

DCR

Digital Battery Charger

32 - 630 AMP



AMETEK®

SOLIDSTATE CONTROLS
PROVIDING CONTINUITY OF ELECTRICAL POWER

DCR

Digital Battery Charger Systems

THREE PHASE INPUT VOLTAGE:
208, 380, 480, 600 VAC

AMPERAGE:
32 - 630 A¹

OUTPUT VOLTAGE:
110, 120, 220, 240 VDC

The DCR from AMETEK Solidstate Controls is a microprocessor-controlled, thyristor-based system designed for high-efficiency conversion of incoming commercial AC power to clean DC power. It is used for charging batteries while supplying power to continuous DC loads such as inverters.

The rugged solid-state design utilizes SCR phase control to provide regulated, current-limited DC power. The DCR can operate with or without batteries and is intended for use in UPS systems. The DCR can also be used as a stand-alone device for battery-charging-only applications.

- Latest digital and power electronics technology
- Reliable industrial design; MTBF >205,000 hours
- User definable control and alarm set-points
- Simultaneous voltage and current readings
- CE safety and EMC standards compliant
- UL1012 (UL, cUL) Approved
- Vacuum impregnated magnetics, 200°C
- Efficiency up to 92%



Animated LCD Touch Screen Display



Our DCR is even easier to use with our new graphical user interface display. Easily navigate between screens utilizing the touch screen menu options. You can quickly determine the status of your system with the increased screen size, additional colors and animations. We have animated the process flow, voltage and alarm readings so you can spot an issue instantly.

New Display Features Allow:

- Support for Network Time Protocol (NTP)
- Access to the data log from the LCD
- Battery test logging
- Ability to easily turn off the Cabinet Humidity alarm
- Option to disable the USB port, as well as an optional alarm for when it is enabled for added security

¹ Consult us for additional sizes

General Specifications - Standard Features			General Specifications - Optional Features				
Design Features			Optional Circuit Breakers		(Option #)		
SCR (Thyristor) based rectifier with double wound isolation transformer Electronic control, current limiting and voltage regulation Floating ground output Detailed data logging for the last 2,000 events Long life LED indicators Insensitive phase rotation			65 kAIC Rated AC Input Breaker		(82)		
			High kAIC Output Breaker		(183)		
			Optional Alarms		(Option #)	(Optional Relay)	Notes
			Charger Fan Fail		(120)	(120R)	With relay options (2), (57), (60) and (107)
			Charger Overload		(119)	(119R)	
Charger Fuse Blown		(67)	(67R)				
Standard Protection Devices			Pos/Neg to Ground		(3)	(3R)	
AC Input Breaker (14 kAIC Minimum)			Charger Output Circuit Breaker open		(191)	(191R)	
DC Output Fuse			Additional Options		(Option #)	Notes	
DC Output Breaker (10 kAIC)			Charger Output Diode		(29)	Blocking diode	
Standard Metering			Auto-Equalize		(130)	After AC power failure > 5 minutes	
DC Output Voltage			Alarm Relay Test		(132)	Facilitate testing of the alarms through LCD screens	
DC Charger Current							
Standard Relays			Charger Ripple Filter		(59)	Extra filtering can be added to the charger for lower ripple requirements	
Fault (Common)			Percent Loading		(115)	Displays the percentage of output current being used as compared to total output current	
Low DC Voltage							
Standard Indications			Input Power Metering		(111)	Optional charger AC input metering for the LCD Display. (Volts, Amps, Frequency)	
'Normal' Green LED			Equalize Inhibit		(155)	External potential free dry contact closure input will prevent the charger from going into equalize mode	
'Trouble' Alarm Red LED							
Control Modes			Dual Charger Current Limit Control		(186)	Optional external input for control	
6 Pulse Standard or 12 Pulse Optional			Battery Temperature Compensation		(108)	DC battery float voltage is adjusted based on room ambient temperature over a range of 32°F and 104°F (0°C to +40°C)	
Stand Alone or Parallel (Capacity and/or Redundancy)			Latching Alarms		(28)	Manual reset provided	
Display Default Alarms			Additional Relays			Additional relay contacts (maximum of 15 allowed)	
(Optional Relay)							
AC Input Available			General Specifications - Performance				
Low DC Voltage							
Charger Loss of Communications							
Charger Board Reset							
AC Power Supply Fail							
AC Input Failure			Electrical Specifications				
High DC Shutdown			AC Input		Available Voltages: 3-phase: 208, 380, 480, 600 (± 10%)		
System Over Temperature			DC Output		Frequency: 50 or 60 Hz (± 5%)		
DC Power Supply Fail			Ripple (RMS)		Nominal voltages: 110, 120, 220, 240 VDC (± 0.5% Float, ± 1.0% Equalize)		
Cabinet Humidity					Unfiltered Units: < 2% with battery connected		
Charger Bridge Over Temperature					Filtered: 0.1% with battery connected		
Charger Failure			Mechanical Specifications				
High DC Voltage			Enclosure		NEMA1 (IP20), 14 GA (2 mm) steel with hinged front access door and drip shield¹		
			Cable Entry		Top or Bottom		
			Finish		Standard Powder Coat ANSI 61, Light Gray		
			Cooling		Convection cooling up to 160 A Output Current, 200 A and larger has fans		
			Optional Mechanical Features (Option #)				
General Specifications - Optional Features			Lifting Eye Bolts		(105)	Key-lockable Enclosure (159)	
Option Packages (Option #)			Pad Lockable Breakers		(93)	IP-21 Rated Cabinet with optional Drip Shield (65)	
LCD Indicators			20% Spare Alarm Terminals		(96)	DC Rated Alarm Contacts (72)	
Communications Package (187)			Conformal Coating of PC Boards		(127)	Space Heater (88)	
MODBUS RTU			Fungus/Moisture Spray (Voids UL)		(70)	Labeling in Other Languages (158) (133)	
MODBUS TCP/IP			Environmental				
SNMP			Audible Noise		65-72 dB(A) at 3 feet (1 meter) at half equipment height		
NTP			Operating Temp		32°F to 104°F (-0°C to +40°C), To 55°C with derate		
Ethernet Web-Page			Storage Temp		-4°F to 158°F (-20°C to 70°C)		
DNP3 RS-485			Operating Humidity		Up to 95% (Non-condensing)		
DNP3 TCP/IP			Altitude		10,000 feet (3,048 meters) without derate		
DNP3 UDP/IP			Cabinet Type		Dimensions	Inches	
Consult us for additional communications options			FS1²		H x W x D	Millimeters	
AC Input Monitoring Package (188)			FS2		H x W x D		
AC Input CB Open							
Low AC Input							
High AC Input							
Battery Monitoring Package (227)							
Battery Test							
Battery Time Remaining							
Battery I & V Metering							
Battery Current Limit							
Battery Discharging Alarm							
Optional Relays (Option #)			Notes				
AC Input Failure (26R)			Available when Package 188 is selected				
Low AC Input (68R)							
AC Input CB Open (101R)							
High AC Input (124R)							
Battery Discharging (197R)			Available when Package 227 is selected				

¹ The drip shield is standard on all models utilizing the FS1 cabinet type

² The drip shield adds 5 in (127 mm) to the height

Specifications subject to change. Consult us for lead times, optional packages and additional information.

110/120 VDC Output												
Model Number	Output Amps	DC Volts (Range)	AC/DC Efficiency %	3Φ AC Input/Frequency ¹		Cabinet Style	Heat Loss (BTU/hr)	Circuit Breaker Ampacity ²			Weight ³	
				AC Amps/Phase				DC Output	Main AC Input			
				208/60	480/60				208/60	480/60	lb	kg
DCR-120-0032- ⁵	32	120 - 147	88	20	9	FS1	1,297	45	25	15	420	191
DCR-120-0040- ⁵	40	120 - 147	88	25	11	FS1	1,620	60	35	15	430	195
DCR-120-0050- ⁵	50	120 - 147	88	31	13	FS1	2,025	70	40	20	450	204
DCR-120-0063- ⁵	63	120 - 147	88	39	17	FS1	2,551	80	50	25	485	220
DCR-120-0080- ⁵	80	120 - 147	88	49	21	FS1	3,240	110	70	30	520	236
DCR-120-0100- ⁵	100	120 - 147	88	62	27	FS1	4,050	150	80	35	540	245
DCR-120-0125- ⁵	125	120 - 147	89	76	33	FS1	4,449	175	100	45	651	295
DCR-120-0160- ⁵	160	120 - 147	89	97	42	FS1	4,931	225	125	60	760	345
DCR-120-0200- ⁵	200	120 - 147	89	121	52	FS2	6,162	300	175	70	880	399
DCR-120-0250- ⁵	250	120 - 147	90	151	65	FS2	7,705	350	200	90	1,100	499
DCR-120-0320- ⁵	320	120 - 147	91	191	83	FS2	8,363	500	250	110	1,235	560
DCR-120-0400- ⁵	400	120 - 147	91	236	102	FS2	8,619	600	300	150	1,340	608
DCR-120-0500- ⁵	500	120 - 147	91	295	128	FS2	10,775	600	400	175	1,815	823
DCR-120-0630- ⁵	630	120 - 147	91	372	161	FS2	13,576	800	500	200	2,000	907
220/240 VDC Output												
Model Number	Output Amps	DC Volts (Range)	AC/DC Efficiency %	3Φ AC Input/Frequency ¹		Cabinet Style	Heat Loss (BTU/hr)	Circuit Breaker Ampacity ²			Weight ³	
				AC Amps/Phase				DC Output	Main AC Input			
				208/60	480/60				208/60	480/60	lb	kg
DCR-240-0032- ⁵	32	240 - 295	88	40	17	FS1	2,593	45	50	25	490	222
DCR-240-0040- ⁵	40	240 - 295	88	49	21	FS1	3,240	60	70	30	510	231
DCR-240-0050- ⁵	50	240 - 295	88	62	27	FS1	4,050	70	80	35	535	243
DCR-240-0063- ⁵	63	240 - 295	88	78	34	FS1	5,102	80	100	45	560	254
DCR-240-0080- ⁵	80	240 - 295	88	99	43	FS1	6,479	110	125	60	610	277
DCR-240-0100- ⁵	100	240 - 295	88	123	54	FS1	8,008	150	175	70	650	295
DCR-240-0125- ⁵	125	240 - 295	89	153	66	FS2	8,902	175	200	90	720	327
DCR-240-0160- ⁵	160	240 - 295	89	193	84	FS2	9,861	225	250	110	1,033	469
DCR-240-0200- ⁵	200	240 - 295	89	241	105	FS2	12,328	300	350	150	1,326	601
DCR-240-0250- ⁵	250	240 - 295	90	302	131	FS2	15,409	350	400	175	1,470	667
DCR-240-0320- ⁵	320	240 - 295	91	382	166	FS2	16,726	500	500	225	1,618	734
DCR-240-0400- ⁵	400	240 - 295	91	472	205	FS2	17,242	600	600	300	1,720	780
DCR-240-0500- ⁵	500	240 - 295	92	591	256	FS2	21,551	700	800	350	2,685	1,218
Dimensions												
Cabinet Type		Dimensions				Inches			Millimeters			
FS1 ⁴		(H x W x D)				48 x 24 x 24			1,220 x 610 x 610			
FS2		(H x W x D)				79 x 32 x 36			2,007 x 813 x 915			

¹ Custom sizes available, please contact us

² Circuit breakers are sized for a minimum of 125% rated current

³ Unit weight corresponds to 60 Hz configuration, consult us for 50 Hz unit weights

⁴ The drip shield adds 5 in (127 mm) to the height

⁵ Model Number Designation System

DCR - 120 - 0100 - 480 - 3 - 60 - 06 - 100 - B
A B C D E F G H I

A - Indicates Base Model Number

B - Indicates DC Output Voltage - 120 = 120 VDC, 240 = 240 VDC

C - Indicates DC Output Current - 0032 = 32 A, 0160 = 160 A

D - Indicates AC Input Voltage - 480 = 480 VAC, 380 = 380 VAC

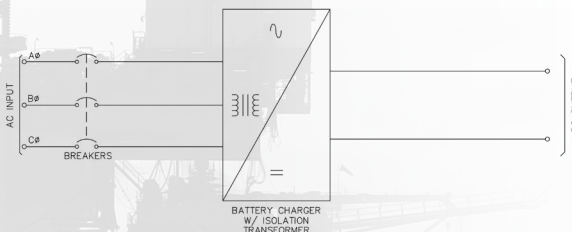
E - Indicates number of Input Phases - 3 = 3 Phase

F - Indicates Input Frequency - 60 = 60 Hz, 50 = 50 Hz

G - Indicates Charger configuration - 06 = 6 Pulse Charger, 12 = 12 Pulse Charger

H - Indicates Current Limit - 100 = 100% Current Limit, 115 = 115% Current Limit

I - Indicates Customization - B = Base, C = Custom



WORLD HEADQUARTERS

875 Dearborn Drive
Columbus, Ohio 43085
Phone: +1-614-846-7500
Toll Free: +1-800-635-7300
Fax: +1-614-885-3990

GLOBAL OFFICES LOCATED IN

Mexico Middle East
Asia Pacific India
Brazil Argentina

WEBSITE

www.solidstatecontrolsinc.com



EMAIL

SCI.sales@AMETEK.com

AMETEK®

SOLIDSTATE CONTROLS

REV 07/2026

THE PURPOSE OF OUR BUSINESS IS TO PROVIDE CONTINUITY OF ELECTRICAL POWER TO KEEP BUSINESSES IN BUSINESS.

WE DO THIS BY HELPING CLIENTS SOLVE THEIR POWER PROBLEMS AND BY CREATING THE MOST ECONOMICAL LONG-TERM RESULTS.