

SPECMATE™ WIREWAY & ENCLOSURES



Wiremold® Specmate™ Type 1 Wireway and Enclosures are available in a broad range of enclosure and trough sizes to accommodate specific wire fill and bend radii requirements.

CODE REFERENCE

UL Listed Wireway, Auxiliary Gutters & Associated Fittings:

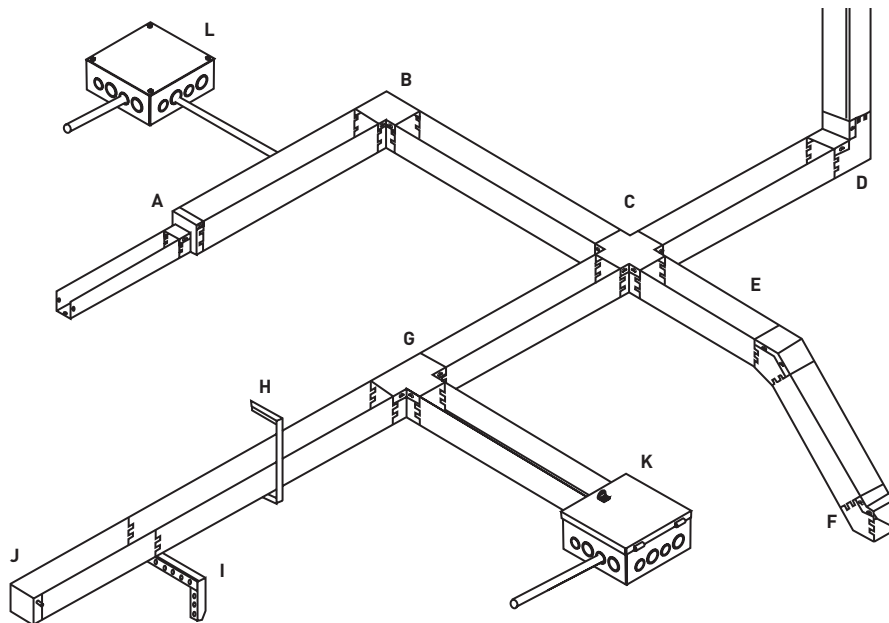
File E137690 Guide ZDYX.

Meets Article 376 of NEC.

CSA File: 59760.

Meets Section 12-2200 of CEC.

Specmate Type 1 Wireway System Layout



Key

A. C14R25	Reducer
B. C14E	90° Flat Elbow
C. C14X	Cross
D. C14EVI	90° Inside Elbow
E. C14E45VO	45° Outside Elbow
F. C14E45VI	45° Inside Elbow
G. C14T	Tee
H. C14H	Hanger
I. C14BH	Bracket Hanger
J. C14EB	End Blank
K. SPMJP-8-8-6	Hinged Cover Junction Box
L. SPMJ-8-8-6	Screw Cover Junction Box

NOTE: Illustration is for showing product applications only.

COLOR OPTIONS



SpecMate™ Wireway is available with a gray baked enamel finish.

Custom color options are also available. Consult the factory for more information.

SPECMATE™ WIREWAY & ENCLOSURES

Technical Data

Specmate Wireway Wire Fill Capacities for Power & Communications

CABLE/WIRE TYPE	CATEGORY/WIRE SIZE	O.D		20% FILL (per sq. inch of area)	40% FILL (per sq. inch of area)
		Inches	[mm]		
POWER WIRING (THHN/THWN)	6 AWG	0.257	[6.5]	3.35	-
	6 AWG	0.218	[5.5]	5.36	-
	6 AWG	0.153	[3.9]	10.88	-
	6 AWG	0.122	[3.1]	17.11	-
	6 AWG	0.105	[2.7]	23.09	-
UNSHIELDED TWISTED PAIR	4-pair, 24 AWG Cat. 5 UTP	0.220	[5.6]	5.26	10.52
	4-pair, 24 AWG Cat. 3 UTP	0.190	[4.8]	7.05	14.11
TELEPHONE	2-pair, 24 AWG	0.140	[3.5]	12.99	25.98
	3-pair, 24 AWG	0.150	[3.8]	11.32	22.64
	4-pair, 24 AWG	0.190	[4.8]	7.05	14.1
	25-pair, 24 AWG	0.410	[10.3]	1.51	3.03
COAXIAL CABLES	RG58/U	0.195	[4.7]	6.70	13.39
	RG59/U	0.242	[6.1]	4.35	8.70
	RG62/U	0.242	[6.1]	4.35	8.70
	RG6/U	0.270	[6.8]	3.49	6.99
TWINAXIAL	100 Ohm	0.330	[8.4]	2.34	4.68
SHIELDED TWISTED PAIR	TYPE 1	0.390	[9.6]	1.67	3.35
	TYPE 2	0.465	[11.8]	1.18	2.36
	TYPE 3	0.275	[6.9]	4.24	8.48
FIBER OPTIC	Two Strand [Duplex] Multimode 62.5/125µm	0.190	[4.8]	7.05	14.11

Wire Fill Calculation:

1. Determine useable area of compartment. Useable area in square inches = [Width x Depth].
2. Determine wire fill for compartment. Multiply the compartment area (from Step 1) by the number of wires per square inch, from the chart above. Wire Fill = Area (sq. in.) x No. Wires per sq. in. (Chart above).
3. Calculate fill for multi-compartment tees or crosses. Wire Fill = (Wire Fill from Step 2) / No. of compartments.)

Sample Wire Fill Calculation:

- Determine the number of 12 gauge wires that will fit in a 4" [102mm] deep by 4" [102mm] wide compartment.
- 1) Useful area = 4" x 4" = 16 in²
 - 2) Wire Fill = 16" x 17.11" wires/in² (from chart) = 273 #12 THHN wires

Specmate Wireway Wire Fill Capacities for Power & Communications

Wireway Capacity

The following charts show the wireway size and number of conductors allowed.

To apply these numbers correctly to your application, observe the rules outlined below, which are taken from the applicable Electrical Code or UL/CSA standard.

National Electrical Code (NEC):

Article 376-22 of the NEC (2002) states that "The sum of cross-sectional areas of all contained conductors at any cross section of the wireway shall not exceed 20 percent of the interior cross-sectional area of the wireway".

Further to this "The derating factors in 310.15(B)(2)(a) shall be applied only when the number of current carrying conductors, including neutral conductors classified as current-carrying under the provisions of 310.15(B)(4), exceeds 30."

Where the conductors enter the wireway through the bottom or the sides, the maximum conductor size is limited due to the need to control the bend radius of the conductor. Please see Article 376 of the NEC (2002) for more details.

Canadian Electrical Code (CEC):

The rules in CEC 12-2104 regarding conductors in wireways are as follows:

- (1) Conductors used in wireways shall be the insulated types indicated in Table 19 (CEC) as being suitable for use in raceways.
- (2) Except as permitted in Subrule (4) wireways shall contain not more than 200 conductors and the aggregate cross-sectional area of the conductors and their insulation shall not exceed 20% of the interior cross-sectional area of the wireway.
- (3) No conductor larger than 500 kcmil (MCM) copper or 750 kcmil (MCM) aluminum shall be installed in any wireway.
- (4) Wireways containing only signal and control conductors may contain any number of conductors but the aggregate cross-sectional area of the conductors and their insulation shall not exceed 40% of the interior cross-sectional area of the wireway.
- (5) The cross-sectional area for conductors in Subrules (2) and (4) shall be determined in accordance with Rule 12-1014(4).

NOTE: See Section 12-2100 of the CEC for more details if required. For divided wireway (two equal compartments), add suffix "D" (i.e. C1800D). Consult factory to order unequal compartments.

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Specmate Type 1 Wireway Ordering Information

Specmate Wireway Type 1



For divided wireway (two equal compartments), add suffix “-D”, i.e.: C1250-D. Wireway can also be provided with divider(s) in specified locations. Consult factory to order.

Steel finished in ANSI61 gray powder coat paint.

One coupling required with each length of duct.

1/2" [12.7mm] and 3/4" [19.1mm] concentric trade size KOs 24" [610mm] on centers.

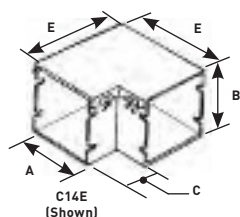
UL Listed and CSA Certified for support on 5' [1.5m] centers. (2 1/2", 4", and 6" [64mm, 102mm, 152mm] square profiles also UL Listed on 10' [3m] centers). Special sizes, lengths, and colors available.

Ordering Data

STANDARD SIZES		GAUGE	10' LENGTH [3m]	5' LENGTH [1.5m]	2' LENGTH [.61m]	1' LENGTH [.30m]
Inches	[mm]					
2 1/2" x 2 1/2"	[64 x 64]	16	C1250	C1255	C1252	C1251
4" x 4"	[102 x 102]	16	C1400	C1405	C1402	C1401
6" x 6"	[152 x 152]	16	C1600	C1605	C1602	C1601
8" x 8"	[203 x 203]	16	C1800	C1805	C1802	C1801
12" x 12"	[305 x 305]	16	C11200	C11205	C11202	C11201
10" x 4"	[254 x 102]	16	C110-40	C110-45	C110-42	C110-41
12" x 6"	[305 x 152]	16	C112-60	C112-65	C112-62	C112-61
18" x 6"	[457 x 152]	14	-	C118-65	C118-62	C118-61
24" x 6"	[610 x 152]	12	-	C124-65	C124-62	C124-61

Specmate Type 1 Wireway Ordering Information

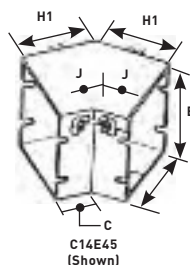
90° Flat Elbow



C125E	2 1/2" x 2 1/2"	[64mm x 64mm]
C14E	4" x 4"	[102mm x 102mm]
C16E	6" x 6"	[152mm x 152mm]
C18E	8" x 8"	[203mm x 203mm]
C112E	12" x 12"	[305mm x 305mm]
C110-4E	10" x 4"	[254mm x 102mm]
C112-6E	12" x 6"	[305mm x 152mm]
C118-6E	18" x 6"	[457mm x 152mm]
C124-6E	24" x 6"	[610mm x 152mm]

One coupling required with each fitting.

45° Flat Elbow



C125E45	2 1/2" x 2 1/2"	[64mm x 64mm]
C14E45	4" x 4"	[102mm x 102mm]
C16E45	6" x 6"	[152mm x 152mm]
C18E45	8" x 8"	[203mm x 203mm]
C112E45	12" x 12"	[305mm x 305mm]
C110-4E45	10" x 4"	[254mm x 102mm]
C112-6E45	12" x 6"	[305mm x 152mm]
C118-6E45	18" x 6"	[457mm x 152mm]
C124-6E45	24" x 6"	[610mm x 152mm]

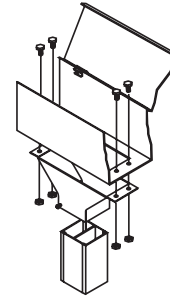
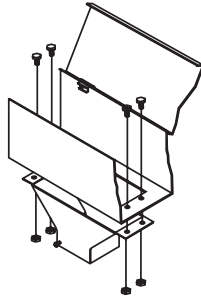
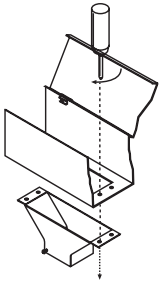
One coupling required with each fitting.

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Specmate Type 1 Wireway Installation Details (continued)

Installation of Tele-Power Pole Adapter:

1. Locate the Pole Adapter on the wireway. Drill holes in the appropriate locations to match the holes in the Pole Adapter. Cut and grommet hole to match pole adapter entrance feed.
2. Bolt the Pole Adapter to the underside of the wireway. No sharp edges should remain in the wireway. (Bolts not furnished.)
3. Insert the Wiremold NP600 Series Tele-Power Pole into the underside of the Pole Adapter. Tighten the two set screws (furnished) onto the pole.

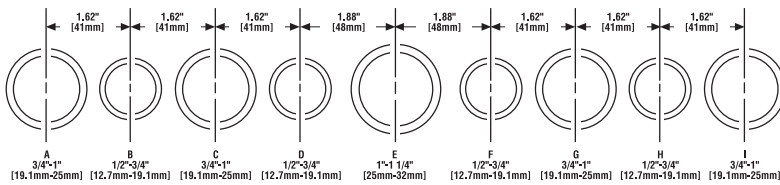


Specmate Type 1 Wireway Enclosures Technical Data

“Type 1 Enclosures are intended for indoor use primarily to provide a degree of protection against contact with the enclosed equipment and wiring.” – NEMA Standard / No. 250-1991

Standard Knockout Configuration

The knockout configuration shown below is referred to for each standard catalog number.



The following chart indicates the standard knockout pattern that can be accommodated according to the dimension specified when custom sizes are ordered.

Standard Knockout Configuration for Custom Sizes

Length of Side (L)	Standard KO Configuration	Metric Conversion	
		In.	[mm]
4" [102mm] to less than 6" [152mm]	B-C	4	[102]
6" [152mm] to less than 8" [203mm]	B-C-D	6	[152]
8" [203mm] to less than 10" [254mm]	F-G-H-I	8	[203]
10" [254mm] to less than 15" [381mm]	C-D-E-F-G	10	[254]
15" [381mm] to less than 18" [457mm]	B-C-D-E-F-G-H	12	[305]
18" [457mm] and up	A-B-C-D-E-F-G-H-I	15	[381]
		18	[457]
		20	[508]
		24	[610]
		30	[762]
		36	[914]
		48	[1220]