

STERLING SERIES™



ON, AND ON, AND ON.

Robertson™
WORLDWIDE
INNOVATIVE LIGHTING SOLUTIONS

For over 57 years, the lighting industry has relied upon Robertson Worldwide for innovative lighting solutions. From the first magnetic ballasts, through developing the ballast for the compact fluorescent lamp to today's high performance electronic ballast, Robertson is known for its dedication to solving customer problems. With four series of ballasts to address specific performance requirements, you can rely on Robertson for the quality products you need to satisfy your customer's expectations:

World Series - World Class, Highest Performance Ballast on the Market Today

Sterling Series - Professional Grade, High Efficiency, Commercial and Residential Applications

Electra Series - Economical, Energy Star Rated, Ideal for the Residential and Hospitality Market

Performance Series - Competitive Performance, High Quality OEM Grade Products

All Robertson ballasts have the same quality of design, components and manufacturing consistency. Each series has specific features and performance targets utilizing the latest in electronic and magnetic technology. Our newest ballasts correctly support more lamp types in more combinations, which in conjunction with wide, multi-voltage support reduce inventory costs and complexity.

Robertson has solutions for the following lighting Technologies

Fluorescent	T5, T8 and T12 Linear, Compact and Circular
High Intensity Discharge	Metal Halide, High and Low Pressure Sodium
Ultraviolet	Air and Water Quality, Germicidal
Dimming	Local, Continuous, 2-Step, 3-Step
Halogen	Voltage Transformers
OptoElectronic (LED)	High Accuracy, Stabilized Power Supplies

Leading manufacturers of the highest quality lighting fixtures and commercial appliances choose Robertson when performance is paramount.

On and On and On . . . Rely on Robertson for Your Lighting Solution.



Sterling Series the Symbol of Quality and Value!

Robertson's Sterling Series family of Electronic, Multi-volt, Multi-Lamp, Energy Star-Compliant ballasts for Compact Fluorescent and Linear lamps has it all. In addition to meeting all the Energy Star requirements these ballasts also feature High Power Factor operation with less than 10% Total Harmonic Distortion for commercial applications. The Sterling Series offers great flexibility, quality and value.

The Sterling Series includes models for Compact Fluorescent, Circular, Long Twin and Linear T5 & T8 lamps. Many are available with dual entry color-coded, poke-in connectors. This feature offers the following benefits: Greater flexibility because the same ballast can be used for both side and bottom exits leads and provides faster, simpler installation and wiring accuracy. In addition to dual entry connectors, these exceptional ballasts offer the following features:

- Smaller, sleeker case styles permits the use of these ballasts in lower-profile fixture designs as well as sign and retail display applications in commercial applications.
- Compatible with Leading Manufacturers of Emergency Battery Packs
- Exceeds the requirements for use in Residential Light fixtures submitted for Energy Star qualification

Ballasts for Single-Based Lamps

Lamp Watts	Lamp	No. Of Lamps	Ballast Catalog Number	Input Voltage (V)	Line Current (A)	Input Power (W)	Power Factor	Ballast Factor	Max. Current THD (%)	Case Style	Wiring Diagram
COMPACT FLUORESCENT TWIN TUBE											
13	CFT13W/2GX7	1	RSM218CQMVW	120	0.13	16	≥0.98	1.25	≤15	28	152
				277	0.06						
		2		120	0.23	27	≥0.98	1.10	≤12	28	153
				277	0.10						
COMPACT FLUORESCENT QUAD & TRIPLE TUBE											
13	CFQ13W/G24q, CFTR13W/GX24q	1	RSM213CQMVW	120	0.15	18	≥0.98	1.20	≤10	28	152
				277	0.07						
		2		120	0.27	29	≥0.98	1.01	≤10	28	153
				277	0.12						
18	CFQ18W/G24q, CFTR18W/GX24q	1	RSM213CQMVW	120	0.20	19	≥0.98	1.00	≤12	28	152
				277	0.09						
		1	RSM218CQMVW	120	0.21	24	≥0.98	1.15	≤10	28	152
				277	0.10						
		2		120	0.36	40	≥0.98	1.00	≤10	28	153
				277	0.16						
26	CFQ26W/G24q, CFTR26W/GX24q	1	RSM218CQMVW	120	0.26	30	≥0.98	0.97	≤10	28	152
				277	0.11						
		1	RSM226CQMVW	120	0.27	35	≥0.98	1.10	≤10	28	152
				277	0.12						
		2		120	0.49	56	≥0.98	0.99	≤10	28	153
				277	0.21						
		2	RSP242TRMVW	120	0.51	55	≥0.98	1.05	≤10	24	153
				277	0.21						
32	CFTR32W/GX24q	1	RSM226CQMVW	120	0.35	40	≥0.98	1.10	≤10	28	152
				277	0.15						
		2	RSP242TRMVW	120	0.59	64	≥0.99	1.00	≤10	24	153
				277	0.25						
42	CFTR42W/GX24q	1	RSM226CQMVW	120	0.45	51	≥0.98	1.10	≤10	28	152
				277	0.19						
		2	RSP242TRMVW	120	0.74	82	≥0.99	0.90	≤10	24	153
				277	0.31						
COMPACT FLUORESCENT LONG TWIN TUBE											
24	FT24W/2G11	1	PSV239T5MV (90°C)	120	0.27	32	≥0.98	1.14	≤10	23C	004
				277	0.12						
		2		120	0.45	55	≥0.98	1.00	≤10	23C	068
				277	0.21						
		2	RSM226CQMVW	120	0.40	53	≥0.98	1.00	≤10	28	153
				277	0.20						
		2	RSP242TRMVW	120	0.44	53	≥0.98	0.94	≤10	24	153
				277	0.19						
36	FT36W/2G11	1	PSV239T5MV (90°C)	120	0.33	40	≥0.98	0.98	≤10	23C	004
				277	0.15						
		2		120	0.60	71	≥0.98	0.90	≤10	23C	068
				277	0.26						
		1	PSV254T5MV (90°C)	120	0.38	44	≥0.98	1.13	≤10	23C	004
				277	0.17						
		2		120	0.69	82	≥0.98	1.06	≤10	23C	068
				277	0.30						
		2	RSP242TRMVW	120	0.55	66	≥0.98	0.82	≤10	24	153
				277	0.24						
40	FT40W/2G11/RS	1	PSV239T5MV (90°C)	120	0.44	52	≥0.98	1.15	≤10	23C	004
				277	0.20						
		2	RSP242TRMVW	120	0.72	84	≥0.98	0.95	≤10	24	153
				277	0.30						
50	FT50W/2G11/RS	1	PSV254T5MV (90°C)	120	0.50	59	≥0.98	1.08	≤10	23C	004
				277	0.22						
		2		120	0.95	113	≥0.98	1.02	≤10	23C	068
				277	0.41						
55	FT55W/2G11/RS	1	PSV254T5MV (90°C)	120	0.46	54	≥0.98	0.90	≤10	23C	004
				277	0.23						
		2		120	0.90	105	≥0.98	0.88	≤10	23C	068
				277	0.38						
COMPACT FLUORESCENT SQUARE TUBE (2-D)											
21	CFS21W/GR10q	1	RSM218CQMVW	120	0.21	26	≥0.98	1.05	≤10	28	152
				277	0.10						
28	CFS28W/GR10q	1	RSM218CQMVW	120	0.25	30	≥0.98	0.95	<10	28	152
				277	0.11						

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Ballasts for Circular Fluorescent Lamps

Lamp Watts	Lamp	No. Of Lamps	Ballast Catalog Number	Input Voltage (V)	Line Current (A)	Input Power (W)	Power Factor	Ballast Factor	Max. Current THD (%)	Case Style	Wiring Diagram
22	FC9T5 (22W)	1	PSV239T5MV (90°C)	120	0.25	32	≥0.98	1.14	≤10	23C	004
				277	0.12						
		2	RSM218CQMVW	120	0.48	57	≥0.98	1.11	≤10	23C	068
				277	0.22						
40	FC12T5 (40W)	1	PSV239T5MV (90°C)	120	0.21	26	≥0.99	0.97	≤10	28	152
				277	0.10						
		2	RSP242TRMVW	120	0.46	54	≥0.98	1.10	≤10	24	153
				277	0.20						
55	FC12T5HO (55W)	1	PSV254T5MV (90°C)	120	0.37	46	≥0.98	0.97	≤10	23C	004
				277	0.18						
		2	RSP242TRMVW	120	0.70	84	≥0.98	0.91	≤10	23C	068
				277	0.32						
22	FC8T9 (22W)	1	RSM218CQMVW	120	0.62	74	≥0.98	0.85	≤10	24	153
				277	0.27						
		2	PSV254T5MV (90°C)	120	0.42	50	≥0.98	0.90	≤10	23C	004
				277	0.18						
32	FC12T9 (32W)	1	RSM226CQMVW	120	0.80	96	≥0.98	0.88	≤10	23C	068
				277	0.35						
		2	RSM218CQMVW	120	0.17	20	≥0.98	0.99	≤10	28	152
				277	0.78						
40	FC16T9 (40W)	1	RSM226CQMVW	120	0.28	34	≥0.99	0.97	≤10	28	152
				277	0.13						
		2	RSM226CQMVW	120	0.36	43	≥0.98	0.90	≤10	28	152
				277	0.16						
22&40	FC9T5 & FC12T5 (22W & 40W)	2	PSV239T5MV (90°C)	120	0.60	72	≥0.98	1.00	≤10	23C	068
				277	0.26						
		2	RSP242TRMVW	120	0.57	64	≥0.98	0.93	≤10	24	153
				277	0.24						

Ballasts for T5 Linear Lamps

Lamp Watts	Lamp	No. of Lamps	Ballast Catalog Number	Input Voltage (V)	Line Current (A)	Input Power (W)	Power Factor	Ballast Factor	Max. Current THD (%)	Case Style	Wiring Diagram
13	F13T5	1	RSM213CQMVW	120	0.16	20	≥0.96	1.20	≤15	28	152
				277	0.07						
		2	RSM213CQMVW	120	0.25	30	≥0.98	1.00	≤10	28	153
				277	0.11						
14	F14T5	1	RSM213CQMVW	120	0.16	20	≥0.96	1.15	≤15	28	152
				277	0.07						
		2	RSM213CQMVW	120	0.27	30	≥0.98	1.00	≤10	28	153
				277	0.12						
24	F24T5	2	RSM226CQMVW	120	0.40	48	≥0.98	1.00	≤10	28	153
				277	0.18						
		1	PSV239T5MV (90°C)	120	0.26	30	≥0.98	1.14	≤10	23C	004
				277	0.12						
		2	PSV239T5MV (90°C)	120	0.43	52	≥0.98	1.00	≤10	23C	068
				277	0.20						
39	F39T5	1	PSV239T5MV (90°C)	120	0.37	44	≥0.98	1.05	≤10	23C	004
				277	0.17						
		2	PSV239T5MV (90°C)	120	0.67	80	≥0.98	0.96	≤10	23C	068
				277	0.29						
54	F54T5	1	PSV254T5MV (90°C)	120	0.48	57	≥0.98	0.93	≤10	23C	004
				277	0.25						
		2	PSV254T5MV (90°C)	120	0.92	109	≥0.98	0.91	≤10	23C	068
				277	0.40						

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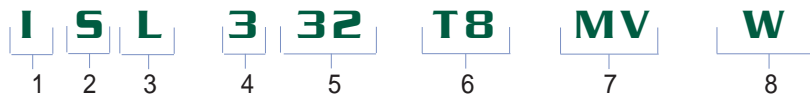
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Ballasts for T8 Linear Lamps

Lamp Watts	Lamp	No. of Lamps	Ballast Catalog Number	Input Voltage (V)	Line Current (A)	Input Power (W)	Power Factor	Ballast Factor	Max. Currnet THD (%)	Case Style	Wiring Diagram
17	F17T8, F17T8U	1	ISS132T8MVW	120	0.14	17	≥0.95	0.90	≤10	12B	44
				277	0.07						
		1	ISS232T8MVW	120	0.17	22	≥0.97	1.07	≤15	12B	45
				277	0.08						
		2	ISS232T8MVW	120	0.27	33	≥0.98	0.90	≤10	12B	45
				277	0.12						
		2	ISL332T8MVW	120	0.14	37	≥0.94	1.03	≤13	12A	46
				277	0.31						
		3	ISL332T8MVW	120	0.40	47	≥0.98	0.88	≤10	12A	46
				277	0.18						
		3	ISL432T8MVW	120	0.42	50	≥0.95	0.95	≤11	12A	47
				277	0.19						
4	ISL432T8MVW	120	0.51	60	≥0.98	0.88	≤10	12A	47		
		277	0.22								
25	F25T8, F25T8U	1	ISS132T8MVW	120	0.19	23	≥0.95	0.89	≤10	12B	44
				277	0.09						
		1	ISS232T8MVW	120	0.24	30	≥0.98	1.06	≤12	12B	45
				277	0.11						
		2	ISS232T8MVW	120	0.39	46	≥0.98	0.89	≤10	12B	45
				277	0.17						
		2	ISL332T8MVW	120	0.42	50	≥0.97	1.03	≤10	12A	46
				277	0.19						
		3	ISL332T8MVW	120	0.58	69	≥0.98	0.88	≤10	12A	46
				277	0.26						
		3	ISL432T8MVW	120	0.59	70	≥0.97	0.93	≤10	12A	47
				277	0.26						
4	ISL432T8MVW	120	0.74	88	≥0.99	0.88	≤10	12A	47		
		277	0.32								
32	F32T8, F32T8U	1	ISS132T8MVW	120	0.25	30	≥0.98	0.88	≤10	12B	44
				277	0.11						
		1	ISS232T8MVW	120	0.30	37	≥0.98	1.05	≤10	12B	45
				277	0.13						
		2	ISS232T8MVW	120	0.49	58	≥0.98	0.88	≤10	12B	45
				277	0.21						
		2	ISL332T8MVW	120	0.59	70	≥0.98	1.02	≤10	12A	45
				277	0.27						
		3	ISL332T8MVW	120	0.75	88	≥0.98	0.88	≤10	12A	46
				277	0.33						
		3	ISL432T8MVW	120	0.75	89	≥0.99	0.92	≤10	12A	47
				277	0.33						
4	ISL432T8MVW	120	0.93	112	≥0.99	0.88	≤10	12A	47		
		277	0.40								
40	F40T8	1	ISS232T8MVW	120	0.37	44	≥0.98	1.04	≤10	12B	45
				277	0.16						
		2	ISL332T8MVW	120	0.69	82	≥0.99	0.96	≤10	12A	46
				277	0.29						
		3	ISL432T8MVW	120	0.90	110	≥0.99	0.91	≤10	12A	47
				277	0.39						
59	F96T8	1	ISR259T8MVW	120	0.56	68	≥0.98	0.88	≤12	12C	45
				277	0.28						
		2	ISR259T8MVW	120	0.95	112	≥0.98	0.88	≤10	12C	45
				277	0.41						

Understanding the Robertson Electronic Ballast Model Number

Example Model No.



1) Circuit Type	2) Case Material	3) Case Style	4) Lamp Qty	5) Lamp Watts	6) Lamp Type	7) Voltage	8) Features
I=Instant (IS)	A=Aluminum	L=(12A)			CQ=Compact Quad	MV=Multi-Voltage	B=Bottom Entry
P=Program (PS)	P=Plastic	M=(28)			CS=Compact Square		BS=Bottom Entry/Studs
R=Rapid Preheat (PH-RS)	S=Steel	P=(24)			CT=Compact Twin		D=Dual Entry
		R=(12)			M=Compact Multi		DS Dual Entry/Studs
		S=(12B)			T=Linear		T=Top Entry
		V=(23C)			TR=Compact Triple		W=White
					FT=Long Twin		

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Ballasts Specifications

1) Physical Characteristics

- 1.1) The electronic ballast shall be furnished with dual entry poke in connectors, side connectors or lead wires when applicable
- 1.2) The tolerance of the lead length is +2/-1 inch.
- 1.3) The electronic ballast shall be encased and fully potted where applicable
- 1.4) The electronic ballast case shall be white painted steel or galvanized

2) Performance requirements

- 2.1) The electronic ballast operates at a line voltage of 120 thru 277±10%, 50/60 Hz.
- 2.2) The electronic ballast shall have a power factor greater than 0.95.
- 2.3) The electronic ballast shall have a starting time:
 - a. ≤1.0 seconds for Preheat Rapid Start
 - b. ≤1.2 seconds for Program Start
 - c. ≤0.10 seconds for Instant Start
- 2.4) The electronic ballast shall have a Current Crest Factor (CCF) less than 1.7.
- 2.5) The electronic ballast shall have a THD less than 10% on primary lamps.
- 2.6) The electronic ballast shall have a lamp end-of-life detection and shutdown circuit for compact, circular and T5 fluorescent lamps compliant with IEC61347-2-3 or ANSI C82.11-2005.
- 2.7) The electronic ballast shall have a starting temperature of -4°F/-20°C.
- 2.8) The electronic ballast shall be sound rated A.
- 2.9) The electronic ballast output frequency to the lamp shall range from 20 to 33 kHz. or above 40 kHz.
- 2.10) The electronic ballast shall carry a three year warranty from date of manufacture when properly installed and operating at maximum case temperature of 75°C under normal conditions of use. The PSV254T5MV and PSV239T5MV carry a five year warranty for operation at a maximum case temperature of 75°C or three year warranty for operation at a maximum case temperature of 90°C from date of manufacture.



3) Regulatory requirements

- 3.1) The electronic ballast shall meet the requirements of the Federal Communications Commission rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) or Consumer (Class B) for EMI/RFI (conducted and radiated)*
- 3.2) The electronic ballast shall comply with all applicable state and federal efficiency standards.
- 3.3) The electronic ballast shall meet ANSI C82.11.
- 3.4) The electronic ballast shall withstand transients specified in ANSI C62.41-1991, Category A.
- 3.5) The electronic ballast shall be Underwriters Laboratories (UL) Listed (Class P) and Canadian Underwriters Laboratories (cUL).
- 3.6) The electronic ballast shall not contain Polychlorinated Biphenyl (PCB's).

Robertson Limited Warranty

Robertson Worldwide (Robertson), 13611 Thornton Road, Blue Island, IL 60406, warrants those products manufactured and distributed by the company will be free from defects in material and workmanship but not against damage caused by abnormal stress or operating conditions for the following periods from the date of manufacture.

Sterling Series Electronic Products (Preheat) Rapid Start	Warranted for a Period of 3 Years
Sterling Series Electronic Product Program Start	Warranted for a Period of 3 Years (Case temperature 90°C or less) Warranted for a Period of 5 Years (Case temperature 75°C or less)

This warranty is conditional upon proper storage, installation, use, and maintenance. This warranty is not applicable to any product, which is not installed and operated in accordance with Robertson specifications and instructions or in accordance with the National Electrical Code (NEC), the Standards for Safety of Underwriters Laboratories, Inc. (UL), and the Standards of the American National Standards Institute (ANSI) or, in Canada, the Canadian Standards Association (CSA).

The conditions of any test for product, which is claimed to not perform according to the terms of this warranty, shall be mutually agreed upon in writing; Robertson reserves the right to be represented at any such test.

The company's obligation under this warranty shall be the repair or replacement of any defective part or parts or providing a replacement product.

NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY BEYOND THE AFOREMENTIONED WARRANTY PERIOD. The foregoing warranty is exclusive of all other statutory, written, or oral warranties, and no other warranties of any kind, statutory or otherwise, are given or herein expressed. This warranty sets forth Robertson's responsibilities regarding the ballast and claimant's exclusive remedy.

LIMITATIONS OF LIABILITY. Under no circumstances, whether as a result of breach of contract, breach of warranty, tort, strict liability or otherwise, will Robertson be liable for consequential, incidental, special or exemplary damages, including, but not limited to, loss of profits, loss of use or damage to any property or equipment, cost of capital, cost of substitute product, facilities or services, down time costs or claims of claimant's customers.

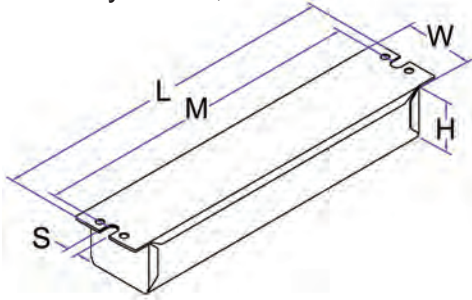
Robertson's liability on any claim of any kind for any loss or damages arising out of, resulting from or concerning any aspect of this agreement of from the product or services furnished hereunder shall not exceed the price paid to Robertson for the specific ballast or ballasts, which gives rise to the claim.

This warranty gives the claimant specific legal rights. The claimant may also have other rights, which vary from state to state.

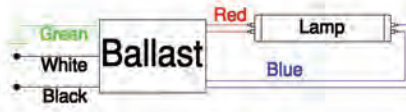
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Wiring Diagrams & Case Styles

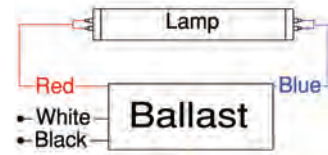
Case Style 12A, 12B & 12C



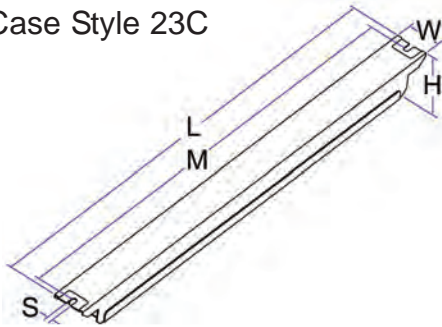
Wiring Diagram 004



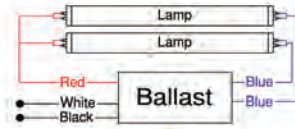
Wiring Diagram 044



Case Style 23C

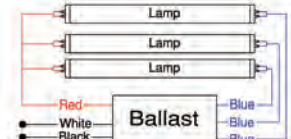


Wiring Diagram 045



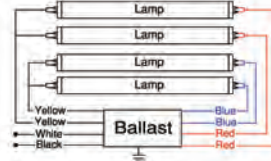
For 1 Lamp applications, cap any unused blue lead, insulate 600V.

Wiring Diagram 046



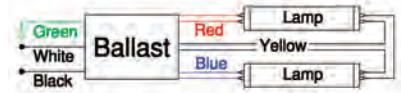
For 2 Lamp applications, cap any unused blue lead, insulate 600V.

Wiring Diagram 047

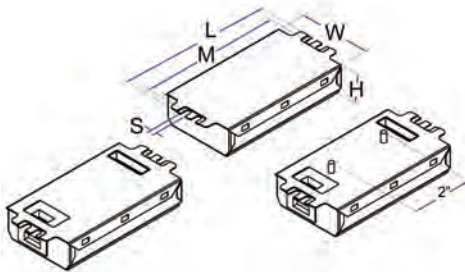


For 3 Lamp applications, cap any unused lead, insulate 900V.

Wiring Diagram 068



Case Style 24 & 28



Wiring Diagram 152



Wiring Diagram 153



***Notes:**

Specifications subject to change without notice.

Non- Consumer (Class A) Models	Consumer (Class B) Models
PSV239T5MV	RSM213CQMVW
PSV254T5MV	RSM218CQMVW
ISL332T8MVW	RSM226CQMVW
ISL432T8MVW	RSP242TRMVW
ISR259T8MVW	ISS132T8MVW
	ISS232T8MVW

Case Style	H	W	I	M	S
12A	1 5/32	1 11/16	9 1/2	8 15/16	9/32
	1.16	1.69	9.50	8.94	0.28
	3.18cm	2.71cm	24.13cm	22.71cm	0.71cm
12B	1 5/32	1 3/8	9 7/16	8 7/8	9/32
	1.16	1.38	9.44	8.88	0.28
	3.18cm	3.51cm	23.98cm	22.56cm	0.71cm
12C	1 3/8	1 13/16	9 7/16	8 7/8	1/4
	1.38	1.81	9.44	8.88	0.25
	3.51cm	4.60cm	23.98cm	22.56cm	0.64cm
23C	1 1/32	1 7/32	16 15/16	16 1/4	3/16
	1.03	1.22	16.94	16.25	0.19
	2.62 cm	3.10 cm	43.02 cm	41.28 cm	0.47cm
24	1 3/8	3	5	4 5/8	1/4
	1.38	3.00	5.00	4.63	0.25
	3.51cm	7.62cm	12.70cm	11.76cm	0.64cm
28	1	2 3/8	5	4 5/8	3/16
	1.00	2.38	5.00	4.63	0.19
	2.54cm	6.05cm	12.70cm	11.76cm	0.47cm



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