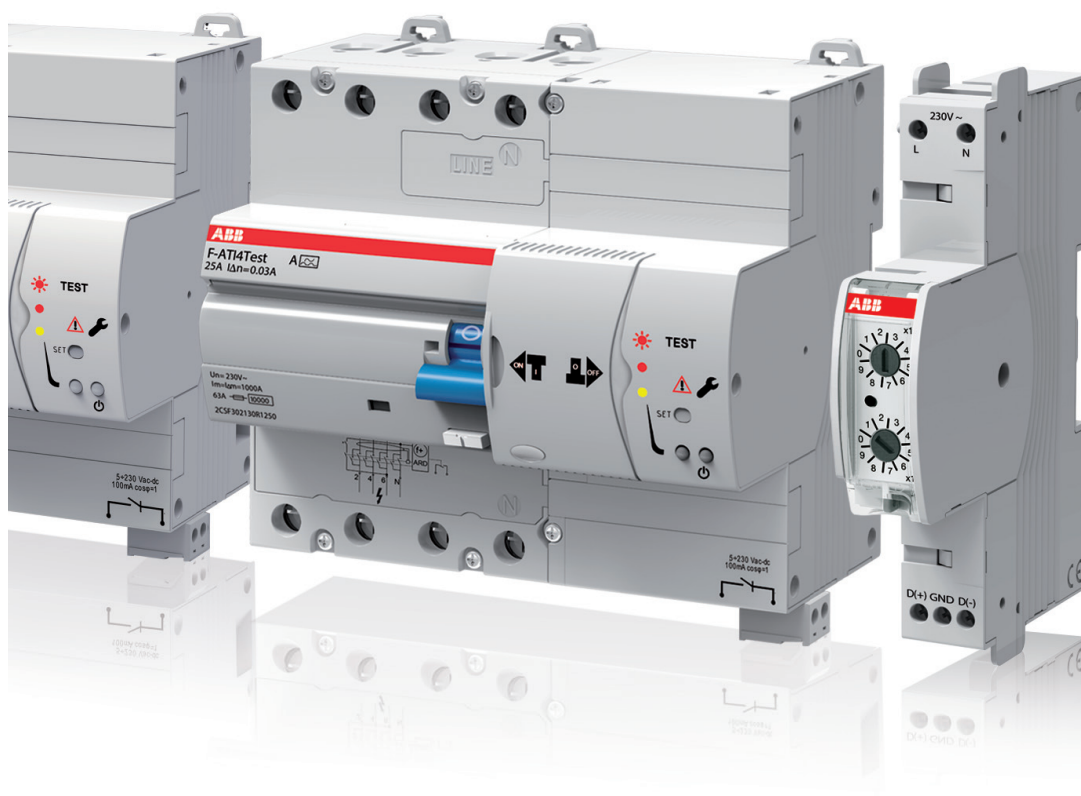


New autoreclosing devices
with automatic test features

Introduction

F-ATI and F-ARI Test are RCCBs equipped with automatic test features. RCCBs are supposed to be checked every six months in order to make sure that the contacts are working properly and the device is able to trip in case of a leakage to earth. This operation affects the operational continuity of the circuits downstream. F-ATI and F-ARI Test ranges push the periodic test to another level as this is run automatically and with no interruption at all of the service. Therefore, also the operations carried out by maintenance personnel are reduced to the very minimum.

In addition to the automatic test, F-ARI Range features a reclosing unit that tries to reclose the RCCB as it trips. The reclosing operations are based on an insulation check to make sure that no permanent fault is present. Moreover, the results coming from each and every circuit are collected at once thanks to ARBus interface.



F-ARI and F-ATI are particularly recommended for environments where operational continuity is key and the impact of maintenance cost is significant. In fact, applications such as airports and hospitals need a thorough check of the installed

RCCBs to make sure they are always up and running. Not only is the periodic test performed automatically with no interruption of the service, but also it can be automated remotely thanks to the communication unit, via protocol Modbus RS485.



Saving

Maintenance costs are cut down as the device runs automatically the test monthly in accordance with EN 61008 provisions.



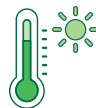
Time saving

A full array of 99 devices can be commanded and read by remote by the means of the ARBus interface.



Quality

F-ATI Test range is approved by VDE while F-ARI Test is approved by IMQ CSV.



Reliability

Suitable for demanding environments up to 60 °C.



Uptime

While running the test, no disconnection of the supply occurs like in the traditional RCCB units.



Easy installation

The unit is factory fitted and it needs no coupling.



Smart

Complete monitoring over the application thanks to a fault check system and a programmable aux contact.

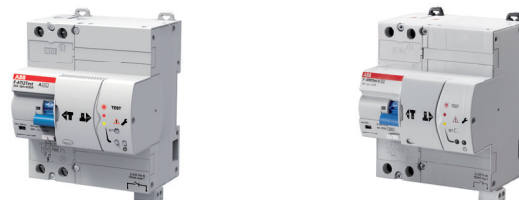


High immunity

RCCBs Type A APR provides anytime a reliable protection that prevents the unit from unwanted trippings.

F-ATI test and F-ARI Test

Technical features



Type		F-ATI Test	F-ARI Test
Reference Standards		EN61008-1, VDE V 0664-120 (annex M)	EN61008-1, CPT054, EN50557
Electrical features	Distribution system	TN, TT, IT	TN, TT
	Rated voltage U_0	230-400 V a.c. -15% ÷ 10%	
	Rated frequency	50 Hz	
	Rated current I_n	25, 40, 63 A	
	Rated sensitivity $I_{\Delta n}$	30, 300 mA	
	Type	A, AP-R	
	Poles	2P, 4P	
	Insulation voltage U_i	500 V d.c.	
	Minimum test voltage U_{min}	195 V a.c.	
	Rated non-operating resistance between live parts and earth R_{do}	8 k Ω (30 mA)	2,5 k Ω (300 mA)
	Rated operating resistance between live parts and earth R_d	16 k Ω (30 mA)	5 k Ω (300 mA)
	Rated conditional short-circuit I_{nc}	10 kA (SCPD – gL fuse 63 A for I_n 25, 40 A; gL fuse 80 A for I_n 63 A)	
	Dielectric test voltage at ind. freq. for 1 min	2,5 kV	
	Rated impulse withstand voltage (1,2/50) U_{imp}	4 kV	
	Power consumption	3,5 W (25 A); 6 W (40 A); 12 W (63 A)	2,2 W (25 A); 5,4 W (40 A); 6,2 W (63 A)
	Power consumption during operation	41 VA	
Other features	Test cycle time	< 7 s	
	Reclosing time	< 10 s (6 s check, 3 s reclosing)	
Mechanical features	Protection degree	IP20 (terminals)	IP40 (housing)
	Contact position indicator CPI	yes	
	Mechanical life	4000	
Installation	Tightening torque	2 Nm	
	Ambient temperature	-25...+60 °C	
	Storage temperature	-40...+70 °C	
Auxiliary contact	Type	NO-NC-NO+pulse (100 ms)	
	Operating features	5 ÷ 230 V a.c./d.c. I_{max} 100 mA	
	Terminals cross section	2,5 mm ²	
	Tightening torque	0,4 Nm	
Dimensions	DIN modules	5 (2P); 7 (4P)	
	Weight	550 g (2P); 900 g (4P)	



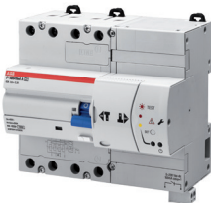
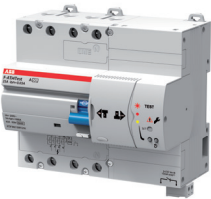
		ARBus
Electrical features	Rated voltage U_0	230 V a.c. -15% ÷ 10%
	Rated frequency	50 Hz
	Insulation voltage U_i	500 V d.c.
	Rated conditional short-circuit I_{nc}	10 kA (SCPD – gL fuse 63 A for I_n 25, 40 A; gL fuse 80 A for I_n 63 A)
	Rated impulse withstand voltage (1,2/50) U_{imp}	4 kV
	Power consumption	1 W
Installation	Terminals	2,5 mm ²
	Tightening torque	0,4 Nm
	Ambient temperature	-25...+60 °C
	Storage temperature	-40...+70 °C
Communication	Protocol	Modbus RS485
	Baud rate	38400
	Addresses	1...99
	Tightening torque	0,4 Nm
Dimensions	DIN modules	1
	Weight	180 gr

Back-up

2P	Rated current [A]		25	40	63	80	100
Single phase circuit with neutral 230-240 V	Fuse gG 25 A	kA	10				
	Fuse gG 40 A		10	10			
	Fuse gG 63 A		10	10	10		
	Fuse gG 100 A		10	10	10		
	S800 S		6	9	10		
	S800 N		6	9	10		
	S200		7	7	5		
	S200 M		7	7	5		
	S200 P		7	7	5		
4P	Rated current [A]		25	40	63	80	100
Three phase circuit with neutral 400-415 V	Fuse gG 25 A	kA	10				
	Fuse gG 40 A		10	10			
	Fuse gG 63 A		10	10	10		
	Fuse gG 100 A		10	10	10	10	10
	S800 S		10	10	10	10	10
	S800 N		10	10	10	10	10
	S200		10	10	10	10	10
	S200 M		10	10	10	10	10
	S200 P		10	10	10	10	10

F-ATI test and F-ARI Test

Order codes



F-ATI Test series							
Poles	Rated current In [A]	Sensitivity mA	ABB type	ABB code	Bbn 8012542	Modules	Weight g
1P+N	25	30	F-ATI2Test A-25/0.03	2CSF302130R1250	288855	5	550
	40	30	F-ATI2Test A-40/0.03	2CSF302130R1400	288954	5	550
	63	30	F-ATI2Test A-63/0.03	2CSF302130R1630	289050	5	550
3P+N	25	30	F-ATI4Test A-25/0.03	2CSF304130R1250	289159	7	900
	40	30	F-ATI4Test A-40/0.03	2CSF304130R1400	289258	7	900
	63	30	F-ATI4Test A-63/0.03	2CSF304130R1630	289357	7	900
	25	300	F-ATI4Test A-25/0.3	2CSF304130R3250	289456	7	900
	40	300	F-ATI4Test A-40/0.3	2CSF304130R3400	289555	7	900
	63	300	F-ATI4Test A-63/0.3	2CSF304130R3630	289654	7	900

F-ARI Test series							
Poles	Rated current In [A]	Sensitivity mA	ABB type	ABB code	Bbn 8012542	Modules	Weight g
1P+N	25	30	F-ARI2Test A-25/0.03	2CSF302131R1250	289753	5	550
	40	30	F-ARI2Test A-40/0.03	2CSF302131R1400	289852	5	550
	63	30	F-ARI2Test A-63/0.03	2CSF302131R1630	293453	5	550
3P+N	25	30	F-ARI4Test A-25/0.03	2CSF304131R1250	289951	7	900
	40	30	F-ARI4Test A-40/0.03	2CSF304131R1400	290056	7	900
	63	30	F-ARI4Test A-63/0.03	2CSF304131R1630	290155	7	900
	25	300	F-ARI4Test A-25/0.3	2CSF304131R3250	290254	7	900
	40	300	F-ARI4Test A-40/0.3	2CSF304131R3400	290353	7	900
	63	300	F-ARI4Test A-63/0.3	2CSF304131R3630	290452	7	900

ARBus series				
ABB type	ABB code	Bbn 8012542	Modules	Weight g
ARBus	2CSF300130R1989	293354	1	180

F-ATI test and F-ARI Test FAQ

What's the difference between F-ATI and F-ARI range?

F-ATI range features the automatic test of the RCCB unit, whilst F-ARI range features also the automatic reclosing in case of non permanent fault to earth.

What are the products that fit with ARBus communication unit?

ARBus fits with all the devices belonging to either F-ATI and F-ARI range.

How many reclosing attempts does F-ARI range?

F-ARI series does not attempt to reclose, rather it recloses the circuit as soon as the insulation check run every 2 minutes provides a positive outcome.

Can the periodic test be operated manually?

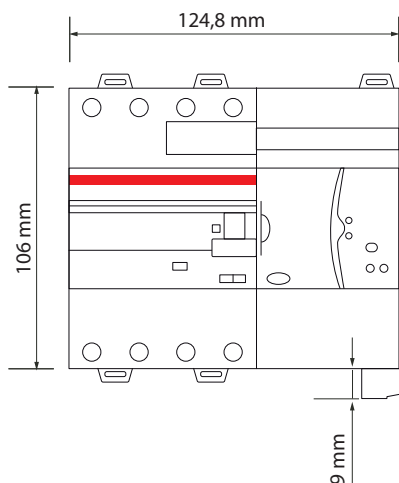
Yes, it can be operated manually pushing the "test" pushbutton like in regular RCDs. In this case, the load won't be supplied.

When is the automatic test run?

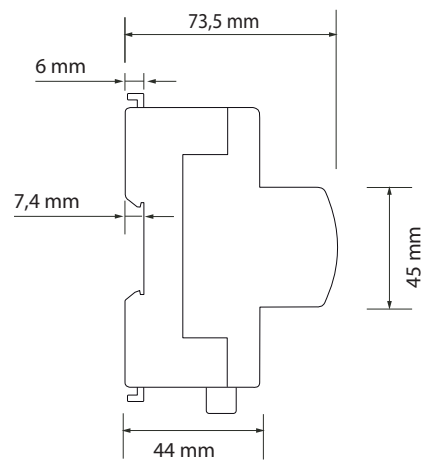
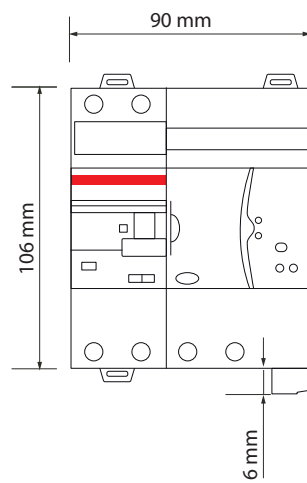
the autotest is run every 28 days.

Overall dimensions:

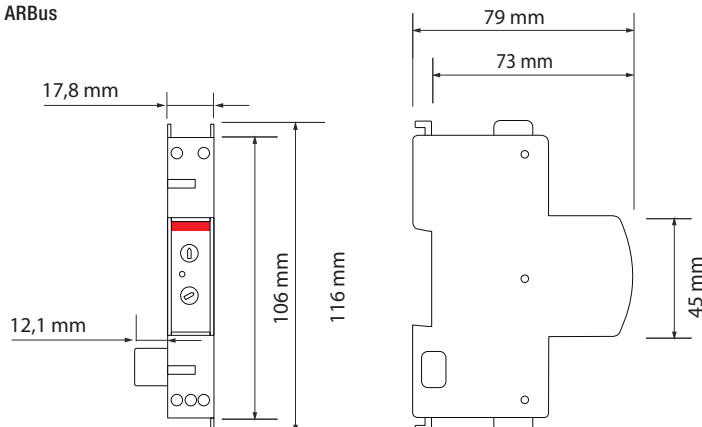
F-ATI Test



F-ARI Test



ARBus



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