Series 19H Digital DC Controls

5 thru 75Hp **180-264 VAC - 50/60 Hz**
5 thru 300 Hp **340-528 VAC - 50/60 Hz**

Applications: Constant torque applications. New installations, replacements and original equipment manufacturers (OEM).

Features: Chassis mounting, built-in armature or encoder feedback, high peak currents.

Design Specifications
- Three phase, full wave SCR armature control
- High peak overload, 250-300% (depending on rating)
- Selectable operating modes: Keypad; Standard Run,15 Speed, Bipolar speed/ torque; Serial; Process follower mode.
- Analog meter outputs
- Buffered encoder output
- 9 isolated inputs
- Chassis mounting

Operator Keypad
- Digital Speed Control
- Forward/Reverse Command
- Motor RUN and JOG
- Local/Remote Key
- Stop Command (coast or external DB to stop)
- 32 Character alpha-numeric display
- Remote mount to 100 feet from control
- NEMA 4X enclosure on keypad

Environmental and Operating Conditions
- Input Frequency - 50 or 60 Hz ± 5%
- Service factor - 1.0
- Duty - continuous
- Humidity - 90% max RH non-condensing
- Altitude - 3300 feet max without derate

Protective Features
- Control Input over and under voltage
- Encoder, tach or resolver loss
- Torque proving
- Selectable manual or automatic restart at power loss
- Digital display for fault conditions

Motor Feedback
- 1024 PPR standard (with quadrature)
- Power output: +5VDC, 300 mA max
- Max frequency: 1 MHz
- Optional feedback: tachometer or resolver through expansion board

Output Ratings	Voltage	DC - 0-1.3 times VAC input
Input Ratings	Frequency	50 or 60 Hz ± 5%
	Voltage	200-240 VAC ± 10%; 380-480 VAC ± 10%
	Phase	Three phase
Control Spec.	Impedance	5% maximum
	Control Method	Full wave-uni-directional DC control, NEMA type C
	Speed Setting	0-5VDC, 0-10VDC, 4-20 mA, digital via keypad, optional RS232/422/485
	Accel/Decel	0-3600 seconds (decel-coast or controlled by external DB resistors) - no S-curve decel
	Minimum Speed	0-maximum speed
	Maximum Speed	0-5000 RPM
	Motor Matching	Automatic tuning to motor with manual override
Field Power Supply	Type	Voltage limited, current regulated full wave single phase
	Voltage	0 to 10-85% of AC line Input in DC volts
	Current	0.1-15 Amps maximum-standard, 0.1-40 amps maximum-optional
	Field Economy Level	OFF, 25-100%
	Field Forcing Level	100-125% (hoist modes only)
Motor Feedback	Feedback Type	Armature or incremental encoder coupled to motor shaft
	Pulses/Rev	60-65535 selectable, 1024 standard
	Voltage Output	2 channel in quadrature, 5VDC differential
	Marker Pulse	Required for position orientation
	Power Input	5VDC, 300 mA maximum
	Maximum Frequency	1 MHz
	Optional Feedback	Tachometer or resolver via expansion board
Protective Functions	Control Trip	Missing control power, over current armature over voltage, motor overspeed over temperature (motor & control), field loss, encoder tach or resolver loss, phase loss, motor overload and overcurrent
	Fusing	Standard input line, armature and field power supply fuses
	External Output	LED indicator for trip conditions, 4 assignable logic outputs - 30VDC Max, 2 assignable analog outputs 0-5VDC
LCD Display	Running	Motor RPM, output current, voltage (selectable)
	Setting	Parameter values for setup and review
	Trip	Separate message for each trip, last 31 trips retained in memory
Ambient Conditions	Temperature	0-40°C for UL listing
	Cooling	Forced air included when required

NOTE: Use of DC tach for feedback requires DC Tachometer Interface Board, catalog number EXB006A01. Other expansion boards are available, see pages 301-302.

Series 19H Digital DC Controls continued...

Hp	Input Volt	Armature Output Current		Catalog Number	List Price	Mult. Sym.	Chassis Size
		Amps Cont	Amps Peak				
230 Volt Input - 240 VDC Output							
5	230	20	40	**BC19H205-CO**	5,764	E1	A
10	230	40	80	**BC19H210-CO**	5,764	E1	A
15	230	60	120	**BC19H215-CO**	6,193	E1	A
20	230	75	150	**BC19H220-CO**	6,696	E1	B
25	230	100	200	**BC19H225-CO**	7,052	E1	B
40	230	140	280	**BC19H240-CO**	9,043	E1	C
50	230	180	360	**BC19H250-CO**	9,724	E1	C
60	230	210	420	**BC19H260-CO**	10,744	E1	C
75	230	270	540	**BC19H275-CO**	11,650	E1	C
460 Volt Input - 500 VDC Output							
10	460	20	40	**BC19H410-CO**	5,870	E1	A
20	460	40	80	**BC19H420-CO**	5,870	E1	A
30	460	60	120	**BC19H430-CO**	6,337	E1	A
40	460	75	150	**BC19H440-CO**	6,852	E1	B
50	460	100	200	**BC19H450-CO**	7,212	E1	B
75	460	140	280	**BC19H475-CO**	9,508	E1	C
100	460	180	360	**BC19H4100-CO**	10,154	E1	C
125	460	210	419	**BC19H4125-CO**	11,172	E1	C
150	460	270	540	**BC19H4150-CO**	12,093	E1	C
200	460	350	875	**BC19H4200-CO**	14,827	E1	D
300	460	500	1000	**BC19H4300-CO**	19,870	E1	D

OPTIONS: See pages 301-302 for optional Expansion Boards including Tachometer Feedback, RS-232, RS-422, RS-485, Resolver, Interface, etc. 40 Amp field power supply. V0073400

Dimensions in/(mm)

Size	Hp	Outside			Mounting		Ap'x
		Height	Width	Depth	Height	Width	Shpg. Wgt.
A	ALL	20.60/(523.2)	11.00/(279.4)	9.87/(250.7)	18.00/(457.2)	10.25/(260.4)	39
B 230V	ALL	25.70/(652.8)	11.00/(279.4)	9.84/(249.9)	23.87/(606.3)	10.25/(260.4)	67
B 460V	ALL	26.75/(679.5)	11.00/(279.4)	9.84/(249.9)	24.94/(633.5)	10.25/(260.4)	69
C 230V	40-60	26.50/(673.1)	11.75/(298.5)	10.63/(270.0)	23.90/(607.0)	10.25/(260.4)	80
C 460V	75-100	27.25/(692.2)	11.75/(298.5)	10.63/(270.0)	24.65/(626.1)	10.25/(260.4)	84
C 230V	75	33.00/(838.2)	11.75/(298.5)	10.63/(270.0)	23.90/(607.6)	10.25/(260.4)	94
C 460V	125-200	33.75/(857.3)	11.75/(298.5)	10.63/(270.0)	24.65/(626.1)	10.25/(260.4)	97
D	ALL	43.80/(1112.5)	16.87/(428.5)	12.43/(315.7)	39.25/(997.0)	13.75/(349.3)	272