



MS® Prep

Dual Force® 2190, 2290

Series Interconnected Deadbolt/Deadlatch

The 2190 Series Interconnected Deadbolt/Deadlatch provides access control and security for narrow stile aluminum (**2190**), hollow metal and wood doors (**2290**). Deadlatch and deadbolt capabilities are combined for fast, easy, and panic-proof exiting.

Function

The Dual Force combines the access control capabilities of a latch with the security of a deadbolt. The key retracts and extends the deadbolt and deadlatch from either side. The exterior lever retracts the latch only. With the deadbolt projected, a simple turn of the inside lever retracts both the latch and deadbolt simultaneously, providing single-motion, panic-proof exiting. The Dual Force is available with electrified trim set for easy integration into an existing access control system. Standard and electrified trim sets are for out-swinging doors only; low profile trim set designed for in-swinging doors only.

Operation

Key or thumbturn projects or retracts deadbolt or deadlatch. Lock accepts any standard 1" [25.4 mm] length, 1-5/32" [29.4 mm] diameter mortise cylinder with MS® cam such as the 4036 Mortise Cylinder, available separately. Lock accepts cylinder from either or both sides.

Inside lever retracts both deadbolt and deadlatch when configured with interconnect feature. Outside lever retracts latch only. Latch holdback feature activated or deactivated by turning key to retract latch. Sliding holdback button on faceplate down will holdback latch and sliding up will release. The 2190 Series Interconnected Deadbolt/Deadlatch are designed to operate with the uniquely designed strike plate that comes standard in the package from the factory.



Features

Cylinder Backset

1-1/8" [28.6 mm] or 1-1/2" [38.1 mm] only.

Bolt

Latchbolt: 5/8" [15.9 mm] throw of solid brass. Easily reversible using only a screwdriver.
Deadbolt: 1" [25.4mm] throw of stainless steel.

Auxiliary Deadlatch Pin

Stainless steel. Deadlocks latchbolt to prevent "loiding" or case-knife entry.

Faceplate

Includes faceplate system that adapts to flat, radius, or beveled door edge.

2190: Measures 1" x 6-7/8" [25.4 mm x 174.6 mm]. Radius with weatherseal faceplate available separately.

2290: Measures 1-1/4" x 8" [31.8 mm x 203.2 mm].

Strike

The Dual Force 2190, 2290 Interconnected Deadbolt/Deadlatch will not operate without its specially designed strike, included standard in package.

2190: Standard strike furnished is the 2101-01 Strike for flat jamb where door closes flush or nearly flush. The 2101 Strike covers MS® Deadlock strike preparation with modification, and the 4901 Deadlatch Strike directly. Also available in radius version for opposite stile pairs of doors and with extended lip strikes for special jamb conditions.

2290: Standard strike furnished is the 2206 (ASA) Strike for flat jamb where door closes flush or nearly flush.

Inter Connection

Field-selectable inter-connection feature allows interior trim to retract deadbolt and deadlatch. Consult local authority having jurisdiction (AHJ) for guidance in code compliance. 1-3/4" [44.5 mm] minimum door thickness required.

- 2190 retrofits to existing MS1850S Deadlock or 4500 and 4900 Deadlatch of the same backset.

Standard Package

Individually boxed with trim as specified, strike and machine screws for mounting. Cylinder available separately.

Shipping Weight

9 lbs [4.08 kg].

Electrical

Electrified Trim Options

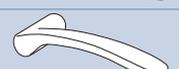
Electrified trim set is designed for easy integration into an existing access control system. Dual-voltage 12/24 VDC rated for continuous duty operation. Energizing the trim set allows the exterior lever to be turned to retract the latch only.

The electrified option is not available for low profile trim (trim option 3). Dual Force 2190/2290 Electrification Kit EK-2190 available separately for field-installation into the exterior standard trim set.

Options

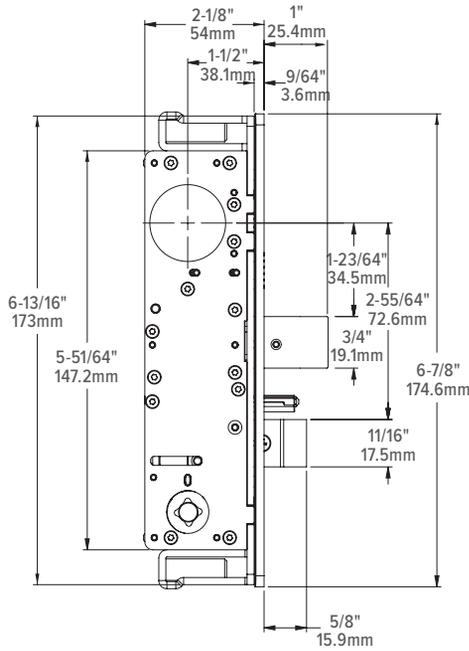
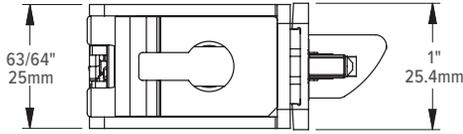
- Specify trim option, lever style, finish, and strike.
- Thick Door Kits (2190-TDKXX) available separately. Specify door thickness.
- Request to Exit REX-4600 switch available separately for small format low profile trim set.
- Available in choice of US3 (605) Bright brass, US4 (606) Satin brass, 10B powder coat to match dark bronze, US32 (629) Bright stainless, or US32D (630) Satin stainless.

Options & Accessories

	OPTION	DESCRIPTION SHORT
	Standard Series 01	Standard lever, curved
	Standard Series 02	Standard lever, round
	Standard Series 03	Standard lever, square
	Aventura Series ME	Studio Collection designer lever
	Aventura Series MG	Studio Collection designer lever
	Aventura Series MI	Studio Collection designer lever
	Aventura Series MW	Studio Collection designer lever
	Centro Series MD	Studio Collection designer lever
	Centro Series MJ	Studio Collection designer lever
	Odeon Series MN	Studio Collection designer lever
	Odeon Series MV	Studio Collection designer lever

All measurements are approximate and are provided for informational purposes only. Refer to the product Installation Instructions.

2190 Dimensions



ARMORED FACEPLATE 1" X 6-7/8"

FLAT 24-0066-01 (included)

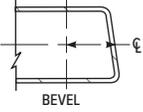
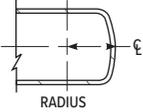
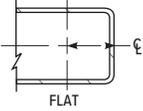
RADIUS 24-0066-02 (included)

RADIUS W/ WEATHERSTRIP
24-0066-03

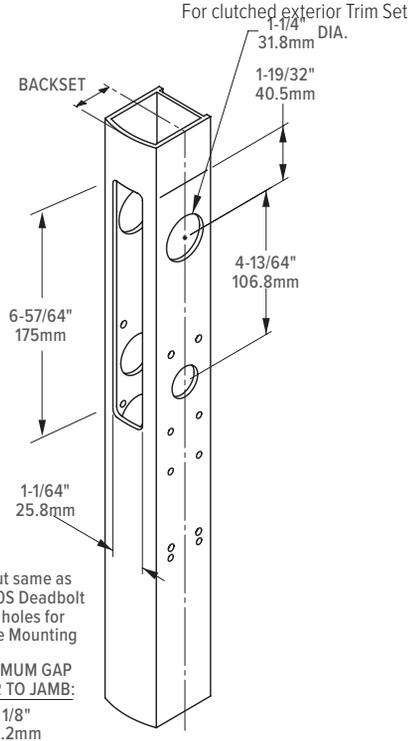
BACKSET	"A"
1-1/8" 28.6mm	1-25/32" 45.2mm
1-1/2" 38.1mm	2-1/4" 57.2mm

HOW BACKSET IS MEASURED:

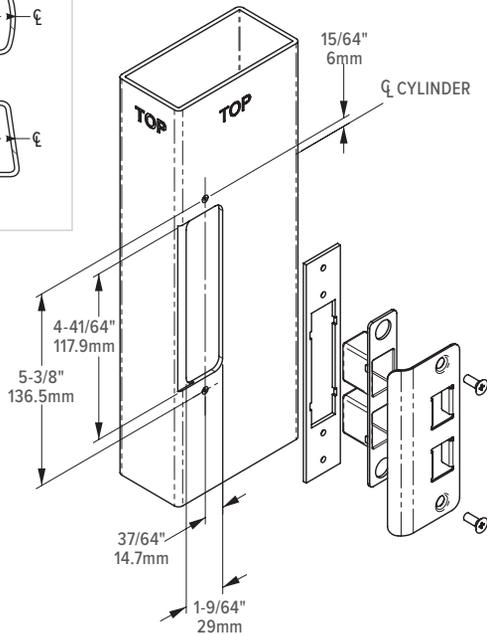
CYLINDER \varnothing



Stile Preparation

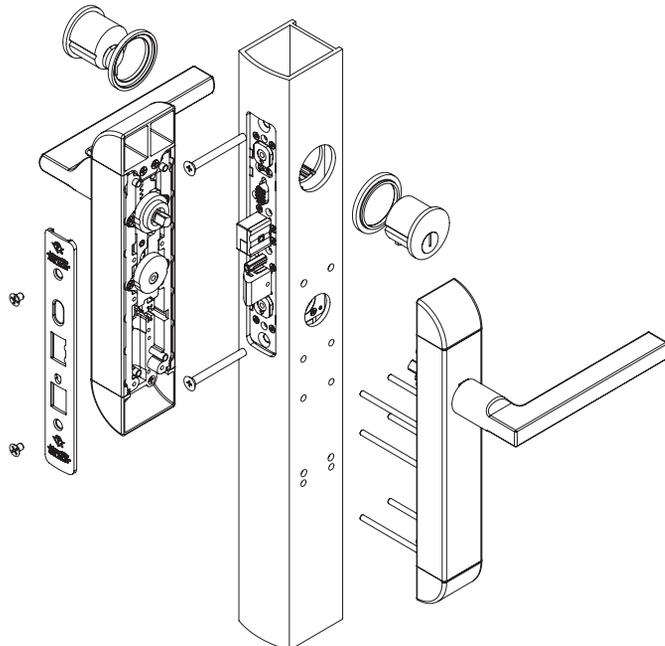


Jamb Preparations

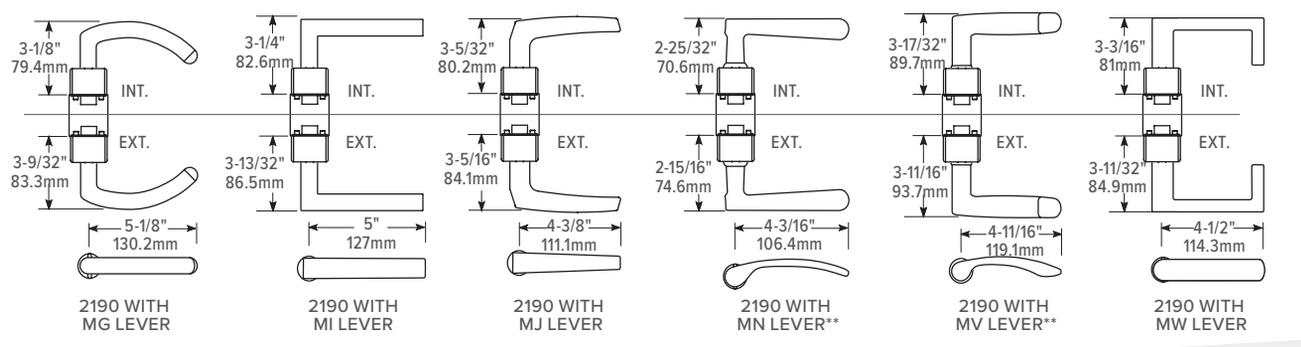
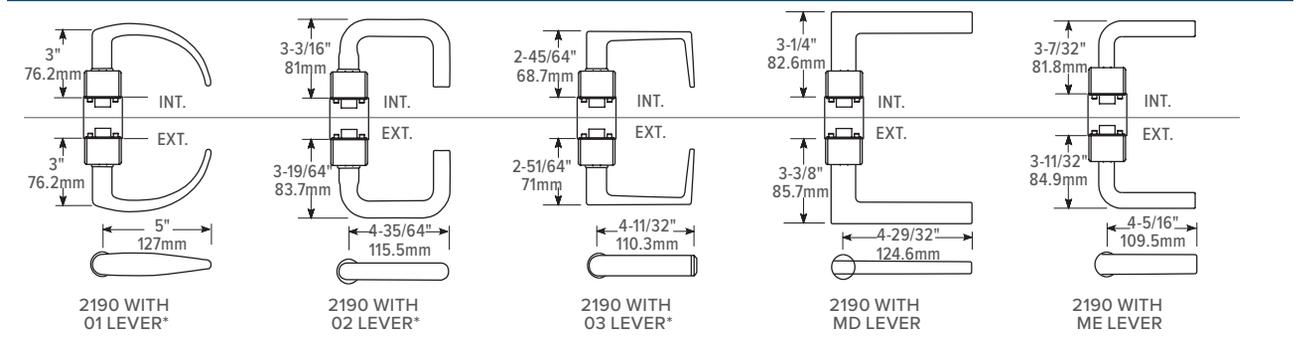
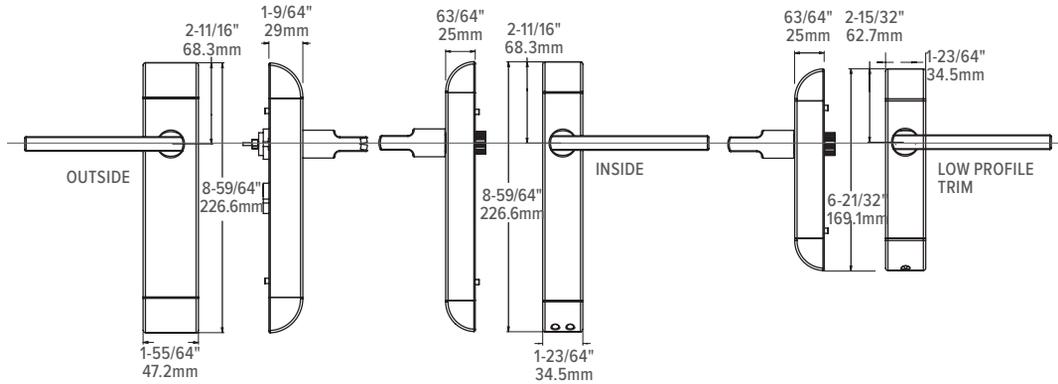


2101 Strike (covers and previous cutout for MS® Deadbolt)
— Retrofits 4901 and 4501 strike preparations.

Latch/Lock, Cylinder & Level Installation



2190 Dimensions



** Handed

How to Order & Related Products

2190 Interconnected Deadbolt/Deadlatch: Specify quantity and the following information. Order related products separately.

MODEL	BACKSET	STRIKE	FACEPLATE FINISH	TRIM	HANDLE DESIGNATION	TRIM AND HANDLE FINISH
2190	-3	1	1	-1	01	32D
	3 1-1/8"	0 None	1 Clear Anodized 628	0 None	00 No Handle	03 Bright Brass (US3)
	4 1-1/2"	1 Standard Flat	2 Dark Bronze Anodized 313	1 With Trim Set	STANDARD SERIES:	
		2 Radius Strike	3 Black Anodized 335	2 With Electrified Trim Set	01 Curve 02 Round 03 Square	10B to match Dark Bronze
				3 Low Profile Trim	DESIGNER SERIES:	
					MD MG MJ MV	32 Bright Stainless (US32)
					ME (Handed) MI MN MW	32D Satin Stainless (US32D)

RELATED PRODUCTS

When purchasing this product, please consider the following related products, available separately:

CYLINDERS	ACCESSORIES	ELECTRIFICATION
Standard 1" length, 1-5/32" diameter mortise cylinder with MS® cam such as 4036 Mortise Cylinder, 4066 Thumbturn; MS4043 Cylinder Guard	2190-TDK Thick Door Kit for standard exterior trim set, TDK-4600 Thick Door Kit for low profile trim set.	EK-2190 Electrification Kit. 2190 may be ordered with electrified trim (trim option 2).



All measurements are approximate and are provided for informational purposes only. Refer to the product Installation Instructions.

2290 Dimensions



ARMORED FACEPLATE
1-1/4" X 8"

FLAT (included)
FPK-0066-OX-XXX

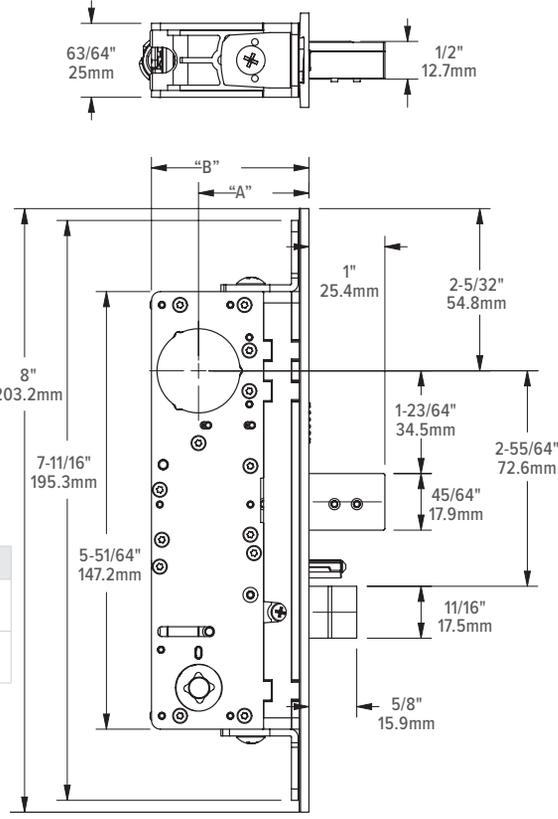
BACKSET	"A"	"B"
1-1/8" 28.6mm	1-1/8" 28.6mm	1-3/4" 45.2mm
1-1/2" 38.1mm	1-1/2" 38.1mm	2-1/8" 54mm

HOW BACKSET IS MEASURED:

CYLINDER ϕ

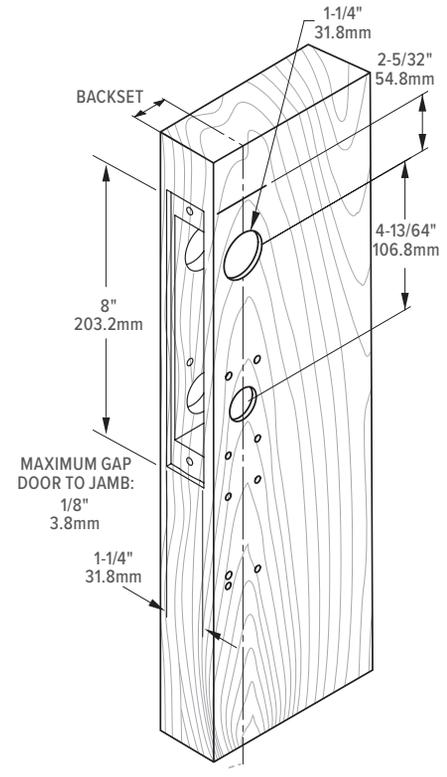
FLAT

BEVEL

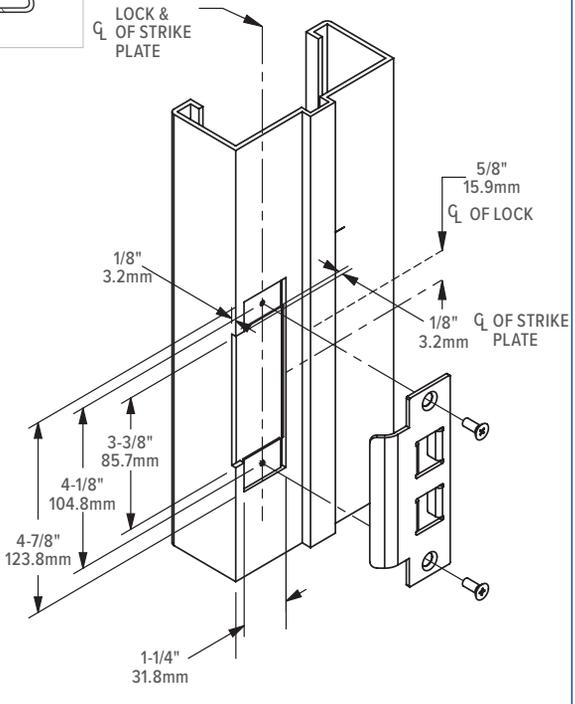


Stile Preparation

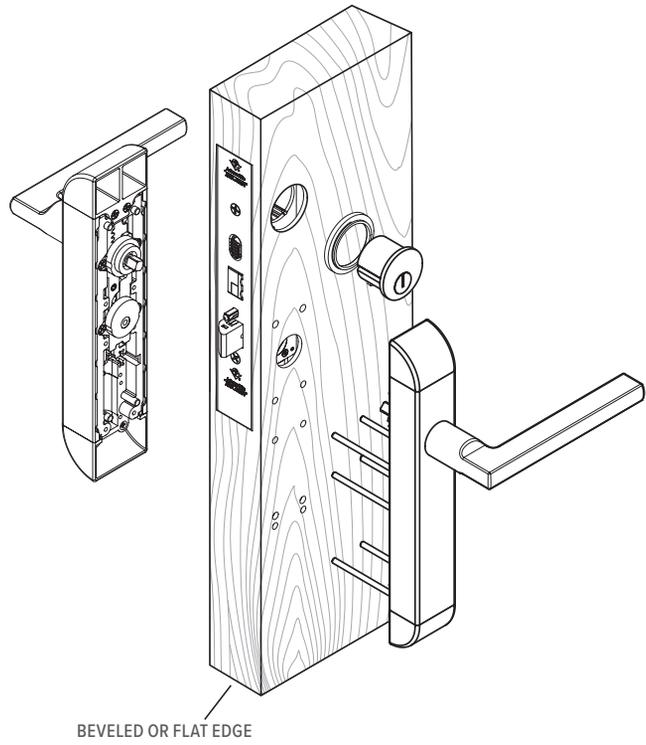
For clutched exterior Trim Set



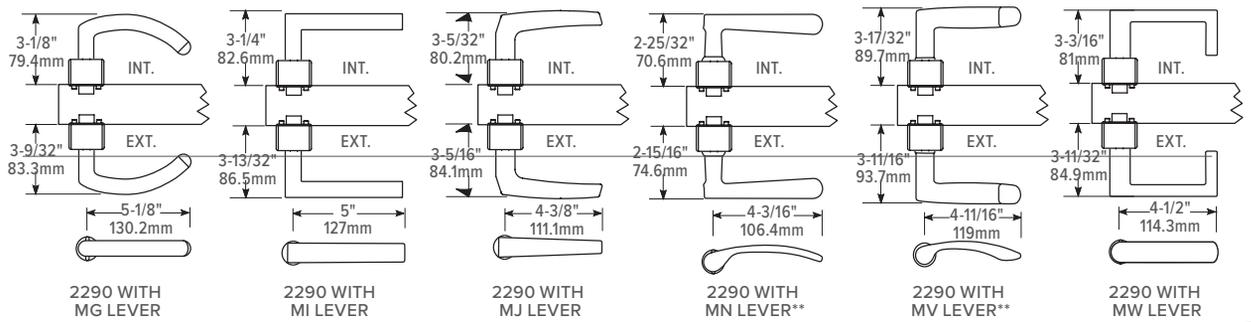
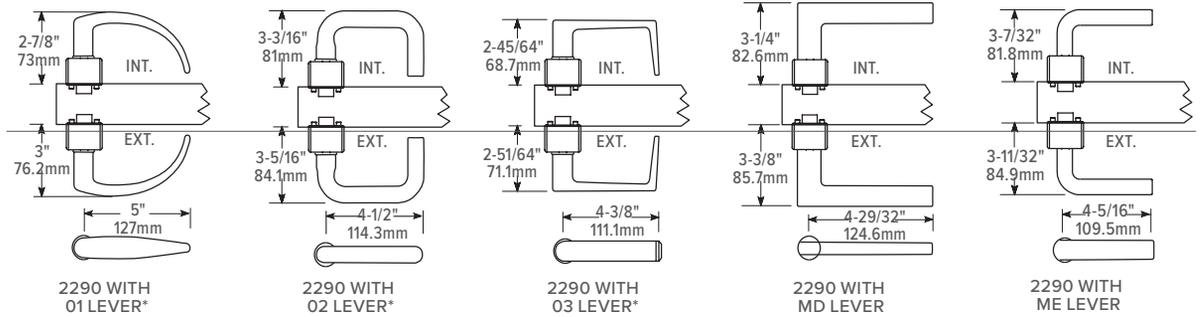
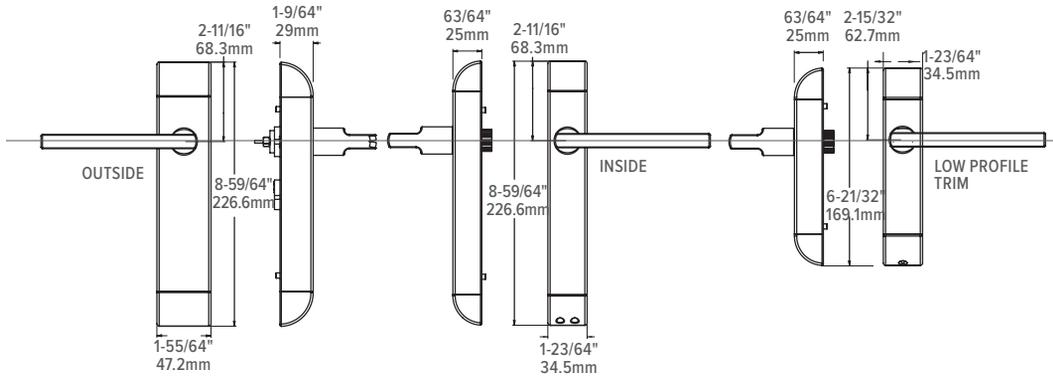
Jamb Preparations



Latch/Lock, Cylinder & Level Installation



2290 Dimensions



** Handed

How to Order & Related Products

2290 Interconnected Deadbolt/Deadlatch: Specify quantity and the following information. Order related products separately.

MODEL	BACKSET	STRIKE	FACEPLATE FINISH	TRIM	HANDLE DESIGNATION	TRIM AND HANDLE FINISH
2290	-3	1	1	-1	01	32D
	3 1-1/8"	0 None	0 US to match trim finish	0 None	00 No Handle	03 Bright Brass (US3)
	4 1-1/2"	1 Standard Flat	1 Clear Anodized 628	1 With Trim Set	STANDARD SERIES:	
			2 Dark Bronze Anodized 313	2 With Electrified Trim Set	01 Curve 02 Round 03 Square	04 Satin Brass (US4)
			3 Black Anodized 335	3 Low Profile Trim	DESIGNER SERIES:	
					MD MG MJ MV	10B to match Dark Bronze
					ME (Handed) MI MN MW	32 Bright Stainless (US32)
						32D Satin Stainless (US32D)

RELATED PRODUCTS

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Standard 1" length, 1-5/32" diameter mortise cylinder with MS® cam such as 4036 Mortise Cylinder, 4066 Thumbturn; MS4043 Cylinder Guard	2190-TDK Thick Door Kit for standard exterior trim set, TDK-4600 Thick Door Kit for low profile trim set.	EK-2190 Electrification Kit. 2190 may be ordered with electrified trim (trim option 2).