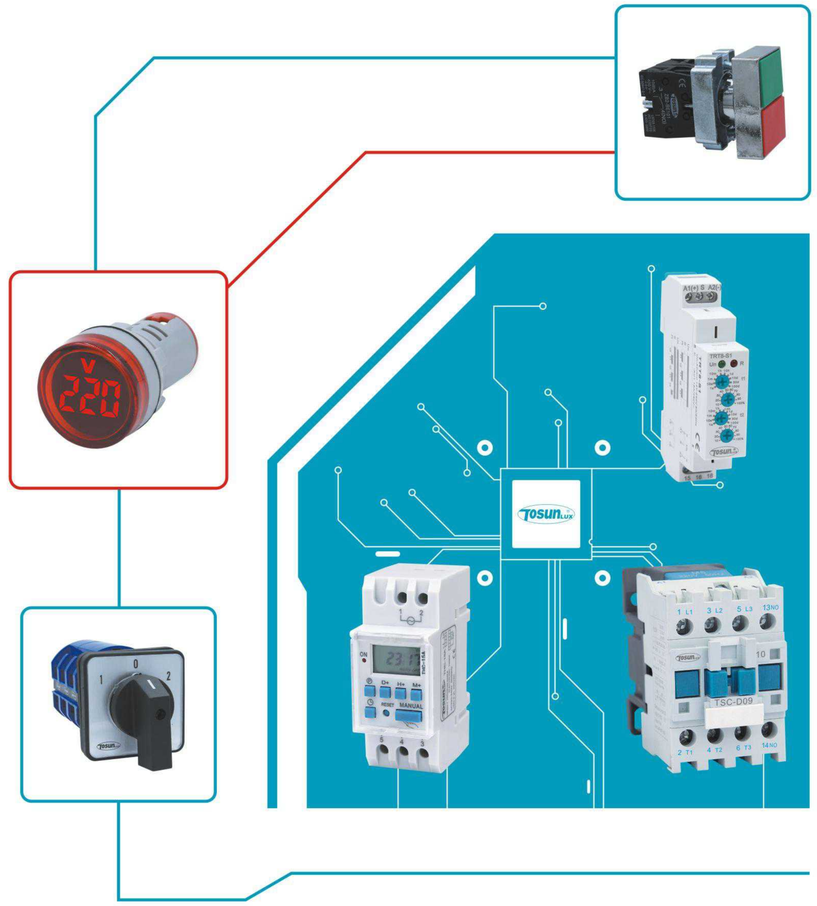
2022 / 2023

Industrial Control Devices



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Distributor

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Contents

TSC-D09

TSC-D AC Contactor

Application

TSC-D series AC Contactor is suitable for using in the circuits up to the rated voltage 660V AC 50Hz or 60Hz, rated current up to 95A, for making, breaking, frequently starting & controlling the AC motor. Combined with the auxiliary contact block, delay timer & machine-interlocking device etc, it becomes the delay contactor, mechanical interlocking contactor, star-delta starter. With the thermal relay, it is combined into the electromagnetic starter. The products comply with IEC60947-4.

Specification

Model		TSC-D09	TSC-D12	TSC-D18	TSC-D25	TSC-D32
Rated working current (A)	AC3	9	12	18	25	32
	AC4	3.5	5	7	8.5	12
AC3 capacity of phase 3 squirrel-cage motor AC3(KW)	220/230V	2.2	3	4	5.5	7.5
	380/400V	4	5.5	7.5	11	15
	415V	4	5.5	9	11	15
	500V	5.5	7.5	10	15	18.5
	660/690V	5.5	7.5	10	15	18.5
Rated heat current (A)		20	20	32	40	50
Electrical life	AC3 x 10^4	100	100	100	100	80
	AC4 x 10^4	20	20	20	20	20
Mechanical life x 10^4		1000	1000	1000	1000	800
Number of the contacts		3P+NO				
		3P+NC				

TSC-D40

Model		TSC-D40	TSC-D50	TSC-D65	TSC-D80	TSC-D95
Rated working current (A)	AC3	40	50	65	80	95
	AC4	16	20	25	32	38
AC3 capacity of phase 3squirrel-cage motor AC3(KW)	220/230V	11	15	18.5	22	25
	380/400V	18.5	22	30	37	45
	415V	22	25	37	45	45
	500V	22	30	37	55	55
	660/690V	30	33	37	45	55
Rated heat current (A)		60	80	80	95	110
Electrical life	AC3 x 10^4	80	60	60	60	60
	AC4 x 10^4	15	15	15	10	10
Mechanical life x 10^4		800	800	800	600	600
Number of the contacts		3P+NO+NC				

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Standard Control Circuit Voltages

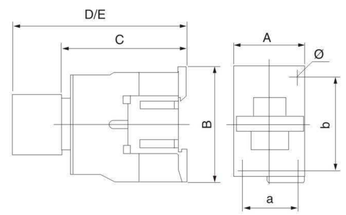
Volts	24	42	48	110	220	230	240	380	400	415	440	500	600
50Hz	B5	D5	E5	F5	M5	P5	U5	Q5	V5	N5	R5	S5	Y5
60Hz	B6	D6	E6	F6	M6	-	U6	Q6	-	-	R6	-	-
50/60Hz	B7	D7	E7	F7	M7	P7	U7	Q7	V7	N7	R7	-	-

TSC-D95

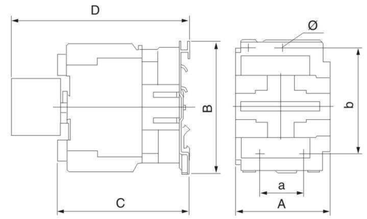
Dimension

For TSC1-D09~95 contactors:

Model	A	B	C	D	a	b	ø
TSC-D09~12	47	76	82	113	34/35	50/60	4.5
TSC-D18	47	76	87	118	34/35	50/60	4.5
TSC-D25	57	86	95	126	40	48	4.5
TSC-D32	57	86	100	131	40	48	4.5
TSC-D40~65	77	129	116	145	40	100/110	6.5
TSC-D80~95	87	129	127	175	40	100/110	6.5



TSC-D09~32



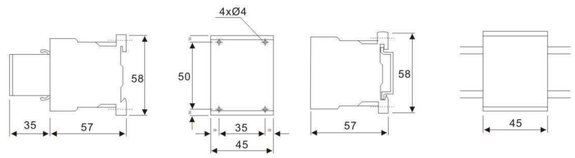
TSC-D40~95

TSC1-K AC Contactor

Specification

Model		TSC1-K06	TSC1-K09	TSC1-K12	TSC1-K16
Rated current at AC3 (A)		6	9	12	16
Rated working current (Ie)A		5	7.5	10	12
Conventional thermal current(Ith)A		16	20	20	20
AC-3 Use Group Control Power KW	220V	1.5	2.2	3	3
	380/415V	2.2	4	5.5	7.5
	440/500V	3	4	5.5	7.5
	660V	3	4	5.5	7.5

TSC1-K09



TSC7-D18

TSC7-D AC Contactor

Application

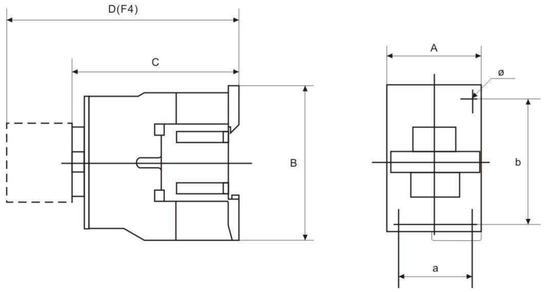
TSC7 series AC Contactor is suitable for using in the circuits up to the rated voltage 660V AC 50Hz or 60Hz, rated current up to 38A, for making, breaking, frequently starting & controlling the AC motor. Combined with the auxiliary contact block, delay timer & machine-interlocking device etc, it becomes the delay contactor, mechanical interlocking contactor, star-delta starter. With the thermal relay, it is combined into the electromagnetic starter. The products comply with IEC60947-4.

Specification

Model			09	12	16	18	22	25	32	38
Rated working current(A)	400(380)V	AC-3	9	12	16	16	22	25	32	38
		AC-4	3.5	5	6.5	7.7	8	8.5	12	12
	690(660)V	AC-3	6.6	8.9	11	18	16	34	39	39
		AC-4	1.5	2	3	4.4	4	9	12	12
Rated heat current(A)			20	20	25	40	40	60	80	80
AC3 capacity of phase 3 squirrel-cage motor AC3 (KW)	230(220)V		2.2	3	4	5	5.5	11	15	15
	400(380)V		4	5.5	6.5	11	10	18.5	22	22
	690(660)V		5.5	7.5	10	15	18.5	30	37	37
Mechanical life x10^4			1200	1200	1200	1200	1200	600	600	600
Electrical life x10^4	AC-3		100	100	100	100	80	80	60	60
	AC-4		20	20	20	20	20	15	15	15
Number of the contacts			3P+NO+NC							

TSC7-D32

Dimension



Model	A	B	C	D	a	b	Ø
TSC7-09-18	46	76	88	120	34	55	4.5
TSC7-22-38	56	87	101	135	40	60	4.5

TSC1-F AC Contactor

Application

TSC1-F series AC Contactor is applicable to the circuits up to the rated voltage 1000V AC 50Hz or 60Hz, rated current from 115A to 800A, for long distance breaking circuit and frequently starting or controlling the motor. It also can be used for the control of distribution circuits of rated current from 200A to 1600A.

TSC1-F115

Specification

Model		TSC1-F115	TSC1-F150	TSC1-F185	TSC1-F225	TSC1-F265	TSC1-F330
Rated operation current(A)	AC-3	115	150	185	225	265	330
	AC-1	200	250	275	315	350	400
Standard power ratings of 3-phase motors AC-3 (KW)	220/230V	30	40	55	63	75	100
	380/400V	55	75	90	110	132	160
	415V	59	80	100	110	140	180
	440V	59	80	100	110	140	200
	500V	75	90	110	129	160	200
	660/690V	80	100	110	129	160	200
	1000V	65	65	100	100	147	160

Model		TSC1-F400	TSC1-F500	TSC1-F630	TSC1-F780	TSC1-F800
Rated operation current(A)	AC-3	400	500	630	780	800
	AC-1	500	700	1000	1600	1000
Standard power ratings of 3-phase motors AC-3 (KW)	220/230V	110	147	200	220	220
	380/400V	200	250	335	400	400
	415V	200	280	375	425	420
	440V	250	295	400	425	420
	500V	257	355	400	450	430
	660/690V	280	335	450	475	470
	1000V	185	335	450	450	450

Both 3 poles and 4 poles are available.

TSC1-F630

TSC1-D AC Contactor

TSC1-D09

Application

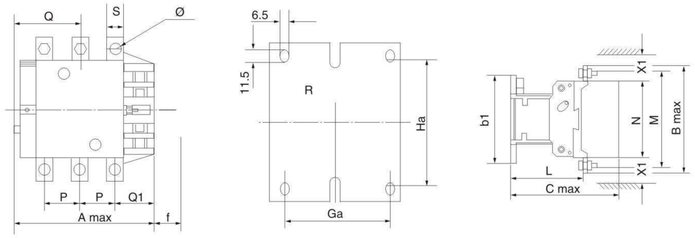
TSC1-D series AC Contactor is suitable for using in the circuits up to the rated voltage 660V AC 50Hz or 60Hz, rated current up to 620A, for making, breaking, frequently starting & controlling the AC motor. Combined with the auxiliary contact block, delay timer & machine-interlocking device etc, it becomes the delay contactor, mechanical interlocking contactor, star-delta starter. With the thermal relay, it is combined into the electromagnetic starter. The products comply with IEC60947-4.

Standard Control Circuit Voltages

Volts	24	42	48	110	220	230	240	380	400	415	440	500	600
50Hz	B5	D5	E5	F5	M5	P5	U5	Q5	V5	N5	R5	S5	Y5
60Hz	B6	D6	E6	F6	M6	-	U6	Q6	-	-	R6	-	-
50/60Hz	B7	D7	E7	F7	M7	P7	U7	Q7	V7	N7	R7	-	-

For TSC1-D115~620 contactors:

Model	A	B	C	b1	P	Q	S	Q1	M	N	L	Ø	Ga	Ha
TSC1-D115	158	120	132	158	35	60	17	25	134	96.2	75	M6	-	-
TSC1-D150	158	120	132	158	35	60	17	25	134	96.2	75	M6	-	-
TSC1-D170	158	120	132	158	35	60	17	25	134	96.2	75	M6	-	-
TSC1-D205	168.5	174	181	137	40	69	20	59.4	154	127	113.5	M8	80	120-106
TSC1-D245	168.5	197	181	137	48	69	25	51.5	172	127	113.5	M10	80	120-106
TSC1-D300	213	206	219	145	48	91	25	74	181	158	145	M10	80	120-106
TSC1-D410	213	206	219	209	48	91	25	74	181	158	145	M10	80	120-106
TSC1-D475	233	238	232	209	55	108	30	77	208	172	146	M10	80	180
TSC1-D620	309	304	255	280	80	140	40	89	264	202	155	M12	80	180



TSC1-D115

Specification

Model		D09	D12	D18	D25	D32	D40	D50	D65
Rated working current (A)	AC3	9	12	18	25	32	40	50	65
	AC4	3.5	5	7.7	8.5	12	18.5	24	28
AC3 capacity of phase 3 squirrel-cage motor AC3 (KW)	220/230V	2.2	3	4	5.5	7.5	11	15	18.5
	380/400V	4	5.5	7.5	11	15	18.5	22	30
	415V	4	5.5	9	11	15	22	25	37
	500V	5.5	7.5	10	15	18.5	22	30	37
	660/690V	5.5	7.5	10	15	18.5	30	33	37
Rated heat current (A)		20	20	32	40	50	60	80	80
Electrical life	AC3 x 10^4	100	100	100	100	80	80	60	60
	AC4 x 10^4	20	20	20	20	20	15	15	15
Mechanical life x 10^4		1000	1000	1000	1000	800	800	800	800
Number of the contacts		3P+NO					3P+NO+NC		
		3P+NC							
		4NO							
		2NO+2NC							

D80	D95	D115	D150	D170	D205	D245	D300	D410	D475	D620
80	95	115	150	170	205	245	300	410	475	620
37	44	52	60	75	85	105	117	138	147	180
22	25	30	40	55	63	75	100	110	147	200
37	45	55	75	90	110	132	160	220	265	335
45	45	59	80	100	110	132	180	220	280	375
55	55	75	90	110	129	160	200	250	355	400
45	55	80	100	110	129	160	220	280	355	450
95	110	200	250	250	275	315	400	500	700	1000
60	60	200	60	60	50	50	50	30	30	20
10	10	15	15	15	15	15	15	8	8	5
600	600	300	300	300	300	300	300	100	100	100
3P+NO+NC		3P								
4NO		-								
2NO+2NC		-								

TSC1-D80

TSC1-D620

TSC2 Mechanical Interlocked Contactor

TSC2-D09

Specifications

Model	Rated current AC-3(A)	Controlled power(KW)				
		220V	380V	415V	440V	660V
TSC2-D09	9	2.2	4	4	4	5.5
TSC2-D12	12	5.5	5.5	5.5	5.5	7.5
TSC2-D18	18	7.5	7.5	9	9	10
TSC2-D25	25	5.5	11	11	11	15
TSC2-D32	32	7.5	15	15	15	18.5
TSC2-D40	40	18.5	18.5	22	22	30
TSC2-D50	50	15	22	25	30	33
TSC2-D65	65	18.5	30	37	37	37
TSC2-D80	80	22	37	45	45	45
TSC2-D95	95	22	45	45	45	41
TSC2-D115	115	30	55	59	59	80
TSC2-D150	150	40	75	80	80	100
TSC2-D170	170	55	90	100	100	110
TSC2-D205	205	63	110	110	110	129
TSC2-D245	245	75	132	132	132	160
TSC2-D300	300	100	160	200	200	220
TSC2-D410	410	110	220	250	250	280
TSC2-D475	475	147	265	280	280	355
TSC2-D620	620	200	335	400	400	450

TSC2-F225

Model	Number of Poles	Rated Current AC-3(A)	Rated Current In/A	Controlled power(KW)	
				220V	380V
TSC2-F115	3P	115	250	200	55
TSC2-F1154	4P	115	250	200	55
TSC2-F150	3P	150	355	250	75
TSC2-F1504	4P	150	355	250	75
TSC2-F185	3P	185	425	275	90
TSC2-F1854	4P	185	425	275	90
TSC2-F225	3P	225	500	315	110
TSC2-F2254	4P	225	500	315	110
TSC2-F265	3P	265	630	350	132
TSC2-F2654	4P	265	630	350	132
TSC2-F330	3P	330	800	400	160
TSC2-F3304	4P	330	800	400	160
TSC2-F400	3P	400	800	500	200
TSC2-F4004	4P	400	800	500	200
TSC2-F500	3P	500	1000	700	250
TSC2-F5004	4P	500	1000	700	250
TSC2-F630	3P	630	1250	1000	335
TSC2-F6304	4P	630	1250	1000	335
TSC2-F800	3P	800	1250	1000	400

TSA1 Auxiliary Contact Block

Specification

Model	Type of Contact	Model	Type of Contact
TSA1-DN01	1NC	TSA1-DN40	4NO
TSA1-DN02	2NC	TSA1-DN04	4NC
TSA1-DN10	1NO	TSA1-DN13	1NO+3NC
TSA1-DN11	NO+NC	TSA1-DN31	3NO+1NC
TSA1-DN20	2NO	TSA8-DN11	1NO+1NC
TSA1-DN22	2NO+2NC	TSA8-DN20	2NO

TSA1-DN22

TSX1 Bobbin of AC Contactor

Specification

TSX1-D2:	Used for Contactor	TSC1-D09 to TSC1-D18
TSX1-D4:	Used for Contactor	TSC1-D25 to TSC1-D32
TSX1-D6:	Used for Contactor	TSC1-D40 to TSC1-D95
TSX1-FF:	Used for Contactor	TSC1-F115 to TSC1-F150
TSX1-FG:	Used for Contactor	TSC1-F185 to TSC1-F225
TSX1-FH:	Used for Contactor	TSC1-F265 to TSC1-F330
TSX1-FJ:	Used for Contactor	TSC1-F400
TSX1-FK:	Used for Contactor	TSC1-F500
TSX1-FL:	Used for Contactor	TSC1-F630
TSX1-FX:	Used for Contactor	TSC1-F780

TSX1-D2

TSA2 TSA3 Delay Timer

Specification

Model	Delay Range	Number of the delay contacts
TSA2-DT0	0.1~3s	NO+NC
TSA2-DT2	0.1~30s	
TSA2-DT4	10~180s	
TSA3-DR0	0.1~3s	
TSA3-DR2	0.1~30s	
TSA3-DR4	10~180s	

TSA2-DT2

TSR2-D Thermal Overload Relay

TSR2-D13

Application

This series of thermal overload relay can be used in the circuit of 50Hz or 60Hz, rated insulation voltage 660V, rated current 0.1-93A for protecting the phase break when the electric motor is overload.
The relay has different mechanism and temperature compensation & can be plugged in TSC-D or TSC1-D series AC contactor. It is the most advanced thermal relay in the nineties in the world. The products comply with IEC 60947-5.

Characteristics

a. Fundamental parameter of the main circuit
(a). Rated insulation voltage 660V.
(b). Rated working current 25,36,93A separately.
(c). The regulator seal of rated setting current.
(d). Current of the Thermal components (see list 1)
b. Auxiliary Circuit
(a). There is one pair of N/O and N/C contact with electric insulation.
(b). Rated insulation voltage 500V.
(c). Rated frequency 50-60Hz.
(d). Use group, rated working voltage, appoint thermal current and rated current.

Specification

Model	Rated working current		Thermal component	
			Rated current (A)	Regular or scale of rated current (A)
TSR2-D13	25A	TSR2-D 1301	0.16	0.10-0.16
		1302	0.25	0.16-0.25
		1303	0.40	0.25-0.40
		1304	0.63	0.40-0.63
		1305	1.0	0.63-1.0
		1306	1.6	1.0-1.6
		1307	2.5	1.6-2.5
		1308	4.0	2.5-4.0
		1310	6.0	4.0-6.0
		1312	8.0	5.5-8.0
		1314	10.0	7.0-10.0
		1316	13.0	9.0-13.0
		1321	18.0	12.0-18.0
		1322	25.0	17.0-25.0
TSR2-D23	36A	TSR2-D 2353	32	23.0-32.0
		2355	36	28.0-36.0
TSR2-D33	93A	TSR2-D 3353	32	23.0-32.0
		3355	40	30.0-40.0
		3357	50	37.0-50.0
		3359	65	48.0-65.0
		3361	70	55.0-70.0
		3363	80	63.0-80.0
		3365	93	80.0-93.0

TSR2-D33

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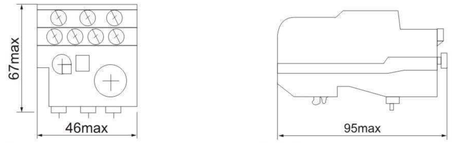
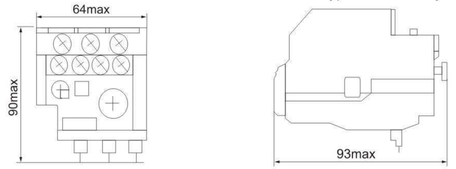
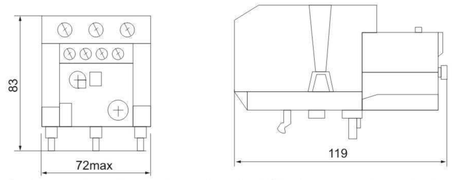
Dimension



Outline and installation dimension for TSR2-D13 type thermal relay.



Outline and installation dimensions for TSR2-D23 type thermal relay.



Outline and installation dimensions for TSR2-D33 type thermal relay.

TSA7-D1064

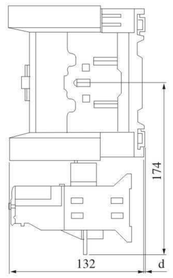
TSA7-D3064

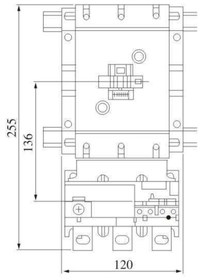
TSR2-F Electronic Thermal Overload Relay

Specification

Model		Setting range(A)	For contactor
TSR2-F53	F5357	30-50	F115-F185
	F5363	48-80	F115-F185
	F5367	60-100	F115-F185
	F5369	90-150	F115-F185
	F5371	132-220	F225-F265
TSR2-F73	F7375	200-330	F330-F500
	F7379	300-500	F330-F500
	F7381	380-630	F400-F630

Dimension





TSR2-F53

TSE1-D Magnetic Starter

TSE1-D09

Application

TSE1-D magnetic starter is mainly applied to circuit of AC 50Hz or 60Hz, voltage up to 550V for far distance making and breaking circuit and frequently starting and controlling motor. It has the features of small volume, light weight, low power consumption, high efficiency, safe and reliable performance etc.

Specification

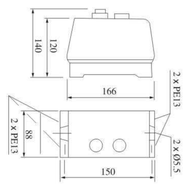
Model	Rated current (A)	Maximum power AC3 duty(KW)						Suitable thermal relay (A)
		220V 230V	380V 400V	415V	440V	550V	660V 690V	
TSE1-D09	9	2.2	4	4	4	5.5	5.5	TSR2-D1312 TSR2-D1314
TSE1-D12	12	3	5.5	5.5	5.5	7.5	7.5	TSR2-D1316
TSE1-D18	18	4	7.5	9	9	10	10	TSR2-D1321
TSE1-D25	25	5.5	11	11	11	15	15	TSR2-D1322 TSR2-D2353
TSE1-D32	32	7.5	15	15	15	18.5	18.5	TSR2-D2355
TSE1-D40	40	11	18.5	22	22	22	30	TSR2-D3353 TSR2-D3355
TSE1-D50	50	15	22	25	30	30	33	TSR2-D3357 TSR2-D3359
TSE1-D65	65	18.5	30	37	37	37	37	TSR2-D3361
TSE1-D80	80	22	37	45	45	55	45	TSR2-D3363 TSR2-D3365
TSE1-D95	95	25	45	45	45	55	45	TSR2-D3365

Standard control circuit voltages

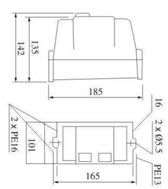
Volts	24	42	48	110	220	230	240	380/400	400	415	440
50/60Hz	B7	D7	E7	F7	M7	P7	U7	Q7	V7	N7	R7

TSE1-D25

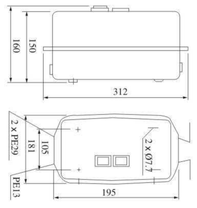
Dimension



TSE1-D09,D12,D18



TSE1-D25,D32



TSE1-D40,D50,D65,D80,D95

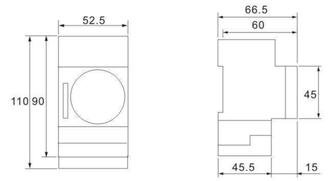
Timer

Specification

Model	TUL181h
Contact capacity	AC220V 16A
Full timing rang	24h
Contact resistance	≤50mΩ
Insulation resistance	≥100MΩ
Coil voltage	100,230VAC
Electrical life	10^5 times
Mechanical life	10^7 times
Operating temperature	-40°C~+55°C
Storage battery (Working reserve)	150h
Minimum setting unit	30 mins
Set up times	30m per times 48 times

TUL181h

Dimension

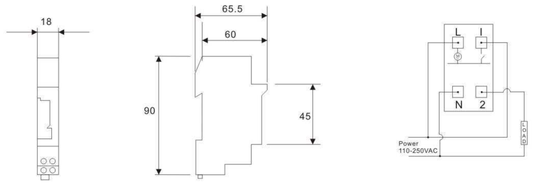


Specification

Model	TS-GM1
Auxiliary power supply	AC220-240V 50/60Hz
Switching contact	16(4)A 250VAC
Burden	0.5W
Accuracy	±3sec/day at 22°C
Back-up time	100 hours
Type of dial	daily 96 pins
Minimum setting unit	daily 15 minutes
Temperature	Working -10°C ~ +50°C storage -25°C÷70°C
Manual operating switch 2 positions	ON-Automatic
Terminal wires	2x2.5mm
Protection degree	IP20 as per EN60529

TS-GM1

Dimension



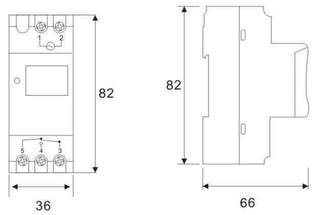
Timer

THC-15A

Specification

Model	THC-15A/ 20A/ 30A
Operating voltage	AC 220-240V 50/60Hz
Power consumption	4.5VA
Operating temperature	-10°C~+50°C
Accuracy	⩽1s/d
On/off setting	16 ON/16 OFF
Minimum setting unit	1 min
Time Setting range	1 minute to 168 hours
Contact capacity	THC-15A Resistive: 16A/250VAC
	THC-20A Resistive: 20A/250VAC
	THC-30A Resistive: 30A/250VAC
Mounting	DIN rail mounting

Dimension



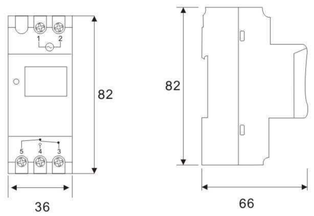
THC-30B

Specification

Model	THC-15B/ 20B/ 30B
Operating voltage	AC 220-240V 50/60Hz
Power consumption	4.5VA
Accuracy	⩽1s/d
On/off Setting	8ON/8OFF
Minimum setting unit	1min
Time setting range	1 minute to 168 hours
Contact Capacity	THC-15B Resistive: 16A/250VAC
	THC-20B Resistive: 20A/250VAC
	THC-30B Resistive: 30A/250VAC
Mounting	DIN rail mounting
Operating temperature	-10°C~+50°C

★ Astronomical latitude setting

Dimension



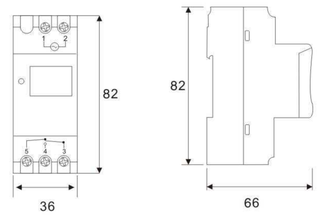
Specification

Model	TS-GE2 16A/ 20A/ 30A
Operating voltage	AC 220-240V 50/60Hz
Power consumption	4.5VA
Accuracy	⩽1s/d
On/off Setting	8ON/8OFF
Minimum setting unit	1min
Time setting range	1 minute to 168 hours
Contact capacity	TS-GE2 16A Resistive: 16A/250VAC
	TS-GE2 20A Resistive: 20A/250VAC
	TS-GE2 30A Resistive: 30A/250VAC
Mounting	DIN rail mounting
Operating temperature	-10°C~+50°C

★ Summer / Winter time setting

TS-GE2

Dimension



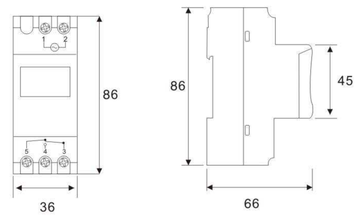
Specification

Model	THC810 16A/ 20A/ 30A
Full timing range	24h 7days
Rated voltage	AC 220-240V 50/60Hz
Contact capacity	16A, 20A, 30A, 250VAC
Contact form	1 changeover switch
Accuracy	⩽1s/d
Display	LCD
Mounting	DIN rail
Minimum setting unit	1 min
Programmable	44ON/44OFF
Storage battery	3 years
Consumed power	4VA
Electrical life	$\geqslant 10^5$ tims
Mechanical life	$\geqslant 10^7$ tims
Operating temperature	-10°C~+50°C

★ Six languages available

THC810

Dimension



Timer

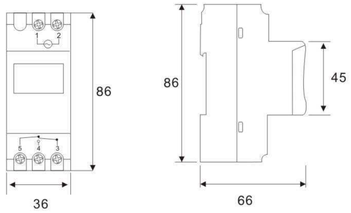
THC811

Specification

Model	THC811 16A/20A/30A
Full timing range	24h 7days
Rated voltage	AC 220-240V 50/60Hz (Other special voltages can be customized)
Contact capacity	16A, 20A, 30A, 250VAC
Contact form	1 changeover switch
Accuracy	⩽1s/d
Display	LCD
Mounting	DIN rail
Minimum setting unit	1 min
Programmable	44ON/44OFF
Storage battery	3 years
Consumed power	4VA
Electrical life	⩾10^5times
Mechanical life	⩾10^7 times
Operating temperature	-10~+50°C

★ pulse function

Dimension

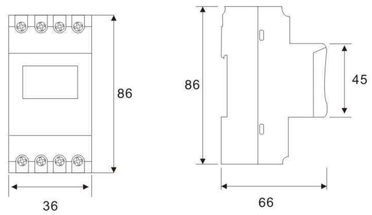


Specification

THC-812

Model	THC812 16A
Full timing range	24h/7days random switching, holiday program
Rated voltage	AC 220V 50/60Hz 85%~110%
Contact capacity	16(10)A, 250VAC
Contact form	2 changeover switch
Accuracy	⩽1s/d
Display	LCD
Mounting	DIN rail
Minimum setting unit	1 min
Programmable	44ON/44OFF
Storage battery	3 years
Consumed power	4VA
Electrical life	⩾10^5times
Mechanical life	⩾10^7 times
Operating temperature	-10~+50°C

Dimension



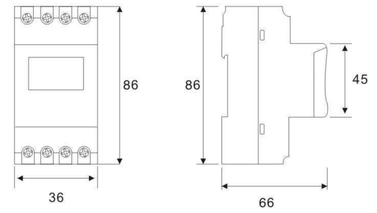
Specification

Model	THC822
Full timing range	24h/7days random switching, holiday program, pulse and cycle program
Rated voltage	AC 220V 50/60Hz 85%~110%
Contact capacity	16(10)A, 250VAC
Contact form	2 changeover switch
Accuracy	⩽1s/d
Display	LCD
Mounting	DIN rail
Minimum setting unit	1 min
Programmable	44ON/44OFF
Storage battery	3 years
Consumed power	7.5VA
Electrical life	⩾10^5times
Mechanical life	⩾10^7 times
Operating temperature	-10~+50°C

★ pulse function

THC-822

Dimension



Light Control Timer

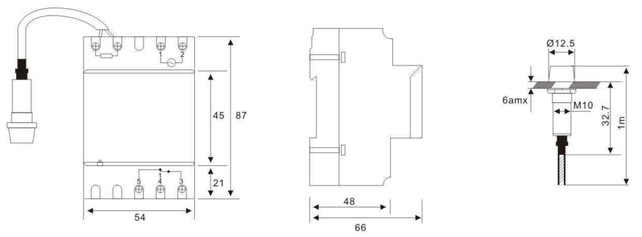
Specification

Model	THC-9115 16A/ 20A
Voltage	DC85-265V/ AC85-265V 50/60Hz
Accuracy	⩽1s/d
On/off setting	16ON/16OFF
Power consumption	4VA (max)
Display	LCD
Ambient light	5-100LUX
Minimum setting unit	1 min
Contact	1NO+1NC
Mounting	DIN rail
Contact capacity	THC9115 16A Resistive: 16A/250VAC
	THC9115 20A Resistive: 20A/250VAC

THC-9115

THC-109X

Dimension



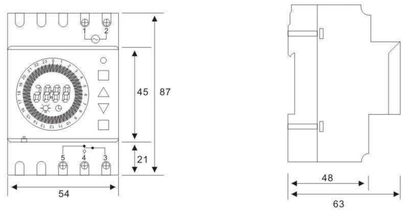
Timer

THC20-1C

Specification

Model	THC20-1C 16A/20A/30A
Voltage	AC220-240V 50/60Hz
Voltage range	AC 180-250V
Timing error	⩽1s/d
On/off setting	48ON/48OFF
Power consumption	4VA (max)
Display	LCD
Minimum setting unit	15 mins
Contact	16A 1NO+1NC, 20A 1NO+1NC, 30A 1NO
Mounting	DIN rail mounting
Contact capacity	THC20-1C 16A Resistive: 16A/250VAC
	THC20-1C 20A Resistive: 20A/250VAC
	THC20-1C 30A Resistive: 30A/250VAC
Electrical life	10^5 times (Rated load)

Dimension



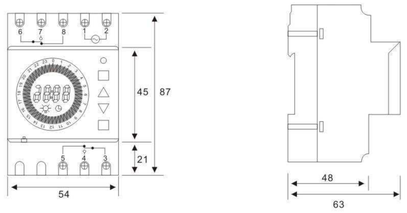
THC20-2C

Specification

Model	THC20-2C 16A/20A/30A
Voltage	AC220-240V 50/60Hz
Voltage range	AC 180-250V
Timing error	⩽1s/d
On/off setting	48ON/48OFF
Power consumption	4VA (max)
Display	LCD
Minimum setting unit	15 mins
Contact	16A 2NO+2NC, 20A 2NO+2NC, 30A 2NO
Mounting	DIN rail mounting
Contact capacity	THC20-2C 16A Resistive: 16A/250VAC
	THC20-2C 20A Resistive: 20A/250VAC
	THC20-2C 30A Resistive: 30A/250VAC
Electrical life	10^5 times (Rated load)

★ 2 groups of synchronized contacts

Dimension



Light Control Timer

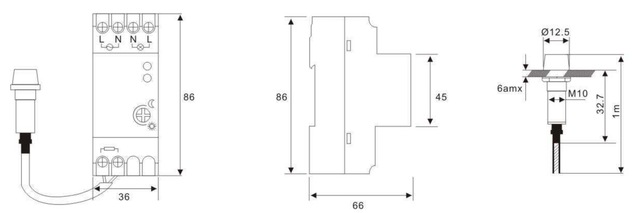
Specification

Model	THC-109
Range voltage	AC220V 50/60Hz
Voltage range	AC 180-250V
Power consumption	4VA (max)
Rated current	16A, 20A, 25A
Mounting	DIN rail
Contact capacity	THC-109 16A Resistive: 16A/250VAC
	THC-109 20A Resistive: 20A/250VAC
	THC-109 25A Resistive: 25A/250VAC
Ambient light	<5-150LUX(adjustable)
Mechanical life	10^5 times (Rated load)

THC-109

THC-109X

Dimension



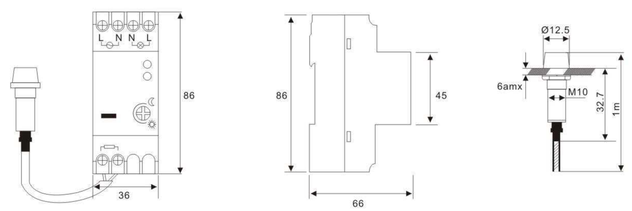
Specification

Model	THC-109B
Range voltage	AC220V 50/60Hz
Voltage range	AC 180-250V
Power consumption	4VA (max)
Rated current	16A, 20A, 25A
Mounting	DIN rail
Contact capacity	THC-109 16B Resistive: 16A/250VAC
	THC-109 20B Resistive: 20A/250VAC
	THC-109 25B Resistive: 25A/250VAC
Ambient light	<5-150LUX(adjustable)
Mechanical life	10^5 times (Rated load)

THC-109B

THC-109X

Dimension



Three Phase Voltage Relay

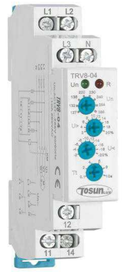
TRV8-03

Applications

- Control for connection of moving equipment (like site equipment, agricultural equipment, refrigerated trucks).
- Control for protection of people and equipment against reverse running.
- Normal/emergency power supply switching.
- Protection against phase failure of driving load.
- Control its own supply voltage (true RMS measurement).
- Set 8 kinds rated operating voltage through knob.

Function

Model	Over-voltage	Under-voltage	Asymmetry	Delay time	Phase sequence	Phase failure
TRV8-03	-	-	-	-	●	●
TRV8-04	2%...20%	-20%...2%	-	0.1s...10s	●	●
TRV8-05	2%...20%	-20%...2%	-8%	0.1s...10s	●	●
TRV8-06	2%...20%	-20%...2%	5%...15%	2s	●	●
TRV8-07	-	-	5%...15%	2s	●	●
TRV8-08	15%	-15%	8%	2s	●	●

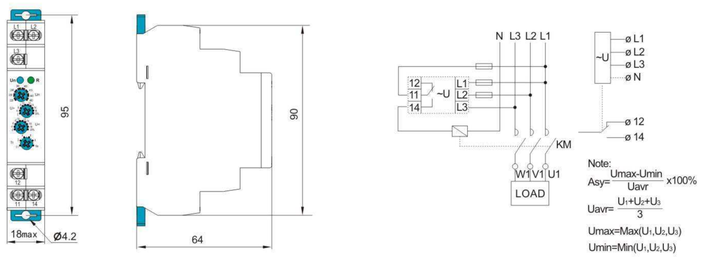


TRV8-04

Specification

Voltage Model	M460	M265
Function	Monitoring 3-phase voltage	
Monitoring Terminals	L1-L2-L3	L1-L2-L3-N
Supply Terminals	L1-L2	L1-N
Voltage Range (V)	220-230-240-380-400 -415-440-460(P-P)	127-132-138-220-230 -240-254-265(P-N)
Rated Supply Frequency	45Hz-65Hz	
Measuring Range	176V-552V	101V-318V
Supply Indication	Green LED	
Output Indication	Red LED	
Switching Voltage	250VAC/24VDC	
Current Rating	10A/AC1	
Reset Time	1000ms	

Dimension



Single-Function Time Relay

Feature

Single-function relay with possibility of time setting by a potentiometer.

Choice of 2 functions: A: Delay ON

B:Delay OFF

Time scale 0.1s-10 days divided into 10 ranges.

Relay status is indicated by LED.

1-MODULE,DIN rail mounting.

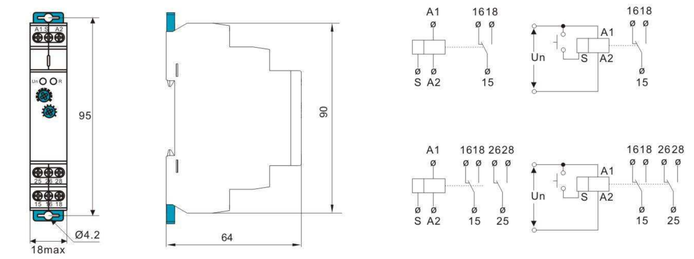
TRT8-A1

Technical Parameters

Model		TRT8-A1/B1	TRT8-A2/B2
Function		A:delay ON ; B:delay OFF	
Supply terminals		A1-A2	
Voltage range	W240	AC/DC 12-240V(50-60Hz)	
Burden	W240	AC 0.09-3VA/DC 0.05-1.7W	
Voltage range	A230	AC 230V(50-60Hz)	
Power input	A230	AC max.6VA/1.3W	AC max.6VA/1.9W
Supply voltage tolerance		-15%;+10%	
Supply indication		Green LED	
Time ranges		0.1s-10days, ON, OFF	
Time setting		Potentionmeter	
Time deviation		10%-mechanical setting	
Repeat accuracy		0.2%-set value stability	
Temperature coefficient		0.05%/°C,at=20°C(0.05%°F,at=68°F)	
Output		1xSPDT	2xSPDT
Current rating		1x16A(AC1)	2x16A(AC1)
Switching voltage		250VAC/24VDC	
Min.breaking capacity DC		500mW	
Output indication		Red LED	
Mechanical life		$1x10^7$	
Electrical life(AC1)		$1x10^5$	
Reset time		max.200ms	
Operating temperature		-20°C to +55°C(-4 °F to 131 °F)	
Storage temperature		-35°C to +75°C(-22 °F to 158 °F)	
Standards		EN 61812-1,IEC6947-5-1	

TRT8-B2

Dimension



TRT8-M1

Multifunction Time Relay

Applications

Multifunction time relay can be used for electrical appliances, control of lights, heating , motors , pumps and fans(10 functions,10time ranges multi-voltage).

Feature

10 functions: - 5 time functions controlled by supply voltage
- 4 time functions controlled by control input
- 1 functions of latching relay

Comfortable and well-arranged function and time-range setting by rotary switches.

Time scale 0.1s-10 days divided into 10 ranges.

Relay status is indicated by LED.

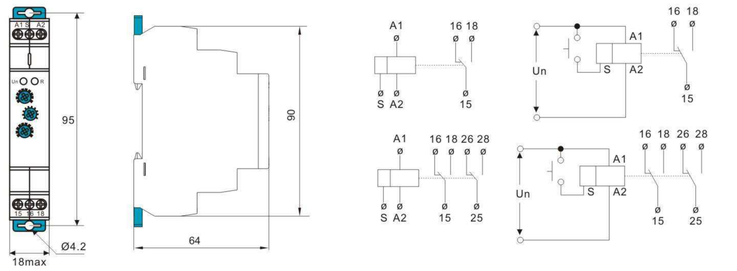
1-MODULE,DIN rail mounting.

Technical Parameters

Model		TRT8-M1	TRT8-M2
Function		A, B, C, D, E, F, G, H, I, J	
Supply terminals		A1-A2	
Voltage range	W240	AC/DC 12-240V(50-60Hz)	
Burden		AC 0.09-3VA/DC 0.05-1.7W	
Voltage range	A230	AC 230V(50-60Hz)	
Power input		AC max.6VA/1.3W	AC max.6VA/1.9W
Supply voltage tolerance		-15%;+10%	
Supply indication		Green LED	
Time ranges		0.1s-10days,ON,OFF	
Time setting		Potentionmeter	
Time deviation		10%-mechanical setting	
Repeat accuracy		0.2%-set value stability	
Temperature coefficient		0.05%/°C,at=20°C(0.05%°F,at=68°F)	
Output		1xSPDT	2xSPDT
Current rating		1x16A(AC1)	2x16A(AC1)
Switching voltage		250VAC/24VDC	
Min.breaking capacity DC		500mW	
Output indication		Red LED	
Mechanical life		$1x10^7$	
Electrical life(AC1)		$1x10^5$	
Reset time		max.200ms	
Operating temperature		-20°C to +55°C(-4 °F to 131 °F)	
Storage temperature		-35°C to +75°C(-22 °F to 158 °F)	
Standards		EN 61812-1,IEC6947-5-1	

TRT8-M2

Dimension



TRT8-S1

Asymmetric Cycler Time Relay

Applications

For gradual switching of heavy powers(e.g.el.heating), prevents current strokes in the main.

Feature

2x Delay ON(2 time relays in one)

Time scale 0.1s-100 days divided into 10 time ranges:

0.1s-1s/1s-10s/0.1min-1min/1min-10min/0.1h-1h/1h-10hrs/0.1day-1day/1day-10days/ ON/OFF.

Time t1 and t2 are independently adjustable.

t1 and t2 are swithed on after supply voltage connection.

Relay status is indicated by LED.

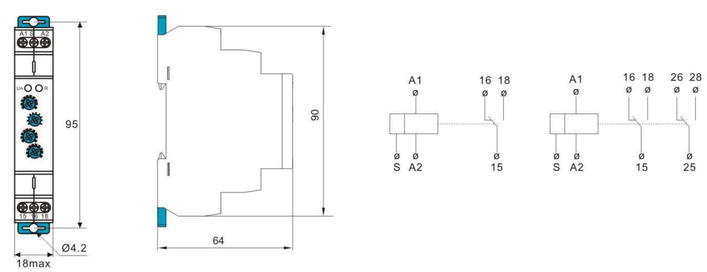
1-MODULE,DIN rail mounting.

Technical Parameters

Model		TRT8-S1	TRT8-S2
Function		Asymmetric cycler time relay	
Supply terminals		A1-A2	
Voltage range	W240	AC/DC 12-240V(50-60Hz)	
Burden		AC 0.09-3VA/DC 0.05-1.7W	
Voltage range	A230	AC 230V(50-60Hz)	
Power input		AC max.6VA/1.3W	AC max.6VA/1.9W
Supply voltage tolerance		-15%;+10%	
Supply indication		Green LED	
Time ranges		0.1s-100days	
Time setting		Potentionmeter	
Time deviation		10%-mechanical setting	
Repeat accuracy		0.2%-set value stability	
Temperature coefficient		0.05%/°C,at=20°C(0.05%°F,at=68°F)	
Output		1xSPDT	2xSPDT
Current rating		1x16A(AC1)	2x16A(AC1)
Switching voltage		250VAC/24VDC	
Min.breaking capacity DC		500mW	
Output indication		Red LED	
Mechanical life		$1x10^7$	
Electrical life(AC1)		$1x10^5$	
Reset time		max.200ms	
Operating temperature		-20°C to +55°C(-4 °F to 131 °F)	
Storage temperature		-35°C to +75°C(-22 °F to 158 °F)	
Standards		EN 61812-1,IEC6947-5-1	

TRT8-S2

Dimension



Level Control Relay

TRL8-01

Applications

Designed for monitoring level in wellss , basins , reservoirs , tanks .....

Feature

In one device you can choose the following configurations:
2 level control mode
1 level control mode
Choice of function PUMP UP , PUMP DOWM.
Adjustable time delay on the output(0.1-10s)
Sensitivity adjustable by a potentiometer(5-100kΩ)
Galvanically separated supply voltage AC/DC 24-240V
Relay status is indicated by LED.
1-MODULE , DIN rail mounting.

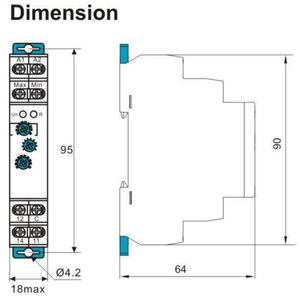
Technical Parameters

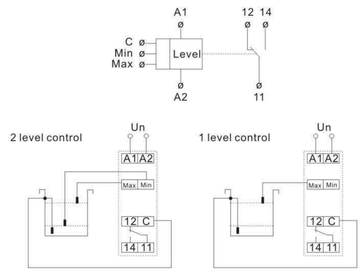
Model	TRL8-01	TRL8-02
Function	2 level control mode	2 or 1 level control mode
Supply terminals	A1-A2	
Voltage range	AC/DC 12-240V(50-60Hz)	
Input	max.2VA	
Supply voltage tolerance	-15%;+10%	
Sensitivity(input resistance)	Adjustable in range 5 kΩ-100kΩ	
Voltage in electrodes	max. AC 5 V	
Current in probe	AC <0.1mA	
Time response	max. 400ms	
Max. capacity length	800 m(sensitvity 25kΩ),200 m(sensitivity 100kΩ)	
Max. capacity of probe cable	400 nF(sensitvity 25kΩ),100 nF(sensitivity 100kΩ)	
Time delay(t)	Adjustable,0.1-10s	
Accuracy in setting(mechanical)	±10%	
Temperature coefficient	0.05%/°C,at=20°C(0.05% °F , at-=68 °F)	
Output	1xSPDT	
Current rating	10A/AC1	
Switching voltage	250VAC/24VDC	
Min. breaking capacity DC	500mW	
Output indication	Red LED	
Mechanical life	$1x10^7$	
Electrical life(AC1)	$1x10^5$	
Reset time	max. 200ms	
Operating temperature	-20°C to +55°C(-4 °F to 131 °F)	
Storage temperature	-35°C to +75°C(-22 °F to 158 °F)	
Standards	EN 60255-1	

TRL8-02

sensor
PLT-01 1.5M

Dimension





Monitoring Voltage Relay

Applications

- Protect electrical equipment and motors from over-voltage and under-voltage.
- Normal/emergency power supply switching.

Feature

Controls its own supply voltage(True RMS measurement)
User may select operation mode through knob.
Voltage measurement accuracy<1%.
Relay status is indicated by LED.
1-MODULE , DIN rail mounting.

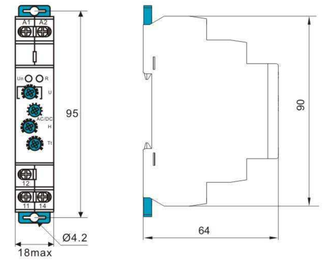
TRV8-01

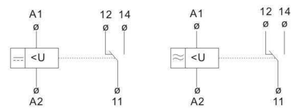
Technical Parameters

Model	TRV8-01	TRV8-02
Function	Monitoring voltage	
Supply terminals	A1-A2	
Rated supply voltage	DC12V,AC/DC24V-48V,AC/DC110V-240V,AC220V	
Rated supply frequency	45Hz-65Hz	
Hysteresis	5%-20%	3%fixed
Supply indication	Green LED	
Time delay	Adjustable 0.1s-10s,10%	
Measurement error	≤1%	
Run up delay at power up	0.5s time delay	
Knob setting accuracy	10% of scale value	
Reset time	1000ms	
Temperature coefficient	0.05%/°C,at =20°C(0.05% °F,at=68°F)	
Output	1xSPDT	
Current rating	10A/AC1	
Switching voltage	250VAC/24VDC	
Min. breaking capacity DC	500mW	
Output indication	Red LED	
Mechanical life	$1x10^7$	
Electrical life(AC1)	$1x10^5$	
Operating temperature	-20°C to +55°C(-4°F to 131°F)	
Storage temperature	-35°C to +75°C(-22°F to 158°F)	
Standards	EN 60255-1,IEC60947-5-1	

TRV8-02

Dimension





Dual Function Time Relay

TRT8-EC

Applications

Dual function time relay can be used for industrial equipment, lighting control, heating element control, motor and fan control, with two delay modes, and the delay range covers 0.1 seconds to 10days.

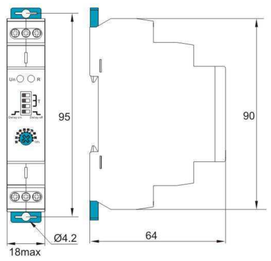
Feature

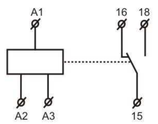
Two delay modes can be set.
Supports AC230V, AC/DC24V two kinds of working voltage.
Ultra wide delay range, 0.1 seconds - 10 days can be set..
The working state of the relay is indicated by the LED indicator.
Ultra small size, only 18mm width, 35mm rail installation.

Technical Parameters

Model	TRT8-EC
Function	ON delay, Delay off
Supply terminals	A1-A2(AC230V), A1-A3(AC/DC24V)
Voltage range	AC 230V(50-60Hz), AC/DC24V
Power in put	AC max.6VA/1.3W
Supply voltage tolerance	-15%;+10%
Supply indication	green LED
Time ranges	0.1s-10day
Time setting	potentionmeter
Time deviation	≤ 10%
Repeat accuracy	0.2%-set value stability
Temperature coefficient	0.05%/°C, at=20°C (0.05%°F, at=68°F)
Output	1×SPDT
Current rating	1×10A(AC1)
Switching voltage	250VAC/24VDC
Min.breaking capacity DC	500mW
Output indication	red LED
Mechanical life	1×10^7
Electrical life(AC1)	1×10^5
Reset time	max.200ms
Operating temperature	-20°C to+55°C (-4°F to 131°F)
Storage temperature	-35°C to+75°C (-22°F to 158°F)

Dimension





Digital Display Time Relay

Applications

Multi functional time relay can be used for industrial equipment, lighting control, heating element control, motor, fan control.

With 20 delay modes, the delay range covers 0.1 seconds to 99 days.

Feature

20 delay modes:
5 delay modes controlled by power supply
13 delay modes controlled by signal
ON, OFF mode
Ultra wide delay range, 0.1 seconds - 99 days can be set.
Relay status is indicated by LED.
1-MODULE,DIN rail mounting.

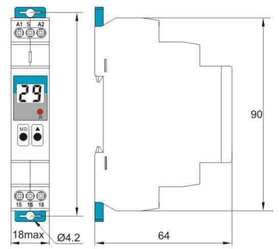
TRT8-X1

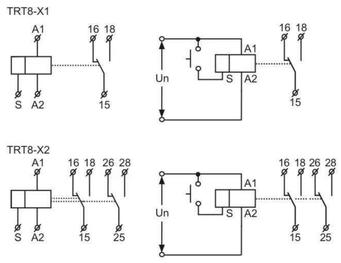
Technical Parameters

Model		TRT8-X1	TRT8-X2
Function		20 functions	
Supply terminals	W240	A1-A2	
Voltage range		AC/DC12-240V (50-60Hz)	
Burden	A230	AC 0.09-3VA/DC 0.05-1.7W	
Voltage range		AC 230V(50-60Hz)	
Power input		AC max.6VA/1.3W	AC max.6VA/1.9W
Supply voltage tolerance		-15%;+10%	
Supply indication		green LED	
Time ranges		0.1s-99day,ON,OFF	
Time setting		Key setting	
Time deviation		≤ 1%	
Repeat accuracy		0.2%-set value stability	
Temperature coefficient		0.05%/°C, at=20°C(0.05%°F, at=68°F)	
Output		1×SPDT	2×SPDT
Current rating		1×16A(AC1)	2×16A(AC1)
Switching voltage		250VAC/24VDC	
Min.breaking capacity DC		500mW	
Output indication		red LED	
Mechanical life		1×10^7	
Electrical life(AC1)		1×10^5	
Reset time		max.200ms	
Operating temperature		-20°C to+55°C (-4°F to131°F)	
Storage temperature		-35°C to+75°C(-22°F to 158°F)	

TRT8-X2

Dimension





Pulse Output Time Relay

TRT8-P1

Applications

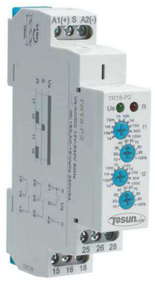
It is used to delay and generate a pulse, which is used to delay the connection of a load for a period of time.

Feature

Separate delay time and pulse width setting can set different delay time.
Time scale 0.1 s - 100 days.
The delay time can be reset by shorting S-A1.
With AC/DC 12V-240V ultra wide operating voltage specifications are optional.
Relay status is indicated by LED.
1-MODULE,DIN rail mounting.

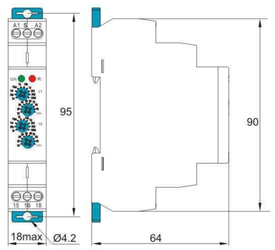
Technical Parameters

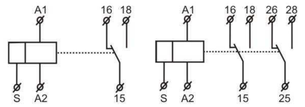
Model		TRT8-P1	TRT8-P2
Function		Pulse output time relay	
Supply terminals	W240	A1-A2	
Voltage range		AC/DC 12-240V(50-60Hz)	
Burden	A230	AC 0.09-3VA/DC 0.05-1.7W	
Voltage range		AC230V (50-60Hz)	
Power input		AC max.6VA/1.3W	AC max.6VA/1.9W
Supply voltage tolerance		-15%;+10%	
Supply indication		green LED	
Time ranges		0.1s-100days	
Time setting		potentionmeter	
Time deviation		10%-mechanical setting	
Repeat accuracy		0.2%-set value stability	
Temperature coefficient		0.05%/°C, at=20°C (0.05%°F, at=68°F)	
Output		1×SPDT	2×SPDT
Current rating		1×16A(AC1)	2×16A(AC1)
Switching voltage		250VAC/24VDC	
Min.breaking capacity DC		500mW	
Output indication		red LED	
Mechanical life		1×10^7	
Electrical life(AC1)		1×10^5	
Reset time		max.200ms	
Operating temperature		-20°C to +55°C (-4°F to 131°F)	
Storage temperature		-35°C to +75°C (-22°F to 158°F)	



TRT8-P2

Dimension





Staircase Switch

Applications

Blue tooth time control relay can be used for industrial equipment, lighting control, heating element control, motor and fan control, and regularly turn on and off loads.

Feature

The relay is set through Bluetooth connection of mobile phone app, which is simple and easy to operate.
8/16 group timing setting.
It has two working modes: automatic and manual.
It has AC / DC 24v-240v ultra wide working voltage.
Relay status is indicated by LED.
1-MODULE,DIN rail mounting.

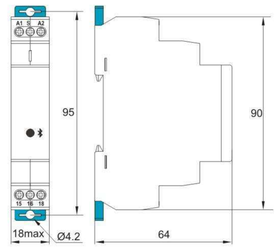
TRT8-TS1

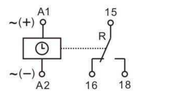
Technical Parameters

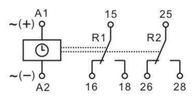
Model	TRT8-TS1	TRT8-TS2
Function	Bluetooth time control relay	
Supply terminals	A1-A2	
Voltage range	AC/DC 24-240V 50Hz	
Burden	AC 0.09-3VA/DC 0.05-1.7W	
Supply voltage tolerance	-15%;+10%	
Supply indication	green LED	
Number of timers	8-ON/8-OFF	2×8-ON/2×8-OFF
Time setting	APP(Bluetooth connectivity)	
Time deviation	±2s/day	
Output	1×SPDT	2×SPDT
Current rating	16A/AC1	
Min.breaking capacity DC	500mW	
Output indication	red LED	
Mechanical life	1×10^7	
Electrical life(AC1)	1×10^5	
Operating temperature	-20°C ~ +55°C	
Storage temperature	-35°C ~ +75°C	

TRT8-TS2

Dimension



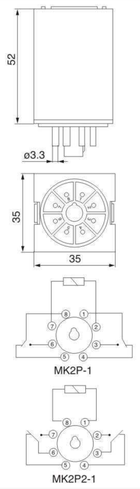
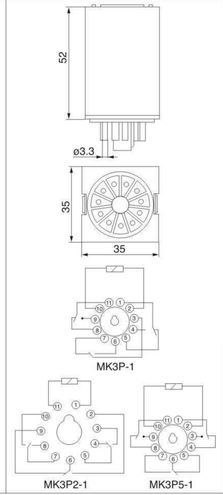
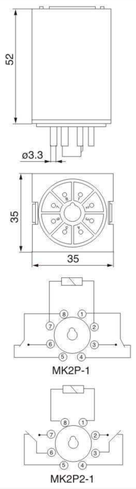
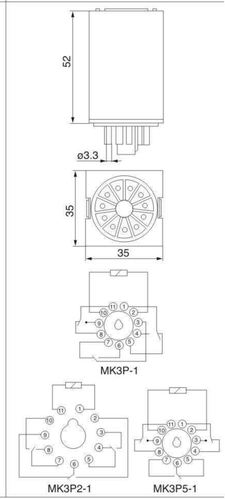




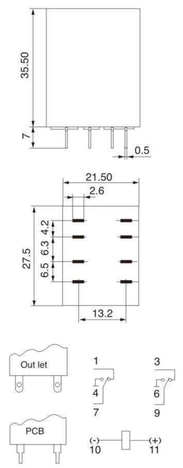
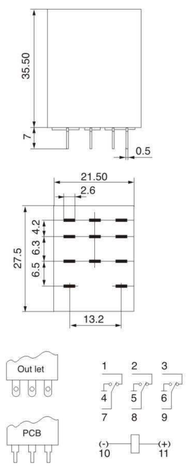
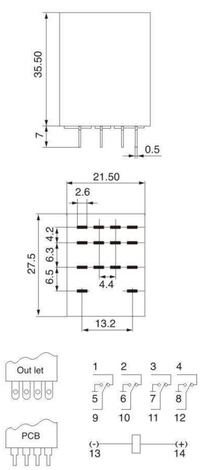
Timer

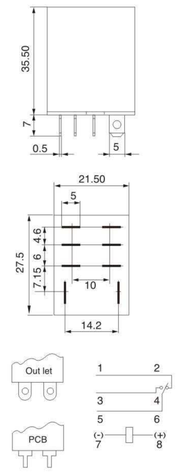
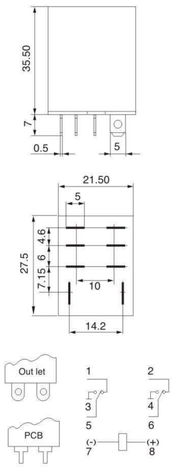
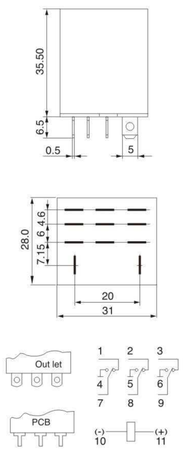
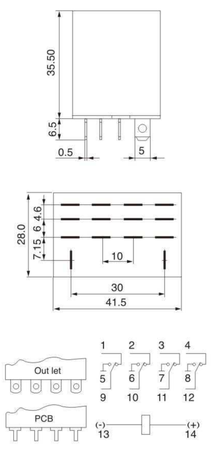
Specification \ Model		H3BA-8 / H3BA-11		H3CR-A8	DH-48S	DH-48S-S
						
Dimension		48H x 48W x 93.5D		48H x 48W x 81.6D	48H x 48W x 97.4D	48H x 48W x 97.4D
Mounting	Surface(-N)	PF113A(E)	PF083A PS-08	PS-08 PF083A	PF-083A (E)	PF-083A (E)
Socket	Flush(-Y)	US-11	US-08 P3G-08	US-08 P3G-08	-	-
Full Timing Range		0.1SEC~100HRS		0.5SEC~300HRS	0.01S~99.99S 1S~99M99S 1M~99H99M	0.01S~99.99S 1S~99M99S 1M~99H99M
Rated Voltage (V)		24 to 240 DC/AC AC: 24,48,110,220 DC: 12,24,48		AC: 24,110~240(50/60Hz) DC: 12,24~240	AC:110V 220V 380V DC:12V 24V	AC:110V 220V 380V DC:12V 24V
Indicator Operating		Time Operating Flicker		Time Operating Flicker	-	-
O/P Contact	Model	H3BA	H3BA-8 / H3BA-8H	H3CR-A8	1Z / 2Z	-
	Time Limit 1C		5A		-	-
	Time Limit 2C	5A	5A	5A(AC250)	-	-
	Instantaneous 1C		5A		-	-
Life	Mechanical	10^7 Times		10^7 Times	10^7 Times	10^7 Times
	Electrical	10^5 Times		10^5 Times	10^5 Times	10^5 Times
Accuracy	Repeat Error	±2% max		±2% max	-	-
	Setting Error	±5% max		±5% max	-	-
	Voltage Error	±5% max		±5% max	-	-
	Temp Error	±2% max		±2% max	-	-
Reset time		0.5 sec max		0.5 sec max	-	-
Consumed Power		100~240VAC:10VA 12VDC,24~240VDC:1.5W		100~240VAC:10VA 12VDC,24~240VDC:1.5W	5W	5W
Ambient temperature		-10℃~+55℃		-10℃~+55℃	-10°C~+55°C	-10°C~+55°C
Ambient Huminity		35~85% RH		35~85% RH	45~85% RH	45~85% RH

General Relay

Specification \ Model		MK2P-I	MK3P-I	MK2PN-I	MK3PN-I
					
Terminal layout		2Z	3Z	2Z	3Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V	10A 250V
	DC	10A 30V	10A 30V	10A 30V	10A 30V
Contact resistance(mΩ)		≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ
Insulation resistance(MΩ)		≥500MΩ	≥500MΩ	≥500MΩ	≥500MΩ
Dielectric strength	BOC	1500VAC	1500VAC	1500VAC	1500VAC
	BCC	1500VAC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 380V	6 to 380V	6 to 380V	6 to 380V
	DC	6 to 220V	6 to 220V	6 to 220V	6 to 220V
Coil nominal power	AC	≤2.8VA	≤2.8VA	≤2.8VA	≤2.8VA
	DC	≤1.6W	≤1.6W	≤1.6W	≤1.6W
Electrical life(OPS)		10^5	10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7	10^7
Operating temperature(℃)		-40~+60	-40~+60	-40~+60	-40~+60
Weight(g)		≤80	≤80	≤80	≤80
Mounting methods		Outlet	Outlet	Outlet	Outlet
Dimension					

General Relay

Specification \ Model		MY2	MY3	MY4
				
Terminal layout		2Z	3Z	4Z
Contact capacity	AC	5A 250V	5A 250V	3A 250V
	DC	5A 30V	5A 30V	3A 30V
Contact resistance(mΩ)		≤50mΩ	≤50mΩ	≤50mΩ
Insulation resistance(MΩ)		≥100MΩ	≥100MΩ	≥100MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V	6 to 240V
	DC	6 to 220V	6 to 220V	6 to 220V
Coil nominal power	AC	0.9VA to 1.2VA	0.9VA to 1.2VA	0.9VA to 1.2VA
	DC	≤0.9W	≤0.9W	≤0.9W
Electrical life(OPS)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
Operating temperature(℃)		-40~+60	-40~+60	-40~+60
Weight(g)		≤35	≤35	≤35
Mounting methods		Printed-circuit board, Outlet	Printed-circuit board, Outlet	Printed-circuit board, Outlet
Dimension				

Model	LY1	LY2	LY3	LY4
				
	1Z	2Z	3Z	4Z
	15A 250V	10A 250V	10A 250V	10A 250V
	15A 30V	10A 30V	10A 28V	10A 28V
	≤50mΩ	≤50mΩ	≤50mΩ	≤50mΩ
	≥100MΩ	≥100MΩ	≥100MΩ	≥100MΩ
	1000VAC	1000VAC	1000VAC	1000VAC
	1500VAC	1500VAC	1500VAC	1500VAC
	6 to 240V	6 to 240V	6 to 240V	6 to 240V
	6 to 220V	6 to 220V	6 to 220V	6 to 110V
	0.9VA to 1.2VA	0.9VA to 1.2VA	≤2.0VA	≤2.5VA
	≤0.9W	≤0.9W	≤1.4W	≤1.6W
	10^5	10^5	10^5	10^5
	10^7	10^7	10^7	10^7
	-40~+60	-40~+60	-40~+70	-40~+70
	≤35	≤35	≤50	≤70
	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet
				

Socket

PTF08A

PTF08A-E

PTF11A

PTF14A

PTF14A-E

PYF08A

PYF08A-E

PYF11A

PYF14A

PYF14A-E

PF113A

PF113A-E

PF083A

PF083A-E

TYPE 90.22

TYPE 90.23

Hour Meter

Specifications

HM-1

Supply Voltage	12VDC 24VDC 12VAC 24VAC 48VAC 110VAC 220VAC, 50Hz or 60Hz
Dimension	48 x 48 x 40
Panel Dimension	72x72x40
Timing range	0~9999.99 Hours

HM-1

HM-2

Supply Voltage	10-50VAC/DC 110VAC/DC 220VAC/DC 24VAC 48VAC 110-120VAC 220-240VAC 380VAC, 50Hz or 60Hz
Dimension	48 x 48 x 40
Panel Dimension	72x72x40, 58x58x40
Timing range	0~99,999.99 Hours

HM-2

HC3L, HC3L-A

Timing Range	99H59M59S, 9999H59M, 9999Day23H, 9999H59M59S, 999999H59M
Voltage	HC3L: No need ; HC3L-A: DC12V,DC24V,AC110-240V
Battery Life	6 Years
Dimension	58 x 58 x 40
Panel Size	22.5 x 45

HC3L-A

Electromagnetic Counter

HC3J, HC3J-AL

Display	6 Digits / 8 Digits LCD
Operation Mode	Sum
Voltage	HC3J: no need; HC3J-AL: 220VAC
Counting Speed	10/200 Times/s 10 Times/s
Dimension	24 x 48 x 50
Panel Size	22.5 x 45
Reset Model	Panel, Terminal blocks

HC3J

Pushbutton Switch

PB2-BA31

PB2-BA45

PB2-BP31

PB2-BA3361

PB2-BL4322

Circular head, with chromium plated metal bezel
Complete units with screw and captive cable clamp connections

Pushbuttons, 22mm

Description	Contact	Circuit	Color	Model
Flush button Spring return Unmarked	N/O	13 14	○	PB2-BA11
			●	PB2-BA21
			●	PB2-BA31
			●	PB2-BA51
			●	PB2-BA61
	N/C	21 22	●	PB2-BA42
Flush button Spring return Unmarked	N/O+N/C	21 13 22 14	●	PB2-BA25
			●	PB2-BA35
			●	PB2-BA55
			●	PB2-BA65
	N/O+N/C	21 13 22 14	●	PB2-BA45
Flush button Spring return With water-proof cover IP65	N/O	13 14	○	PB2-BP11
			●	PB2-BP21
			●	PB2-BP31
			●	PB2-BP51
			●	PB2-BP61
	N/C	21 22	●	PB2-BP42
Flush button Spring return Marked	N/O	13 14	I	PB2-BA3311
			II	PB2-BA3361
			↑	PB2-BA3341
			↑	PB2-BA3351
			●	PB2-BA3331
			●	PB2-BA3321
	N/C	21 22	●	PB2-BA4322
			Stop	PB2-BA4342
Projecting button Spring return Unmarked	N/O	13 14	●	PB2-BL21
			●	PB2-BL31
			●	PB2-BL51
			●	PB2-BL61
	N/C	21 22	●	PB2-BL42
Projecting button Spring return Marked	N/O	13 14	I	PB2-BL3311
			II	PB2-BL3361
			↑	PB2-BL3341
			↑	PB2-BL3351
	N/C	21 22	●	PB2-BL4322
			Stop	PB2-BL4342

Circular head, with chromium plated metal bezel
Complete units with screw and captive cable clamp connections

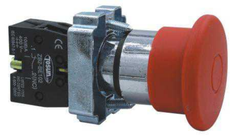
Emergency stop pushbutton
Emergency switching off pushbutton

Description	Contact	Scheme	Color	Model
Ø40 Mushroom Spring return	N/O	13 14	●	PB2-BC21
			●	PB2-BC31
	N/C	21 22	●	PB2-BC42
Ø60 Mushroom Spring return	N/O	13 14	●	PB2-BR21
			●	PB2-BR31
	N/C	21 22	●	PB2-BR42
Mushroom Turn to release	N/C	21 22	● ø 30	PB2-BS442
			● ø 40	PB2-BS542
	N/C	21 22	● ø 60	PB2-BS642
Ø40 Mushroom Push-pull	N/C	21 22	● ø 40	PB2-BT42
	N/O+N/C	21 13 22 14	● ø 40	PB2-BT45
Key release Ronis 455	N/C	21 22	● ø 30	PB2-BS742
			● ø 40	PB2-BS142
			● ø 60	PB2-BS242
	N/O+N/C	21 13 22 14	● ø 40	PB2-BS145

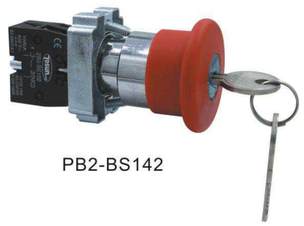
PB2-BC42

PB2-BR42

PB2-BS542



PB2-BT42



PB2-BS142

Pushbutton Switch

Circular head, with chromium plated metal bezel
Complete units with screw and captive cable clamp connections

Selector switch

Description	Contact	Circuit	Locality	Model
Standard handle 2 position	N/O	1 11 13 14	▽	PB2-BD21
			▽	PB2-BD41
	N/O+N/C	1 11 21 13 22 14	▽	PB2-BD25
			▽	PB2-BD45
Standard handle 3 position	N/O+N/O	1 0 11 13 23 14 24	▽	PB2-BD33
	N/O+N/O	1 0 11 13 23 14 24	▽	PB2-BD53
			▽	PB2-BD73
			▽	PB2-BD83
Long handle 2 position	N/O	1 11 13 14	▽	PB2-BJ21
			▽	PB2-BJ41
	N/O+N/C	1 11 21 13 22 14	▽	PB2-BJ25
			▽	PB2-BJ45
Long handle 3 position	N/O+N/O	1 0 11 13 23 14 24	▽	PB2-BJ33
	N/O+N/O	1 0 11 13 23 14 24	▽	PB2-BJ53
			▽	PB2-BJ73
			▽	PB2-BJ83
Key switch Ronis 455 2 position	N/O	1 11 13 14	▽	PB2-BG21
			▽	PB2-BG41
			▽	PB2-BG61
	N/O+N/C	1 11 21 13 22 14	▽	PB2-BG25
			▽	PB2-BG45
			▽	PB2-BG65
Key switch Ronis 455 3 position	N/O+N/O	1 0 11 13 23 11 14 24	▽	PB2-BG33
			▽	PB2-BG53
			▽	PB2-BG03
			▽	PB2-BG73

★▽Stay put, ▽Spring return, ▽Stay put, ▽Spring return

PB2-BD21

PB2-BD53

PB2-BJ21

PB2-BJ33

PB2-BG21

Circular head, screw and captive cable clamp connections
Complete units

Illuminated pushbutton and selector switch

Description	Circuit	Supply Voltage	Color	Model
2 Position stay put Standard handle Direct supply LED	N/O+N/C X1 X2	X1 1 11 21 13 22 14 X2	●	PB2-BK2365
			●	PB2-BK2565
			●	PB2-BK2665
			○	PB2-BK2765
			●	PB2-BK2465
3 Position stay put Standard handle Direct supply LED	N/O+N/O X1 X2	X1 1 11 13 13 14 14 X2	●	PB2-BK3365
			●	PB2-BK3565
			●	PB2-BK3665
			○	PB2-BK3765
			●	PB2-BK3465
Flush button Spring return Direct supply LED bulb	X1 X1 13 X2 X2 14	220~240V	○	PB2-BW3161
			●	PB2-BW3361
			●	PB2-BW3561
			●	PB2-BW3661
	X1 X1 21 X2 X2 22	220~240V	●	PB2-BW3462
Flush button Spring return Integral resistance LED 24V	X1 13 X2 14	220~240V	○	PB2-BW3171
			●	PB2-BW3371
			●	PB2-BW3571
			●	PB2-BW3671
	X1 21 X2 22	220~240V	●	PB2-BW3472
Flush button Spring return Direct supply LED bulb (with water-proof cover) IP65	X1 X1 13 X2 X2 14	220~240V	○	PB2-BPW3161
			●	PB2-BPW3361
			●	PB2-BPW3561
			●	PB2-BPW3661
	X1 X1 21 X2 X2 22	220~240V	●	PB2-BPW3462
Flush button Spring return Integral resistance LED 24V (with water-proof cover) IP65	X1 13 X2 14	220~240V	○	PB2-BPW3171
			●	PB2-BPW3371
			●	PB2-BPW3571
			●	PB2-BPW3671
	X1 21 X2 22	220~240V	●	PB2-BPW3472

PB2-BK2365

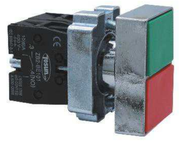
PB2-BK3465

PB2-BW3361

PB2-BW3371

PB2-BPW3361

Pushbutton Switch



PB2-BL8325

PB2-BL9325

PB2-BL9425

Head with chromium plated metal bezel
Complete units with screw and captive cable clamp connections
Double headed pushbutton

Description	Contact	Circuit	Color	Model
Double headed Spring return 1 flush green button 1 flush red button Unmarked	N/O+N/C	13 14 21 22	■ ■	PB2-BL8325
Double headed Spring return 1 Flush green button 1 Projecting red button Marked	N/O+N/C	13 14 21 22	I ○	PB2-BL8425
Double headed Spring return 1 Flush green button 1 Flush red button With water-proof cover Unmarked IP40	N/O+N/C	13 14 21 22	■ ■ ○	PB2-BL9325
Double headed Spring return 1 Flush green button 1 Projecting red button With water-proof cover Marked IP40	N/O+N/C	13 14 21 22	I ○	PB2-BL9425

ZB2-BE101

Additional/replacement contact block, screw and captive cable

Contact	Circuit	Color	Model
N/O	3 4	●	ZB2-BE101
N/C	1 2	●	ZB2-BE102

Rectangle head, with chromium plated metal bezel
Complete units with screw and captive cable clamp connections
Illuminated double headed pushbutton

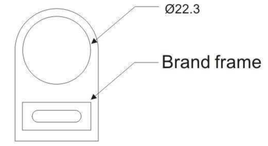
Description	Contact	Circuit	Color	Model
Double headed spring return 1 flush green button 1 flush red button 1 yellow lens pilot light Marked IP40 Direct supply Neon (BA9S) LED	N/O+N/C	X1 X1 X2 X2 13 14 21 22	■ ▬ ■	PB2-BW8365
Double headed spring return 1 flush green button 1 Projecting red button 1 yellow lens pilot light Marked IP40 Direct supply Neon (BA9S) LED			■ ▬ ■	PB2-BW8465
Double headed spring return 1 flush green button 1 flush red button 1 yellow lens pilot light resistance marked	N/O+N/C	X1 X1 LED X2 X2 13 14 21 22	■ ▬ ■	PB2-BW8375
Double headed spring return 1 flush green button 1 Projecting red button 1 yellow lens pilot light resistance marked			■ ▬ ■	PB2-BW8475

PB2-BW8365

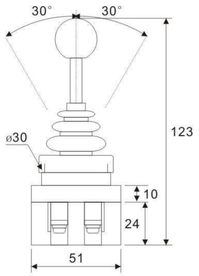
PB2-BW8465

PB2-BW8375

Dimension	Measuring Range	Model
45x30 (25x10 Brand frame)	Hang it on the push button or Ø22 pilot light, for symbol or text explanation .Structure of putting out, which can change signed paper.	ZBY-2510
53x30 (25x18 Brand frame)		ZBY-2518

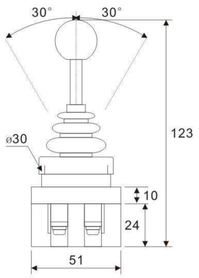


Control Switch



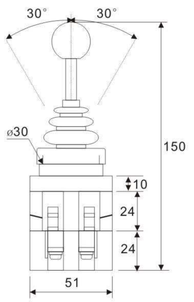
Model	Description
PD-201	Spring return
PD-2011	Self locked

Rated Current: 15/10/4A
Rated Voltage: 150/250/600V
2 Position 2 N/O Contact type Up, Down, Center off



Model	Description
PD-301	Spring return
PD-3011	Self locked

Rated Current: 15/10/4A
Rated Voltage: 150/250/600V
2 Position 2 N/O Contact type Up, Down, Center off

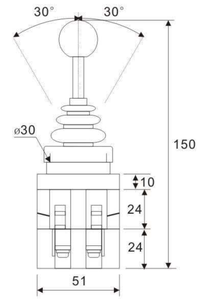


Model	Description
PD-302	Spring return
PD-3022	Self locked

Rated Current: 15/10/4A
Rated Voltage: 150/250/600V
4 Position 4 N/O Contact type Up, Down, Left, Right, Center off

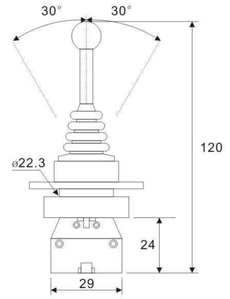
Model	Description
PD-402	Spring return
PD-4022	Self locked

Rated Current: 15/10/4A
Rated Voltage: 150/250/600V
4 Position 4 N/O Contact type Up, Down, Left, Right, Center off



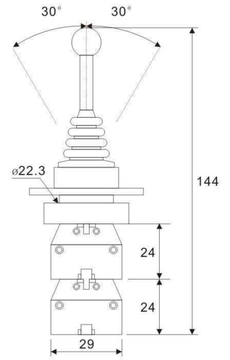
Model	Description
PD2-PA22	Spring return
PD2-PA12	Self locked

Rated Current: 15/10/4A
Rated Voltage: 150/250/600V
2 Position 2 N/O Contact type Up, Down, Center off



Model	Description
PD2-PA24	Spring return
PD2-PA14	Self locked

Rated Current: 15/10/4A
Rated Voltage: 150/250/600V
4 Position 4 N/O Contact type Up, Down, Left, Right, Center off



TAL-B Control Station

TAL-B101H29

TAL-J174H29

TAL-B144H29

TAL-B213

Description	Contact	Circuit	Marking on legend	Marking on button	Model
1 green flat pushbutton spring return	N/O	13 14	Start		TAL-B101H29
			-		TAL-B102
			-	Start	TAL-B103
1 red flat pushbutton spring return	N/C	21 22	Stop		TAL-B111H29
			-	Stop	TAL-B114
			-		TAL-B112
1 red mushroom head pushbutton, ϕ40 mm spring return	N/C	21 22	Emergency Stop	Spring return	TAL-J164H29
			Stop	Latching turn to release	TAL-J174H29
			-		TAL-J174
1 red mushroom head pushbutton ϕ40mm, latching key release (key n° 445)	N/C	21 22	Emergency Stop	Key release	TAL-J184H29
1 selector switch 2 position stay put black standard handle	N/O	1 11 13 14	Start Stop	black standard handle	TAL-B132H29
			O I		TAL-B134H29
1 selector switch key operated(key n° 455) 2 position stay put key with drawal from LH position	N/O	1 11 13 14	Start Stop	Key release	TAL-B142H29
			O I		TAL-B144H29
2 spring return pushbutton 1 flat green 1 flat red	N/O+N/C	13 14 21 22	Open Close		TAL-B241H29
			Start Stop		TAL-B211H29
			-		TAL-B213
			-	Start Stop	TAL-B215

Description	Contact	Circuit	Marking on legend	Marking on button	Model
2 spring return pushbutton 1 flat white 1 flat black	N/O+N/O	13 14	-		TAL-B222
			-		TAL-B223
3 spring return pushbutton 1 flat white 1 flat red 1 flat black	N/O + N/C + N/O		-		TAL-B324
			-		TAL-B334
3 spring return pushbutton 2 flat green 1 flat red		13 14 21 22 13 14	-		TAL-B311
			-		TAL-B339
			Forward Stop Reverse		TAL-B311H29
			Up Stop Down		TAL-B321H29
			Open Stop Close		TAL-B341H29
1 red neon indicator 2 spring return pushbuttons] 1 flat green 1 flat red	N/O+N/C	X1 X2 13 14 21 22	Start Stop		TAL-B361H29
			-		TAL-B363
			-		TAL-B366
1 red LED indicator 2 spring return pushbuttons] 1 flat green 1 flat red	N/O+N/C	X1 X2 13 14 21 22	-		TAL-B371H29
			Start Stop		TAL-B373
			-		TAL-B376
4 spring return pushbutton 1 flat red 1 flat green 1 flat white 1 flat black	N/O + N/O + N/O + N/C	13 14 13 14 13 14 21 22	-		TAL-B4111

TAL-B222

TAL-B311

TAL-B361H29

TAL-D Control Station

TAL-D102

TAL-D174

TAL-D134H29

TAL-D213

Description	Contact	Circuit	Marking on legend	Marking on button	Model
1 green flat pushbutton spring return	N/O	13 14	Start		TAL-D101H29
			-		TAL-D102
			-	Start	TAL-D103
1 red flat pushbutton spring return	N/C	21 22	Stop		TAL-D111H29
			-	Stop	TAL-D114
			-		TAL-D112
1 red mushroom head pushbutton, ϕ40 mm spring return	N/C	21 22	Emergency Stop	Spring return	TAL-D164H29
			Stop	Latching turn to release	TAL-D174H29
			-		TAL-D174
1 red mushroom head pushbutton ϕ40mm, latching key release (key n° 445)	N/C	21 22	Emergency Stop	Key release	TAL-D184H29
1 selector switch 2 position stay put black standard handle	N/O	1 11 13 14	Start Stop	black standard handle	TAL-D132H29
			O I		TAL-D134H29
1 selector switch key operated(key n° 455) 2 position stay put key with drawal from LH position	N/O	1 11 13 14	Start Stop	Key release	TAL-D142H29
			O I		TAL-D144H29
2 spring return pushbutton 1 flat green 1 flat red	N/O+N/C	13 14 21 22	Open Close		TAL-D241H29
			Start Stop		TAL-D211H29
			-		TAL-D213
			-	Start Stop	TAL-D215

Description	Contact	Circuit	Marking on legend	Marking on button	Model
2 spring return pushbutton 1 flat white 1 flat black	N/O+N/O	13 14	-		TAL-D222
		13 14	-		TAL-D223
3 spring return pushbutton 1 flat white 1 flat red 1 flat black	N/O + N/C + N/O		-		TAL-D324
			-		TAL-D334
3 spring return pushbutton 2 flat green 1 flat red		13 14 21 22	-		TAL-D311
			-		TAL-D339
		13 14	Forward Stop Reverse		TAL-D311H29
			Up Stop Down		TAL-D321H29
			Open Stop Close		TAL-D341H29
1 red neon indicator 2 spring return pushbuttons] 1 flat green 1 flat red	N/O+N/C	X1 X2 13 14 21 22	Start Stop		TAL-D361H29
			-		TAL-D363
			-		TAL-D366
1 red LED indicator 2 spring return pushbuttons] 1 flat green 1 flat red	N/O+N/C	X1 X2 13 14 21 22	Start Stop		TAL-D37H29
			-		TAL-D373
			-		TAL-D376

TAL-D222

TAL-D363

TAC-A Pushbutton Switch

TAC-A271

For control of motors

Symbol & Number of operators	Contact	Circuit	Model
2 mechanically interlocked	1NO	13 14	TAC-A271
	1NO+1NC	21 13 22 14	TAC-A281
2 mechanically interlocked + 1 trigger action latching "Emergency stop" ϕ30mm operator ZA2-BS44	1NO	13 14 11 12 ZB2-BE102	TAC-A2713
	1NO+1NC	21 13 22 14 11 12 ZB2-BE102	TAC-A2813
4 mechanically interlocked between pairs	1NO	13 14	TAC-A471
	1NO+1NC	11 13 12 14	TAC-A481
4 mechanically interlocked between pairs + 1 trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44	1NO	13 14 11 12 ZB2-BE102	TAC-A4713
	1NO+1NC	11 13 12 14 11 12 ZB2-BE102	TAC-A4813
6 mechanically interlocked between pairs	1NO	13 14	TAC-A671
	1NO+1NC	11 13 12 14	TAC-A681
6 mechanically interlocked between pairs +1trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44	1NO	13 14 11 12 ZB2-BE102	TAC-A6713
	1NO+1NC	11 13 12 14 11 12 ZB2-BE102	TAC-A6813

TAC-A4713

TAC-A881

For control of motors

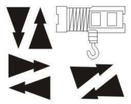
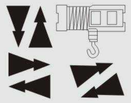
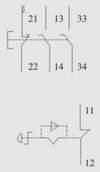
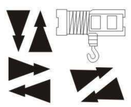
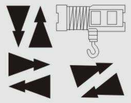
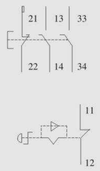
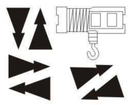
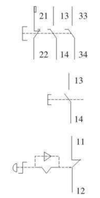
Symbol & Number of operators	Contact	Circuit	Model
8 mechanically interlocked between pairs	1NO	13 14	TAC-A871
	1NO+1NC	11 13 12 14	TAC-A881
8 mechanically interlocked between pairs +1 trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44	1NO	13 14 11 12 ZB2-BE102	TAC-A8713
	1NO+1NC	11 13 12 14 11 12 ZB2-BE102	TAC-A8813
2 mechanically interlocked	1NC+1NO+1NO staggered XEN-G1191	21 13 33 22 14 34	TAC-A291
2 mechanically interlocked +1 trigger action latching "Emergency stop" ϕ 30mm operator ZA2-BS44	1NC+1NO+1NO staggered XEN-G1191	21 13 33 22 14 34	TAC-A2913
	1NC	11 12	
4 mechanically interlocked between pairs	1NC+1NO+1NO staggered XEN-G1191	21 13 33 22 14 34	TAC-A491
4 mechanically interlocked between pairs +1 trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44	1NC+1NO+1NO staggered XEN-G1191	21 13 33 22 14 34	TAC-A4913
	1NC	11 12	
4 mechanically interlocked between pairs +1 trigger action latching "Emergency stop" Ø30mm operator ZA2-BS44	1NC+1NO+1NO staggered(a) XEN-G1191	21 13 33 22 14 34 13 14	TAC-A4923
	1NC	11 12	

TAC-A4913

TAC-A691

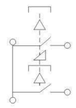
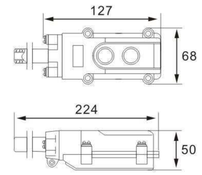
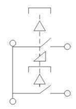
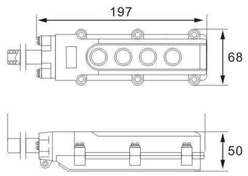
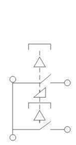
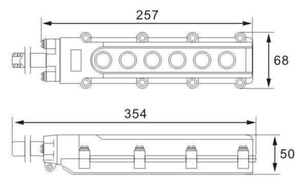
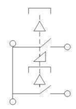
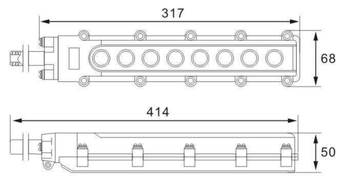
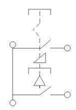
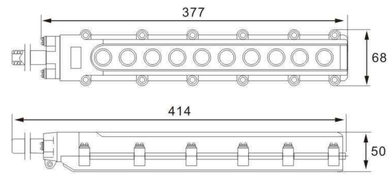
TAC-A Pushbutton Switch

For control of motors

Symbol & Number of operators	Contact	Circuit	Model
 6 mechanically interlocked	1NC+1NO+1NO staggered XEN-G1191		TAC-A691
 6 mechanically interlocked +1 trigger action latching " Emergency stop" ϕ30mm operator ZA2-BS44	1NC+1NO+1NO staggered XEN-G1191 1NC		TAC-A6913
 8 mechanically interlocked	1NC+1NO+1NO staggered XEN-G1191		TAC-A891
 8 mechanically interlocked +1 trigger action latching " Emergency stop" ϕ30mm operator ZA2-BS44	1NC+1NO+1NO staggered XEN-G1191 1NC		TAC-A8913
 8 mechanically interlocked +1 trigger action latching " Emergency stop" ϕ30mm operator ZA2-BS44	1NC+1NO+1NO staggered(a) XEN-G1191 1N/C102(b) 1N/C ZB2-BE102		TAC-A8923

TAC-A8923

Pushbutton Switch

Model: COB61 Button interlocked and auto reset Ui:500v Ith: 5A AC-15 380V~2A 220V~5A		
Model: COB62 Button interlocked and auto reset Ui:500v Ith: 5A AC-15 380V~2A 220V~5A		
Model: COB63 Button interlocked and auto reset Ui:500v Ith: 5A AC-15 380V~2A 220V~5A		
Model: COB64 Button interlocked and auto reset Ui:500v Ith: 5A AC-15 380V~2A 220V~5A		
Model: COB64A Normal-on and self-locked reset is driven by off Ui:500v Ith: 5A AC-15 380V~2A 220V~5A		

COB62

COB63

Enclosure of Pushbutton

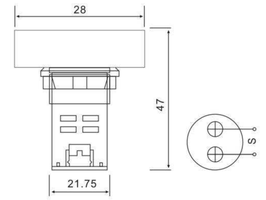
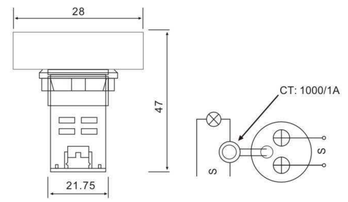
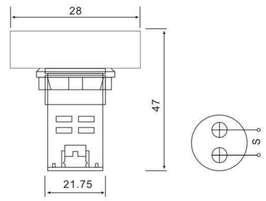
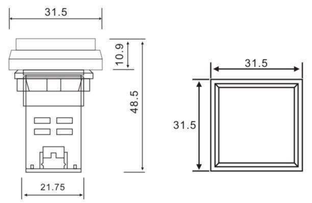
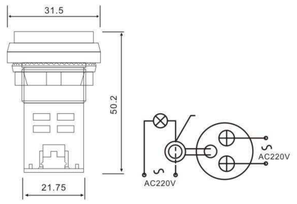
 H9-1	Button box for single hole IP40 Ø22 Ø25 Ø30	 H9-4	Button box for four holes IP40 Ø22 Ø25 Ø30
 H9-2	Button box for two holes IP40 Ø22 Ø25 Ø30	 H9-5	Button box for five holes IP40 Ø22 Ø25 Ø30
 H9-3	Button box for three holes IP40 Ø22 Ø25 Ø30	 H9-6	Button box for six holes IP40 Ø22 Ø25 Ø30


TAL-D01

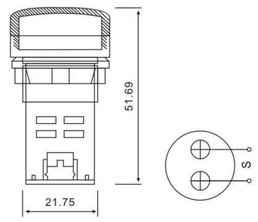
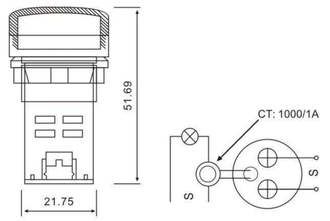
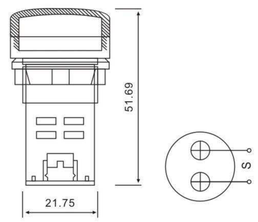
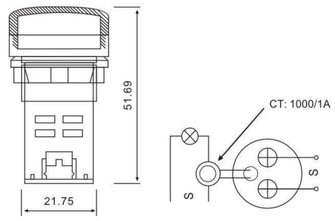

TAL-D02

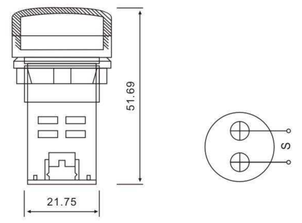
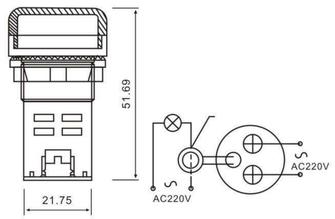
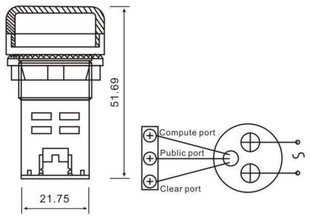
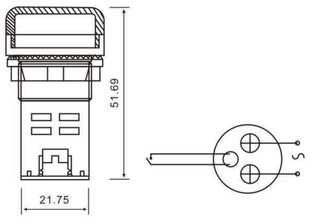

TAL-D03

Indicator Type Digital Meter

Dimension	Measuring Range	Color	
	AC50-500V		 AD22-SV
	0-100A Working Voltage: AC50-265V		 AD22-SA
	0-99Hz Working Voltage: AC50-265V		 AD22-SF
	-20°C~+199°C		 AD22-ST
	AC50-500V 0-100A 0-99HZ		 AD22-SAVF

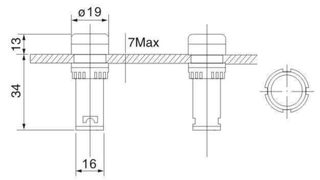
Indicator Type Digital Meter

	Color	Measuring Range	Dimension
 AD22-RV	● ● ● ● ○	AC50-500V	
 AD22-RA	● ● ● ● ○	0-100A (0-200A 0-400A) Working Voltage: AC50-265V	
 AD22-RF	● ● ● ● ○	0-99Hz Working Voltage: AC50-265V	
 AD22-RAV	● ● ● ● ○	AC50-500V 0-100A	

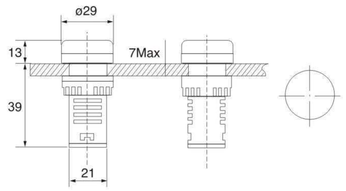
Dimension	Measuring Range	Color	
	-20-199°C Working Voltage: AC50-500V	● ● ●	 AD22-RT
	0-26KW at AC220V / 0-45KW at AC380V Working voltage: AC50-380V Working frequency: 50-60Hz	● ● ● ● ○	 AD22-RKW
	Counter 0-999999 AC220-380V	● ● ● ● ○	 AD22-CR
	Hour meter 0-60M 0-999H AC220-380V	● ● ● ● ○	 AD22-HR

LED Indicator

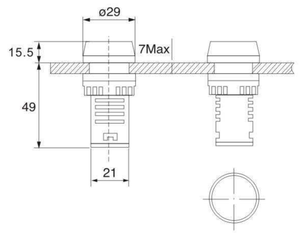
AD16-16DS

Type	Color	Voltage	Dimension
AD16-16DS	● ● ● ○ ●	DC.AC6V DC.AC12V DC.AC24V DC.AC36V DC.AC48V DC.AC110V DC.AC127V DC220V AC220V AC380V	

AD22-22DS ϕ22

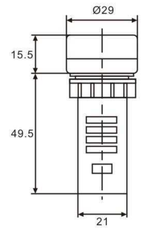
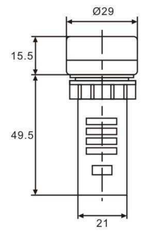
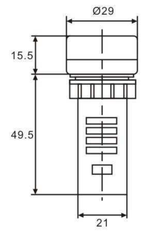
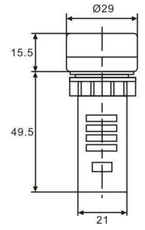
Type	Color	Voltage	Dimension
AD22-22DS ϕ22	● ● ● ○ ●	DC.AC6V DC.AC12V DC.AC24V DC.AC36V DC.AC48V DC.AC110V DC.AC127V DC220V AC220V AC380V	

Buzzer

Type	Color	Voltage	Dimension
AD22-22M/K	●	DC/AC12V DC/AC24V DC/AC110V DC/AC220V AC380V	

Flash buzzer

Type	Color
AD22-22M/r	●

Dimension	Measuring Range	Color	
	DC.AC 12V DC.AC 24V DC.AC 36V DC.AC 48V DC.AC 110V DC.AC 127V DC.220V AC.220V AC.380V	● ● x1 Red x0 Green x2 Connect Ground Indicator	 AD22-W/N
	DC.AC 12V DC.AC 24V DC.AC 36V DC.AC 48V DC.AC 110V DC.AC 127V DC.220V AC.220V AC.380V	● ● x1 Red x0 Green x2 Isolation Switch Position Indicator	 AD22-W/G
	DC.AC 12V DC.AC 24V DC.AC 36V DC.AC 48V DC.AC 110V DC.AC 127V DC.220V AC.220V AC.380V	● ● x1 Red x0 Green x2 Circuit Breaker Position Indicator	 AD22-W/D
	DC.AC 12V DC.AC 24V DC.AC 36V DC.AC 48V DC.AC 110V DC.AC 127V DC.220V AC.220V AC.380V	● ● x1 Red x0 Green x2 Double Color Indicator Light	 AD22-SS

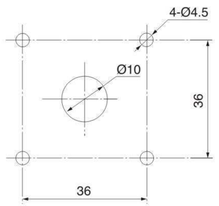
CA10 Changeover Switch

Enclosed type IP55

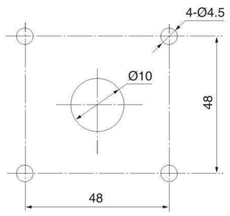
Specification

Type		CA10-20	CA10-25	CA10-32	CA10-63	CA10-125	CA10-160	CA10-200	CA10-400
Rated Insulation Voltage Ui(V)		690							
Conventional Heating Current Ith(A) Ac10≤40°		20	25	32	63	125	160	200	400
Rated Working Voltage Ue(V)		120 240 440	120 240 440	120 240 440	240 440	240 440	220 440	240 440	240 400
Rated Working Current Ie(A)	AC-21A AC-22A	20 20	25 25	25 32 32	63 63	100 100	150 150	180 180	360 360
	AC-23A	15 15	22 22	22 30 30	57 57	90 90	135 135	150 150	360 360
	AC-2	15 15	22 22	22 30 30	57 57	90 90	135 135	150 150	360 360
	AC-3	11 11	15 15	15 22 22	36 36	75 75	95 95	110 110	140 140
	AC-4	3.5 3.5	6.5 6.5	6.5 11 11	15 15	30 30	55 55	70 70	110 110
	AC-15	5 4	8 5	5 14 6	- -	- -	- -	- -	- -
	AC-13	5 1	9 1.5	25 11	- -	- -	- -	- -	- -
Rated Control Power (KW)	AC-23A	3.7/2.5 7.5/3.7	5.5/3 11/5.5	7.5/4 15/7.5	15/10 30/18.5	30/15 45/22	37/22 75/37	45/27 85/40	75/37 132/55
	AC-2	4 7.5	5.5 11	7.5 15	18.5 30	30 45	37 55	45 60	55 95
	AC-3	3/2.2 5.5/3	4/3 7.5/3.7	5.5/4 11/5.5	11/6 18.5/11	15/7.5 30/13	22/11 37/18.5	28/15 45/22	37/22 55/30
	AC-4	0.55/0.75 1.5/1.5	1.5/1.1 3/2.2	3.7/1.5 5.5/3	5.5/2.4 7.5/4	6/3 12/5.5	10/4 15/7.5	12.5/6 22/9	15/7.5 25/11
Mechanical Life		60 x 10^4							
Electrical Life		AC-15 20 x 10^4 DC-13 6 x 10^4							

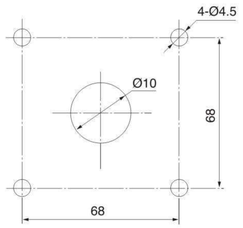
Dimension



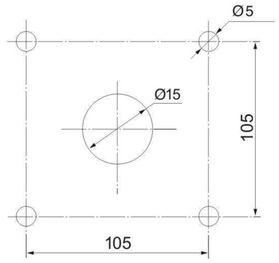
20A, 25A



32A, 63A



125A, 160A



200A, 400A

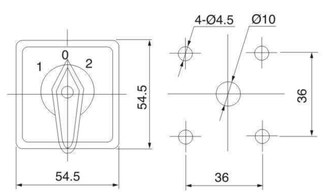
EP Changeover Switch

Enclosed type

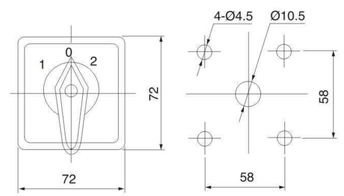
Specification

Type		EP-20A	EP-25A	EP-32A	EP-75A	EP-125A
Rated Insulation Voltage Ui(V)		660				
Conventional Heating Current Ith(A) Ac10≤40°		20	25	32	75	125
Rated Working Voltage Ue(V)		120 240 440	120 240 440	120 240 440	120 440	440
Rated Working Current Ie(A)	AC-21A AC-22A	20	25	32	75	125
	AC-23A	15	22	30	72	90
	AC-2	15	22	30	72	90
	AC-3	11	15	22	32	36
	AC-4	3.5	6.5	11	23	30
	AC-15	5 4	8 5	14 3		
	AC-13	5 1	9 1.5	25 11	60	
Rated Control Power (KW)	AC-23A	7.5	11	15	30	45
	AC-2	7.5	11	15	30	45
	AC-3	5.5	7.5	11	24	45
	AC-4	1.5	3	5.5	11.5	18.5
Mechanical Life		60 x 10^4				
Electrical Life		AC-15 20 x 10^4 DC-13 6 x 10^4				

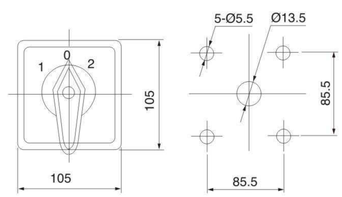
Dimension



EP-20A



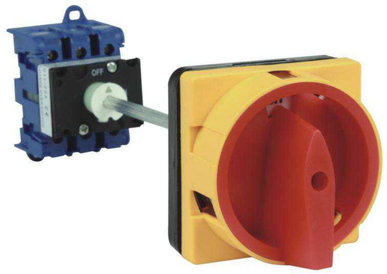
EP-25A, 32A



EP-75A, 125A

D11 Changeover Switch

D11-32A Front Panel

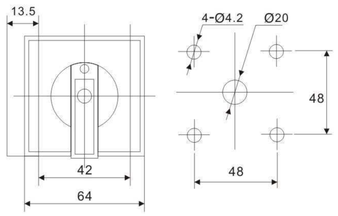


D11-40A Rear Panel

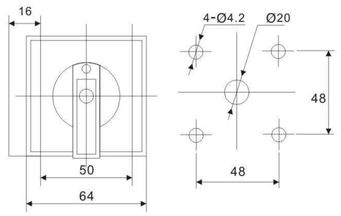
Specification

Model		D11-25	D11-32	D11-40	D11-63	D11-80	D11-100
Conventional Heating Current Ith(A)		25A	32A	40A	63A	80A	100A
Resistive Load AC21		25A	32A	40A	63A	80A	100A
AC23 Accidental Switch Motor or High Inductance Load	3x220~240V	4kW	5.5kW	7.5kW	11kW	18.5kW	22kW
	3x380~440V	7.5kW	11kW	15kW	22kW	30kW	37kW
AC3 Direct Connection Start Motor	3x220~240V	3kW	4kW	7.5kW	11kW	15kW	18.5kW
	3x380~440V	5.5kW	7.5kW	11kW	12.5kW	22kW	30kW

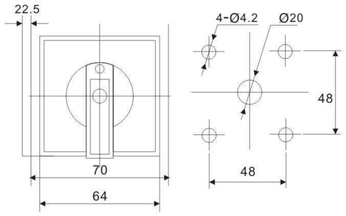
Dimension



D11-25A, 32A



D11-40A, 63A



D11-80A, 100A

LW5 Changeover Switch

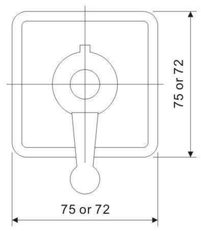
LW5 16A

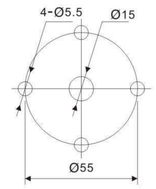
LW5 40A

Specification

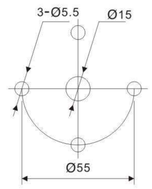
Application	Master Control									Direct Control Motor	
Using Classes	AC-15			DC-13 two breakpoints			DC-13 four breakpoints			AC-3	AC-4
Ue(V)	500	380	220	440	220	110	440	220	110	380	
Ie(V)	2.0	2.6	4.6	0.14	0.27	0.55	0.2	0.41	0.82	12	
Ui(V)	500										
Ith(A)	16										
Operation Frequency (times/h)	300									300	120
Mechanical Life (times)	$3x10^5$										
Electrical Life (times)	$2x10^4$									$19.5x10^4$	$0.5x10^4$
										$20x10^4$	

Dimension

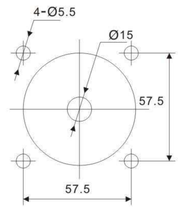




Manual-Return Switch



Self-Return Switch



Improved Panel

Limiting Switch


TSK-J10511


TSK-J10513


TSK-J10541


TSK-J139

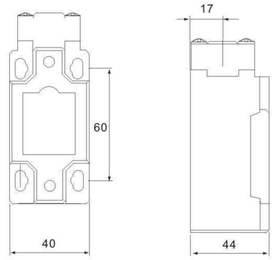

TSK-J161


TSK-J167


TSK-J10559


TSK-J108


TSK-J121



TSK-J Series


ME8101


ME8104


ME8107


ME8108

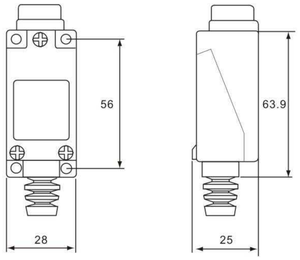

ME8111


ME8112


ME8122


ME8166


ME8169



ME Series


HL-5000


HL-5030


HL-5050


HL-5100


HL-5200


HL-5300


WL-CA2


WL-CA2-2


WL-CA32-41


WL-CL


WL-D

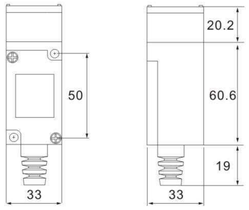

WL-D2


WL-CA12

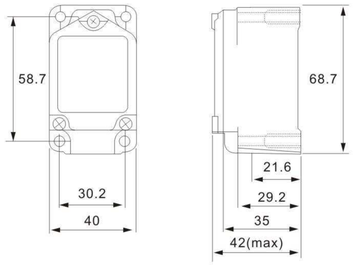

WL-CA12-2


WL-NJ


WL-NJ-S2



HL Series



WL Series

Limiting Switch

TSK-S101

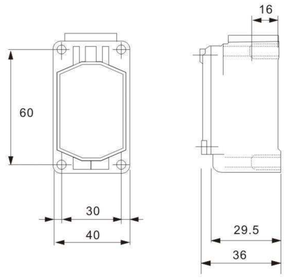
TSK-S102

TSK-S121

TSK-S131

TSK-S141

TSK-S139



TSK-S Series

TSK-P102

TSK-P106

TSK-P110

TSK-P118

TSK-P121

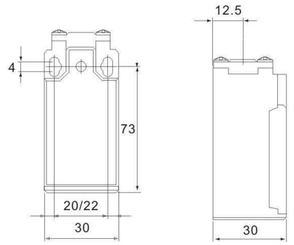
TSK-P127

TSK-P128

TSK-P139

TSK-P145

TSK-P155



TSK-P Series

TSK-T102

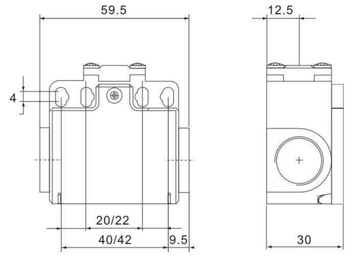
TSK-T106

TSK-T110

TSK-T118

TSK-T121

TSK-T127



TSK-T Series

TSK-T128

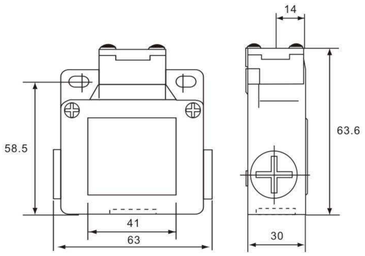
TSK-T145

TSK-T155

TSK-M102

TSK-M106

TSK-M110



TSK-M Series

TSK-M115

TSK-M121

TSK-M139

TSK-M141

Micro Switch

Z-15HW24-B

Z-15GD-B

Z-15GQ-B

Z-15GW-B

Z-15GW2-B

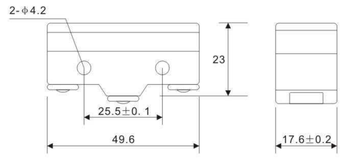
Z-15GW21-B

Z-15GQ21-B

Z-15GQ22-B

Z-15GW22-B

Z-15G-B

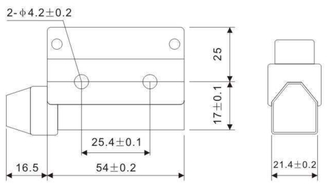


Z-15 Series

AZ-7100

AZ-7110

AZ-7120



AZ-7 Series

AZ-7121

AZ-7124

AZ-7140

AZ-7141

AZ-7144

AZ-7166

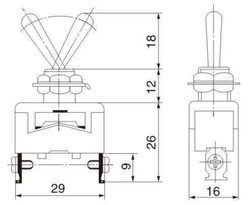
AZ-7310

AZ-7311

AZ-7312

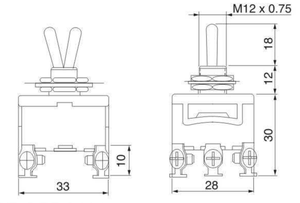
Toggle Switch

ON-OFF 1021



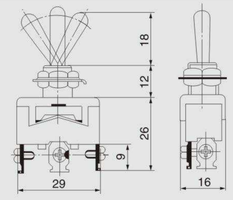
START-OFF 2021

ON-OFF 1401



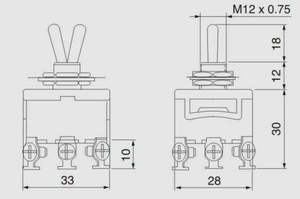
START-OFF 2401

ON-OFF-ON 1122



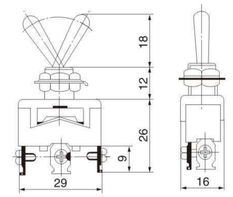
START-OFF-START 2122

ON-ON 1402



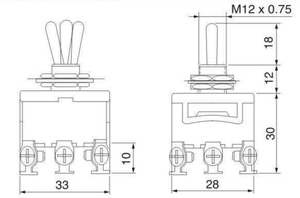
START-START 2402

ON-ON 1121



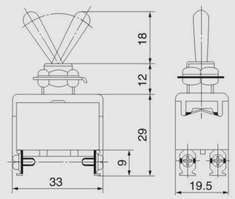
START-START 2121

ON-OFF-ON 1403



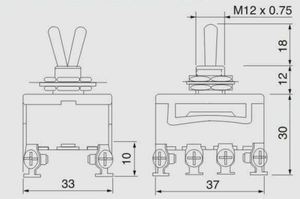
START-OFF-START 2403

ON-OFF 1221



START-OFF 2221

ON-OFF 1404



START-OFF 2404

ON-ON 1321

START-START 2321

ON-ON 1405

START-ON 2405

ON-OFF-ON 1322

START-OFF-START 2322

ON-OFF-ON 1406

START-OFF-START 2406

Pedal Switch

FS-1 Steel

FS-2 Aluminum

FS-7 Plastic

8017 Plastic

VFS-201 Plastic

KH8012 Plastic

SFM-1 Aluminum

SFM-5 Aluminum

SFMP-1 Aluminum

SFMS-1 Aluminum

SFM-15 Aluminum