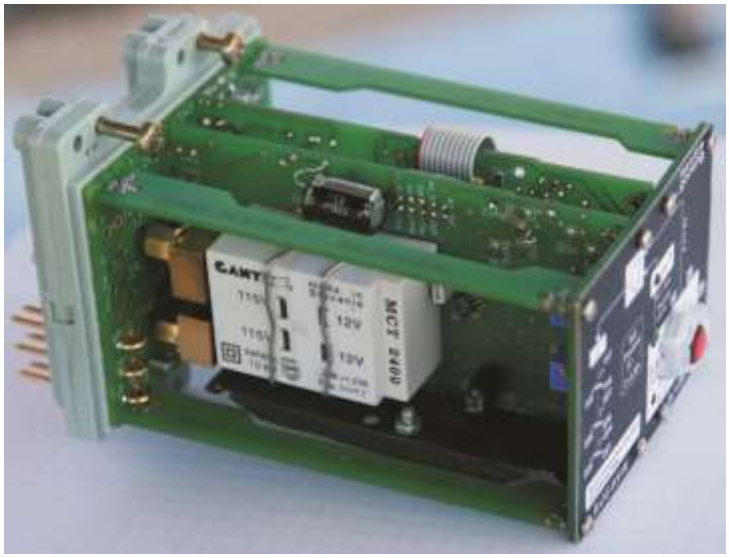
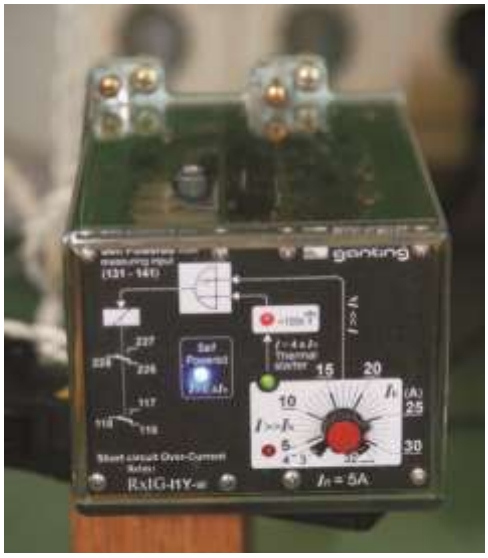
CONTENT

*SELF-POWERED SHORT-CIRCUIT RELAY type **RxIG-I1Y***

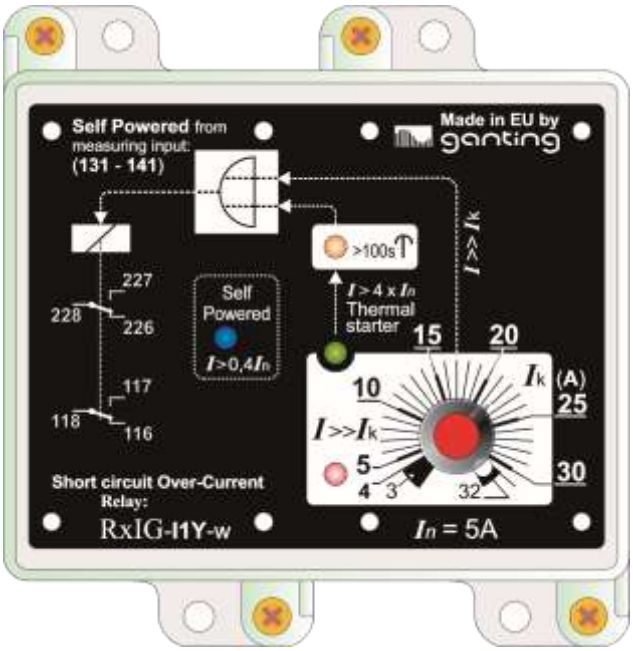
page

Place and date of issue: Medvode, 10. 05. 2021
The producer reserves the right to modify data and design in the light of future progress.





APPLICATION



Designed in a housing Hx2, campatible to system Combiflex.

Replacing mechanical over current measuring relays:
"Pin to pin" replacement for RxIG (ABB) and for TFI-12 (Iskra Co.)

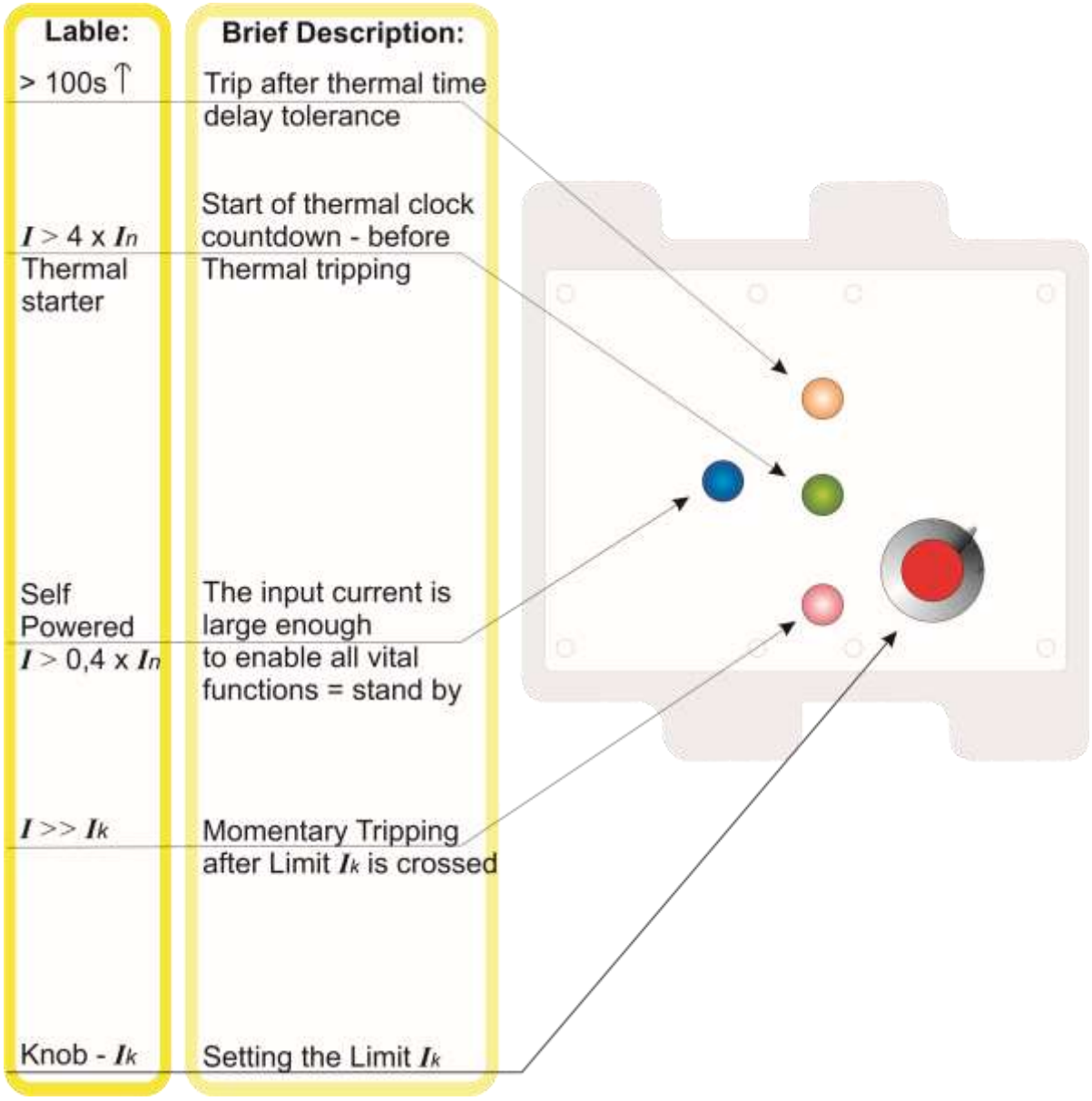
- Designed for use on Locomotive in railway traffic or on Ship in marine trafic;
- Back up protection, with no auxiliary battery required;
- Basic protection in remote locations, with no man-service;

FEATURES

Relay is self powered from the measuring input.

- Large scale setting range operation range: (3 to 31)A ... for **I**n = 5A accuracy range: (4 to 30)A;
- Thermal protection is started over 4 x **I**n = ... > 20A;
- **Re-wiring**
  at the terminal's base board offers „original-pin to any-pin“ configuration, which accomodates the client's pin rearangement.

DESCRIPTION of OPERATION



* Blue LED turns On at input current >0,4In. Above this current all Relay's functions are alive.

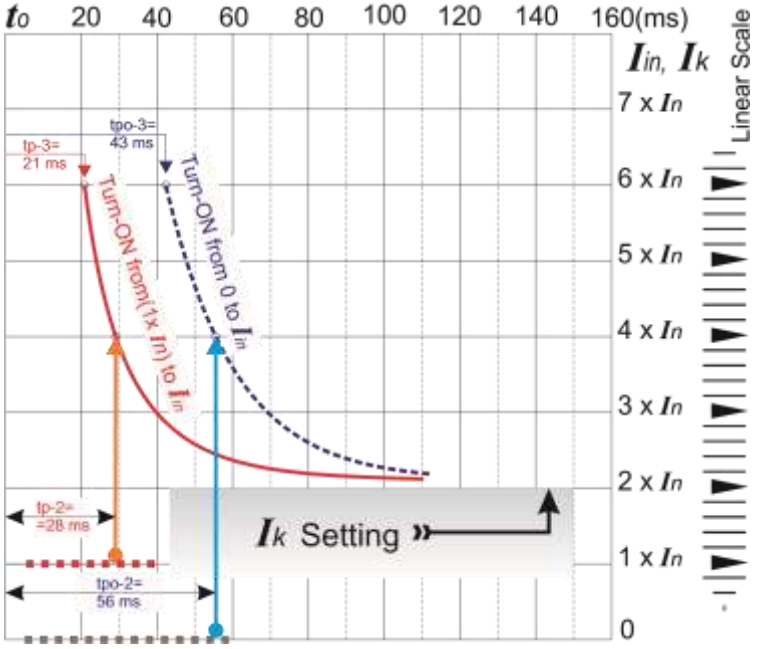
** The **RxIG-I1Y-w** relay has much wider settings range compared to **I1Y-w** (in Hx1 housing) or any of the successful models on the market.

*** An internal Thermal protection is watching a reference limit of the input current, which starts a count down Time. It has to prevent thermal overload of all input parts. This includes the primar-winding of the mini-C-transformer for measuring and for power supply.

TECHNICAL DATA

	Symbol	*Parameter*	*Conditions*	*Min.*	*Nom.*	*Max.*	*Unit*
Over-current relay	I_n	Nominal Current	(on request: 1A and 2,5)		5		A
		Repetition Accuracy	of scale range		1		%
		Reset Ratio (pick-up/drop-out)	of full scale		95		%
Thermal protection	Ts	Thermal guard Time delay	set by producer on request (5-120)s		100		s
		Repetition accuracy	of scale range		3		%
		Reset time	Recovery done	50	66	130	ms
		Short-circuit protection					
	I_k	Setting range-functional	I_n = 5A	4		31	A
			Recommended setting range	5		30	A
Pick-up time	t_p-2	Pick-up time from working current	pre-error input ($I = I_n$) & error ($I = 2x\ I_k$)		28		ms
	t_p-3		pre-error input ($I = I_n$) & error ($I = 3x\ I_k$)		21		ms
	t_{po}-2	Pick-up time from zero	pre-error input ($I = 0$) & error ($I = 2x\ I_k$)		56		ms
	t_{po}-3		pre-error input ($I = 0$) & error ($I = 3x\ I_k$)		43		ms
Power dissipation	P_n	Nominal Power dissipation	$I = I_n$			0,5	W
		Dual Power dissipation	$I = 2\ I_n$			2	W
		Quard Power dissipation	$I = 4\ I_n$			5	W
		Continuous phase current	dissipation = 5W per housing HX2 @ Tamb = 20°C			5	I_n
Temperature	T_{amb}	Ambient temperature	operating range	-10		+55	°C
		Working temperature	standard accuracy	+5		+45	°C
		Storage temperature		-25		+75	°C
Contact rating		Making capability				8	A
		Breaking capacity – d.c.	L/R < 20ms; 100V d.c.			0,05	A
		D.c. breaking capacity via arc suppressor	L/R < 40ms; 264V d.c.			5	A
		Test voltage (50Hz; 1min)	between all d.c. separated circuits			2,5	kV_{rms}

TECHNICAL DATA continued



Pick-up time

of the short circuit relay, regarding

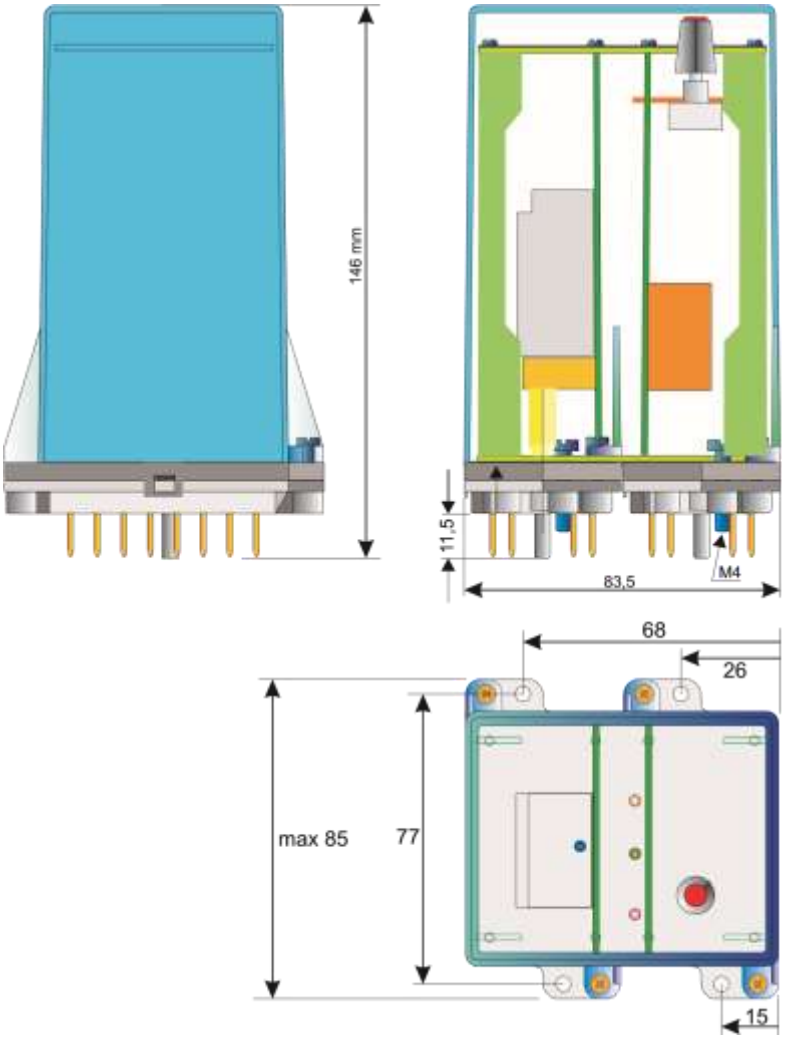
- limit setting on the scale *Ik* and

- over-current exceeding of the selected *Ik* - setting:

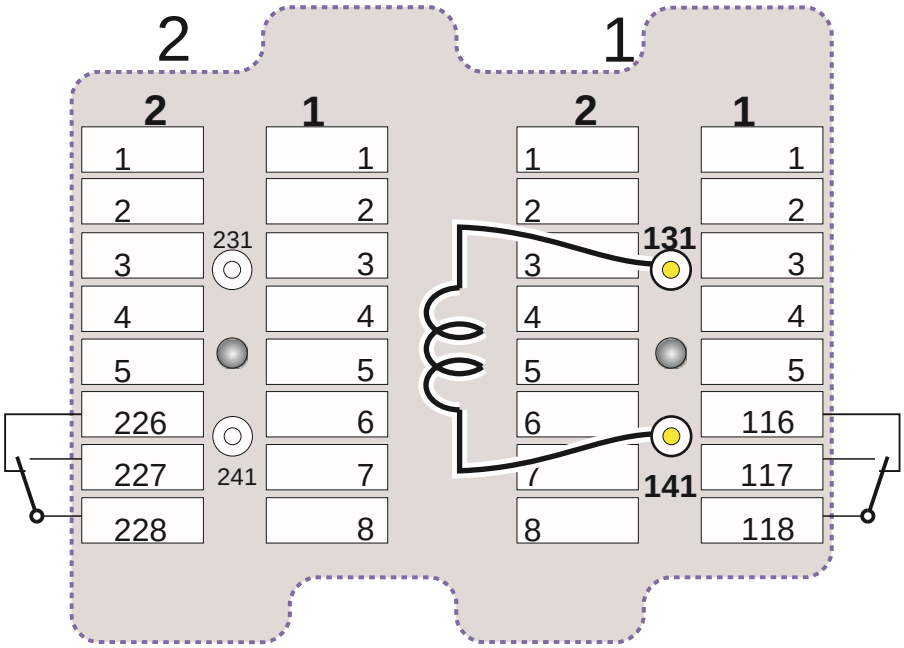
Initial, pre-fault current $\boldsymbol{I}(t < t_0) = 2\ \boldsymbol{I}_n = 10A$

DIMENSIONS

Mounting



CONNECTION DIAGRAM



„Connections - view to Pins of Combiflex HX2

RANGE OF APPLICATION – preliminary

Low current ranges	Scale range: 0,2A-3,2A 0.3dA (**0,4 - 3**) 3,1dA (d…division) (The most sensitive relay available.)	96 turns; d=0,7mm Sqar= 0,385mm^2	*In* = 0,5A
	Scale range: 0,4A-16A 0,6dA (**0,8 - 6**) 6,2dA	48 turns; d=0,7+ 0,7mm Sqar= 0,77mm^2	*In* = 1A
Middle current Ranges	Scale range: 1A-16A 1.5dA (**2 - 15**) 15,5dA	24 turns; d=1+1mm Sqar= 0,785mm^2	*In* = 2A5
	Scale range: 2A-32A 3dA (**4 - 30**) 31dA	12 turns; d=1+1mm Sqar= 1,57mm^2	*In* = 5A
High current Ranges (highest avaliable)	Scale range: 4A-64A 6dA (**8 - 60**) 62dA	6 turns; d=1+1+1+1mm Sqar= 3,14mm^2	*In* = 10A
	Scale range: 8A-128A 12dA (**16 - 120**) 124dA	3 turns; d=(1+1+1+1)x2mm Sqar= 6,28mm^2	*In* = 20A