Overexcitation Controls CBC-700

General Purpose OEX Control

CBC-700 series

Simple, compact, high performance OEX control for either 90 or 24 VDC clutches and brakes. OEX spike duration and anti-overlap times delay are adjustable. Two optically isolated inputs.

- High performance
- Switch selectable OEX duration
- Force decay suppression with adjustable anti-overlap time delay
- Compact, flexible mounting
- Models for 24 or 90 volt clutches and brakes
- Cycle rate limited by clutch/brake

Enclosure (Optional)



- Lift off hinge
- Quick-release latches
- Conforms to NEMA Type 13
- European Standard IEC 529, IP65

Part No.	6042-101-004
Size	8"H x 6"W x 4"D
	(203.2 x 152.4 x 101.6 mm)

Connection Diagram





Specifications

	CBC-700-90	CBC-700-24	
Part No.	6042-448-003 6042-448-002		
Input	120 VAC, 50/60 Hz 24-28 VAC, 50/60 Hz		
Output Voltages Steady State Overexcitation	90 VDC 24 VDC 340 VDC 105 VDC		
Output Current (Per channel alternately)	.5 Amps 3.5 Amps		
OEX Pulse Duration	Adjustable through logic board dip switches (see service manual)		
Inputs	Two-optically isolated (10-30 VDC)		
Ambient Temperature Range	0°F to 140°F (-18°C to +60°C)		
Maximum Off State Leakage	<2 mA (inputs)		
Circuit Protection	1.6A Fast Act (5 x 20 mm)	5A Slo-Blo (5 x 20 mm)	
Auxiliary Supply	12 VDC, 250 mA maximum		

Dimensions



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Overexcitation Controls CBC-750

Rapid Acceleration/Deceleration

CBC-750 series Dual channel, current based OEX with switching logic

Warner Electric's CBC-750 series of Constant Current Overexcitation Clutch/ Brake Controls are solid-state electronic controls designed to increase the cycle rate capabilities and accuracies of electromagnetic clutches and brakes. The controls accomplish this by sending a momentary high voltage overexcitation spike to the clutch and/or brake magnetic coil to build a high density magnetic flux field almost instantaneously. By using overexcitation, the response time is reduced as dramatically as performance is increased. For example, the current build up time of a 5 inch, 6 volt magnet is reduced from 84 milliseconds to 2 milliseconds.

The CBC-750 user selects either 120, 220 or 240 VAC operation at the time of installation. Models for 6 volt, 24 volt, or 90 volt clutches and brakes are available.

- High performance OEX control
- Constant current output capability
- Models for 6, 24, and 90 V clutches and brakes
- Outputs short circuit protected.
- AC/DC optically isolated inputs
- Transformer isolation
 Remote torque potentiometer
 capability
- Input/Output inhibit functions
- Switch selectable OEX function
- Automatic CH1/CH2 anit-overlap feature
- Heavy duty suppression circuits
- Selectable output current ranges
- Remote status indicators inputs and outputs



Shown with optional cover, part number 6041-101-004

- Maintains torque at preset levels regardless of temperature variations
- Automatically controls OEX pulse duration for optimum response without overheating coils
- Automatically prevents clutch and brake "overlap"
- Configurable as an analog follower control through remote top input
- Integral switching logic through auxiliary, inhibit and override inputs

Specifications

LED indicators on the faceplate of each

inputs. A reset switch resets the output

torque adjust potentiometer inputs are

also provided. Appropriate current range

for each size clutch or brake is selected

level is assured by the control's design.

by a dip switch. Constant current for each

should a short be detected. Remote

signals, output activation and any auxiliary

control tell the user the status of input

	CBC-750-6	CBC-750-24	CBC-750-90			
Part No.	6041-448-001	6041-448-002	6041-448-003			
Input Power	120/220/240 VAC, ±10%, 50/60 Hz, 350 VA (switch selectable)					
Control Inputs	Opto-isolated 10-30 VDC @ 10-35 mA nominal sinking or sourcing, or 24 VAC (50/60Hz) @ 22 mA nominal, or 120 VAC (50/60 Hz) @ 20 mA nominal					
Clutch/brake Output Steady State Output Current controlled Current Rise Time Current Fall Time Overexcitation Voltage Overexcitation Time	.910 to 4.34 A max227 to 1.175 A max060310 A max. Dependent on clutch/brake size Depending on clutch/brake size 75 VDC nom. 240 VDC nom. 450 VDC nom. Automatic adjustment by control feedback					
Anti-overlap Time	Automatic adjustment by control teedback					
Power Supply Output	12 VDC, ±0.6 VDC, 250 mA max.					
Auxiliary Indicator Outputs	Opto-isolated NPN transistors 24 VDC maximum, 20 mA max., reverse polarity protected					
Circuit Protection	Internal short circuit protection on each output channel.					
Fusing AC Input Line OEX Supply	2 Amp, 250 V Slo-Blo 10 Amp, 32 V Slo-Blo	5 Amp, 250 V Slo-Blo	1 Amp, 250 V Slo-Blo			

Overexcitation Controls CBC-750

Rapid Acceleration/Deceleration

Seven optically isolated inputs accept 10-30V A.C./D.C. (TB2) or 120 VAC (TB3), configured through set-up switches

- 1. Channel 2 Input
- 2. Channel 2 Input Inhibit (disregards channel 2 input signal)
- 3. Auxiliary Input
- 4. Channel 1 Input
- 5. Channel 1 Input Inhibit (disregards channel 1 input signal)
- 6. Output Inhibit (deactivates both output channels)
- 7. Channel 2 Override (applies full voltage to channel 1 output)



Dimensions

SW8



All dimensions nominal unless otherwise specified.

Setup Switches

SW1: AC Voltage selection switch on terminal board inside control unit

Max. Current Output

(SW7 & SW8 settings)

Nominal Voltage	1	2	3	4	5
6	0.910	2.35	3.183	3.760	4.340
24	0.227	0.641	0.881	0.940	1.175
90	0.060	0.176	0.256	0.282	0.310

SW7 Channel 2 current range selector



Channel 2 OEX enable (1)

disable (1) SW10 Channel 1

input invert л (×) _л (т)

Level/pulse selector level (1)

pulse (,)

SW5

Channel 1 OEX enable (1) / disable (1)

SW2

Channel 1 local (1) or remote (,) torque adjust

SW4

Channel 2 local () or remote (,) torque adjust

SW11

Auxiliary input selector Channel 1 (,) Channel 2 (,