90 ReStart

AUTOMATIC RECLOSING DEVICES

GEWISS

RESTART AUTOTEST

Technical data

TYPE		ReStart with Autotest PRO 2P	ReStart with Autotest PRO 4P
Electrical characteristics			
Standards:		IEC EN 63024, IEC EN 61008-1	
Distribution system:		TT - TN-S	
Rated operational voltage (Ue):	(V)	230 AC [1]	400 AC
Minimum operating voltage (min Ue)	(V)	85% Ue	
Maximum operating voltage (max Ue):	(V)	110% Ue	
Rated insulation voltage (Ui):	(V)	500	
Dielectric strength test voltage between pole and earth:	(V)	2500 AC for 1 minute	
Rated impulse withstand voltage (Uimp):	(kV)	4	
Overvoltage category:		III	
Rated frequency:	(Hz)	50	
Residual making and breaking capacity (IΔm):	(A)	630	
Rated conditional residual short-circuit current with fuse (IΔc):	(A)	Type A[IR] and A[S] 10000 (gL 63A) for In=25-40A 10000 (gL 80A) for In=63A Type B 10000 (gL 63A) for In=25-40-63A	
Number of poles:		2	4
Type of associated residual current circuit breaker:		A[IR], A[S], B	
Rated current (In):	(A)	25 - 40 - 63	
Rated residual operating current (IΔn):	(mA)	30 - 300	
Rated non-operating resistance between live parts and earth (Rdo):	(kΩ)	8 (30mA) - 2.5 (300mA)	
Rated operating resistance between live parts and earth (Rd):	(kΩ)	16 (30mA) - 5 (300mA)	
Power loss at In:	(W)	2.2 (25A) - 5.4 (40A) - 6.2 (63A)	3.5 (25A) - 6 (40A) - 12 (63A)
Off-load absorbed power:	(VA)	4 (cosφ=0.2)	
Power absorbed during automatic reclosing:	(VA)	41 (cosφ=0.5)	
Power supply:		from above	
Mechanical characteristics			
Width in DIN modules:		Type A[IR]: 5 Type B: 7	7
Reclosing time:	(s)	10	
Autotest cycle time:	(s)	7	
Maximum operational frequency:	(oper./h)	30	
Max mechanical endurance (total no. operations):		4000	
Maximum no. of consecutive automatic reclosure operations [2]:		3	
Counter reset time no. of consecutive automatic reclosure operations:	(s)	60	
Section of circuit breaker terminals:	(mm²)	flexible cable: ≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10 rigid cable: ≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10	
Rated tightening torque:	(Nm)	2	
Mounting position:		any	
Degree of protection:		IP20 (terminals) - IP40 (front)	
Pollution degree:		2	
Operating temperature:	(°C)	-25 +60 [3]	
Stocking temperature:	(°C)	-40 +70	
Tropicalization:		55°C - RH 95%	
Auxiliary contact characteristics			
Type of contact:		Photomos (potential free contact)	
Operating voltage:	(V)	5÷230 AC/DC	
Operating current:	(mA)	0.6 (min) - 100 cosφ=1 (max)	
Operating frequency:	(Hz)	50	
Category of use:		AC12	
Operating mode:		NO / NC / NC + impulse[4]	
Terminal section:	(mm²)	≤ 2.5	
Rated tightening torque:	(Nm)	0.4	
Autotest FUNCTION			
Regular and automatic RCCB test:		•	
Light signalling for autotest cycle in progress:		•	
Light signalling for any device anomaly:		•	
ReStart FUNCTION			
Automatic reclosure for untimely tripping:		•	
Earth leakage check:		•	
Continuous system check:		•	
Interruption of reclosure operation in the event of a fault:		•	
Signalling of reclosure operation in progress:		•	
Light signalling of failure:		•	
Activation / exclusion of ReStart function:		•	
Auxiliary contact for remote operating status access:		•	
Compatible with ModBus interface module:		•	
Internal electrical protection:		PTC	

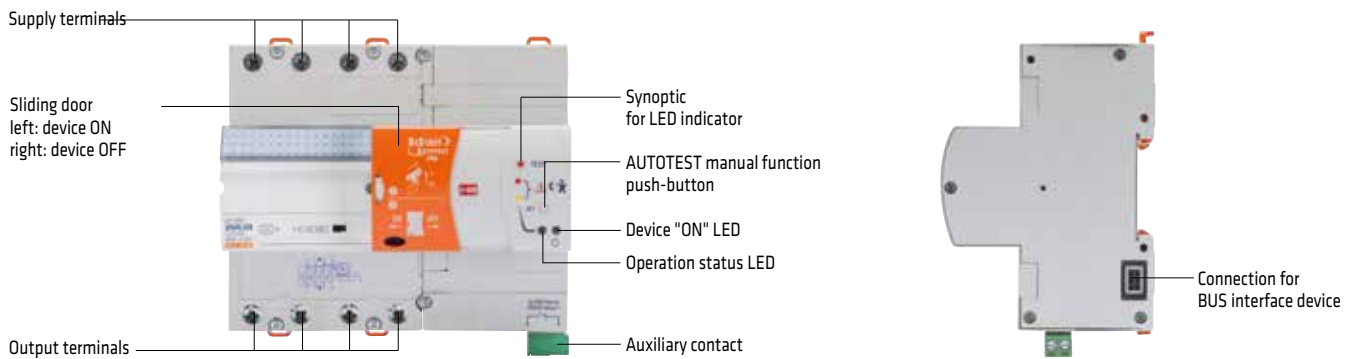[1] 230V phase-neutral power supply [2] In the absence of failure in the system [3] Average daily temperature ≤ +35°C
[4] By setting NC+pulse mode, the auxiliary contact switches for 100ms at the end of each Autotest cycle performed successfully.

For technical information contact the Technical Assistance Service or visit gewiss.com

DEVICE DESCRIPTION

ReStart Autotest PRO 2P

Supply terminals

Sliding door
left: device ON
right: device OFF

Output terminals

Synoptic
for LED indicator

AUTOTEST manual
function push-button

Device "ON" LED

Operation status LED

Auxiliary contact

Connection for
BUS interface device

ReStart Autotest PRO 4P

Supply terminals

Sliding door
left: device ON
right: device OFF

Output terminals

Synoptic
for LED indicator

AUTOTEST manual function
push-button

Device "ON" LED

Operation status LED

Auxiliary contact

Connection for
BUS interface device

AUTOTEST FUNCTION

The AUTOTEST function periodically tests the working of the residual current circuit breaker protection. During the test, a bypass circuit ensures electrical continuity meanwhile an additional RCCB protection device guarantees system safety. The automatic reclosing device ensures the automatic resetting of the lever of circuit breaker in ON position. Moreover, pressing the button on the front of the device at any time, Autotest immediately carries out an automatic test on the RCCB without interupting the power supply. This means test can be carried out during normal day-to-day operations without any inconvenience.

Electrical diagram

Key	
R	Automatic reclosing device
A	Control microprocessor
———	Electrical signals
▬▬▬	Power supply
⌐⌐	Auxiliary contact
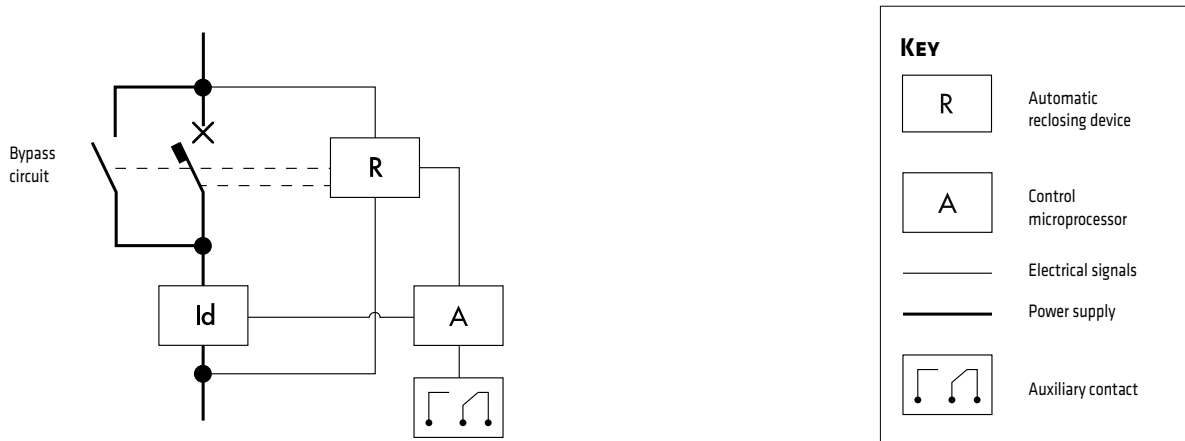
Periodical test function

After installation, it is possible to start up the AUTOTEST function manually (pressing the appropriate button) in order to check if the wiring is correct and to synchronise the periodical test function.
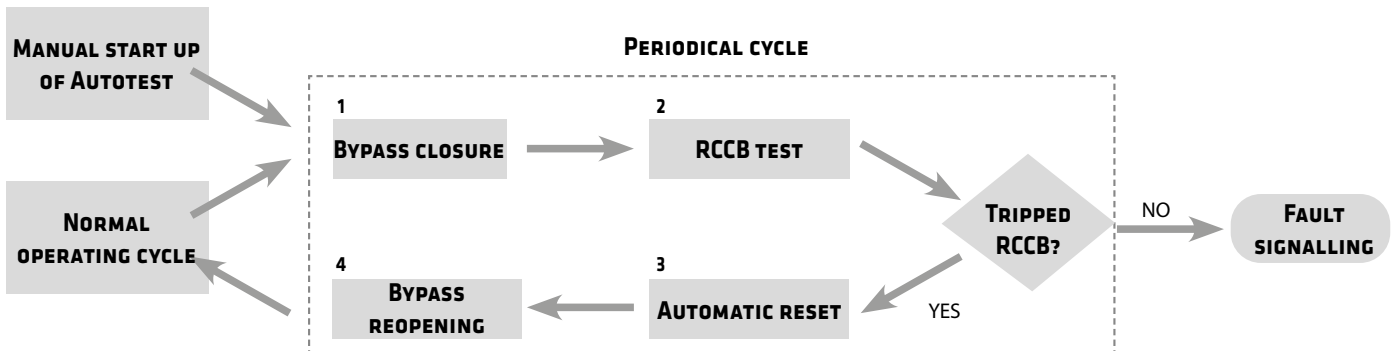
ReStart with Autotest light signalling

ReStart with Autotest is equipped with two LEDs on the front which show the operation conditions of device. Precisely, the right LED is switched on when the device is activated, whereas the left LED shows the operation conditions.

ReStart conditions	ReStart front	Lever position	LED indicators			Description
			Left LED	Right LED	Aux contact	
MANUAL OPERATION						
Deactivated		I	◯	◯	**OFF**	ARD and autotest **OFF**
Deactivated for over 15 minutes		I	◯	◯	**ON**	ARD and autotest **OFF**
Deactivated		O	◯	◯	**OFF**	ARD and autotest **OFF**
AUTOMATIC OPERATING CYCLE (*)						
Normal operation		I	◯	🟢	**OFF**	ARD and autotest ON Automatic functions ON
Electric circuit check		O	🔴 blinking	🟢	**OFF**	ARD and autotest **checks the electric system insulation**
System failure		O	🔴	🟢	**ON**	ARD and autotest in **block condition** due to system fault. **For PRO versions** only, ARD and autotest in **standby condition** due to system fault
Periodic Autotest		I/O	🔴 blinking	🟢	**OFF**	**Electric circuit check in progress** **Electric system supplied**
Device fault		O	🟡	🟢	**ON**	There is a fault in Restart device after testing RCCB. It is possible to restore the proper functions.
Device fault		I	🟡	🟢	**ON**	There is a fault in Restart device after testing RCCB. It is possible to restore the proper functions.
Device failure		I	🟡/🔴 blinking	🟢	**ON**	ARD and autotest **not working** Call a technician for replacement
Device failure		O	🟡/🔴 blinking	🟢	**ON**	ARD and autotest **not working** Call a technician for replacement

(*) Before sliding the plastic cover to the left to activate the device, it is necessary to set the circuit breaker in the "I" position.
NOTE: ReStart device can be in block condition (red led fixed) after 4 following trips too (t≤60s after previous trip).
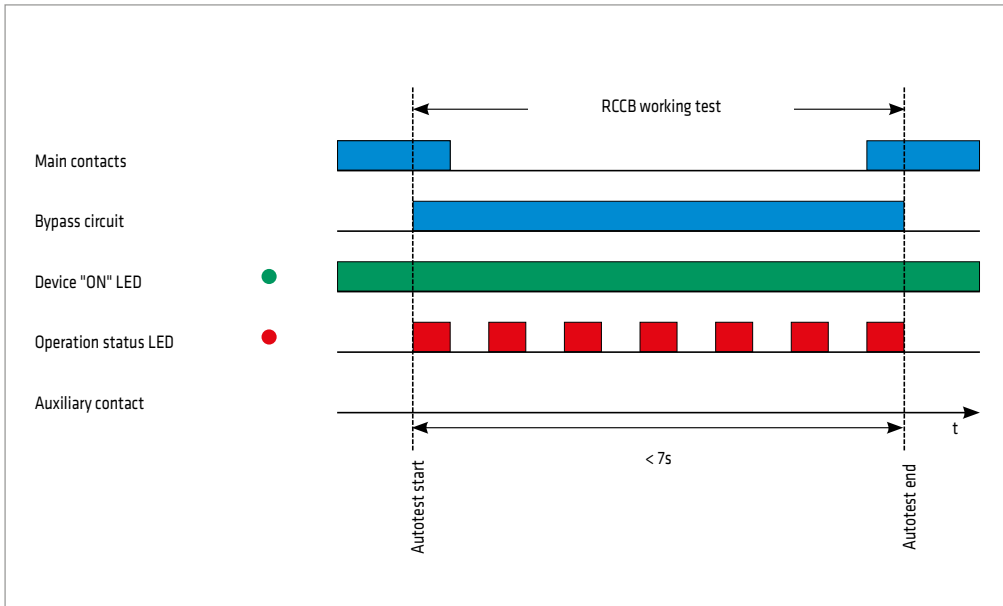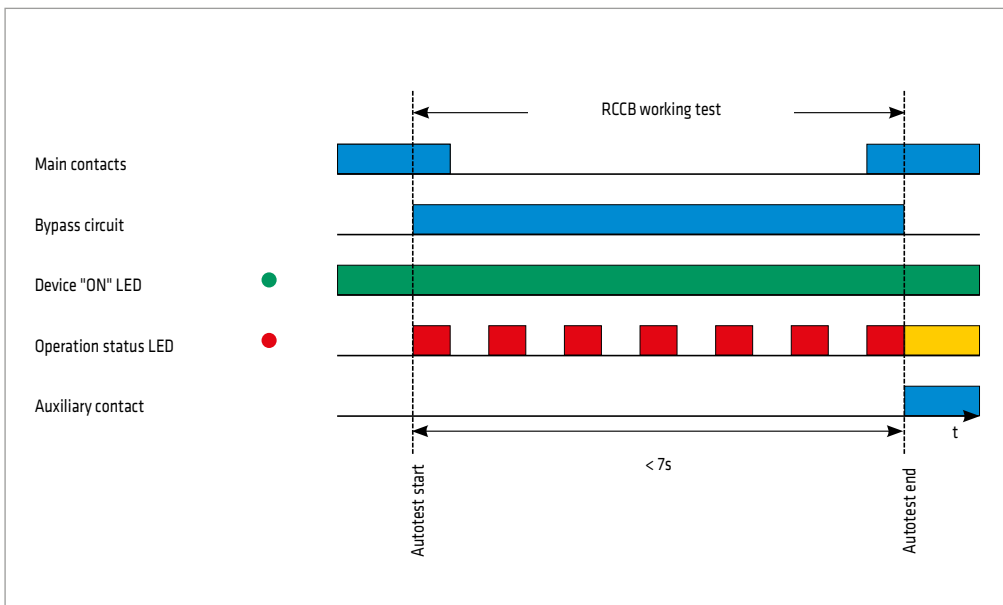
Key
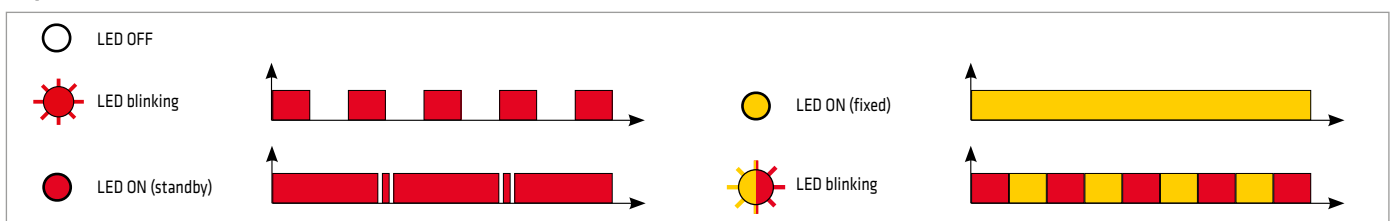
◯	LED OFF		
🔴	LED blinking	🟡	LED ON (fixed)
🔴	LED ON (standby)	🟡/🔴	LED blinking

ReStart with Autotest operation conditions

Autotest function with positive result
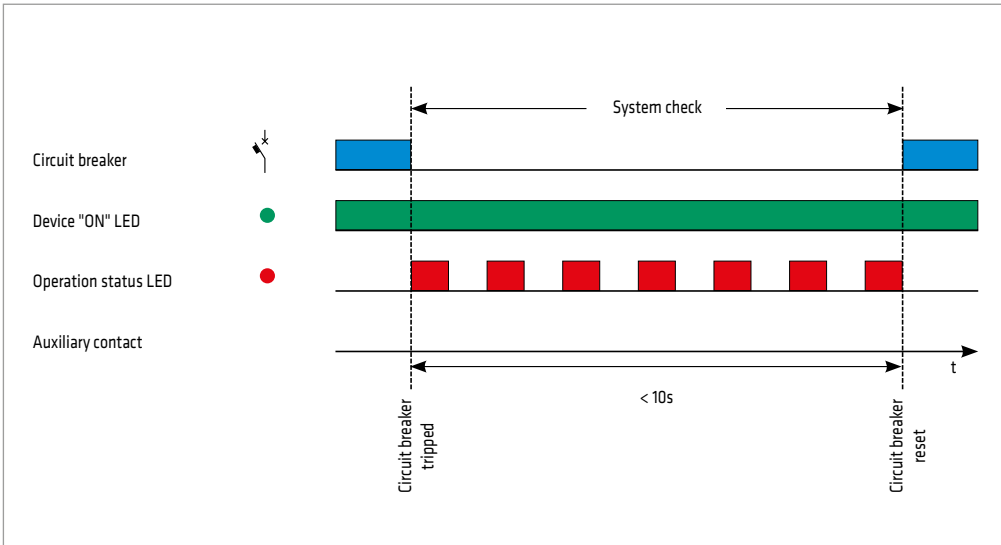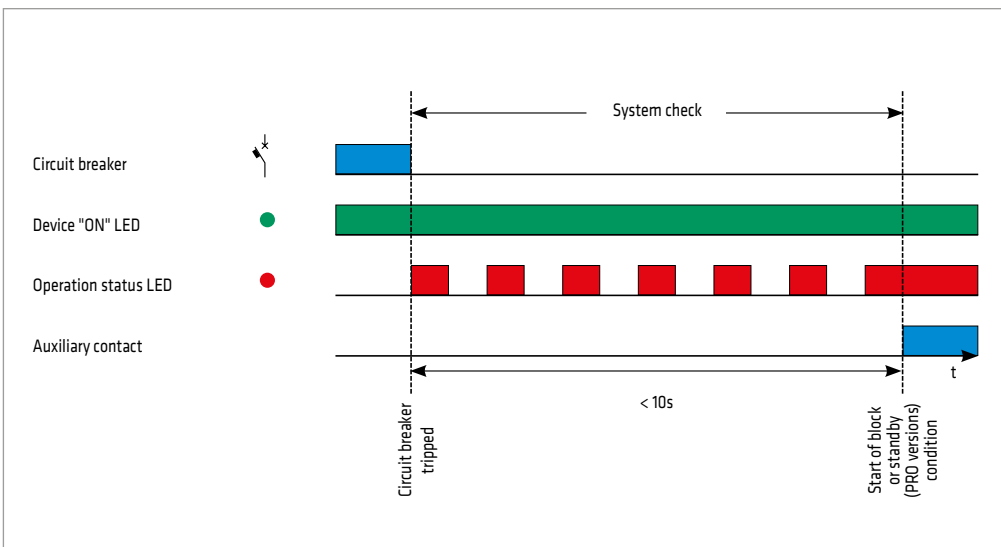

Autotest function with negative result

Key

Closed circuit
Device ON
Test in progress
Device fault

ReStart function with positive result

ReStart function with negative result

Key

Closed circuit

Device ON

System check in progress

Device in standby

RESTART RD

Technical data

TYPE	ReStart Rd 2P	ReStart Rd PRO 2P	ReStart Rd PRO 4P
Electrical characteristics			
Standards:		IEC EN 63024	
Distribution system:		TT - TN-S	
Rated operational voltage (Ue): (V)		230 AC [1]	
Minimum operating voltage (min Ue) (V)		85% Ue	
Maximum operating voltage (max Ue): (V)		110% Ue	
Rated insulation voltage (Ui): (V)		500	
Dielectric strength test voltage between pole and earth: (V)		2500 AC for 1 minute	
Rated impulse withstand voltage (Uimp): (kV)		4	
Overvoltage category:		III	
Rated frequency: (Hz)	50/60		50
Residual making and breaking capacity (I∆m): (A)		I∆m of the associated circuit breaker	
Rated conditional residual short-circuit current with fuse (I∆c): (A)		I∆c of the associated circuit breaker	
Number of poles:	2		4
Type of IDP RCCB:		AC - A - A [IR] - A[S] -F -B	
Rated current (In): (A)		25 - 40 - 63 - 80	
Rated residual operating current (I∆n): (mA)		30 - 100 - 300 - 500	
Rated non-operating resistance between live parts and earth (Rdo): (kΩ)		8 (30mA) - 2,5 (100/300/500mA)	
Rated operating resistance between live parts and earth (Rd): (kΩ)		16 (30mA) - 5 (100/300/500mA)	
Power loss at In: (W)		Power loss of the associated circuit breaker	
Off-load absorbed power: (VA)	3 (cosφ=0.4)		4 (cosφ=0.2)
Power absorbed during automatic reclosing: (VA)	18 (cosφ=0.5)		45 (cosφ=0.5)
Mechanical characteristics			
Width in DIN modules:	1		3
Reclosing time: (s)		10	
Maximum operational frequency: (oper./h)		30	
Max mechanical endurance (total no. operations):		4000	
Maximum no. of consecutive automatic reclosure operations [2]:		3	
Counter reset time no. of consecutive automatic reclosure operations: (s)		60	
Section of circuit breaker terminals: (mm²)		flexible cable: ≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10 rigid cable: ≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10	
Circuit breaker rated tightening torque: (Nm)		3 (IDP) - 2 (IDP NA)	
Mounting position:		any	
Circuit breaker degree of protection:		IP20 (terminals) - IP40 (front)	
Pollution degree:		2	
Operating temperature: (°C)	-5 +40	-5 +60 [3]	-25 +60 [3]
Stocking temperature: (°C)		-40 +70	
Tropicalization:		55°C - RH 95%	
Auxiliary contact characteristics			
Can be fitted with auxiliary:	no	yes (with GWD0951)	already integrated in the ReStart
Type of contact:	-	Photomos (potential free contact)	
Operating voltage: (V)	-	5÷230 AC/DC	
Operating current: (mA)	-	0.6 (min) - 100 cosφ=1 (max)	
Operating frequency: (Hz)	-	50	
Category of use:	-	AC12	
Operating mode:	-	NO\NC\NO as signal of handle position	
Terminal section: (mm²)	-	≤ 2.5	
Rated tightening torque: (Nm)	-	0.4	
ReStart FUNCTION			
Automatic reclosure for untimely tripping:	•	•	•
Earth leakage check:	•	•	•
Continuous system check:		•	•
Interruption of reclosure operation in the event of a fault:	•	•	•
Signalling of reclosure operation in progress:	•	•	•
Light signalling of failure:	•	•	•
Activation / exclusion of ReStart function:	•	•	•
Auxiliary contact for remote operating status access:		•	•
Compatible with ModBus interface module:		•	•
Internal electrical protection:	PTC	PTC	PTC

[1] Power supply 230V phase-neutral [2] In the absence of a system fault [3] Average daily temperature ≤ +35°C

90 ReStart

AUTOMATIC RECLOSING DEVICES

RESTART RM

Technical data

TYPE		ReStart Rm 2P	ReStart Rm PRO 2P	ReStart Rm PRO 4P	Rm TOP	CM
Electrical characteristics						
Standards:		IEC EN 63024			-	-
Distribution system:		TT - TN-S			TT - TN - IT [1]	TT-TN-IT
Rated operational voltage (Ue):	(V)	230 AC [2]				
Minimum operating voltage (min Ue):	(V)	85% Ue				
Maximum operating voltage (max Ue):	(V)	110% Ue				
Rated insulation voltage (Ui):	(V)	500				
Dielectric strength test voltage between pole and earth:	(V)	2500 AC for 1 minute				
Rated impulse withstand voltage (Uimp):	(kV)	4				
Overvoltage category:		III				
Rated frequency:	(Hz)	50/60		50		
Residual making and breaking capacity (IΔm):	(A)	IΔm of the associated circuit breaker				
Number of poles:		2		4		
Type of MDC RCBO:		AC - A - A[IR] - A[S] -F				
Type of MT+BD RCBO:		-		AC - A - A[IR] - A[S]		
Rated current (In):	(A)	from 6 to 32		from 1 to 63		
Rated residual operating current (IΔn):	(mA)	30 - 300		30 - 300 - 500 - 1000		
Rated non-operating resistance between live parts and earth (Rdo):	(kΩ)	8 (30mA) - 2.5 (300mA)		8 (30mA) - 2.5 (300/500/1000mA)		-
Rated operating resistance between live parts and earth (Rd):	(kΩ)	16 (30mA) - 5 (300mA)		16 (30mA) - 5 (300/500/1000mA)		-
Rated non-operating resistance between live parts (Rcco):	(Ω)	0.4		0.3		-
Rated operating resistance between live parts (Rcc):	(Ω)	2.3		1.8		-
Power loss at In:	(W)	Power loss of the associated circuit breaker				
Off-load absorbed power:	(VA)	3 (cosφ=0.4)	16 (cosφ=0.2)		15 (cosφ=0.1)	0 (cosφ=0.2)
Power absorbed during automatic reclosing:	(VA)	18 (cosφ=0.5)	34 (cosφ=0.7)		30 (cosφ=0.6)	30 (cosφ=0.6)
Reclosing control:		automatic			automatic / remote [3]	remote [3]
Mechanical characteristics						
Width in DIN modules:		1	3		4	2
Reclosing time:	(s)	10			3 (without system test) 10 (with system test)	3
Remote control opening time:	(s)	-			2	
Maximum operational frequency:	(oper./h)	30				
Max mechanical endurance (total no. operations):		4000			10000	
Maximum no. of consecutive automatic reclosure operations [4]:		3				-
Counter reset time No. of consecutive automatic reclosure operations:	(s)	60				-
Section of circuit breaker terminals:	(mm²)	flexible cable: ≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10 rigid cable: ≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10				
Circuit breaker rated tightening torque:	(Nm)	2				
Mounting position:		any				
Circuit breaker degree of protection:		IP20 (terminals) - IP40 (front)				
Pollution degree:		2				
Operating temperature:	(°C)	-5 +40	-5 +60 [5]		-25 +60 [5]	
Stocking temperature:	(°C)	-40 +70				
Tropicalization:		55°C - RH 95%				
Auxiliary contact characteristics						
Can be fitted with auxiliary:		no	yes (with GWD0951)	already integrated in the ReStart	already integrated in the ReStart	already integrated in the ReStart
Type of contact:		-	Photomos (potential free contact)		Changeover	Photomos (potential free contact)	Changeover
Operating voltage:	(V)	-	5÷230 AC/DC		230 AC/ 30 DC	5÷230 AC/DC	230 AC/ 30 DC
Operating current:	(mA)	-	0.6 (min) - 100 cosφ=1 (max)		1.5 a.c. / 0.8 d.c.	0.6 (min) - 100 cosφ=1 (max)	1.5 a.c. / 0.8 d.c.
Operating frequency:	(Hz)	-	50			
Category of use:		-	AC12			
Operating mode:		-	NO\NC\NO as signal of handle position		CO	NO/NC/ INTERMITTENT	CO
Terminal section:	(mm²)	-	≤ 2.5			
Rated tightening torque:	(Nm)	-	0.4			
ReStart FUNCTION						
Automatic reclosure for untimely tripping:		•	•	•	•	
Earth leakage check:		•	•	•	•	
Short-circuit check:		•	•	•	•	
Adjustable insulation threshold:					•	
Continuous system check:			•	•	•	
Adjustable reset standby time [6]:					•	
Adjustable reclosing mode:					•	
Interruption of reclosure operation in the event of a fault:		•	•	•	•	
Signalling of reclosure operation in progress:		•	•	•	•	
Light signalling of failure:		•	•	•	•	
Activation / exclusion of ReStart function:		•	•	•	•	•
Auxiliary contact for remote operating status access:			•	•	•	•
Compatible with ModBus interface module:			•	•		
Internal electrical protection:		PTC	PTC	PTC	PTC	PTC

[1] For IT system reclosing without fault check
[2] Power supply 230V phase-neutral
[3] Impulse duration ≥ 200ms
[4] In the absence of a system fault
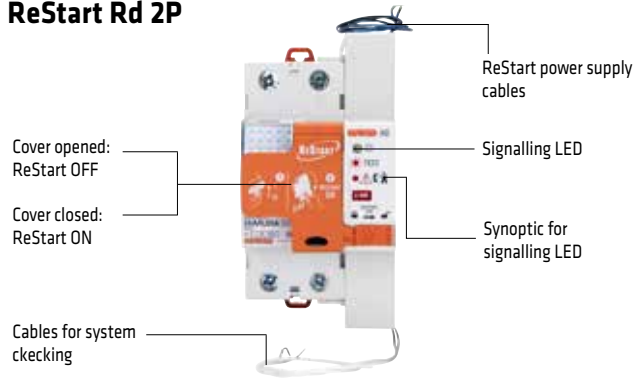[5] Average daily temperature ≤ +35°C
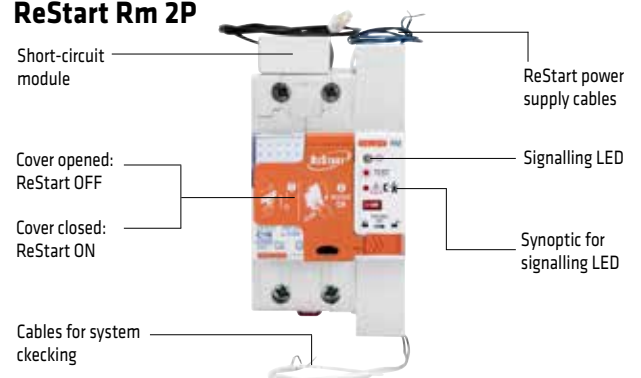[6] Automatic reclosure delay time: 0-1h

For technical information contact the Technical Assistance Service or visit gewiss.com

90 ReStart

AUTOMATIC RECLOSING DEVICES
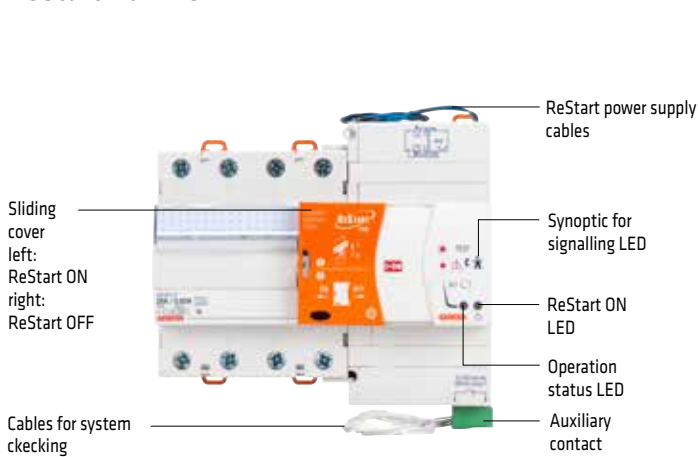
DEVICE DESCRIPTION

ReStart Rd 2P

ReStart power supply cables

Cover opened: ReStart OFF

Cover closed: ReStart ON

Signalling LED

Synoptic for signalling LED

Cables for system ckecking

ReStart Rm 2P

Short-circuit module

ReStart power supply cables

Cover opened: ReStart OFF

Cover closed: ReStart ON

Signalling LED

Synoptic for signalling LED

Cables for system ckecking

ReStart Rd PRO 2P

ReStart power supply cables

Cover opened: ReStart OFF

Cover closed: ReStart ON

Signalling LED

Synoptic for signalling LED

Cables for system ckecking

Auxiliary contact

ReStart Rm PRO 2P

Short-circuit module

ReStart power supply cables

Cover opened: ReStart OFF

Cover closed: ReStart ON

Signalling LED

Synoptic for signalling LED

Cables for system ckecking

Auxiliary contact

ReStart Rd PRO 4P

ReStart power supply cables

Sliding cover left: ReStart ON right: ReStart OFF

Synoptic for signalling LED

ReStart ON LED

Operation status LED

Cables for system ckecking

Auxiliary contact

ReStart Rm PRO 4P

Short-circuit module

ReStart power supply cables

Sliding cover left: ReStart ON right: ReStart OFF

Synoptic for signalling LED

ReStart ON LED

Operation status LED

Cables for system ckecking

Auxiliary contact

ReStart Rm TOP

Selector UP: ON; DOWN: OFF

Auxiliary contact mode

Operating mode

Synoptic for LED indicator

Operation status LED

Device "ON" LED

Adjustable reset time

ReStart Cm

Auxiliary contact mode

Selector UP: ON; DOWN: OFF

For technical information contact the Technical Assistance Service or visit gewiss.com
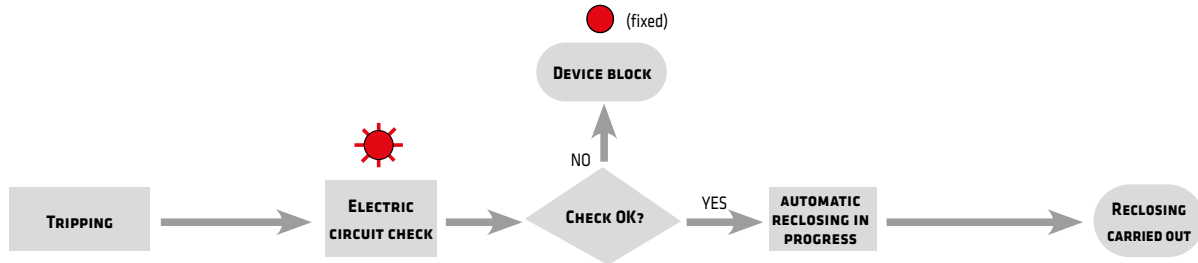
AUTOMATIC RECLOSING FUNCTION
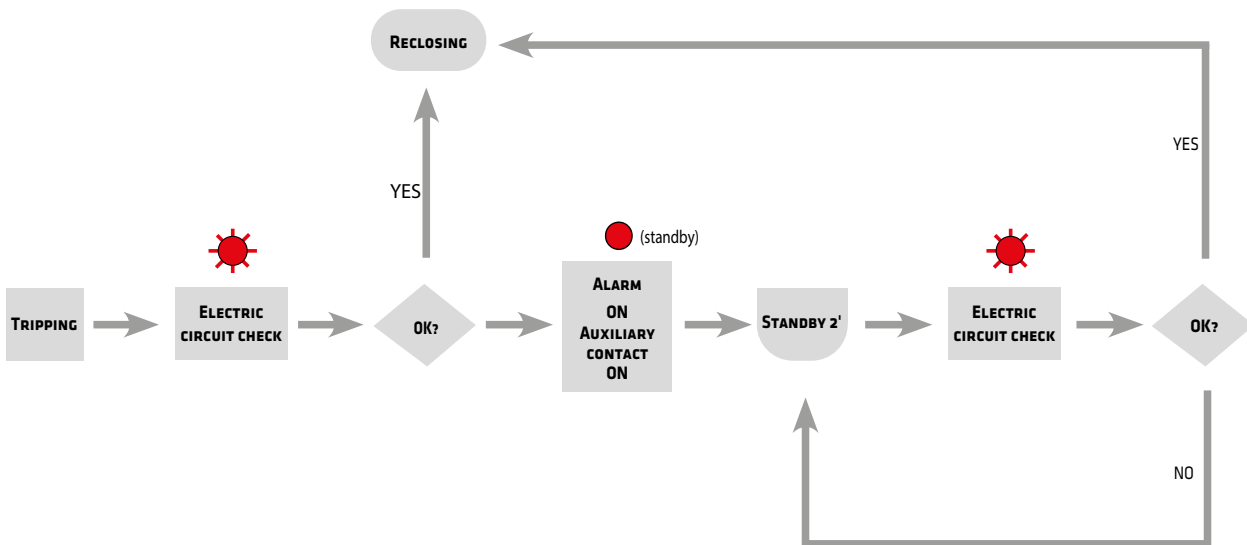
ReStart Rd and Rm

The automatic reclosing is carried out after an untimely tripping of the circuit breaker but only after an electrical circuit check. If a fault is found, the device sets itself on block condition and signals the fault by means of the front LED indicator.

🔴 (fixed)

Device block

Tripping → **Electric circuit check** → **Check OK?** — NO → Device block

Check OK? — YES → **automatic reclosing in progress** → **Reclosing carried out**
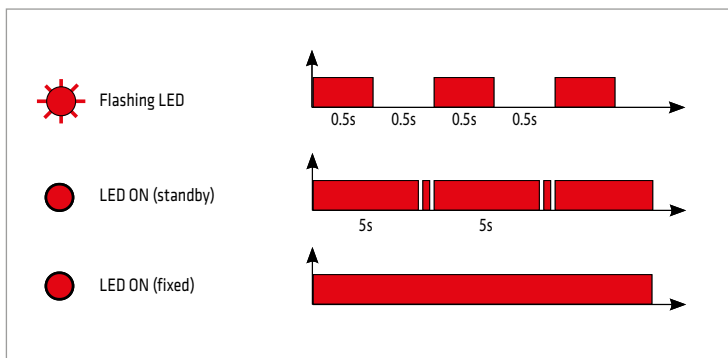
RESTART AUTOTEST, RD AND RM PRO VERSION

The circuit breaker is reclosed after an untimely tripping of the circuit breaker but only after a system check.

When the system check gives a negative result, the device goes into standby and signals this condition by means of the frontal LED indicator. System checks will then be carried out at 2' intervals, and the device will only reclose when the result of the test is positive. If no positive result is obtained, the device will remain in standby until the next test, or until a manual reset. The auxiliary contact signals the system fault.

Reclosing

🔴 (standby)

Tripping → **Electric circuit check** → **OK?** — YES → Reclosing

OK? → **Alarm ON Auxiliary contact ON** → **Standby 2'** → **Electric circuit check** → **OK?** — YES → Reclosing

OK? — NO → Standby 2'

Key

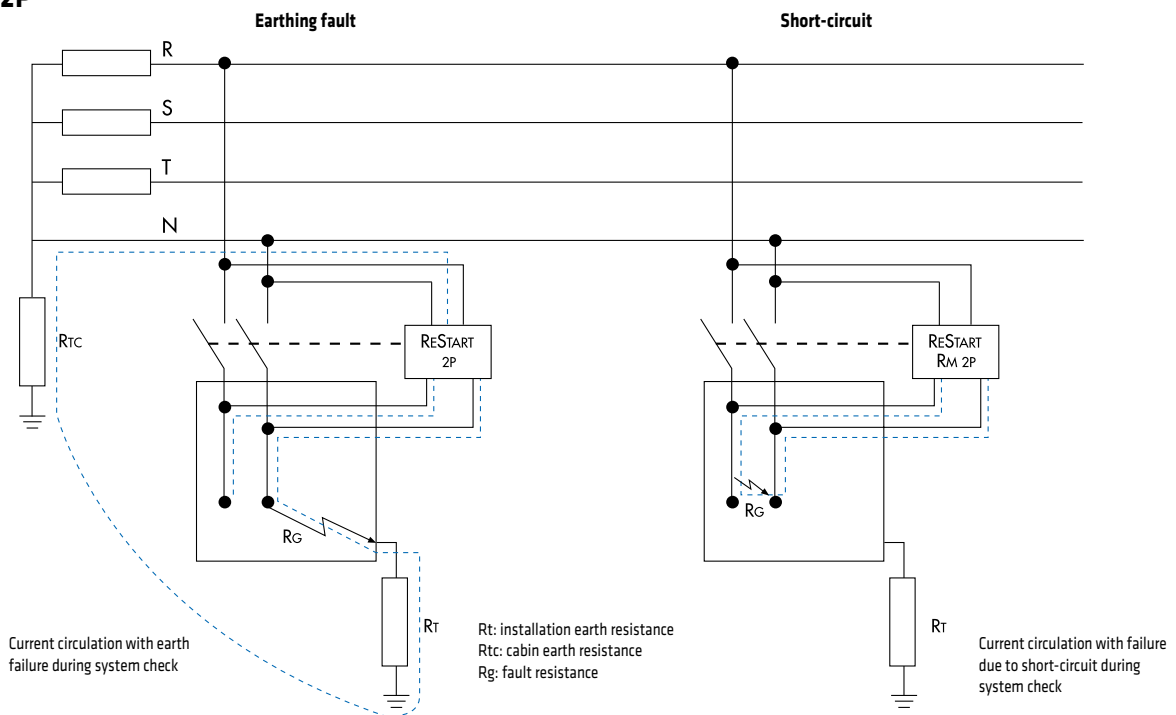|		
🔴 Flashing LED		0.5s 0.5s 0.5s 0.5s
🔴 LED ON (standby)		5s 5s
🔴 LED ON (fixed)		

System fault check

Every device belonging to ReStart range is equipped with internal electronic circuit which is able to check the system and then to carry out the automatic reclosing of the circuit breaker if the value of the insulation resistance measured by the electronic circuit is compatible with the predefined safety values.
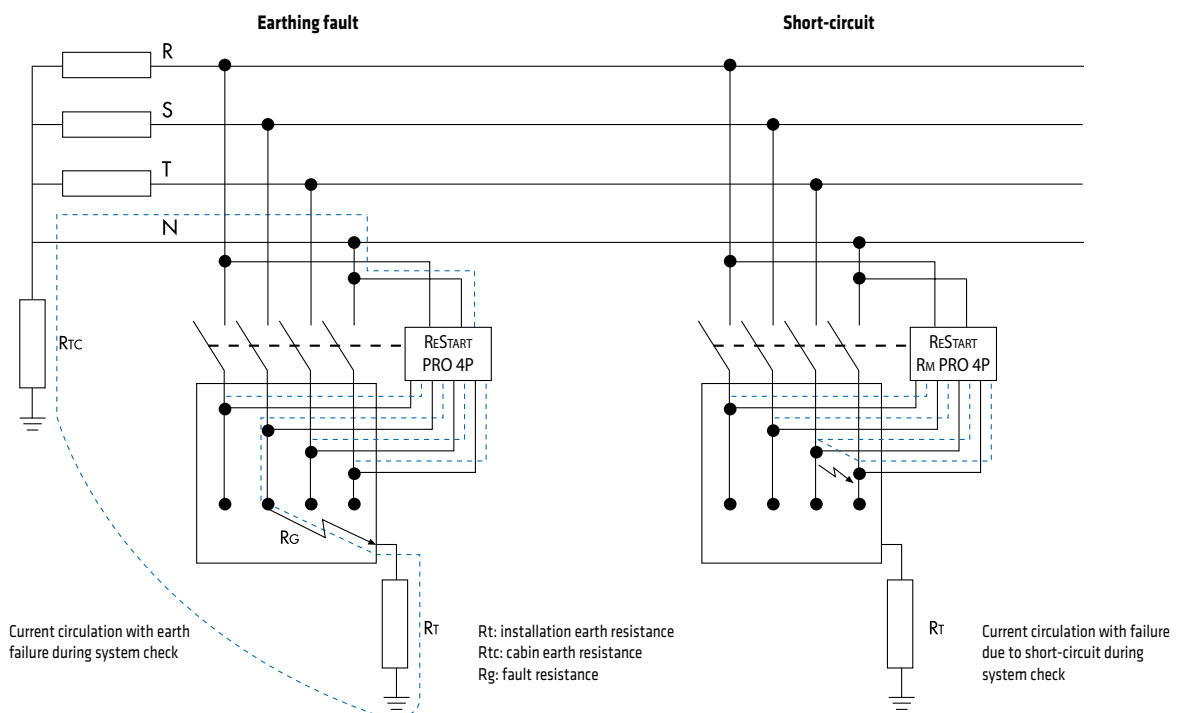
During the system check ReStart injects a pulsant unidirectional current type in order to check the status of the system. The intensity of this current is extremely low in order to guarantee always the people safety. The figures below are given as an example to show the route taken by the current during system check for TT distribution systems both single and three phase.

ReStart RM, in addition to the check of the insulation resistance, carries out a system short circuit check.

ReStart 2P

Earthing fault

Short-circuit

Current circulation with earth failure during system check

Rt: installation earth resistance
Rtc: cabin earth resistance
Rg: fault resistance

Current circulation with failure due to short-circuit during system check

ReStart 4P

Earthing fault

Short-circuit

Current circulation with earth failure during system check

Rt: installation earth resistance
Rtc: cabin earth resistance
Rg: fault resistance

Current circulation with failure due to short-circuit during system check

ReStart Rd and Rm light signalling

ReStart Rd and Rm are equipped with one LED on the front which shows the operation conditions of the device.

ReStart Rd

| ReStart conditions	ReStart front	Lever position	Indicator LED	Description
MANUAL OPERATION				
Deactivated		I	⚪	Reset device **OFF**
Deactivated		0	⚪	Reset device **OFF**
AUTOMATIC OPERATING CYCLE (*)				
Normal operation		I	🟢	Reset device **ON**
Electric circuit check		0	🔴	Reset device in **electric system insulation check condition.**
System failure		0	🔴	Reset device in **block** condition due to low insulation of downstream electric system.

(*) Before sliding the plastic cover to the left to activate the device, it is necessary to set the associated circuit breaker in the "I" position.
NOTE: ReStart device can be in block condition (red led fixed) after 4 following trips too (t≤60s after previous trip).
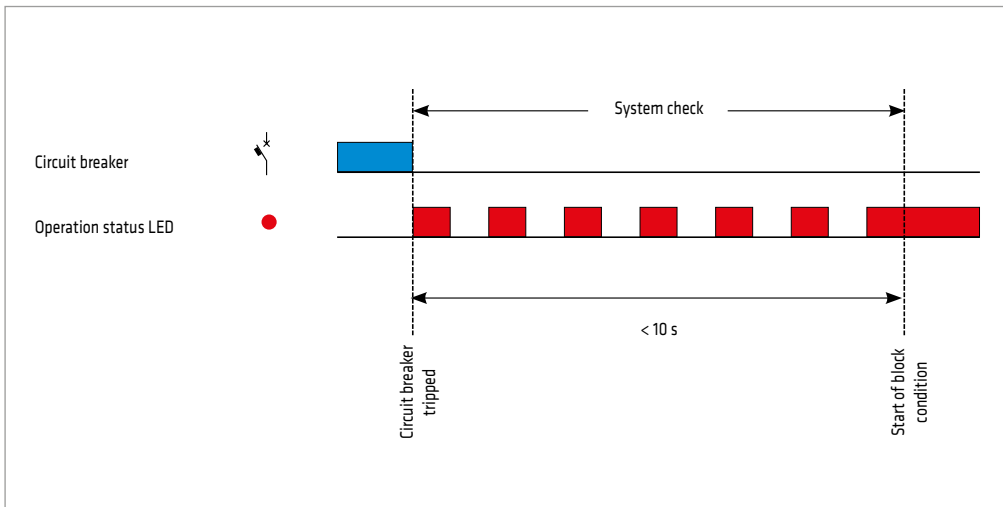
ReStart Rm

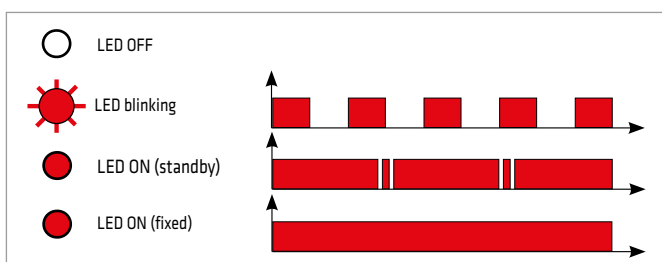| ReStart conditions	ReStart front	Lever position	Indicator LED	Description
MANUAL OPERATION				
Deactivated		I	⚪	Reset device **OFF**
Deactivated		0	⚪	Reset device **OFF**
AUTOMATIC OPERATING CYCLE (*)				
Normal operation		I	🟢	Reset device **ON**
Electric circuit check		0	🔴	Reset device in **electric system insulation and short-circuit check conditions.**
System failure		0	🔴	Reset device in **block** condition due to low insulation or short-circuiting fault of downstream electric system

(*) Before sliding the plastic cover to the left to activate the device, it is necessary to set the associated circuit breaker in the "I" position.
NOTE: ReStart device can be in block condition (red led fixed) after 4 following trips too (t≤60s after previous trip).

For technical information contact the Technical Assistance Service or visit gewiss.com

ResStart Rd and Rm operation conditions

ReStart function with positive result
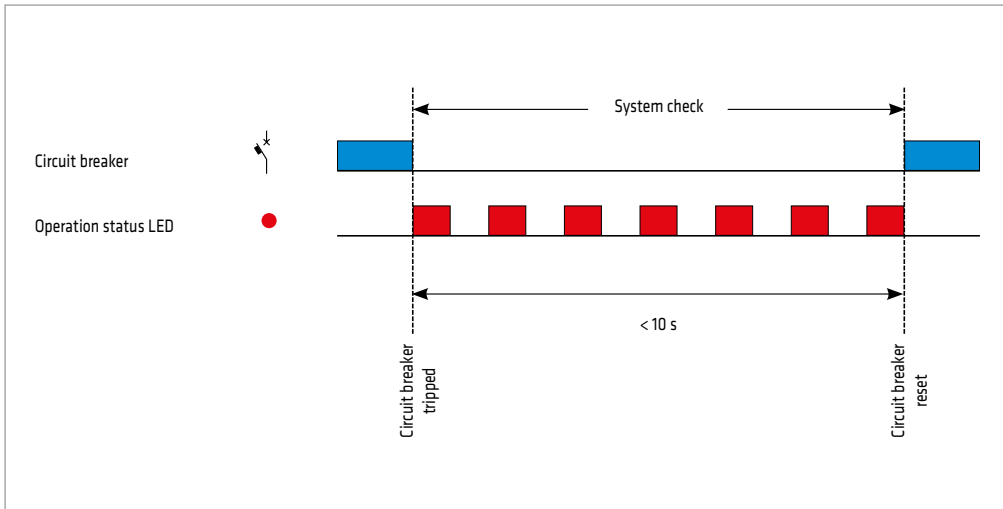
ReStart function with negative result

Key

Closed circuit

System check in progress

Device block

ReStart Rd and Rm PRO light signalling for circuit breakers 2 poles

ReStart Rd and Rm PRO for circuit breakers 2 poles are equipped with one LED on the front which shows the operation conditions of device.

ReStart conditions	ReStart front	Lever position	LED indicators	Description
MANUAL OPERATION				
Deactivated		I	○	Reset device **OFF**
Deactivated		O	○	Reset device **OFF**
AUTOMATIC OPERATING CYCLE (*)				
Normal operation		I	● (green)	Reset device ON
Electric circuit check		O	☀ (red blinking)	Reset device in **system check condition.**
System insulation fault		O	● (standby)	Reset device in **standby** conditions due to insulation fault of downstream electric system

(*) Before sliding the plastic cover to the left to activate the device, it is necessary to set the associated circuit breaker in the "I" position.
NOTE: ReStart device can be in block condition (red led fixed) after 4 following trips too (t≤60s after previous trip)

Specifically, Restart Rm PRO may have the following operation condition:
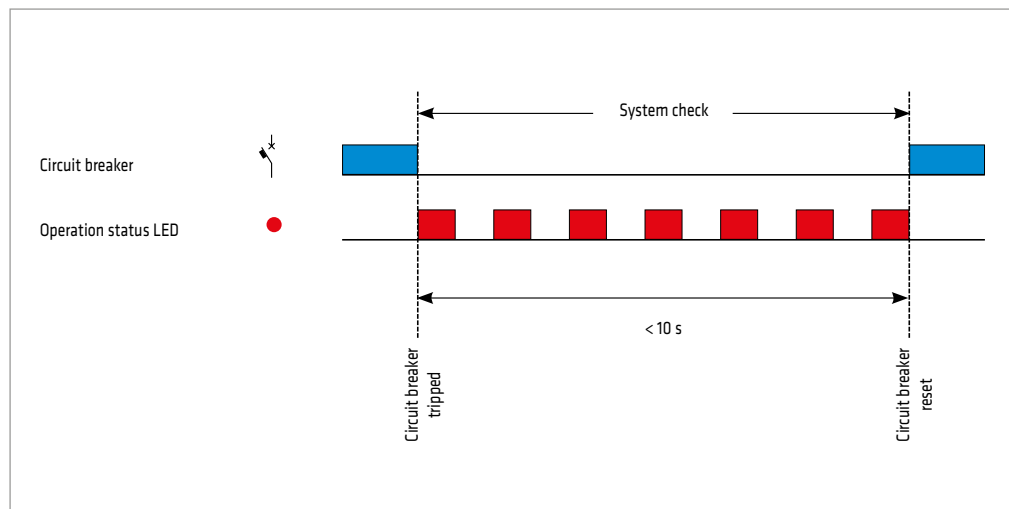
ReStart conditions	ReStart front	Lever position	LED indicators	Description
AUTOMATIC OPERATION				
System short-circuit fault		O	● (fixed)	Reset device in **block** condition due to short-circuit fault of downstream electric system

Key

○	LED OFF
☀	LED blinking
●	LED ON (standby)
●	LED ON (fixed)

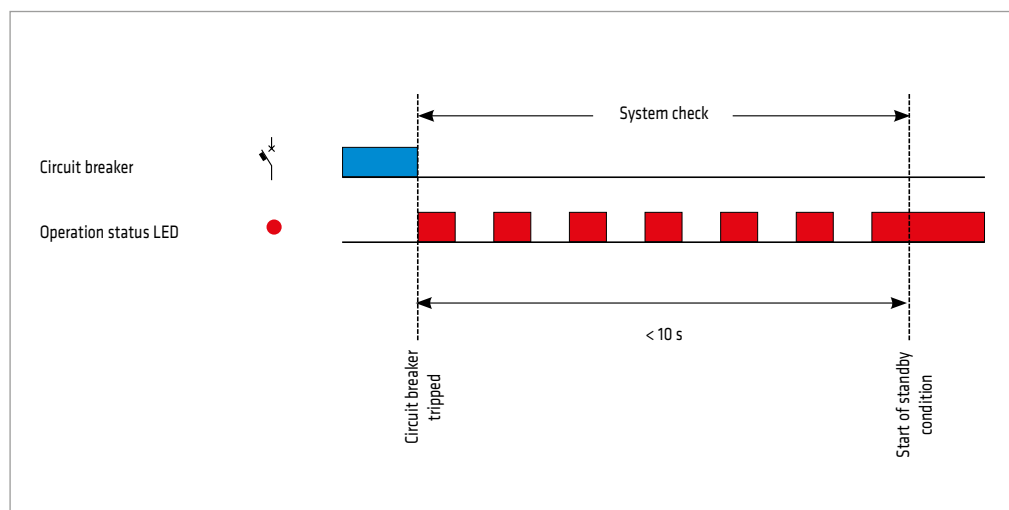For technical information contact the Technical Assistance Service or visit gewiss.com

Restart Rd and Rm PRO operation conditions for circuit breakers 2 poles

ReStart function with positive result

ReStart function with negative result

Key

Closed circuit

System check in progress

Device standby

ReStart Rd and Rm PRO light signalling for circuit breakers 4 poles

ReStart PRO for circuit breaker 4 poles is equipped with two LEDs on the front which show the operation conditions of device.
The right-hand LED is switched on when the device is activated, and the left-hand LED shows the operation conditions.

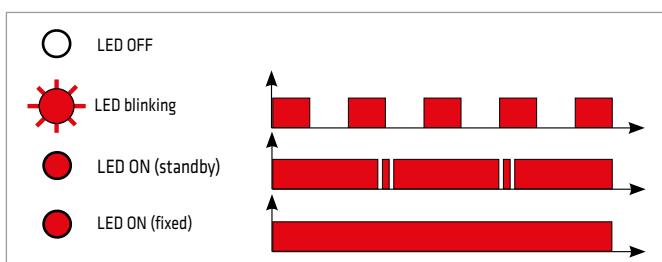| ReStart conditions	ReStart front	Lever position	LED indicators			Description
			Left LED	Right LED	Aux contact	
MANUAL OPERATION						
Deactivated		I	○	○	**OFF**	Reset device **OFF**
Deactivated for over 15 minutes		I	○	○	**ON**	Reset device **OFF**
Deactivated		0	○	○	**OFF**	Reset device **OFF**
AUTOMATIC OPERATING CYCLE (*)						
Normal operation		I	○	🟢	**OFF**	Reset device ON
Electric circuit check		0	☀ (blinking red)	🟢	**OFF**	Reset device in **system check condition.**
System insulation fault		0	🔴 (standby)	🟢	**ON**	Reset device in **standby** conditions due to insulation fault of downstream electric system

(*) Before sliding the plastic cover to the left to activate the device, it is necessary to set the associated circuit breaker in the "I" position.
NOTE: ReStart device can be in block condition (red led fixed) after 4 following trips too (t≤60s after previous trip)

Specifically, Restart Rm PRO may have the following operation condition:

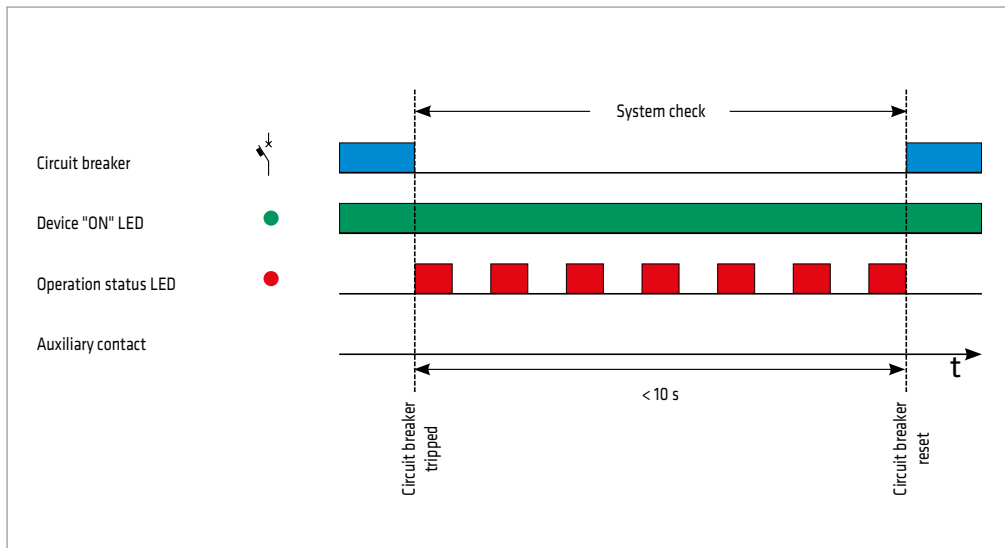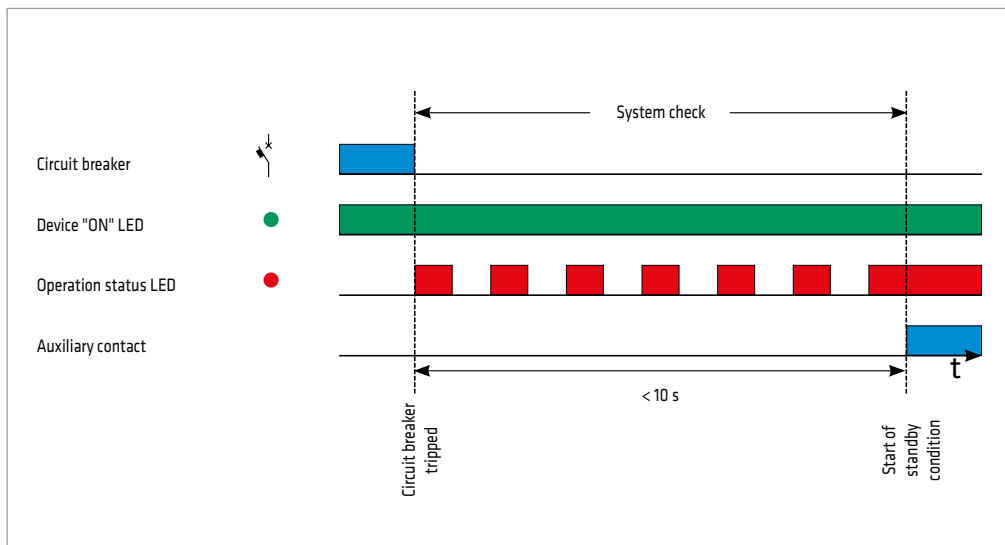| ReStart conditions	ReStart front	Lever position	LED indicators			Description
			Left LED	Right LED	Aux contact	
AUTOMATIC OPERATION						
System short-circuit fault		0	🔴 (fixed)	🟢	**ON**	Reset device in **block** condition due to short-circuit fault of downstream electric system

Key

○	LED OFF
☀	LED blinking
🔴	LED ON (standby)
🔴	LED ON (fixed)

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Restart Rd and Rm PRO operation conditions for circuit breaker 4 poles

ReStart function with positive result

Circuit breaker		
Device "ON" LED	●	
Operation status LED	●	
Auxiliary contact		

System check

< 10 s

Circuit breaker tripped

Circuit breaker reset

ReStart function with negative result

Circuit breaker		
Device "ON" LED	●	
Operation status LED	●	
Auxiliary contact		

System check

< 10 s

Circuit breaker tripped

Start of standby condition

Key

	Closed circuit
	Device ON
	System check in progress
	Device standby

ReStart Rm TOP light signalling

ReStart Rm TOP is equipped with two LEDs on the front which show the operation conditions of the device. In addition, by adjusting the two trimmers you can select the operation mode.
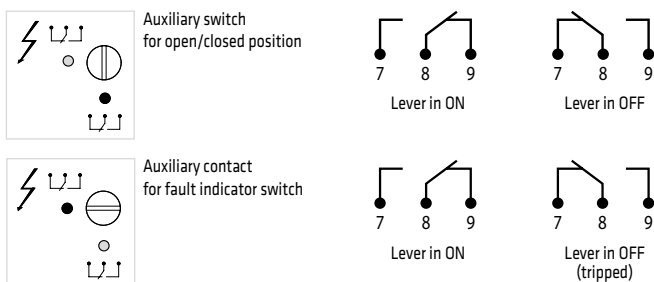
ReStart conditions	ReStart front	Lever position	LED indicators				Description
			Left LED	Right LED	Aux contact 1	Aux contact 2	
MANUAL OPERATION							
Deactivated		I	○	○	**OFF**	**ON (OFF)***	Device OFF
Deactivated		0	○	○	**OFF**	**OFF**	Device OFF
AUTOMATIC OPERATING CYCLE							
Normal operation		I	○	●	**OFF**	**ON**	Device ON
Electric circuit check		0	☀	●	**OFF**	**OFF**	Device in **system check condition**
System failure		0	●	●	**ON**	**OFF**	Device in **standby** due to system fault

(*) If it has been set as fault indicator switch.

Key

- LED OFF
- LED blinking
- LED ON (standby)

Setting of Aux contact 2

Auxiliary switch for open/closed position
- Lever in ON
- Lever in OFF

Auxiliary contact for fault indicator switch
- Lever in ON
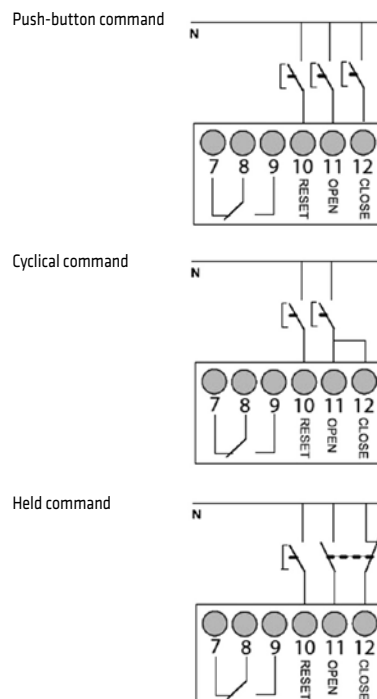- Lever in OFF (tripped)
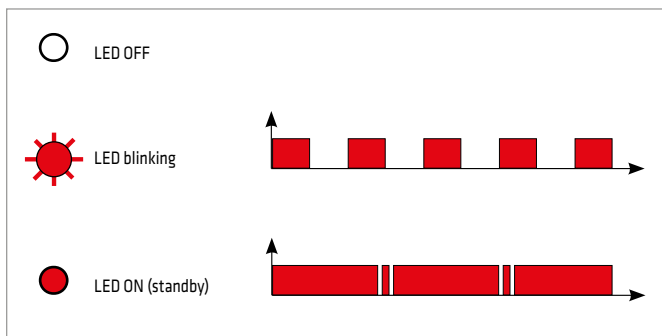
NOTE: to change the function Aux contact 2, from open/closed position to fault indicator switch and viceversa, it's required to turn the selector by screwdriver and to make an automatic reclosing cycle.
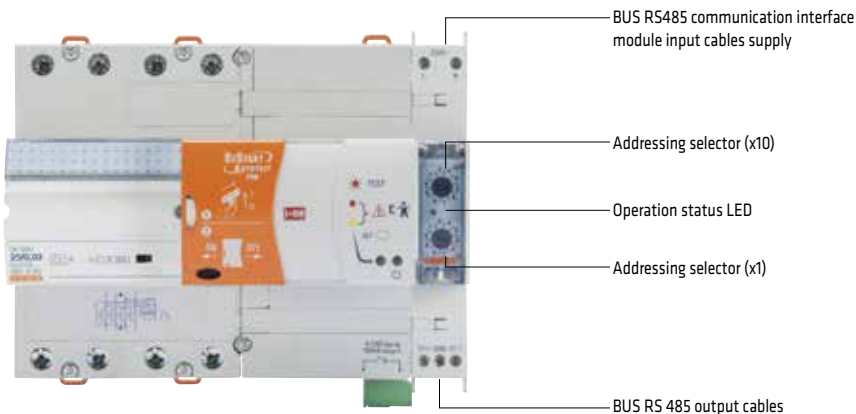
Setting as motor operating

Push-button command

Cyclical command

Held command

For technical information contact the Technical Assistance Service or visit gewiss.com
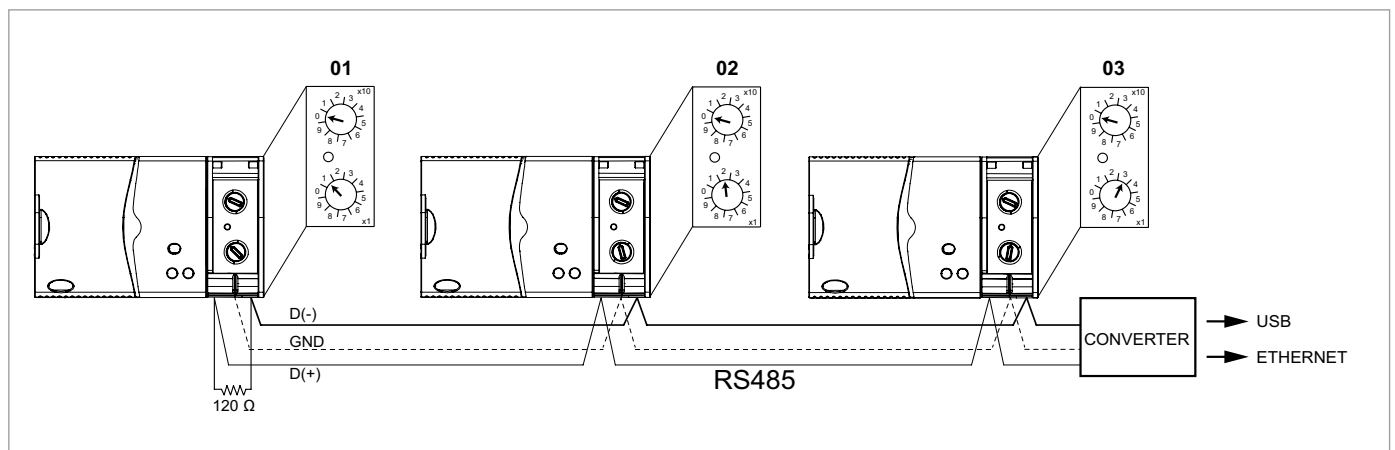
BUS RS485 Communication interface module

Technical data		
Code:		GW90992
Rated operational voltage (Ue):	(V)	230 a.c.
Minimum operating voltage (min Ue):	(V)	85% Ue
Maximum operating voltage (max Ue):	(V)	110% Ue
Rated impulse voltage (Uimp):	(kV)	4
Rated frequency:	(Hz)	50
Width in DIN modules:		1
Communication protocol:		modbus RS485
Number of addresses:		1 ÷ 99
Transmission speed:		38.400 baud rate
Coupled with:		ReStart with Autotest (2 e 4 pole) ReStart Rm PRO (4 pole) ReStart Rd PRO (4 pole)
Rated tightening torque:	(Nm)	0,4
Power loss:	(W)	1
Degree of protection:		IP20
Operating temperature:	(°C)	-25...+60 [1]
Maximum conductor cross section:	(mm²)	2,5
Sealable:		yes

[1] Average daily temperature ≤ +35°C

Device description

- BUS RS485 communication interface module input cables supply
- Addressing selector (x10)
- Operation status LED
- Addressing selector (x1)
- BUS RS 485 output cables

Connection example

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Application examples

ReStart PRO and ReStart Rm TOP

With Restart PRO it is possible to monitor the insulation level after tripping for an indefinite period of time (until acceptable values are obtained and the automatic reset operation is performed). This control system is indispensable where the system's insulation level can suddenly drop, due to weather conditions, and then rise thus allowing reset operations once optimal conditions are re-established.

|	SPECIFICATIONS	TYPICAL SYSTEMS
OUTDOOR SYSTEMS	- Exposure to atmospheric disturbance - Insulation levels depending on weather conditions (temperature and humidity) - Presence of electronic power supplies - Extensive damage due to blackout - Difficult accessibility of electrical circuit	- Lighting in public places - Outdoor lighting in gardens and squares - Sporting facilities - Traffic lights - Signalling - Pollution control stations - Telecommunication installations - Radio links - Traffic-information panels - Advertising hoardings
INDOOR SYSTEMS	- Strong presence of electronic power supplies - Extensive damage due to blackout - Need for guaranteed service continuity - Sensitivity to disturbance induced by mains supply and by atmospheric conditions - Insulation levels depending on weather and operating conditions	- Small, medium, and large tertiary sector - Industrial plants - Data processing centres - Garages - Pumping systems - Catering - Supermarkets - Ice-cream shops - Alarm system protection - CCTV system protection - Access monitoring system protection - Door and automatic gate protection

Dimension tables

ReStart with Autotest

2 POLE

4 POLE
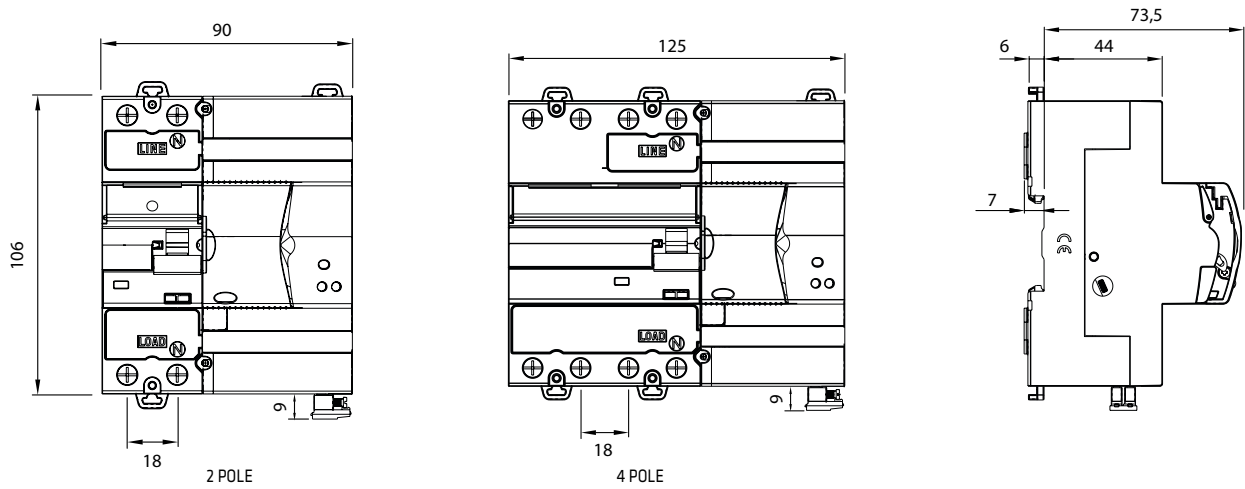
ReStart Rd and Rd PRO 2P
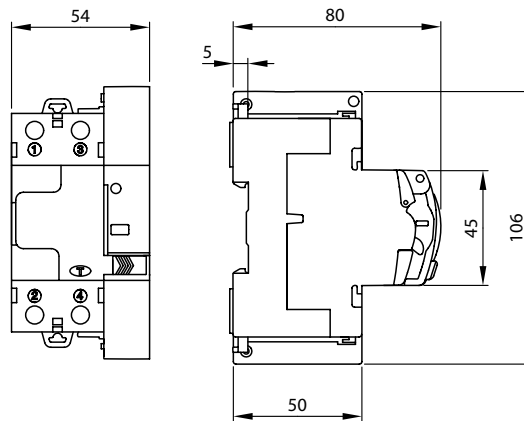
ReStart Rm and Rm PRO 2P
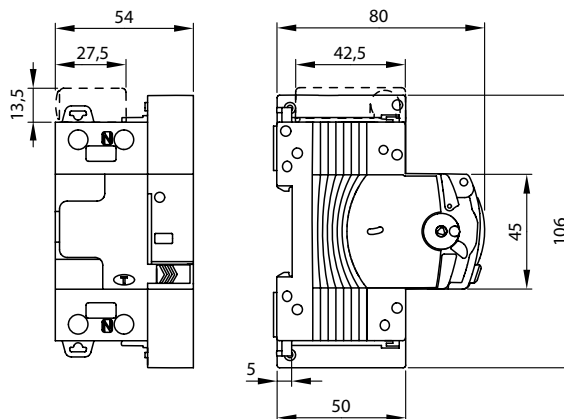
ReStart Rd PRO 4P
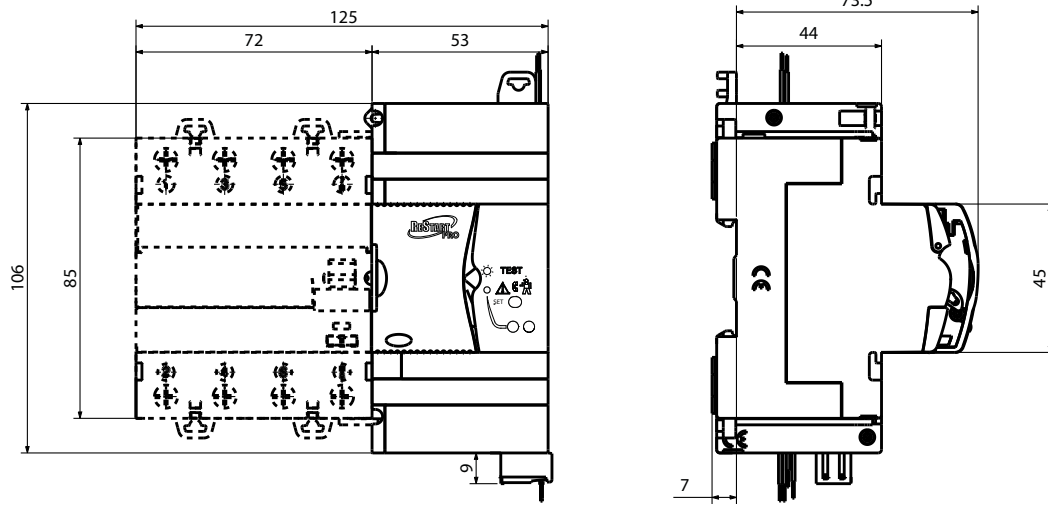
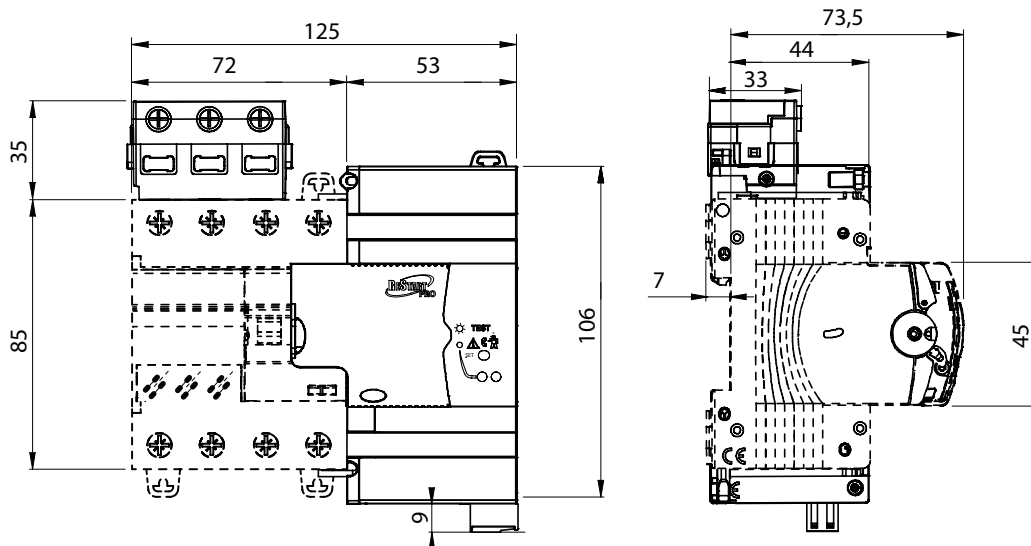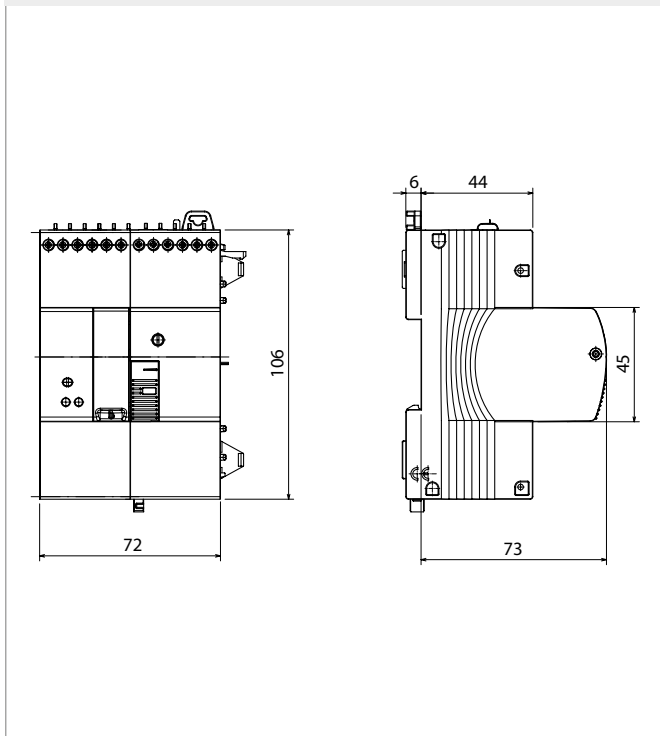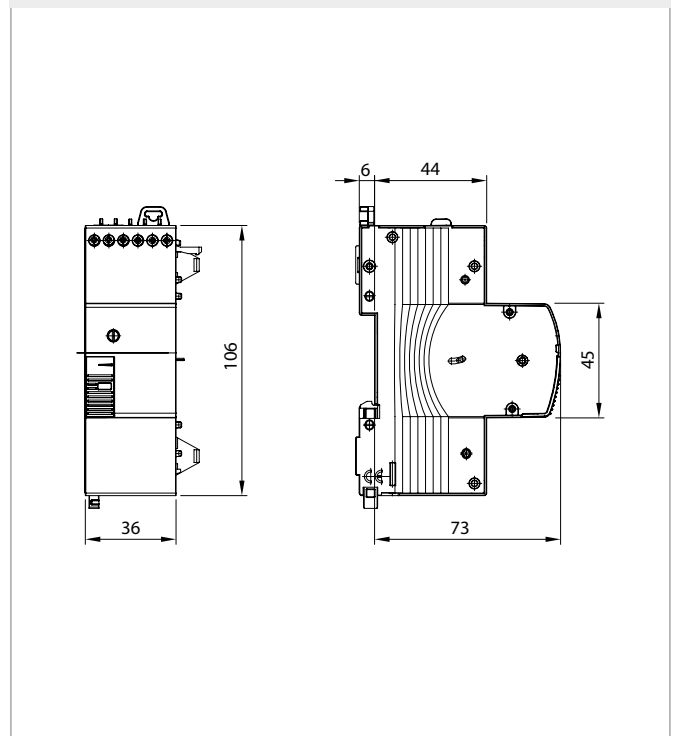**ReStart Rm PRO 4P**

AUTOMATIC RECLOSING DEVICES

ReStart Rm TOP

ReStart Cm

BUS RS485 Interface module