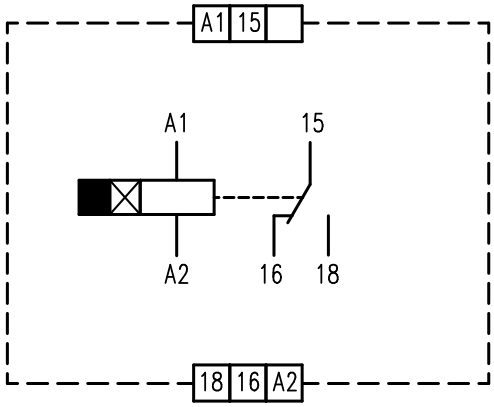
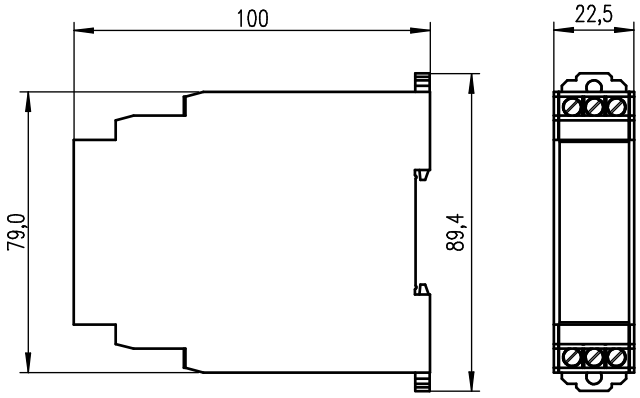
flare TIME M4-1

Multifunctional Time Relay
24-240 V AC/DC
81.020.0000.0

- Multifunctional Time Relay
- 4 selectable operating modes
- Multi range time settings
- 8 time ranges
- Multi voltage supply 20.4 ... 264 V AC/DC
- Mounting width 22.5 mm



Block diagram



Dimensional diagram

Technical Data

flare TIME M4-1		Order no. 81.020.0000.0
Input / Control		
Rated supply voltage A1-A2	[U_{I_N}]	24 ... 240 V AC/DC
Supply voltage range		20.4 ... 265 V AC/DC
Line frequency AC		50/60 Hz
Rated power consumption	[$P_{I\ max}$]	max. 4.5 VA @ 240 V AC
Output / Switching Contact		
Contacts		1 changeover contact
Contact load max.		5 A at 250 V AC / 5 A at 24 V DC, ohmic load
Contact output minimum load		10 mA at 5 V DC
Switching voltage max.		250 V AC / 30 V DC
Rated breaking capacity		see Fig. 1 Load limiting curve(d = distance to adjacent modules)
Contact material		AgNi
Life cycle		100 x 10^3 operations (5 A at 250 V AC, ohmic load, 360 operations/h)
Time Ranges / Operating Modes		
Time ranges (8 time ranges)		0.1 s / 1 s / 10 s / 1 m / 10 m / 1 h / 10 h / 100 h
Accuracy of operating time		max. ±1 % of full scale
Setting error		max. ±10 % of full scale ±0.05 s
Minimum input signal width		50 ms (start input)
Influence of voltage		max. ±0.5 % of full scale
Influence of temperature		max. ±2 % of full scale

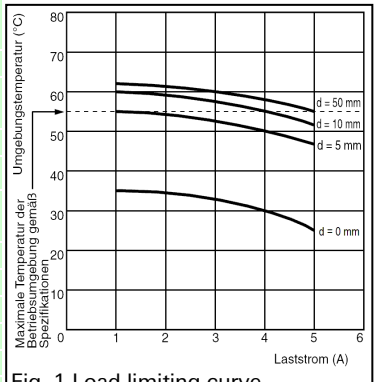


Fig. 1 Load limiting curve

Technical Data

flare TIME M4-1	**Order no. 81.020.0000.0**
Operating modes (Fig. 2 - e) (4 time functions)	A: ON Delay B2: Flicker ON start E: Single shot J: ON delayed single shot, fixed time
Change of operating mode (Fig. 2 - e)	Without power supply, else error
Functional Display	(see Fig. 2 Control and display elements)
LED relay control (Fig. 2 - d)	
Operating voltage off	LED off / n. o. contact open
Operating voltage on	LED slow flashing / n. o. contact open
time running	LED fast flashing / n. o. contact open
time expired	LED on / n. o. contact closed
LED relay contact (Fig. 2 - c)	
Contact open	LED off
Contact closed	LED on
Isolation Property	
Dielectric strength (input/output)	2.000 V AC (50/60 Hz, for 1 min)
Insulation resistance (A1, A2 / contacts)	min 100 MΩ at 500 V DC
Approvals and Standards	
UL	cURus
CE	EMV 2004/108/EC; Low voltage 2006/95/EC
Safety Standard	EN61812-1
Product Standard	EN61812-1
EMV immunity	EN61000-4-2, /-4-3, /-4-4, /-4-5
EMV emission	EN61000-3-2, /-3-3, EN55011 Class B
Operation / Dimensions / Wiring	
Operating temperature range [T_U]	-20 ... +55 °C
Storage temperature range [T_U]	-40 ... +70 °C
Humidity in operation	25 … 85 % RH
Dimensions (W x H x D)	22.5 x 100 x 79.0 mm
Weight	ca. 120 g
Housing material	Plastic
Mounting on	35 mm rail acc. EN 60715
Cooling	Free convection
IP protection	IP20
Clamp type	Screw clamp
Connector cross section (min.) solid/stranded	0.2 mm² (AWG24)
Connector cross section (max.) solid/stranded	2.5 mm² (AWG14)
Strip length	8 mm max.
Recommended torque	0.49 Nm
Terminal Connections	
A1, A2	Supply voltage
15, 16, 18	Changeover contact (relay)
Control Elements	(see Fig. 2 Control and display elements)
a - turn switch	Time range (0.1 s ... 100 h)
b - turn potentiometer	Time duration (0 ... 12 x time range)
e - turn switch	Operating mode / time function

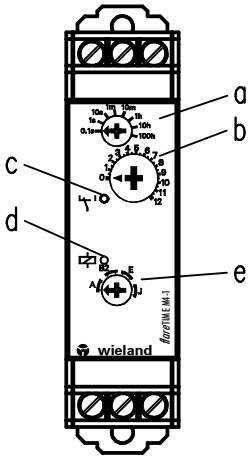


Fig. 2 Control and display elements