

ACB Special Build Order Form v3.0



- Check option boxes with a cross and enter configuration details (voltages etc) where appropriate
- Supply one order form per each ACB configuration

Customer Name: _____
 NHP Contact: _____
 Project Name: _____
 ACB Name: _____
 Customer Order Number: _____
 Requested Delivery Date: ACB Carriage: _____ ACB Body: _____

ACB Type Required - enter the current and kA rating, or select the appropriate model number	Required ACB current rating: _____ A	Required short-circuit rating: _____ kA	Mains 3-phase voltage: _____ VAC
	Enter the above current and short-circuit ratings, or select the required ACB model from the following:		For DC voltages please contact NHP
	AR2 frame size <input type="checkbox"/> AR208S <input type="checkbox"/> AR212S <input type="checkbox"/> AR216S <input type="checkbox"/> AR220S <input type="checkbox"/> AR212H <input type="checkbox"/> AR216H <input type="checkbox"/> AR220H	AR3 frame size <input type="checkbox"/> AR325S <input type="checkbox"/> AR332S <input type="checkbox"/> AR325H <input type="checkbox"/> AR332H <input type="checkbox"/> AR316H <input type="checkbox"/> AR320H	AR4 frame size <input type="checkbox"/> AR440S <input type="checkbox"/> AR440SB
Pole configuration: <input type="checkbox"/> 3-pole <input type="checkbox"/> 4-pole	ACB quantity: _____	Select one or both of the following: <input type="checkbox"/> ACB Body <input type="checkbox"/> ACB Carriage	

Carriage Terminals Required for ACB carriage	Top terminals:	<input type="checkbox"/> Vertical	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Front
	Bottom terminals:	<input type="checkbox"/> Vertical	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Front

Horizontal and Front terminals are not available on ACB's rated 4000A and above

ACB Trip Unit Required - select one trip unit and one curve type, then complete the trip unit specification details, then select if ground fault is required	Trip unit: <input type="checkbox"/> TemPro PLUS AGR-21C <small>Standard Trip Unit with ammeter display</small> <input type="checkbox"/> TemPro PREMIER AGR-31C <small>Advanced Trip Unit with integral energy analyser</small> <input type="checkbox"/> Non-Auto <small>No Trip Unit nor Current Transformers</small>	Trip unit curve type: <input type="checkbox"/> L Type <small>Standard protection curve for general power distribution and transformer protection (IEC 60947-2, low voltage circuit breakers)</small> <input type="checkbox"/> R Type <small>High selectivity curve for when selectivity cannot be achieved with other system protective devices (e.g. Fuses and other relays)</small> <input type="checkbox"/> S Type <small>For generator protection (Lloyds Register of Shipping for marine generator protection). Ground Fault (GF) is not available with this trip unit type. For S Type trip unit curve the generator full-load current must be entered below:</small>
	Trip unit current setting (long-time): _____ A	Generator full load current (S Type only): _____ A
	Trip unit control voltage: <input type="checkbox"/> 100-120 VAC <input type="checkbox"/> 100-125 VDC <input type="checkbox"/> 24 VDC <input type="checkbox"/> 200-240 VAC <input type="checkbox"/> 200-250 VDC <input type="checkbox"/> 48 VDC <small>For transfer switch applications with ATyS C55/C65, control voltage must be 240VAC.</small>	
	Ground fault: <input type="checkbox"/> Disabled <input type="checkbox"/> Enabled <input type="checkbox"/> External Ground fault CT	
	Optional trip unit configuration settings: Long time setting (optional): Time: _____ sec Short time setting (opt.): Pickup: _____ A Time: _____ sec Instantaneous setting (opt.): Pickup: _____ A Ground fault setting (opt.): Pickup: _____ A Time: _____ sec ACB CT rating (opt): _____ A	

Additional Trip Unit Special Application Functions Optional - select special application functions as required	Special application function: <small>For further information on these functions please contact NHP</small>	Trip unit compatibility:																			
	<input type="checkbox"/> Ground fault trip (GFT) ^{1) 3)}	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td></td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S	•	•		•	•	•	
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	L	R	S	L	R	S															
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	<input type="checkbox"/> Zone interlocking (Z)	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td></td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td></td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S	•	•		•	•		
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<input type="checkbox"/> Neutral phase protection (NP) ²⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S				•	•	•		
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<input type="checkbox"/> Negative-phase sequence protection (NS) ³⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S								
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<input type="checkbox"/> Reverse power trip (RPT) ³⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S								
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<input type="checkbox"/> 3C Over temperature monitoring and alarm (OH) ³⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S				•	•	•		
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<input type="checkbox"/> Under/Over frequency protection (UFOF) ³⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S				•	•	•		
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<input type="checkbox"/> Overvoltage alarm (OV) ⁴⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S								
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<input type="checkbox"/> Restricted Earth Fault (REF) ^{1) 2) 3)}	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td></td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S				•	•			
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<input type="checkbox"/> Additional Pre-Trip Alarm (PTA2) ⁴⁾	<table border="1"> <tr> <th colspan="3">AGR-21</th> <th colspan="3">AGR-31</th> </tr> <tr> <th>L</th> <th>R</th> <th>S</th> <th>L</th> <th>R</th> <th>S</th> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">•</td> <td></td> <td></td> <td style="text-align: center;">•</td> </tr> </table>	AGR-21			AGR-31			L	R	S	L	R	S			•			•	1) Ground Fault CT required for 3-pole ACB with ground fault, or for 4-pole ACB with REF 2) 4-pole ACB required 3) Only one option selectable per ACB: NS, OH, UFOF, REF and RPT/GFT (L/S curve) 4) Only one of the following options are selectable per ACB: PTA2, UV, OV, or *ACB ON/OFF control via MODBUS* function	
AGR-21			AGR-31																		
L	R	S	L	R	S																
		•			•																

Communications

Required - select one

- MODBUS RTU (standard) MODBUS TCP Ethernet IP DeviceNET Profibus BACnet

Please note Modbus TCP, Ethernet IP, DeviceNET, Profibus, BACnet and other protocols are via an external communication gateway

Tripping Options

Optional - select shunt trip options as required

- Shunt trip (Continuously rated):

Standard shunt trip

Please provide operating voltage:

Voltage: _____ V AC DC

If two independent shunt circuits required, select both continuously rated and special shunt controller options. For transfer switch applications with ATyS C55/C65, motor voltage must be 240VAC.

- Special shunt controller

(Continuously rated):

Special shunt controller

Please provide operating voltage:

Voltage: _____ V AC DC

For closed transition applications or if an undervoltage trip is required, select this shunt controller option.

- Single-phase undervoltage trip (UVT):

Please provide operating voltage and select if instantaneous or time delayed 500ms:

Voltage: _____ V AC DC

- Instantaneous Time Delayed

Closing Options

Required - select either manual charging or motor charging, then select other closing options if required

- Manual Charging or

Please select either manual charging or motor charging

- Motor Charging:

Supply Voltage: _____ V AC DC

For transfer switch applications with ATyS C55/C65, motor voltage must be 240VAC.

- Spring charge indicator

Optional for either manual charging or motor charging

- Latch Release Coil (LRC): _____ V AC DC

Optional with manual charging, required for motor charging

- Split voltage for charging motor control circuit

Separate power supplies for charging motor and LRC. Required if charging motor and LRC voltages are different, optional when voltages are the same (used for TemRack iR integrated remote racking in some cases)

- ACB ON/OFF control via MODBUS ⁴⁾

Operating voltage for charging motor and LRC must be the same for control via MODBUS

Locking-off and Interlocking Accessories

Optional - select if off padlock is required, or if key interlocking is required, and select if mechanical interlocking is required

- Off Padlock or

Optional padlockable accessory fitted in lieu of key barrel, preventing the ACB from being switched on

- Key Interlocking:

If key interlocking is enabled, select one of the below

- Allen-Bradley ProSafe

- Fortress

- Internal key interlock mechanism only

Key code (required): _____

- Castell

- Ronis

- Mechanical Interlocking:

If mechanical interlock is enabled, select one of the following interlock types and specify the cable length

- Type C

Two ACBs interlocked. One of two ACBs can be closed

- Type B

Three ACBs are interlocked. One or two ACBs out of three can be closed

- Other

Other variations are available, please contact NHP or consult the [NHP ACB Technical Catalogue](#) for more details.

Cable length: 2m 4m

Draw-out and Indicator Options

Optional - select as required

Standard included features:

- Main circuit safety shutter
 Control circuit safety shutter
 Control circuit terminal cover
 Auto spring discharge ⁵⁾
 Draw-out handle
 7C/O auxiliary switches (AXR-7C) ⁶⁾

Optional features:

- Main circuit safety shutter padlock
 Door interlock ⁵⁾
 Trip indication contact
 System alarm contact
 Internal racking handle
 10C/O auxiliary switches (AXR-10C) ⁶⁾
 Position switches (ALR-2/4C):

1x Insert, 1x Isolated, 1x Test and 1x Connected contacts as standard (1111). Please consult the [NHP ACB Technical Catalogue](#) for more configuration options.

Insert Isolated Test Connected

General Accessories

Optional - select as required

Standard included accessories:

- Position padlock facility
 Padlockable ON/OFF button cover
 Door flange IP41
 Instruction manual

Optional accessories:

- Open/Close cycle counter
 Interpole barriers
 Padlockable IP55 door cover
 Test jumper lead: Quantity: _____
 Incorrect insertion device:
Select 1x number and 1x letter per incorrect insertion device
- Fixing bolts
 Lifting plates
 T2ED external digital display
 Carriage rear insulation cover
- 1 2 3
 A B C

TemRack iR Integrated Remote Racking

Optional - select as required

- TemRack iR integrated remote racking fitted to ACB Body and Carriage

The following ACB configuration options are required for TemRack iR integrated remote racking:

- Motor Charging and LRC (see *Closing Options*)
- Position Switches (see *Draw-out and Indicator Options*)

Please note the racking motor requires a 24VDC power supply.

If the charging motor operating voltage is also 24VDC, a separate power supply must be provided for the racking motor

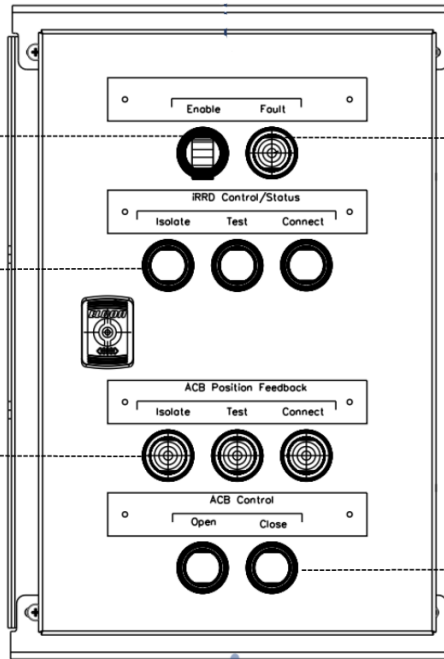
- Local Control Station (LCS)

Optional local control station custom manufactured by NHP for remote racking operation.

See next page for additional configuration details.

Number of ACBs to control 1 2 3 Other (please specify) _____

Example of Local Control Station (LCS) for one ACB



Enable Switch

Activates the TemRack iR enable signal – Illuminated solid green LED when the ENABLE signal is active

IRRD control/status

- LED illuminated momentary pushbuttons .
- Press pushbuttons to issue a racking command
- Flashes while the racking process is in motion
- Illuminated solid when the TemRack iR registers it is in the ISOLATE/TEST/CONNECT position

ACB Position Feedback

LED illuminated indicators – Illuminated solid for when the ACB in ISOLATE/TEST/ CONNECT position

Fault Status Indicator

- The indicator will illuminate and flash several times followed by a pause in the sequence.
- The number of flashes corresponds to the fault code which can be used to assist in troubleshooting

ACB Control

- LED illuminated momentary pushbuttons – Press pushbuttons to issue a command to OPEN/ CLOSE the ACB
- Illuminated solid when ACB contacts are OPEN or CLOSED

Local Control Station (LCS)

Additional requirements for LCS (PLC I/O Interface, Enclosure size etc.):

Customer Sign Off
Required

I confirm the ACB configuration as detailed within this order form is correct:

Signed: _____

Date: ____/____/____

FOR NHP OFFICE USE ONLY

Quote reference number: _____

Sales Order No.: _____

Ordering branch / Agent: _____

Prepared by: _____

Special instructions / NHP SR number: _____

Notes

For more information on Terasaki TemPower 2 AR ACBs and the features listed within this order form, please contact NHP or consult the [NHP ACB Technical Catalogue](#)
Please note that not all requested ACB features may be able to be accommodated due to terminal/wire count limitations

- | | |
|---|---|
| <p>1) Ground Fault CT required for 3-pole ACB with ground fault, or for 4-pole ACB with REF</p> <p>2) 4-pole ACB required</p> <p>3) Only one option selectable per ACB: NS, OH, UFOF, REF and RPT/GFT (L/S curve)</p> | <p>4) Only one of the following options are selectable per ACB: PTA2, UV, OV, or *ACB ON/OFF control via MODBUS* function</p> <p>5) Not available with TemRack iR integrated remote racking</p> <p>6) AR6 ACB with trip unit only available with 4 C/O (AXR-4C)</p> |
|---|---|