DISTRIBUTION SERIES 3

Intelligent 10/10 GMT DC Load Distribution Panel
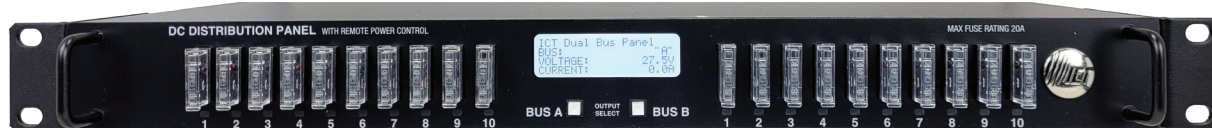
The ICT200DF-20BRC is an intelligent, dual bus, DC load distribution GMT fuse panel with remote monitoring and power control over Ethernet. Each bus is rated at 100A continuous and provides 10 GMT fuse positions, each rated at 20 Amps maximum. The ICT200DF-20BRC is designed for sites requiring I.P.-based remote monitoring and power control of up to 20 connected loads.

CE   RoHS

Overview

The ICT200DF-20BRC DC Distribution Panel provides a dual bus, common ground 1RU solution for applications requiring remote monitoring and power control of up to 20 individual loads. The on-board TCP/IP and web server provide an easy to use, graphical user interface for remote management and power control of system and individual outputs. Each bus supports up to ten 20A GMT fuses for 48 or 24 volt DC applications.

Dual voltages and polarities can be supported on a single panel, useful for sites requiring -48 and +48 or -48 and +24 volts DC to be distributed simultaneously.

Alarms can be sent to multiple email accounts, and each output has definable load-shed settings. The network watchdog feature will ping up to 12 pre-determined I.P. addresses, such as a router, and power-cycle the device if not answered.

There are five digital inputs for connecting site monitoring sensors such as door, fire, and water alarms. These alarms can be given individual names and be sent as email alarm notifications.

The on-board web server means there is no software to maintain, and SNMPv3 is also supported. Firmware can be updated remotely over Ethernet.

The ICT200DF-20BRC allows each connected load to be monitored, power cycled, or taken off-line. This functionality can be used to conserve power, troubleshoot devices, and reboot connected loads remotely, possibly preventing or delaying the need for a costly site visit.

Features

▶ 200A continuous system rating / 100A per bus
▶ +/-24 or +/-48 VDC
▶ 20A GMT fuses per output (16A continuous)
▶ TCP/IP remote management and power control of individual outputs
▶ Ten fully managed outputs per bus
▶ Independent Form C alarm contacts for each bus
▶ Remote firmware update capability
▶ HTTPS, SMTP, SNMPv3 protocols supported
▶ Monitoring and alarm reporting of each output for pinpointing of issues with connected loads
▶ Each output has adjustable load-shed settings
▶ Adjustable power-on sequencing
▶ Site monitoring sensor inputs with alarm reporting
▶ Data logging

Applications

▶ Fixed Wireless Broadband
▶ Radio Access Networks
▶ DAS
▶ Remote Sites
▶ Secondary Distribution

DUAL BUS DISTRIBUTRION PANELS

12VDC 24VDC 48VDC -48VDC 2 x 100A Smart

Power Specifications

Operating Voltage Range (POS or NEG)	20-60VDC
System Current Rating	200A cont
A/B Bus Current Rating	100A cont
Number of Outputs per Bus	10
Max. GMT Fuse Size	20A [1]
Continuous Load Rating	16A per output

Environment

Operating Temperature Range	-20°C to +60°C
Cooling	Convection

Mechanical

Form Factor	1RU - 19 Inch rack mount
Dimensions L x W x H	9.4 x 19.0 x 1.7 in 236 x 483 x 45 mm
Weight (lbs/kg)	9.5 lbs / 4.3 kg
Input Connectors	Dual 1/4" - 20 studs with 0.625" spacing
Output Connectors	Cage clamp 10-22AWG

Design Standards

FCC, CE, ROHS

Warranty

Two years

Communications and Control

Ethernet	TCP/IP built-in web server and graphical user interface, 10/100BASE-T, IEEE 802.3 compatible
Supported Protocols	IPv4, HTTP, HTTPS, SMTP, DNS, TCP, UDP, ICMP, DHCP, ARP, SNMPv1/v2c/v3
SNMP Ports	UDP Port 161, SNMP Traps: UDP Port 162
Firmware Upgrades	Upgradeable over Ethernet
Security	Password protection, HTTPS encryption, TLS 1.2
20 Channel Output Monitoring	Current draw measured and reported for each output, user definable under and over current alarms
Email and SMS Alerts	Multiple email or text accounts, adjustable intervals
Data Logging	Up to 30 days at 1 minute sampling rate, csv file download, major event logging
Network Watchdog	Autonomously ping up to 12 I.P. addresses and power-cycle output if no response, definable settings
Power Cycling and Rebooting	Remote on/off control of every output individually
Auto Restore Mode	Return to previous output settings after a power loss
Power-up Delay Sequencing	User selectable 0 to 60 second delay between outputs
Auto Load Shedding	Each output user definable, manual or auto restart

Configurable Alarms

▶ Channel over current threshold
▶ Channel over/under current
▶ Bus over current
▶ Automatic load shedding
▶ Bus over/under voltage threshold
▶ Site monitoring input contact status

Site Monitoring Inputs

Voltage free digital inputs	5
Connector type	Removable cage clamp 16-28AWG

Ordering Information

Model Number	Description
ICT200DF-20BRC	Dual bus common ground 10-10 GMT fuse DC distribution panel (fuses not included)
ICT-RA2319 [2]	ICT 23 to 19 inch, 1RU rack mount reducer kit

(1) GMT fuses not supplied by ICT
(2) Option, orderable separately

MIL-STD-810G DUAL BUS DC LOAD DISTRIBUTION PANEL

COMPLIANT MIL-STD 810G

The ICT200DB-12IRC/MIL dual bus DC load distribution panel has been designed and engineered to meet the challenging MIL-STD-810G standard for harsh environmental and battlefield conditions. This design has been tested and verified for military use.

The ICT200DB-12IRC/MIL provides independent dual bus capability for 12, 24 or 48 volt DC systems. Each bus is rated at 100 Amps and provides six breaker protected outputs. On board TCP/IP capability provides customizable remote monitoring as well as remote shutdown and power cycling of individual outputs. Five digital input contacts are provided for site monitoring sensors such as door, smoke, and water detection. Each input can be custom labeled in the web interface to provide descriptive email alerts.

The on-board, easy to use embedded graphical user interface requires no software to maintain, and remote updates can be made over Ethernet.

FEATURES

▶ 200A peak system current rating (100A per bus)
▶ Six load outputs per bus
▶ Independent Form C alarm contacts for each bus
▶ High-quality, reliable hydraulic/magnetic breakers support 12, 24 and 48VDC systems (breakers sold separately)
▶ Mixed voltages and polarities can be supported in a single panel
▶ -30 to +60C operating temperature range

REMOTE TCP/IP MONITORING & CONTROL

▶ TCP/IP remote management and power control of system and individual outputs
▶ On-board web server means no software to maintain
▶ Extremely easy to use Graphical User Interface
▶ Remote firmware update capability
▶ HTTPS, SMTP, SNMPv1/2c/3 protocols supported
▶ Monitoring and alarm reporting of each output for pinpointing of issues with connected loads
▶ Alarms can be sent to multiple email accounts
▶ Each output has adjustable load-shed settings
▶ Network Watchdog feature will ping a pre-determined I.P. address and power-cycle connected device if not answered
▶ Five digital inputs for site monitoring sensors with email notifications sent
▶ Data logging
▶ Password protection

STANDARDS

MIL-STD-810G tested and verified for shock and vibration, salt fog, humidity, sand and dust, including Method 507.6 Procedure II Aggravated, Method 514.7 Procedure I Category 4, and Method 510.6 Procedure I Blowing Dust.

DUAL BUS DISTRIBUTRION PANELS

12VDC 24VDC 48VDC -48VDC 2 x 100A Smart

SNAPTEC
www.snaptec.com.au

MODEL NUMBER   ICT200DB-12IRC/MIL

SPECIFICATIONS

Application Voltage (pos or neg ground)	12, 24, 48VDC
System Current Rating (peak/cont)	200A/160A
Operating Voltage Range	10-60VDC
Number of Outputs per bus	6
Bus Current Rating (peak/cont)	100A/80A
Number of Breaker Outputs	12
Max Breaker Ratings (12,24V/48V)	25A/15A[1][2]

MECHANICAL

Dimensions (inches) L x W x H	9.29 x 19.0 x 1.72
Weight (lbs/kg)	7.0 lbs / 3.2 kg
Connectors	M8 DC input stud connectors, 10-22AWG cage clamp output terminal blocks

ENVIRONMENT

Operating Temperature Range	-30°C to +60°C

STANDARDS (Tested and Verified for Military Use)

Humidity	MIL-STD - 810G CHG 1 Method 507.6 Procedure II Aggravated
Vibration	MIL-STD-810G CHG1 Method 514.7 Procedure I Category 4, Composite Wheeled Vehicle
Blowing Dust	MIL-STD - 810G CHG 1 Method 510.6 Procedure I Blowing Dust

COMMUNICATIONS & CONTROL

Ethernet	TCP/IP built-in web server and graphical user interface, 10/100BASE-T, IEEE 802.3 compatible
Supported Protocols	IPv4, HTTP, HTTPS, SMTP, DNS, TCP, UDP, ICMP, DHCP, ARP, SNMP v1/v2c/v3
SNMP Ports	UDP Port 161, SNMP Traps: UDP Port 162
Firmware Upgrades	Upgradeable over Ethernet
Security	Password protected, SSL encryption
12 Channel Output Monitoring	Current draw measured and reported for each output, user definable under and over current alarms
Email and SMS Alerts	Multiple email or text accounts, adjustable intervals
Data Logging	Up to 30 days at 1 minute sampling rate, csv file download, major event logging
Network Watchdog	Autonomously ping up to two I.P. addresses and power-cycle output if no response, definable settings
Power Cycling and Rebooting	Remote on/off control of every output individually
Auto Restore Mode	Return to previous output settings after a power loss
Power-up Delay Sequencing	User selectable 0 to 60 second delay between outputs
Auto Load Shedding	Each output user definable, manual or auto restart

ORDERING INFORMATION

	MODEL NO.
6/6 dual bus DC distribution panel, 200A system rating	ICT200DB-12IRC/MIL
5 Amp hydraulic/magnetic circuit breaker	ICT-CB5 [1][2]
10 Amp hydraulic/magnetic circuit breaker	ICT-CB10
15 Amp hydraulic/magnetic circuit breaker	ICT-CB15
25 Amp hydraulic/magnetic circuit breaker	ICT-CB25
Unused breaker position blanking plate	ICT-BLP

(1) Please follow all recommendations of the manufacturer. Fuses, breakers and wiring should be continuously operated at no more than 80% of their current rating.
(2) Hydraulic/magnetic breakers not included, must be ordered separately.

DISTRIBUTION SERIES 3

Dual Bus DC Load Distribution Panels

The ICT DISTRIBUTION SERIES 3 provides independent dual bus capability for redundant systems or mixed-voltage sites. Each bus is rated at 100A peak and provides six fuse or breaker protected outputs. Standard models are available for unmanaged applications, while Intelligent models include ICT's industry leading TCP/IP remote management and power control features.

ICT200DB-12IRC
Intelligent Dual Bus Breaker Panel

ICT200DF-12IRC
Intelligent Dual Bus Fuse Panel

Common Features

▶ 200A peak system current rating / 100A per bus
▶ Six outputs per bus
▶ Independent Form C alarm contacts for each bus
▶ Choice of fuse or breaker protected models
▶ 80 volt rated FKS ATO style fuses or high-quality, reliable hydraulic/magnetic breakers support 12, 24 and 48VDC
▶ Mixed voltages and polarities can be supported in one panel (provided grounds are common)
▶ -30 to +60C operating temperature range
▶ Front panel LED indicators for fuse status (fuse models)

Intelligent Model Features

▶ TCP/IP remote management and power control of system and individual outputs
▶ On-board web server means no software to maintain
▶ Extremely easy to use Graphical User Interface
▶ Remote firmware update capability
▶ HTTPS, SMTP, SNMP protocols supported
▶ Monitoring and alarm reporting of each output for pinpointing of issues with connected loads
▶ Alarms can be sent to multiple email accounts
▶ Each output has adjustable load-shed settings
▶ Network Watchdog feature will ping a pre-determined I.P. address and power-cycle connected device if not answered
▶ Five digital inputs for site monitoring sensors
▶ Data logging
▶ Password protection

CE **RoHS**

Lower Cost of Ownership and Site Maintenance

All models come with a 2 year warranty. Intelligent models are I.P. enabled for remote monitoring and remote shutdown or power cycling of individual outputs, potentially saving unnecessary service call-outs. Intelligent models also come with five digital input contacts for site monitoring sensors such as door, smoke, and water detection. Each input can be custom labeled to provide descriptive email alerts. All Distribution Series 3 models feature independent Form C outputs to monitor and report alarm conditions for each bus.

Remote TCP/IP Monitoring

The Intelligent models are TCP/IP enabled, and utilize a built-in Ethernet connector with integrated web server to allow users to remotely monitor load conditions at the panel. System voltage and current, as well as the current reading of each output, can be monitored. This can provide an indication of a problem with the system power, or with individually connected devices such as a radio, repeater, or RF amplifier. Text or email alerts will be sent when an alarm is triggered. Up to 30 days of data logging is provided.

Remote TCP/IP Power Control

Intelligent models allow the individual DC outputs to be turned on and off remotely using the TCP/IP connection. This allows connected devices to be power-cycled or shut down, potentially averting the need for an on-site service visit. The Network Watchdog feature pings a designated I.P. address and will restart an assigned output automatically, allowing devices such as routers to be power-cycled without risk of losing communications to the site. Load shedding is provided with user definable settings for each output, allowing non-essential loads to be automatically shut down in order to prolong power to priority loads.

DUAL BUS DISTRIBUTRION PANELS

12VDC 24VDC 48VDC -48VDC 2 x 100A Smart

SNAPTEC
www.snaptec.com.au

POWER SPECIFICATIONS	ICT200DF-12 Standard Dual Bus Fuse Panel	ICT200DB-12 Standard Dual Bus Breaker Panel	ICT200DF-12IRC Intelligent Dual Bus Fuse Panel With TCP/IP	ICT200DB-12IRC Intelligent Dual Bus Breaker Panel With TCP/IP
Application Voltage (pos or neg gnd)	12, 24, 48VDC			
System Current Rating (peak/cont)	200A/160A			
Bus Current Rating (peak/cont)	100A/80A			
Number of Outputs per bus	6			
Operating Voltage Range	10-60VDC			
Number of ATO Fused DC Outputs	12	————	12	————
ATO Max Fuse Rating (12,24V)	25A [(1)(2)]	————	25A [(1)(2)]	————
ATO Max Fuse Rating (48V)	25A [(1)(2)]	————	15A [(1)(2)]	————
Number of Breaker Outputs	————	12	————	12
Max Breaker Ratings (12,24V)	————	30A [(1)(3)]	————	30A [(1)(3)]
Max Breaker Ratings (48V)	————	30A [(1)(3)]	————	15A [(1)(3)]

MECHANICAL

Form Factor	1RU - 19 Inch rack mount with handles
Dimensions (inches) L x W x H	9.29 x 19.0 x 1.72
Weight (lbs/kg)	7.0 lbs / 3.2 kg
Connectors	M8 DC input stud connectors, 10-22AWG cage clamp output terminal blocks

ENVIRONMENT

Operating Temperature Range	-30°C to +60°C

COMMUNICATIONS & CONTROL

Ethernet	————	————	TCP/IP built-in web server and graphical user interface, 10/100BASE-T, IEEE 802.3 compatible
Supported Protocols	————	————	IPv4, HTTP, HTTPS, SMTP, DNS, TCP, UDP, ICMP, DHCP, ARP, SNMP v1/v2c/v3
SNMP Ports	————	————	UDP Port 161, SNMP Traps: UDP Port 162
Firmware Upgrades	————	————	Upgradeable over Ethernet
Security	————	————	Password protected, HTTPS encryption, TLS 1.0
12 Channel Output Monitoring	————	————	Current draw measured and reported for each output, user definable under and over current alarms
Email and SMS Alerts	————	————	Multiple email or text accounts, adjustable intervals
Data Logging	————	————	Up to 30 days at 1 minute sampling rate, csv file download, major event logging
Network Watchdog	————	————	Autonomously ping up to two I.P. addresses and power-cycle output if no response, definable settings
Power Cycling and Rebooting	————	————	Remote on/off control of every output individually
Auto Restore Mode	————	————	Return to previous output settings after a power loss
Power-up Delay Sequencing	————	————	User selectable 0 to 60 second delay between outputs
Auto Load Shedding	————	————	Each output user definable, manual or auto restart
Remote Alarms	Independent Form C alarm contacts (C/NO/NC)		

(1) Please follow all recommendations of the manufacturer. Fuses, breakers and wiring should be continuously operated at no more than 80% of their current rating.
(2) Ships from factory with 12 - 15A FKS ATO 80VDC rated fuses installed.
(3) Hydraulic/magnetic breakers not included, must be ordered separately.

ACCESSORIES

	5 AMP	10 AMP	15 AMP	25 AMP	30 AMP
Hydraulic/magnetic circuit breaker	ICT-CB5	ICT-CB10	ICT-CB15	ICT-CB25	ICT-CB30
80 volt, 15 Amp ATO fuse			ICT-80VF15		
Blanking plate for unused breaker positions	ICT-BLP				
ICT 23 to 19 inch, 1RU rack mount reducer kit	ICT-RA2319				

DISTRIBUTION SERIES 3

ICT240DB-8IRC Dual Bus Front Access Intelligent DC Load Distribution Panel

The ICT240DB-8IRC provides high current 48, 24 and 12 volt DC dual bus DC distribution capability for sites requiring IP-based remote monitoring and power control of connected loads where front access to all connections and functions is required. Each bus is rated at 120 Amps peak and provides four breaker-protected outputs. TCP/IP remote management and power control are standard, allowing remote monitoring of individual loads as well as power-cycling, rebooting, and load shedding of individually selected outputs. The integrated web server provides an intuitive, easy to use browser interface, and SNMP is supported.

FC RoHS CE

Overview

The ICT240DB-8IRC Front Access DC Distribution Panel provides a dual bus, common ground 1RU solution for applications requiring remote monitoring and power control of individual loads. The on-board TCP/IP and web server provide an easy to use, graphical user interface for remote management and power control of system and individual outputs. Each bus supports up to four 30A hydraulic/magnetic breakers for 48, 24, or 12 volts DC.

Dual voltages and polarities can be supported on a single panel, useful for sites requiring -48 and +24 volts DC to be distributed simultaneously.

Alarms can be sent to multiple email accounts, and each output has definable load-shed settings. The network watchdog feature will ping a pre-determined I.P. address, such as a router, and power-cycle the device if not answered.

There are four digital inputs for connecting site monitoring sensors such as door, fire, and water alarms, and one dedicated temperature sensor input. These alarms can be given individual names and be sent as email alarm notifications.

The on-board web server means there is no software to maintain, and SNMP is also supported. Firmware can be updated remotely over the Ethernet link.

The ICT240DB-8IRC allows each connected load to be monitored, power cycled, or taken off-line. This functionality can be used to conserve power, troubleshoot devices, and reboot connected loads remotely, possibly preventing or delaying the need for an costly site visit.

Features

▶ 200A continuous system rating / 100A per bus
▶ 30A max. breakers per output at 48, 24, or 12 VDC
▶ TCP/IP remote management and power control of individual outputs
▶ Four fully managed outputs per bus
▶ Independent Form C alarm contacts for each bus
▶ Mixed voltages and polarity support
▶ Remote firmware update capability
▶ HTTPS, SMTP, SNMP protocols supported
▶ Monitoring and alarm reporting of each output for pinpointing of issues with connected loads
▶ Each output has adjustable load-shed settings
▶ Adjustable power-on sequencing
▶ Site monitoring sensor inputs with alarm reporting
▶ Data logging

Applications

▶ LTE/Small Cell
▶ Radio Access Networks
▶ DAS
▶ Fixed Wireless Broadband
▶ RF Wireless Systems

DUAL BUS DISTRIBUTRION PANELS

12VDC 24VDC 48VDC -48VDC 2 x 100A Smart

Power Specifications

Operating Voltage Range (pos or neg ground)	10-60VDC
System Current Rating (peak/cont)	240A / 200A
A/B Bus Current Rating (peak/cont)	120A / 100A
Number of Outputs per Bus	4
Max. Breaker Size (12, 24V, 48V)	30A
Output Rating, continuous (12, 24V, 48V)	25A

Environment

Operating Temperature Range	-30°C to +60°C
Cooling	Temperature Controlled Fan

Mechanical

Form Factor	1RU - 19 Inch rack mount
Dimensions L x W x H	6.4 x 19.0 x 1.7 in 163 x 483 x 44 mm
Weight (lbs/kg)	4.6 lbs / 2.1 kg
Connectors	Dual 1/4" - 20 input studs with 0.625" spacing, 30 Amp terminal blocks

Design Standards

Safety	CSA/UL/IEC 60950-1
Emissions	EN61000-6-3, FCC Part 15 Class B limits, CE

Warranty

Two years

Communications and Control

Ethernet	TCP/IP built-in web server and graphical user interface, 10/100BASE-T, IEEE 802.3 compatible
Supported Protocols	IPv4, HTTP, HTTPS, SMTP, DNS, TCP, UDP, ICMP, DHCP, ARP, SNMP v1/v2c/v3
SNMP Ports	UDP Port 161, SNMP Traps: UDP Port 162
Firmware Upgrades	Upgradeable over Ethernet
Security	Password protection, HTTPS encryption, TLS 1.0
8 Channel Output Monitoring	Current draw measured and reported for each output, user definable under and over current alarms
Email and SMS Alerts	Multiple email or text accounts, adjustable intervals
Data Logging	Up to 30 days at 1 minute sampling rate, csv file download, major event logging
Network Watchdog	Autonomously ping up to two I.P. addresses and power-cycle output if no response, definable settings
Power Cycling and Rebooting	Remote on/off control of every output individually
Auto Restore Mode	Return to previous output settings after a power loss
Power-up Delay Sequencing	User selectable 0 to 60 second delay between outputs
Auto Load Shedding	Each output user definable, manual or auto restart

Configurable Alarms

▶ Channel over current threshold
▶ Channel over/under current
▶ Bus over current
▶ Automatic load shedding
▶ Bus over/under voltage threshold
▶ Site monitoring input contact status (4)
▶ Temperature over/under alarm reporting (requires ICT-TMP)

Site Monitoring Inputs

Voltage free digital inputs	4
Analog temperature input	1
Temp Sense Probe	ICT-TMP
Connector type	Cage clamp 16-26AWG

Ordering Information

Model Number	Description
ICT240DB-8IRC	Front access dual bus common ground DC distribution panel
ICT-CB5 [1]	5 Amp hydraulic/magnetic breaker
ICT-CB10 [1]	10 Amp hydraulic/magnetic breaker
ICT-CB15 [1]	15 Amp hydraulic/magnetic breaker
ICT-CB25 [1]	25 Amp hydraulic/magnetic breaker
ICT-CB30 [1]	30 Amp hydraulic/magnetic breaker
ICT-BLP [1]	Breaker Position Blanking Plate
ICT-TMP [2]	Temperature Sense Probe with 3M (10ft) cable
ICT-RA2319 [2]	ICT 23 to 19 inch, 1RU rack mount reducer kit

(1) Hydraulic/magnetic breakers and blanking plates not included, must be ordered separately.
(2) Option, orderable separately