



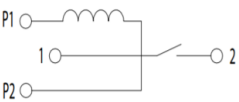
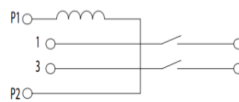
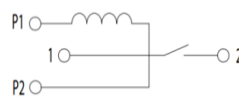
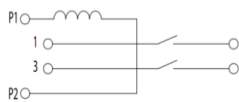
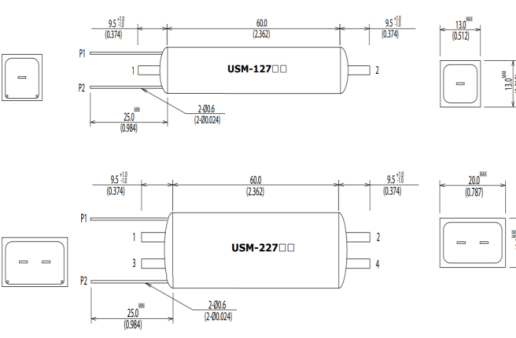
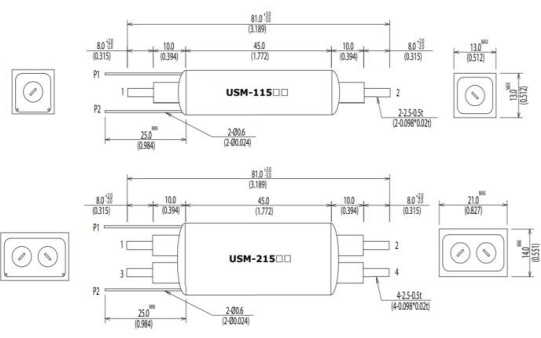


TPM Part / No.					
SANYU Part / No.		<b>USM-12705(H)(5V)</b> <b>USM-12712(H)(12V)</b> <b>USM-12724(H)(24V)</b>	<b>USM-22705(H)(5V)</b> <b>USM-22712(H)(12V)</b> <b>USM-22724(H)(24V)</b>	<b>USM-11505(H)(5V)</b> <b>USM-11512(H)(12V)</b> <b>USM-11524(H)(24V)</b>	<b>USM-21505(H)(5V)</b> <b>USM-21512(H)(12V)</b> <b>USM-21524(H)(24V)</b>
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm		60.0 x 13.0 x 13.0	60.0 x 20.0 x 13.0	45.0 x 13.0 x 13.0	45.0 x 21.0 x 14.0
回路接續圖 Figure.(TOP VIEW)					
電氣規格	Contact Form	1 Form A	2 Form A	1 Form A	2 Form A
	Coil Rating Voltage	5 V / 90Ω 12 V / 300Ω 24 V / 1200Ω	5 V / 70Ω 12 V / 250Ω 24 V / 900Ω	5 V / 60Ω 12 V / 200Ω 24 V / 800Ω	5 V / 45Ω 12 V / 160Ω 24 V / 600Ω
	Contact Rating	15 W	15 W	50 W	50 W
	Contact Current	3.0 Amp	3.0 Amp	3.0 Amp	3.0 Amp
	Carry Current	5.0 Amp	5.0 Amp	4.0 Amp	4.0 Amp
	Switching Voltage	1000 VDC	1000 VDC	3500 VDC	3500 VDC
	Contact Voltage	3000 VDC	3000 VDC	5000 VDC	5000 VDC
	Contact Resistance	200 mΩ	200 mΩ	200 mΩ	200 mΩ
	Insulation Resistance	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.
	Operate Time	5.0 mS	5.0 mS	4.0 mS	4.0 mS
	Release Time	5.0 mS	5.0 mS	3.0 mS	3.0 mS
	Operating temperature				
Reflow temperature					
電氣壽命 (代表例) Electrical Life		DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)
High-frequency response					
外觀尺寸 DIMENSION					

TPM Part / No.					
SANYU Part / No.		HA702-11505(5V) HA702-11512(12V) HA702-11524(24V)	HA702-11805(5V) HA702-11812(12V) HA702-11824(24V)	HA703-11005(5V) HA703-11012(12V) HA703-11024(24V)	HA703-11505(5V) HA703-11512(12V) HA703-11524(24V)
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm		68.5 x 19.5 x 20.0	68.5 x 19.5 x 20.0	65.5 x 15.0 x 15.5	65.5 x 15.0 x 15.5
回路接續圖 Figure.(TOP VIEW)					
電氣規格	Contact Form	1 Form A	1 Form A	1 Form A	1 Form A
	Coil Rating Voltage	5 V / 30Ω 12 V / 150Ω 24 V / 600Ω	5 V / 30Ω 12 V / 150Ω 24 V / 600Ω	5 V / 45Ω 12 V / 250Ω 24 V / 1000Ω	5 V / 30Ω 12 V / 120Ω 24 V / 465Ω
	Contact Rating	50 W	50 W	50 W	50 W
	Contact Current	3.0 Amp	3.0 Amp	3.0 Amp	3.0 Amp
	Carry Current	4.0 Amp	4.0 Amp	4.0 Amp	4.0 Amp
	Switching Voltage	10000 VDC	<b>12000 VDC</b>	7500 VDC	10000 VDC
	Contact Voltage	15000 VDC	<b>18000 VDC</b>	10000 VDC	15000 VDC
	Contact Resistance	200 mΩ	200 mΩ	200 mΩ	200 mΩ
	Insulation Resistance	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.	<b>10<sup>13</sup>Ω min.</b>	<b>10<sup>13</sup>Ω min.</b>
	Operate Time	3.0 mS	3.0 mS	3.0 mS	3.0 mS
	Release Time	1.5 mS	1.5 mS	1.5 mS	1.5 mS
	Operating temperature				
Reflow temperature					
電氣壽命 (代表例) Electrical Life	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	
High-frequency response					
外觀尺寸 DIMENSION	<p>UL 3239 AWG22 Silicone High-Voltage wire</p>				

TPM Part / No.			130D-1A10N0(5V) 130D-1A20N0(12V) 130D-1A30N0(24V)	133D-1A10N0(5V) 133D-1A20N0(12V) 133D-1A30N0(24V)	
SANYU Part / No.	HA706-11005(5V) HA706-11012(12V) HA706-11024(24V)	HA706-11505(5V) HA706-11512(12V) HA706-11524(24V)	HA707-11005(5V) HA707-11012(12V) HA707-11024(24V)	HA707-11505(5V) HA707-11512(12V) HA707-11524(24V)	
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm	68.5 x 19.5 x 20.0	68.5 x 19.5 x 20.0	85.7 x 19.7 x 18.2	85.7 x 19.7 x 18.2	
回路接續圖 Figure.(TOP VIEW)					
電氣規格	Contact Form	1 Form A	1 Form A	1 Form A	
	Coil Rating Voltage	5 V / 45Ω 12 V / 250Ω 24 V / 1000Ω	5 V / 30Ω 12 V / 150Ω 24 V / 600Ω	5 V / 80Ω 12 V / 250Ω 24 V / 600Ω	5 V / 30Ω 12 V / 120Ω 24 V / 400Ω
	Contact Rating	50 W	50 W	50 W	50 W
	Contact Current	3.0 Amp	3.0 Amp	3.0 Amp	3.0 Amp
	Carry Current	4.0 Amp	4.0 Amp	4.0 Amp	4.0 Amp
	Switching Voltage	7500 VDC	10000 VDC	7500 VDC	10000 VDC
	Contact Voltage	10000 VDC	15000 VDC	10000 VDC	15000 VDC
	Contact Resistance	200 mΩ	200 mΩ	500 mΩ	500 mΩ
	Insulation Resistance	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.
	Operate Time	3.0 mS	3.0 mS	5.0 mS	5.0 mS
	Release Time	1.5 mS	1.5 mS	5.0 mS	5.0 mS
	Operating temperature				
Reflow temperature					
電氣壽命 (代表例) Electrical Life	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	
High-frequency response					
外觀尺寸 DIMENSION					

TPM Part / No.	135W-1A10N0(5V) 135W-1A20N0(12V) 135W-1A30N0(24V)		131D-1A10N1(5V) 131D-1A20N1(12V) 131D-1A30N1(24V)	132D-1A10N0(5V) 132D-1A20N0(12V) 132D-1A30N0(24V)	
SANYU Part / No.	HA708-10905(5V) HA708-10912(12V) HA708-10924(24V)	USM-P13012V-90(12V) USM-P13024V-90(24V)	UPM-13605SV(5V) UPM-13612SV(12V) UPM-13624SV(24V)	UPM-11505SV(5V) UPM-11512SV(12V) UPM-11524SV(24V)	
外觀形狀 Appearance					
尺寸 Size (LxWxH) mm	85.7 x 19.7 x 18.2	70.6 x 24.0 x 25.0	70.0 x 17.0 x 19.0	70.0 x 17.0 x 19.0	
回路接續圖 Figure.(TOP VIEW)					
電氣規格	Contact Form	1 Form A	1 Form A	1 Form A	
	Coil Rating Voltage	5 V / 20Ω 12 V / 100Ω 24 V / 300Ω	12 V / 180Ω 24 V / 720Ω	5 V / 35Ω 12 V / 180Ω 24 V / 650Ω	5 V / 35Ω 12 V / 180Ω 24 V / 650Ω
	Contact Rating	<b>250 W</b>	<b>250 W</b>	50 W	50 W
	Contact Current	<b>5.0 Amp</b>	<b>5.0 Amp</b>	3.0 Amp	3.0 Amp
	Carry Current	<b>10.0 Amp</b>	<b>10.0 Amp</b>	4.0 Amp	4.0 Amp
	Switching Voltage	9000 VDC	9000 VDC	7500 VDC	3500 VDC
	Contact Voltage	10000 VDC	9000 VDC	10000 VDC	5000 VDC
	Contact Resistance	50 mΩ	50 mΩ	500 mΩ	500 mΩ
	Insulation Resistance	10 <sup>10</sup> Ω min.	10 <sup>10</sup> Ω min.	10 <sup>11</sup> Ω min.	10 <sup>10</sup> Ω min.
	Operate Time	10.0 mS	10.0 mS	5.0 mS	5.0 mS
	Release Time	6.0 mS	10.0 mS	5.0 mS	5.0 mS
	Operating temperature				
Reflow temperature					
電氣壽命 (代表例) Electrical Life	DC.1.0V,10mA 1000×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 1000×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	DC.1.0V,10mA 100×10 <sup>6</sup> (R負荷)	
High-frequency response					
外觀尺寸 DIMENSION					