

## 2.4 Time Relays - pluggable

### RS 41-M

Multifunction | 24 ... 48 V UC | 220 ... 240 V AC | 1 CO | Potential-free control

#### Time data

Timing functions	fig. 1 4: E, 5: A, 6: K, 1: W, I
Timing range	0.1 s ... 15 min
Timing scale	1.5 s / 15 s / 15 min

#### Main circuit

Number of contacts	1 CO
Contact Material	AgNi
Rated voltage	250 V
Rated current	6 A
Minimum load	10 mA, 10 V
Inrush current	10 A, 10 ms
Rated load DC	fig. 2
Rated load AC-1	1500 VA
Mechanical endurance (cycles)	$2 \times 10^7$
Electrical endurance at rated load AC-1 (cycles)	fig. 3

#### Control circuit

Nominal voltage	24 ... 48 V UC	220 ... 240 VAC
Operating voltage range	19 ... 53 V UC	187 ... 265 VAC
Power consumption AC / DC	0.48 VA / 0.48 W	2.4 VA / 2.4 W
Typ. input current on command input AC / DC	n.A.	
Typ. threshold voltage on command input AC / DC	n.A. (8 V from Terminal 4)	
Rated frequency	45 ... 63 Hz	45 ... 63 Hz

#### Insulation

Rated test voltage control / main circuit	2 kV rms / 1 min
Rated test voltage open contact	1 kV rms / 1 min
Pollution degree	2
Oversupply category	III

#### General data

Ambient temperature storage	-40 ... 85 °C
Ambient temperature operation	-25 ... 60 °C
Module width	fig. 4
Weight	75 g
Protection degree	IP 20
Housing material	PC

#### Product references

Types	Product reference	24-48 220-240
UC supply	RS 41-M/UFK UC...V	✓
AC supply	RS 41-M/ATX AC...V	✓

"..." list control circuit voltage to complete product references.

Other voltages on request. Please contact support@comatreleco.com.

#### Accessories

Sockets	S3-M
Retaining clip	HF-50



fig. 1. Wiring diagram

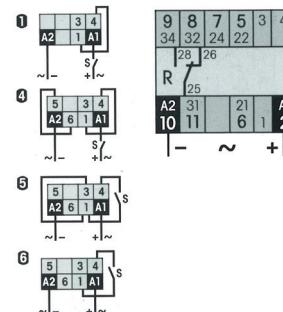


fig. 2. DC load limit curve

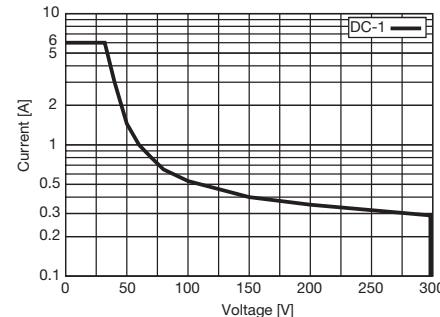


fig. 3. AC voltage endurance

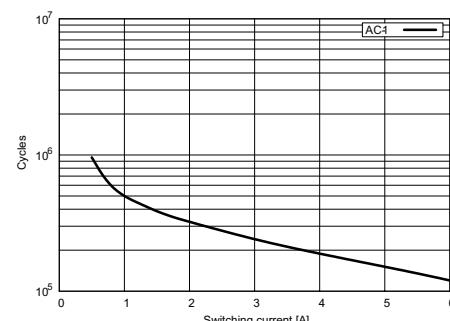
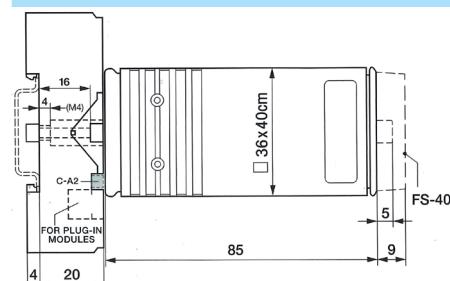


fig. 4. Dimensions (mm)



#### Standards and approvals

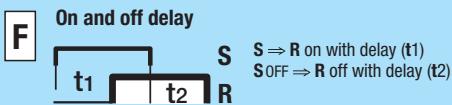
Standards IEC/EN 60947

Approvals

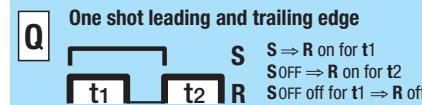
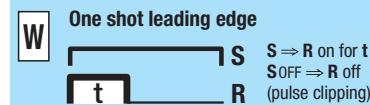


# Time functions

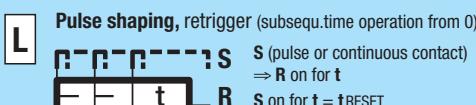
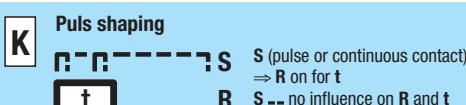
## Delay functions



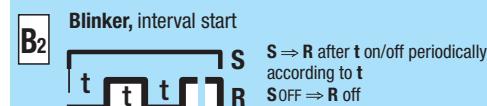
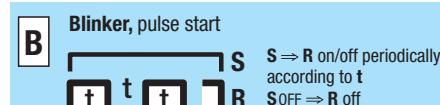
## Shot timing modes



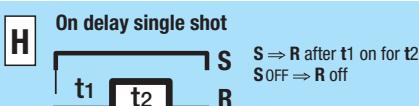
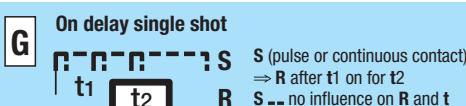
## Puls shaping



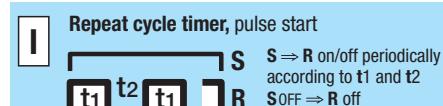
## Blinker functions



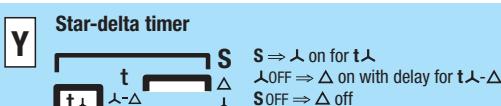
## Delayed pulse



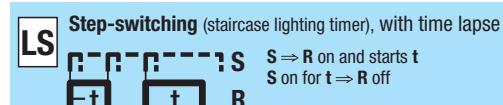
## Repeat cycle timer



## Special functions



## Special functions



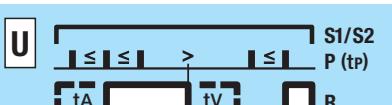
## Stop/Reset



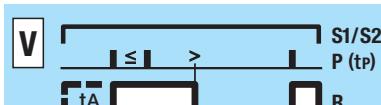
S = Triggering  
R = Output circuit  
=> = switches...

ON OFF

## Pulse sequence monitoring



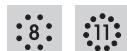
$\leq$ : Pulse separation is smaller than the time tp  
 $>$ : Pulse separation is larger than the time tp



Start with S1 = without start-up short-out tA  
Start with S2 = start-up short-out tA

S1/S2 = Monitoring start  
P = Pulse sequence  
tp = Pulse separation

tv = settable alarm delay  
delay (tA - tv)

**Time Cubes**


Type	Function															t max.	Ext. Poli									
	E	A	F	W	N	Q	K	L	M	B	B <sub>1</sub>	B <sub>2</sub>	G	H	I	P	S	LS	X <sub>1</sub>	U	V	I-Stop	I-Reset			
CT..-E 30	●																								30	
CT..-A 30		●																							30	
CT..-K 30				●			●																	30		
CT..-B 30									●															30		

**Modular plug-in Time Relays  
(CT-System)**


Type	Function															t max.	Ext. Poli								
	E	A	F	W	N	Q	K	L	M	B	B <sub>1</sub>	B <sub>2</sub>	G	H	I	P	S	LS	X <sub>1</sub>	U	V	I-Stop	I-Reset		
CT32...	●	●		●	●	●	●			●	●													60*	
CT33...	●	●	△	●	●	△	●	●		●	●		▲	▲										60*	
CT36...													●	●										60*	

**Plug-in Time Relays**


Type	Function															t max.	Ext. Poli									
	E	A	F	W	N	Q	K	L	M	B	B <sub>1</sub>	B <sub>2</sub>	G	H	I	P	S	LS	X <sub>1</sub>	U	V	I-Stop	I-Reset			
C55	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	60	186	
C55.3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	60	187	
C55.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	60	188	
C56	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	60	189	
C64	■			■																				20		
CS2	●	●		●	●		●			●	●													●	60*	193
CS3	●	●		●	●		●			●	●													●	60*	194

**Plug-in Time Relays**


Type	Function															t max.	Ext. Poli								
	E	A	F	W	N	Q	K	L	M	B	B <sub>1</sub>	B <sub>2</sub>	G	H	I	P	S	LS	X <sub>1</sub>	U	V	I-Stop	I-Reset		
C83	●	●	△	●	●	△	●	●		●	●		▲	▲									60*		
C85			●		●								●	●	●	●								60*	

**DIN Time Relays**


Type	Function															t max.	Ext. Poli											
	E	A	F	W	N	Q	K	L	M	B	B <sub>1</sub>	B <sub>2</sub>	G	H	I	P	S	LS	Y	U	V	I-Stop	I-Reset					
AA2 - AA2M	●																							1,5/12				
AE2 - AE2M	●																							1,5/12				
AL1								●																	170			
AL3								●																	60	171		
AL4								●																	60	172		
AL5								●																	60	173		
AM1	●			●						●	●														60	174		
AM2	●	●		●			●																		60	175		
AM3 <sup>1)</sup>	●	●		●			●																		60	176		
CM2	●	●		●			●																		●	12	177	
CM3	●	●		●	●		●			●	●													●	60*	178		
CMD11 A	●																										152	
CMD11 E	●																											153
CIM1	●	●		●	●		●			●	●														60*	160		
CIM12	●	●		●	●		●			●	●														60*	161		
CIM13	●	●		●	●		●			●	●														60*	162		
CIM14	●	●		●	●		●			●	●														60*	163		
CIM2	●	●					●	●		●	●														60*	164		
CIM22	●	●					●	●		●	●														60*	165		
CIM23	●	●					●	●		●	●														60*	166		
CIM3	●			●						●	●														60*	167		
CIM32	●			●						●	●														60*	168		
CIM33	●			●						●	●														60*	169		
CRV4	●	●	△	●	●	△	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	60*	180			
CSV4	●	●	△	●	●	△	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	10*	181			
CPF11	●						●	●		●	●													0.6		179		
CY1																	●									●	184	

<sup>1)</sup> alternatively with instantaneous contact

■ without auxiliary voltage (relay bistable)

□ without auxiliary voltage (relay monostable)

△  $t_2 = t_1$

▲  $t_2 = 0.5s$