menu and application setup
  - Adjustable multiple monitoring views

Feature	Benefit
Quick set-up menu	- Adjusts key parameters to suit the application, reducing start-up time
Log menu – up to 348 individual events recorded	- Eases analysis of the application
Pump clean functionality and deragging	- Helps dislodge debris from impeller without extra components
Integrated USB port (Parameter copy, data logging, firmware updates)	- Reduced startup and upgrade time - Easy access to operational data
AAC Adaptive Acceleration Control	- Automatically adapts to the chosen start/stop profile
Reversing contactor control	- Allows for soft starting in any direction - Does not require any external contactors
Internal bypass contactors	- Save space and wiring - Reduced heat dissipation when running - Eliminates costly external components
PowerThrough operation	- Utilizes 2-phase control when one phase is damaged (shorted SCR)
Onscreen, dynamic QR-codes	- Provides information about the MCD 600, including serial number and failure information

### Mains voltage (L1, L2, L3)

MCD6-xxxxB-T5	200-525 VAC (± 10%)
MCD6-xxxxB-T7	380-690 VAC (± 10%) (in-line connection)

### Control voltage (terminals A4, A5, A6)

CV1 (A8, A9)	24 VAC/VDC (± 20%), 2.8 A
CV2 (A8, A9)	110-120 VAC (+ 10% / -15%), 600 mA
CV2 (A8, A9)	220-240 VAC (+ 10% / -15%), 600 mA
Mains frequency	50/60 Hz (± 5%)
Rated insulation voltage to earth	690 VAC
Rated impulse withstand voltage	6 kV
Form designation	Bypassed or continuous, semiconductor motor starter form 1

### Short circuit capability

Coordination with semiconductor fuses	Type 2
Coordination with HRC fuses	Type 1

### Electromagnetic capability (compliant with EU Directive 2014/35/EU)

EMC Immunity	IEC 60947-4-2
EMC Emissions	IEC 60947-4-2 Class B

### Inputs

Input rating	Active 24 VDC, 8 mA (approximately)
Motor thermistor (TER-05, TER-06)	Trip > 3.6 kΩ, reset > 1.6 kΩ

### Outputs

Relay outputs	10 A @ 250 VAC resistive 5 A @ 250 VAC AC15 pf 0.3
Main Contactor (13, 14)	Normally open
Relay output A (21, 22, 23)	Changeover
Relay output B (33, 34)	Normally open
Analog Output (AO-07, AO-08)	0-20 mA or 4-20 mA (selectable)
Maximum load	600 Ω (12 VDC @ 20 mA) (accuracy ± 5%)

### Environmental

Protection MCD6-0020B ~ MCD6-0129B	IP20
Protection MCD6-0144B ~ MCD6-0579C	IP00
Operating temperature	-10° C to 60° C, above 40° C with derating
Storage temperature	-25° C to + 60° C
Operating altitude	0-1000 m, above 1000 m with derating
Humidity	5% to 95% relative humidity
Pollution degree	Pollution Degree 3
Vibration	IEC 60068-2-6

### Heat Dissipation

During start	4.5 watts per ampere
During run	
MCD6-0020B~MCD6-0042B	≤ 35 W approximately
MCD6-0063B~MCD6-0129B	≤ 50 W approximately
MCD6-0144B~MCD6-0244B	≤ 120 W approximately
MCD6-0287B~MCD6-0579B	≤ 140 W approximately