

Power Latching Relay TMR

- 1 pole 120A, 1 form A (NO) contact
- Polarized bistable (latching) with 1 or 2 coils
- Auxiliary switch optional
- Shunt implementation optional
- Various terminal configurations
- Meet IEC62055-31 UC3

Typical applications
Smart metering, charging pile, circuit breaker



Approval

Contact Data

Contact Form	1 Form A (NO)
Rated current	120A
Rated voltage	24VDC
Contact material	AgNi
Initial contact resistance	≤1mΩ @ 1A 6VDC
Operate/release time	≤30ms
Frequency of operation with/without load	360 cycles per hour = with 3600 cycles per hour = without
Max. short circuit, acc. to IEC62055.31	3kA/10ms 6kA/10ms (no explosion)

Contact ratings

Load	Cycles
120A, 24VDC, resistive (AgNi)	1 x 10 ⁴
Mechanical endurance	2 x 10 ⁵

Coil Data

Magnetic system	polarized, bistable
Coil voltage range	6 to 24VDC
Min./Max. energization duration	100ms/1min at <10% duty factor

Auxiliary Switch Data

Contact Form	1 Form B (Normally Closed)
Min. Switching Voltage	5VDC
Max. Switching Voltage	30VDC
Min. Switching Current	10mA
Max. Switching Current	200mA
Contact material	Ag Alloy
Initial contact resistance	≤100mΩ @ 10mA 6VDC
Mechanical endurance	1.0 x 10 ⁵ cycles
Frequency without load	360 cycles per hour

Coil operation	1 Coil		2 Coils	
Coil terminals	1	3	1	3
Set	-	+	-	+
Reset	+	-	+	-

Contact position not defined at delivery

TMR12 (120A)

Standard Single Coil Latching

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil Resistance Ω±10%	Rated Power W
B006	6	4.8	4.8	12	3.0
B009	9	7.2	7.2	27	3.0
B012	12	9.6	9.6	48	3.0
B024	24	19.2	19.2	192	3.0

Standard Dual Coil Latching

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil Resistance Ω±10%	Rated Power W
C006	6	4.8	4.8	6 / 6	6.0
C009	9	7.2	7.2	13.5 / 13.5	6.0
C012	12	9.6	9.6	24 / 24	6.0
C024	24	19.2	19.2	96 / 96	6.0

All figures are given for coil without pre-energization, at ambient temperature +23°C

Insulation Data

Initial dielectric strength	
between open contacts	2000V _{rms}
between contact and coil	4000V _{rms}
Initial surge withstand voltage	
between contact and coil	10kV (1.2/50μs)
Insulation resistance	1 x 10 ⁹ Ω
Clearance/creepage	
between contact and coil	≥6/8mm

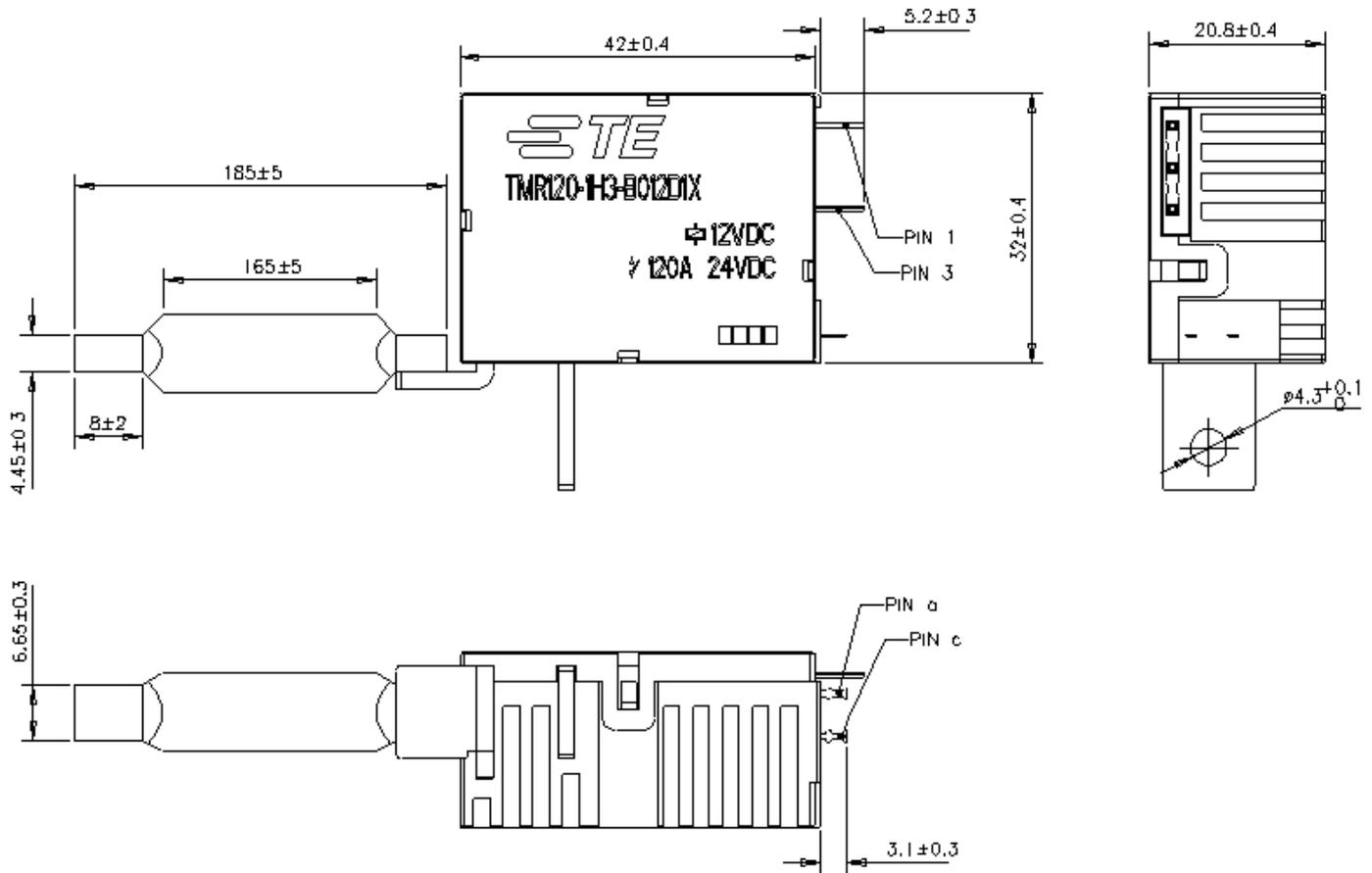
Other Data

Ambient temperature	-40 ~ 85°C
Category of environmental protection IEC 61810	RT1 (dust protected)
Vibration resistance (functional)	1.5mm double amplitude, 10...55HZ
Shock resistance (functional)	10g
Shock resistance (destructive)	100g
Terminal type	Power contacts: Braid wire/busbar, optional coil and auxiliary contacts: PCB/connector, optional
Weight	70g (Main body)

Power Latching Relay TMR (Continued)

Dimensions

TMR120 (vertical, with auxiliary contact)



Product code	Version	Coil	Contact Material	Contact Terminals	Part Number
TMR120-1H4-B012D10,03000	Vertical	12V Bistable, 1 Coil 3W	AgNi	angled	2071540-1

note: only typical PN listed, other types on request.



Power Latching Relay TMR (Continued)

Product code structure	Typical product code	Series			Contact			Coil		Enclosure, Terminals			Variant			
		TMR	12	0	-	1	H	4	-	B	012	-	D	1	0	.
1. Type (Product family)		TMR Power Latching Relay TMR Series														
2. Version - Current class/Model		12 120A														
3. Version - Orientation and Performance		0 Vertical, standard performance														
4. Number of Contact Poles		1 1 pole														
5. Contact arrangement		A form A (NO contact) H form A with auxiliary contact (NO contact)														
6. Contact material		4 AgNi														
7. Coil version		B bistable 1 coil														
8. Coil voltage		006 6V 009 9V 012 12V 024 24V nnn coil voltage; e.g 012 (12V) for standard coil														
9. Category of Protection		D RTI - dust proof														
10. Mechanical feature		1 standard														
11. Terminals		0 angled contact terminals														
12. Variant		99999 optional 5 digit identifier for customized variant - reverse coil polarity - Shunt (if any, value) - customized wires, busbars, etc.														