



New Information
Supersedes Renewal Parts Data 33-790-1H, dated October 1996

DS/DSII Low Voltage Switchgear Renewal Parts



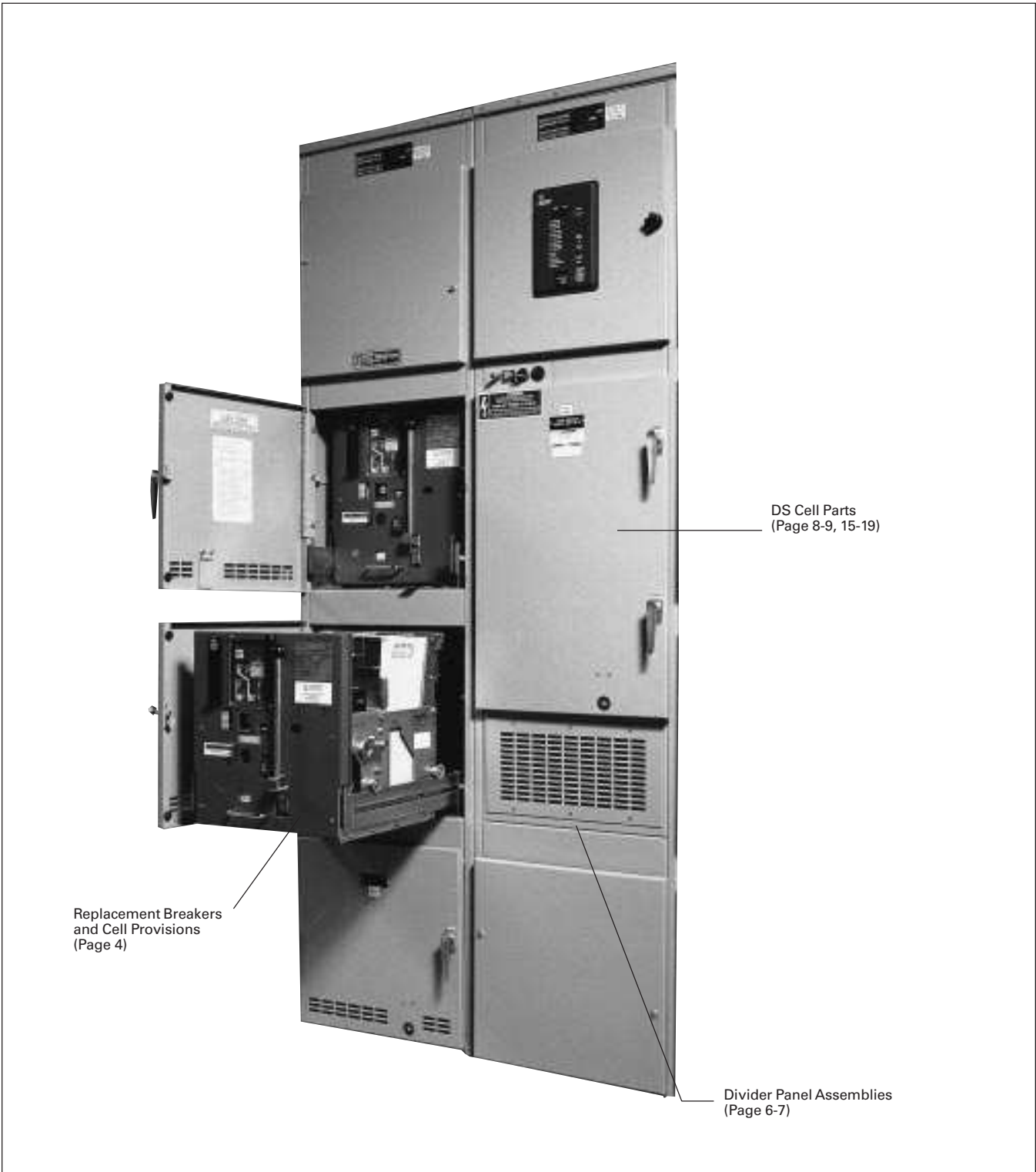
DS Switchgear Assembly



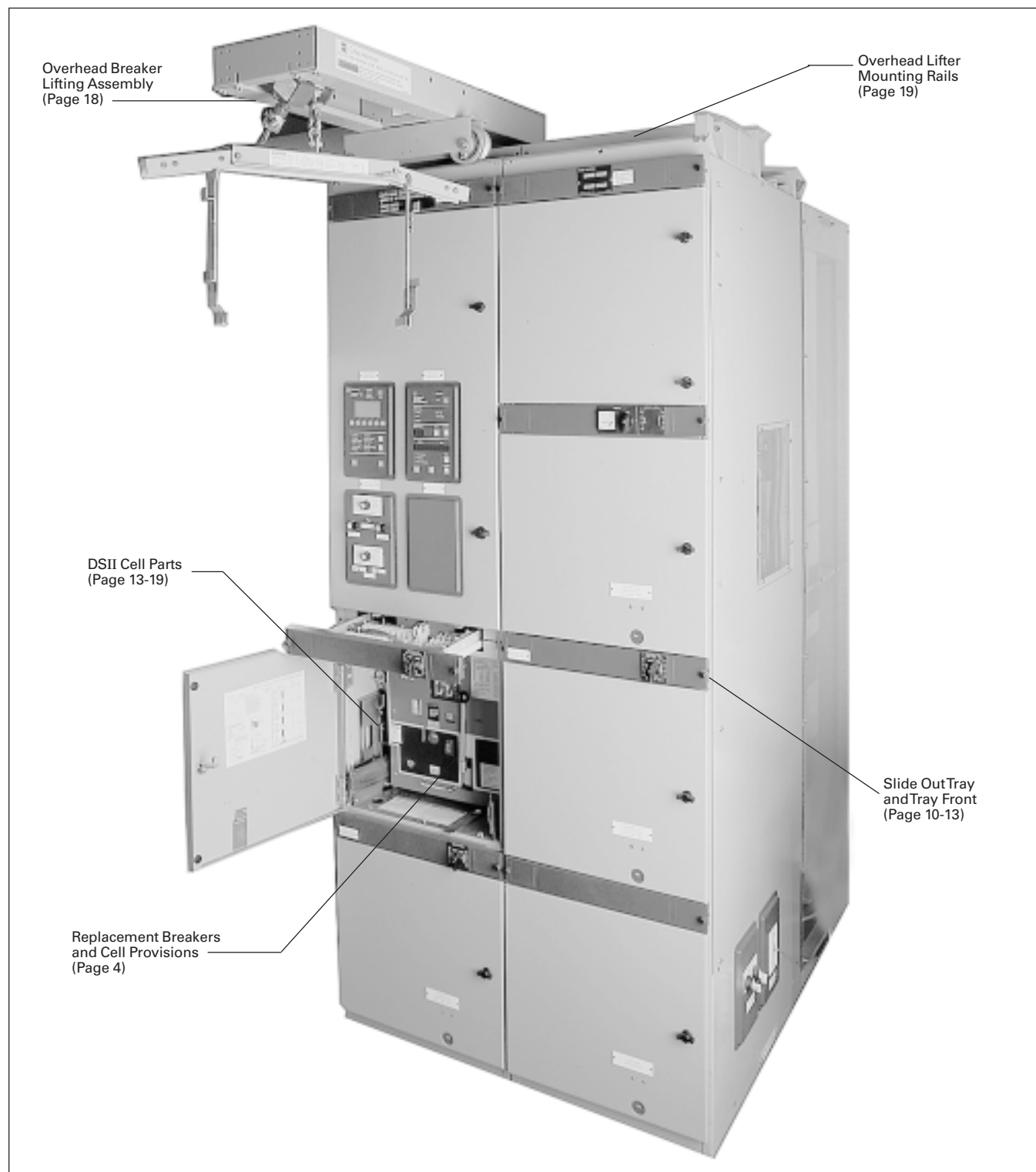
DSII Switchgear Assembly

Contents	Pages
DS Switchgear (Front View)	2
DSII Switchgear (Front View)	3
Replacement Breakers	4
Switchgear Cell Provisions And Upgrades	4
Procedure For Identifying Breaker Type	4
DS/DSII Vacuum Starter Replacement	5
DS Switchgear Cell Parts	6-9
DSII Switchgear Cell Parts	10-14
Accessories and Other Parts	15-19
Recommended Spare Parts	20

DS LOW VOLTAGE SWITCHGEAR ASSEMBLY



DSII LOW VOLTAGE SWITCHGEAR ASSEMBLY



Replacement Power Circuit Breakers for

DS

DS-206	DS-416H	DS-632
DS-206H	DSL-416	DSL-632
DS-206E	DS-420	DS-840
DSL-206	DSL-420	DSL-840
DS-416		



DSII

DSII-308	DSII-616	DSII-632
DSII-508	DSLII-516	DSLII-632
DSII-608	DSII-620	DSII-840
DSLII-308	DSLII-620	DSLII-840
DSII-516		



Procedure For Identifying Breaker Type

A breaker is identified by the data on the nameplate. Shop Order or S.O. numbers were used to identify breakers until 1990. These S.O. numbers were usually seven characters, constructed with two numbers, followed by a letter, and then four additional numbers. Examples are:

24Y7859 80Y3600
28Y5868 82Y1260

After September 1990, DS and DSII breakers were identified using three unique numbers: One is the general order number or G.O., the second is a 10-character feature number F.N., and the third is a 20-character OPTION number. An example is:

G.O. CG12345
F.N. 6616C32G02
Option Number 10200 80700 00010 00000

Refer to RP22B.01T.E and RP22B.02.T.E for breaker parts.

Cell Provisions and Upgrades for DS and DSII Switchgear

Cutler-Hammer offers provisions and upgrade kits necessary to correctly modify your existing DS or DSII switchgear assembly. If you have an existing space in your switchgear, you can equip that space with these provisions. This would allow you to install a new circuit breaker or a DS-VSR vacuum starter replacement. Your analog metering devices can also be upgraded with IQ devices mounted on new doors.



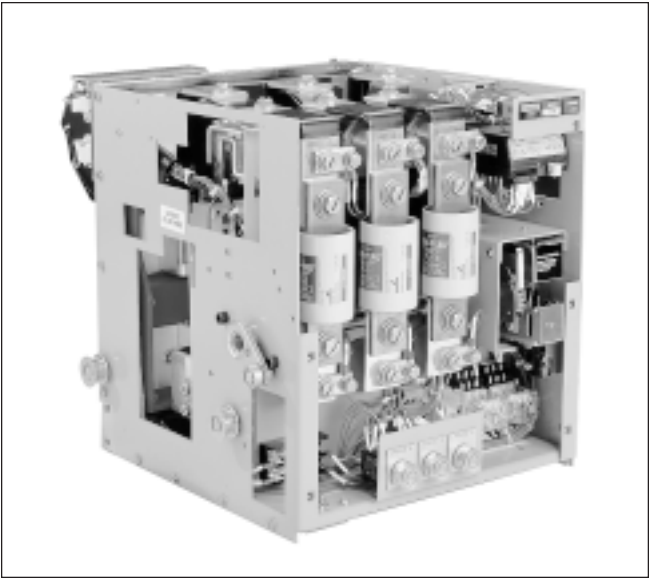
DS/DSII-VSR

The Cutler-Hammer DS or DSII-VSR is a self-contained vacuum starter replacement for DS or DSII draw-out air circuit breakers. The DS-VSR consists of a Cutler-Hammer V201 vacuum contactor with series limiting fuses, a control power transformer and an IQ-500 solid state motor protective relay.

The DS-VSR is designed for starting and controlling 3 phase, 50/60 hertz, AC motors and can be applied in nearly any application including other contactor loads in harsh environments. It is used where an application change requires a motor starter instead of a power circuit breaker in existing DS or DSII switchgear.

The DS-VSR has the ability to accept all the typical breaker control functions without sacrificing the DS breaker drawout safety interlocking system features. The DS-VSR is the only circuit breaker replacement on the market that conforms to the UL508 definition of a combination motor starter.

DS-VSR Ratings	Size 5	Size 6
Motor HP	250HP @ 480V 125HP @ 230V	400HP @ 480V 200HP @ 230V
Continuous Current	320A	540A
Voltage Rating	600V	600V
Fuse Size	400A Class J	600A Class J
Short Circuit Rating	100KA @ 480V	100KA @ 480V



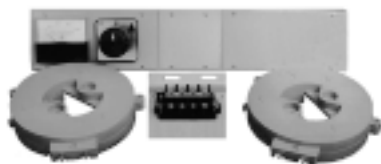
DS SWITCHGEAR CELL PARTS

Divider Panel with ammeter and current transformer and shorting block	
	
Ammeter Scale	Style Number
0-100	3A73104G01
0-150	3A73104G02
0-200	3A73104G03
0-300	3A73104G04
0-400	3A73104G05
0-500	3A73104G06
0-600	3A73104G07
0-800	3A73104G08
0-1000	3A73104G09
0-1200	3A73104G10
0-1500	3A73104G11
0-1600	3A73104G12
0-2000	3A73104G13
0-2500	3A73104G14
0-3000	3A73104G15
0-4000	3A73104G16

Divider Panel with ammeter, switch, pushbuttons, lights, current transformers and shorting block	
	
Ammeter Scale	Style Number
0-100	3A73112G01
0-150	3A73112G02
0-200	3A73112G03
0-300	3A73112G04
0-400	3A73112G05
0-500	3A73112G06
0-600	3A73112G07
0-800	3A73112G08
0-1000	3A73112G09
0-1200	3A73112G10
0-1500	3A73112G11
0-1600	3A73112G12
0-2000	3A73112G13
0-2500	3A73112G14
0-3000	3A73112G15
0-4000	3A73112G16

DS SWITCHGEAR CELL PARTS

Divider Panel with ammeter, switch, 2-current transformers and shorting block



Ammeter Scale	Style Number
0-100	3A73106G01
0-150	3A73106G02
0-200	3A73106G03
0-300	3A73106G04
0-400	3A73106G05
0-500	3A73106G06
0-600	3A73106G07
0-800	3A73106G08
0-1000	3A73106G09
0-1200	3A73106G10
0-1500	3A73106G11
0-1600	3A73106G12
0-2000	3A73106G13
0-2500	3A73106G14
0-3000	3A73106G15
0-4000	3A73106G16

Divider Panel with ammeter, switch pushbuttons, lights, 2-current transformers and shorting block



Ammeter Scale	Style Number
0-100	3A73113G01
0-150	3A73113G02
0-200	3A73113G03
0-300	3A73113G04
0-400	3A73113G05
0-500	3A73113G06
0-600	3A73113G07
0-800	3A73113G08
0-1000	3A73113G09
0-1200	3A73113G10
0-1500	3A73113G11
0-1600	3A73113G12
0-2000	3A73113G13
0-2500	3A73113G14
0-3000	3A73113G15
0-4000	3A73113G16

Divider Panel with ammeter, switch, 3-current transformers and shorting block



Ammeter Scale	Style Number
0-100	3A73107G01
0-150	3A73107G02
0-200	3A73107G03
0-300	3A73107G04
0-400	3A73107G05
0-500	3A73107G06
0-600	3A73107G07
0-800	3A73107G08
0-1000	3A73107G09
0-1200	3A73107G10
0-1500	3A73107G11
0-1600	3A73107G12
0-2000	3A73107G13
0-2500	3A73107G14
0-3000	3A73107G15
0-4000	3A73107G16

Divider Panel with ammeter, switch, pushbuttons, lights, 3-current transformers and shorting block



Ammeter Scale	Style Number
0-100	3A73114G01
0-150	3A73114G02
0-200	3A73114G03
0-300	3A73114G04
0-400	3A73114G05
0-500	3A73114G06
0-600	3A73114G07
0-800	3A73114G08
0-1000	3A73114G09
0-1200	3A73114G10
0-1500	3A73114G11
0-1600	3A73114G12
0-2000	3A73114G13
0-2500	3A73114G14
0-3000	3A73114G15
0-4000	3A73114G16

Divider Panel with pushbuttons and lights

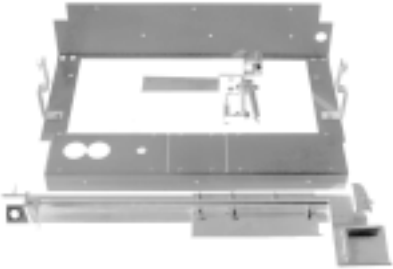


Ammeter Scale	Style Number
N/A	3A73115G01

DS SWITCHGEAR CELL PARTS

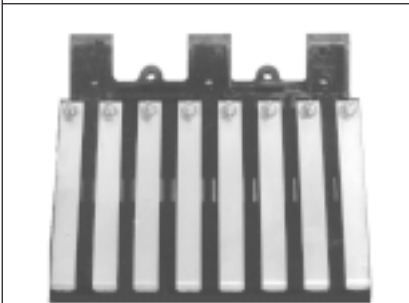
Neutral Sensor Kit	
	
Sensor Ampere Rating	Style Number
50	3A73101G01
100	3A73101G02
150	3A73101G03
200	3A73101G04
300	3A73101G05
400	3A73101G06
600	3A73101G07
800	3A73101G08
1200	3A73101G09
1600	3A73101G10
2000	3A73101G11
3200	3A73101G12
4000	3A73101G13

3-Phase Current Transformer Kit	
	
Ratio	Style Number
250:5	3A73102G01
300:5	3A73102G02
400:5	3A73102G03
500:5	3A73102G04
600:5	3A73102G05
750:5	3A73102G06
800:5	3A73102G07
1000:5	3A73102G08
1200:5	3A73102G09
1500:5	3A73102G10
1600:5	3A73102G11
2000:5	3A73102G12

Key Interlock Provision Kit	
	
Breaker Type	Style Number
DS-206, DS206S DS-206H, DS-206E DSL-206, DS-416, DS-416S, DS-416H, DSL-416, DS-420	3A73116G01
DS-632, DS-632 with fuses	3A73116G02
DS-840, DS-840 with fuses	3A73116G03

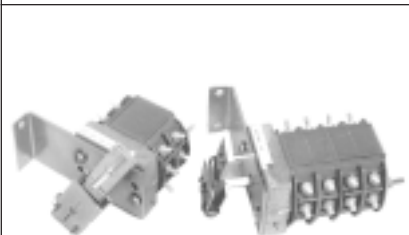
DS SWITCHGEAR CELL PARTS

Stationary Secondary Contact (8 point)



Style Number 590C808G01

Breaker Cell Switch



Description	Style Number
3-NO, 3-NC	2A89010G01
6-NO, 6-NC	2A89010G02

Insulation Boot For Live Bus Stab



Description	Style Number
All breakers except DS-632 and DS-840	140D294H02 ●
DS-632 (For cells w/o CTs)	140D769H01 ●
DS-632 (For cells w/ CTs)	140D768H01 ●
DS-840	(Not available)

● Required 1 for each stab.

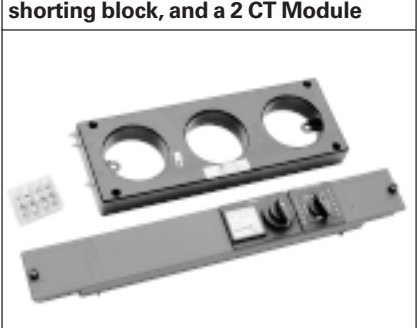
Current Transformer Kit (Metering Only)



Type	Circuit Breaker Type	Ratio	Style Number
DSM-16	DS-206, DS-206S DS-206H, DS-206E DSL-206, DS-416, DS-416S, DS-416H, DSL-416, DS-420	100:5	3A73103G01
		150:5	3A73103G02
		200:5	3A73103G03
		250:5	3A73103G04
		300:5	3A73103G05
		400:5	3A73103G06
		500:5	3A73103G07
		600:5	3A73103G08
		800:5	3A73103G09
		1000:5	3A73103G10
		1200:5	3A73103G11
		1500:5	3A73103G12
		1600:5	3A73103G13
		2000:5	3A73103G14
		2500:5	3A73103G15
		3000:5	3A73103G16
DSM-32	DS-632, DS-632 with fuses	2400:5	3A73103G17
		2500:5	3A73103G18
		3000:5	3A73103G19
		3200:5	3A73103G20
		4000:5	3A73103G21
DSM-40	DS-840, DS-840 with fuses	4000:5	3A73103G22
		5000:5	3A73103G23
		6000:5	3A73103G24

DSII SWITCHGEAR CELL PARTS

Tray Front with ammeter, switch, shorting block, and a 2 CT Module	
	
Ammeter Scale	Style Number
0-100	4A35991G01
0-150	4A35991G02
0-200	4A35991G03
0-250	4A35991G04
0-300	4A35991G05
0-400	4A35991G06
0-500	4A35991G07
0-600	4A35991G08
0-750	4A35991G09
0-800	4A35991G10
0-1000	4A35991G11
0-1200	4A35991G12
0-1500	4A35991G13
0-1600	4A35991G14
0-2000	4A35991G15

Tray Front with ammeter, switch, breaker control switch with lights, shorting block, and a 2 CT Module	
	
Ammeter Scale	Style Number
0-100	4A35992G01
0-150	4A35992G02
0-200	4A35992G03
0-250	4A35992G04
0-300	4A35992G05
0-400	4A35992G06
0-500	4A35992G07
0-600	4A35992G08
0-750	4A35992G09
0-800	4A35992G10
0-1000	4A35992G11
0-1200	4A35992G12
0-1500	4A35992G13
0-1600	4A35992G14
0-2000	4A35992G15

DSII SWITCHGEAR CELL PARTS

Tray Front with ammeter, switch,
shorting block, and a 3 CT Module

Ammeter Scale	Style Number
0-100	4A35993G01
0-150	4A35993G02
0-200	4A35993G03
0-250	4A35993G04
0-300	4A35993G05
0-400	4A35993G06
0-500	4A35993G07
0-600	4A35993G08
0-750	4A35993G09
0-800	4A35993G10
0-1000	4A35993G11
0-1200	4A35993G12
0-1500	4A35993G13
0-1600	4A35993G14
0-2000	4A35993G15

Tray Front with ammeter, switch,
breaker control switch with lights,
shorting block, and a 3 CT Module

Ammeter Scale	Style Number
0-100	4A35994G01
0-150	4A35994G02
0-200	4A35994G03
0-250	4A35994G04
0-300	4A35994G05
0-400	4A35994G06
0-500	4A35994G07
0-600	4A35994G08
0-750	4A35994G09
0-800	4A35994G10
0-1000	4A35994G11
0-1200	4A35994G12
0-1500	4A35994G13
0-1600	4A35994G14
0-2000	4A35994G15

Slide-out Tray Assembly



Breaker Type	Style Number
DSII-308, DSII-508, DSII-608, DSLII-308, DSII-516, DSII-616, DSLII-516, DSII-620, DSLII-620, DSII-632, DSII-840	4A35999G01
	4A35999G02

Tray Front with breaker control switch
and lights for 21" wide structures

Tray Front	Style Number
With Switch	4A35995G01
Without Switch	4A35995G02

Tray Front with breaker control switch
and lights, with additional filler panel
for 34" wide structures

Tray Front	Style Number
With Switch	4A35995G03
Without Switch	4A35995G04

DSII SWITCHGEAR CELL PARTS

DSII-632 and DSLII-632

Tray Front with ammeter, switch, shorting block, and a 2 CT Module



Ammeter Scale	Style Number
0-1600	4A35996G01
0-2000	4A35996G02
0-2400	4A35996G03
0-2500	4A35996G04
0-3000	4A35996G05
0-3200	4A35996G06

Tray Front with ammeter, switch, breaker control switch with lights, shorting block, and a 2 CT Module



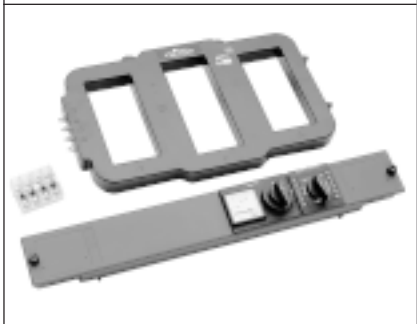
Ammeter Scale	Style Number
0-1600	4A35997G01
0-2000	4A35997G02
0-2400	4A35997G03
0-2500	4A35997G04
0-3000	4A35997G05
0-3200	4A35997G06

Tray Front with ammeter, switch, shorting block, and a 3 CT Module



Ammeter Scale	Style Number
0-1600	4A35998G01
0-2000	4A35998G02
0-2400	4A35998G03
0-2500	4A35998G04
0-3000	4A35998G05
0-3200	4A35998G06

Tray Front with ammeter, switch, breaker control switch with lights, shorting block, and a 3 CT Module

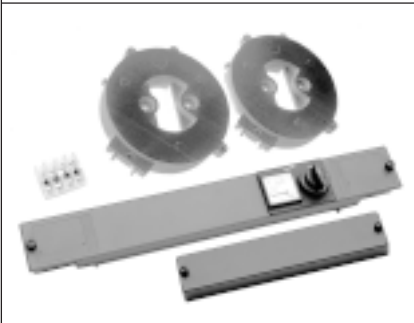


Ammeter Scale	Style Number
0-1600	4A35999G01
0-2000	4A35999G02
0-2400	4A35999G03
0-2500	4A35999G04
0-3000	4A35999G05
0-3200	4A35999G06

DSII SWITCHGEAR CELL PARTS

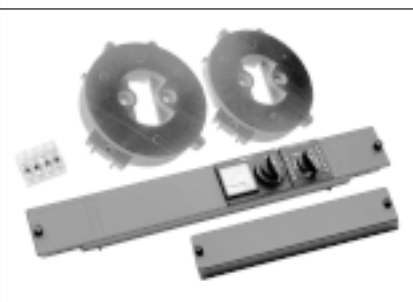
DSII-840

Tray Front with ammeter, switch, shorting block, and 2 current transformers



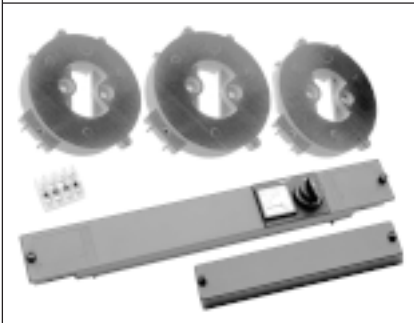
Ammeter Scale	Style Number
0-3200	4A36017G01
0-4000	4A36017G02
0-5000	4A36017G03

Tray Front with ammeter, switch, breaker control switch with lights, shorting block, and 2 current transformers



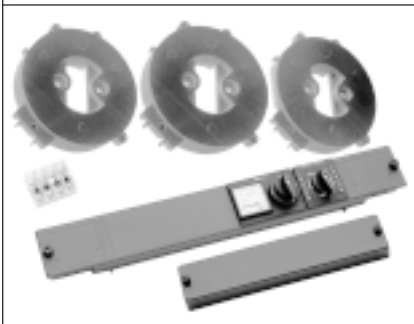
Ammeter Scale	Style Number
0-3200	4A36018G01
0-4000	4A36018G02
0-5000	4A36018G03

Tray Front with ammeter, switch, shorting block, and 3 current transformers



Ammeter Scale	Style Number
0-3200	4A36019G01
0-4000	4A36019G02
0-5000	4A36019G03

Tray Front with ammeter, switch, breaker control switch with lights, shorting block, and 3 current transformers



Ammeter Scale	Style Number
0-3200	4A36020G01
0-4000	4A36020G02
0-5000	4A36020G03

DSII SWITCHGEAR CELL PARTS

Neutral Sensor Kit	
	
Sensor Ampere Rating	Style Number
50	4A36009G01
100	4A36009G02
150	4A36009G03
200	4A36009G04
300	4A36009G05
400	4A36009G06
600	4A36009G07
800	4A36009G08
1200	4A36009G09
1600	4A36009G10
2000	4A36009G11
3200	4A36009G12
4000	4A36009G13

Key Interlock Provision Kit	
	
Breaker Type	Style Number
DSII-308, DSII-508, DSII-608, DSLII-308, DSII-516, DSII-616, DSLII-516, DSII-620 DSLII-620	4A36010G01
DSII-632 DSII-840	4A36010G02 4A36010G03 4A36010G04

Communications and Zone Interlock Kit	
	
Breaker Type	Style Number
DSII-308, DSII-508, DSII-603, DSLII-308, DSII-516, DSII-616, DSLII-516, DSII-620, DSLII-620, DSII-632, DSII-840	4A36011G01

Stationary Secondary Contact (12 point)	
	
Style Number	2A89641G01

Breaker Cell Switch	
	
Style Number	4A36013G01

DS and DSII SWITCHGEAR CELL PARTS

Capacitor Trip Device (120VAC)



Description	Style Number
DS 330mf	CTD-1
DS 1500mf	CTD-2
DSII 330mf	CTD-10

Insulation Boot for Live Bus Stab



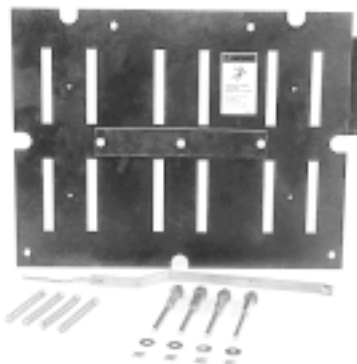
Description	Style Number
All breakers except 3200A and 4000A	4A36014G01
DS/DSII-632 (For cells w/o CT's)	4A36014G02
DS/DSII-632 (For cells w/ CT's)	4A36014G03
DS/DSII-840	(Not Available)

Shutter Assembly



Description	Style Number
For all DS and DSII Breaker Cells except 3200A, 4000A, and DSLII-420 in a 632 cell.	4A36015G01

Shutter Assembly



Description	Style Number
DS/DSII-632 (For cells w/o CT's)	4A36016G01
DS/DSII-632 (For cells w/ CT's)	4A36016G02
DS/DSII-840 (For cells w/o CT's)	4A36016G03
DS/DSII-840 (For cells w/ CT's)	4A36016G04

DS and DSII SWITCHGEAR CELL PARTS

Two-Phase Current Transformer Kit	
	
CT Ratio	Style Number
100:5	4A36000G01
150:5	4A36000G02
200:5	4A36000G03
250:5	4A36000G04
300:5	4A36000G05
400:5	4A36000G06
500:5	4A36000G07
600:5	4A36000G08
750:5	4A36000G09
800:5	4A36000G10
1000:5	4A36000G11
1200:5	4A36000G12
1500:5	4A36000G13
1600:5	4A36000G14
2000:5	4A36000G15

Three-Phase Current Transformer Kit	
	
CT Ratio	Style Number
100:5	4A36001G01
150:5	4A36001G02
200:5	4A36001G03
250:5	4A36001G04
300:5	4A36001G05
400:5	4A36001G06
500:5	4A36001G07
600:5	4A36001G08
750:5	4A36001G09
800:5	4A36001G10
1000:5	4A36001G11
1200:5	4A36001G12
1500:5	4A36001G13
1600:5	4A36001G14
2000:5	4A36001G15

Two-Phase Current Transformer Kit	
	
CT Ratio	Style Number
1600:5	4A36002G08
2000:5	4A36002G09
2400:5	4A36002G10
2500:5	4A36002G11
3000:5	4A36002G12
3200:5	4A36002G13
3500:5	4A36002G14
4000:5	4A36002G15

DS and DSII SWITCHGEAR CELL PARTS

Three-Phase Current Transformer Kit	
	
CT Ratio	Style Number
1600:5	4A36003G01
2000:5	4A36003G02
2400:5	4A36003G03
2500:5	4A36003G04
3000:5	4A36003G05
3200:5	4A36003G06
3500:5	4A36003G07
4000:5	4A36003G08

Two-Phase Ammeter and Sw.Assembly	
	
Ammeter Scale	Style Number
0-100	4A36004G01
0-150	4A36004G02
0-200	4A36004G03
0-300	4A36004G04
0-400	4A36004G05
0-500	4A36004G06
0-600	4A36004G07
0-800	4A36004G08
0-1000	4A36004G09
0-1200	4A36004G10
0-1500	4A36004G11
0-1600	4A36004G12
0-2000	4A36004G13
0-3000	4A36004G14
0-4000	4A36004G15

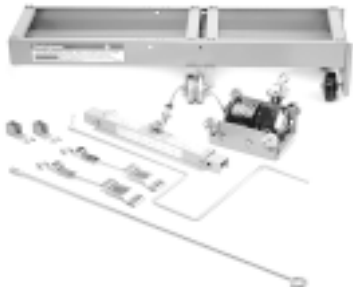
Three-Phase Ammeter and Sw.Assy	
	
Ammeter Scale	Style Number
0-100	4A36005G01
0-150	4A36005G02
0-200	4A36005G03
0-300	4A36005G04
0-400	4A36005G05
0-500	4A36005G06
0-600	4A36005G07
0-800	4A36005G08
0-1000	4A36005G09
0-1200	4A36005G10
0-1500	4A36005G11
0-1600	4A36005G12
0-2000	4A36005G13
0-3000	4A36005G14
0-4000	4A36005G15

DS and DSII SWITCHGEAR CELL PARTS

Voltmeter and Switch Assembly	
	
Voltmeter Scale	Style Number
0-600	4A36006G01
0-750	4A36006G02

Potential Transformer Kit	
	
Line to Line Voltage Rating	Style Number
480V - 120V (2vt in one case)	4A36007G01
480V - 120V (3vt in one case)	4A36007G03

Control Power Transformer Kit	
	
CPT Rating	Style Number
1kVA 480V	4A36008G08
2kVA 480V	4A36008G09
3kVA 480V	4A36008G10

Overhead Breaker Lifting Assembly	
	
Style Number	694C616G01

Yoke Assembly with Hooks	
	
Style Number	694C614G02

Portable Circuit Breaker Transport Assy	
	
Style Number	4A36023G01

DS and DSII SWITCHGEAR ACCESSORIES

Breaker Test Kit and Adapter



Description	Style Number
Test Kit and Adapter Adapter only	8779C02G02 8779C02G03
This test kit can be used for testing DS breakers that have either the Amptector or Digitrip RMS Trip Units. This test kit also works on the DSII Breakers.	
Calibration and Repair Services	
Old Test Kit Style	Service Options
140D481G01	Trade-in only
140D481G02	Trade-in only
140D481G03	Repair Available
Trade-in Program	
If you have one of these:	You can get this with a Trade-in:
140D481G01	8778C02G02
140D481G02	8779C02G02
Send us your old test kits, and receive the new test kit, at a discounted price.	
Contact your local Cutler-Hammer Field Sales Office for details.	

Overhead Lifter Mounting Rail Assy



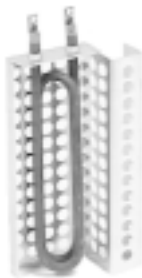
Structure Width	Style Number
DS Switchgear 21" Wide Structure	3A36021G01
DS Switchgear 34" Wide Structure	3A36021G02
DSII Switchgear 21" Wide Structure	3A36021G03
DSII Switchgear 34" Wide Structure	3A36021G04

Breaker Test Cabinet



Voltage Class	Style Number
DS Breaker Test Cabinet (120VAC/125VDC)	6500C57G01
DS Breaker Test Cabinet (240VAC/250VDC)	6500C57G02
DSII Breaker Test Cabinet (120VAC/125VDC)	6500C57G03
DSII Breaker Test Cabinet (240VAC/250VDC)	6500C57G04

Space Heater Assembly



Rating	Style Number
250 Watts, 125 Volts	4A36022G01
250 Watts, 250 Volts	4A36022G02
375 Watts, 125 Volts	4A36022G03
375 Watts, 250 Volts	4A36022G04
95 Watts, 125 Volts	4A36022G04
100 Watts, 250 Volts	4A36022G05

RECOMMENDED SPARE PARTS FOR STOCK

It is recommended that one circuit breaker for every 5 of the same rating be stocked for spare parts. Refer to page 4 of this manual or contact your local Cutler-Hammer sales representative with the following information:

- **General Order number**
- **Shop Order number**
- **Date of manufacture**

Refer to RP22B.01.T.E and RP22B.02.T.E for breaker parts.

Copyright Cutler-Hammer Inc., 1998.
All Rights Reserved.