



## ACB Retrofits – Purchasers Checklist

Clearly, we are very experienced in carrying out a wide range of ACB retrofits with over 500 in service and are continually involved in such projects. However, most purchasers or specifiers are only involved in such projects rarely. We have therefore used our experience to provide a checklist that you may find useful to assist in your decision making as to who is best suited to carry out your ACB retrofit project. We also include some explanatory notes on each point. For further clarification please do not hesitate to contact us by any of the methods above.

No.	Question	Notes	exellison	Other
1.	Does the retrofit replace the old isolating contacts?	<i>If you are not replacing the main isolating contacts then you are only doing half a job. All of the power passes through these contacts – are you prepared to continue to use aged contacts the contact pressure of which is produced by aged springs. In our opinion any ACB replacement MUST replace these old components – see separate sheet for full explanation.</i>	YES	?
2.	Can you have your choice of ACB?	<i>We offer the following ACB Manufacturers: ABB, Schneider, Mitsubishi, Siemens, Terasaki, Eaton. If you have another preference we will design a solution for you.</i>	YES	?
3.	Does the retrofit replace the old moving Chassis?	<i>If the proposed retrofit uses a refurbished old ACB chassis then you are relying on aged worn components. Availability is limited and spares difficult to obtain. We replace the whole ACB. Fixed and moving portions.</i>	YES	?
4.	Does the retrofit replace the old racking mechanism?	<i>Some retrofits utilise old mechanisms to insert and withdraw the retrofit. This has consequences with interlocking between the ACB and chassis such that the ACB must be off before inserting or withdrawing. Castell locks or other devices are required which may complicate the operation of the device – very confusing in a shutdown / emergency situation. Old mechanisms are prone to jamming / seizing. We replace every part of the old ACB.</i>	YES	?
5.	Is a TRUE 4-Pole available	<i>Plug-in retrofits can not provide a true 4-pole ACB. Instead you may find a separate solenoid operated contact is used. This introduces major reliability and timing issues to the fourth pole and the ACB open/closed indicator is NOT mechanically connected to the 4<sup>th</sup> pole! In our opinion this is totally unacceptable and should be rejected. Where 4-pole ACBs are required, we use true 4-pole ACBs with no complications. We retain all of the standard interlocking and indication without modification.</i>	YES	?
6.	Does the retrofit include new CTs	<i>We always include a new set of CTs within our new retrofit assembly. These are used for the new multi-function metering as well as Power Factor Correction</i>	YES	?



		<i>reference. We have found on a number of occasions that a customer loses his PFC because a shoddy ACB retrofit has been carried out and the PFC reference CT has been removed. We include any PFC CT and pick up the loom wiring to ensure your PFC continues to operate.</i>		
7.	Does the retrofit include new fuses	<i>We fit new backup fuses directly to our own copperwork. This allows our new assembly to be completely self-contained. We can then fully bench-test the whole assembly including all control signals and metering prior to delivery. Witness testing at our factory is always encouraged.</i>	YES	?
8.	Is metering included	<i>We fit metering as standard as part of our self-contained assembly. We use Socomec, Schneider and Rayleigh Instruments as standard but you may specify your own preference.</i>	YES	?
9.	Does the retrofit automatically pick up control wiring?	<i>Our assembly includes wiring from the new ACB to a set of terminals that pick up the existing standard wiring loom. Any existing control scheme will continue to operate correctly. We can of course offer a complete control scheme overhaul if required.</i>	YES	?
10.	Can the new ACB be simply replaced?	<i>We utilise completely standard off the shelf ACBs in our retrofit. They are not modified in any way. Therefore you can obtain spares or replacements simply yourselves. A plug-in retrofit may require mounting on old chassis etc. before they can be used. This is difficult and time-consuming and may result in you having to resort to the retrofit supplier for any future spares requirements limiting your future options.</i>	YES	?
11.	Can accessories be fitted simply.	<i>Do you have to strip down your assembly to access the accessories? Again, we use a standard ACB unmodified in any way. Accessories are fully accessible.</i>	YES	?
12.	Can the new ACB be simply maintained?	<i>Because we use standard unmodified ACBs, maintenance remains simple. No additional knowledge other than the usual skills required for ACB servicing is required. All parts remain accessible and the ACB is fully removable for servicing or replacement.</i>	YES	?
13.	Does the installation include a free busbar inspection and clean?	<i>We replace the whole ACB right back to your busbars. During this process we provide a full survey and clean of the existing busbar system. If you are shutting down to replace your ACBs you should verify that your switchboard is up to the job.</i>	YES	?