

MGS-R20-  -  - X

GEARBOX MODEL (X AXIS)

MPG-064  MPG-084  MPG-114

MRG-064  MRG-084  MRG-114

RATIO:

GEARBOX MODEL (Y AXIS)

MPG-064  MPG-084  MPG-114

MRG-064  MRG-084  MRG-114

RATIO:

FOR DIRECT DRIVE OPTION WITH MMK  
(NO GEARBOX) CHECK HERE:

MOTOR INFORMATION (X AXIS)

MANUFACTURER:

MODEL:

MOTOR INFORMATION (Y AXIS)

MANUFACTURER:

MODEL:

SENSOR INFORMATION X-AXIS:

HOME-QTY  244

EOT-QTY  244

SENSOR INFORMATION Y-AXIS:

HOME-QTY  244

EOT-QTY  244

(SEE T-SLOT SENSOR KIT SHEET FOR  
PART NUMBER CONFIGURATION)

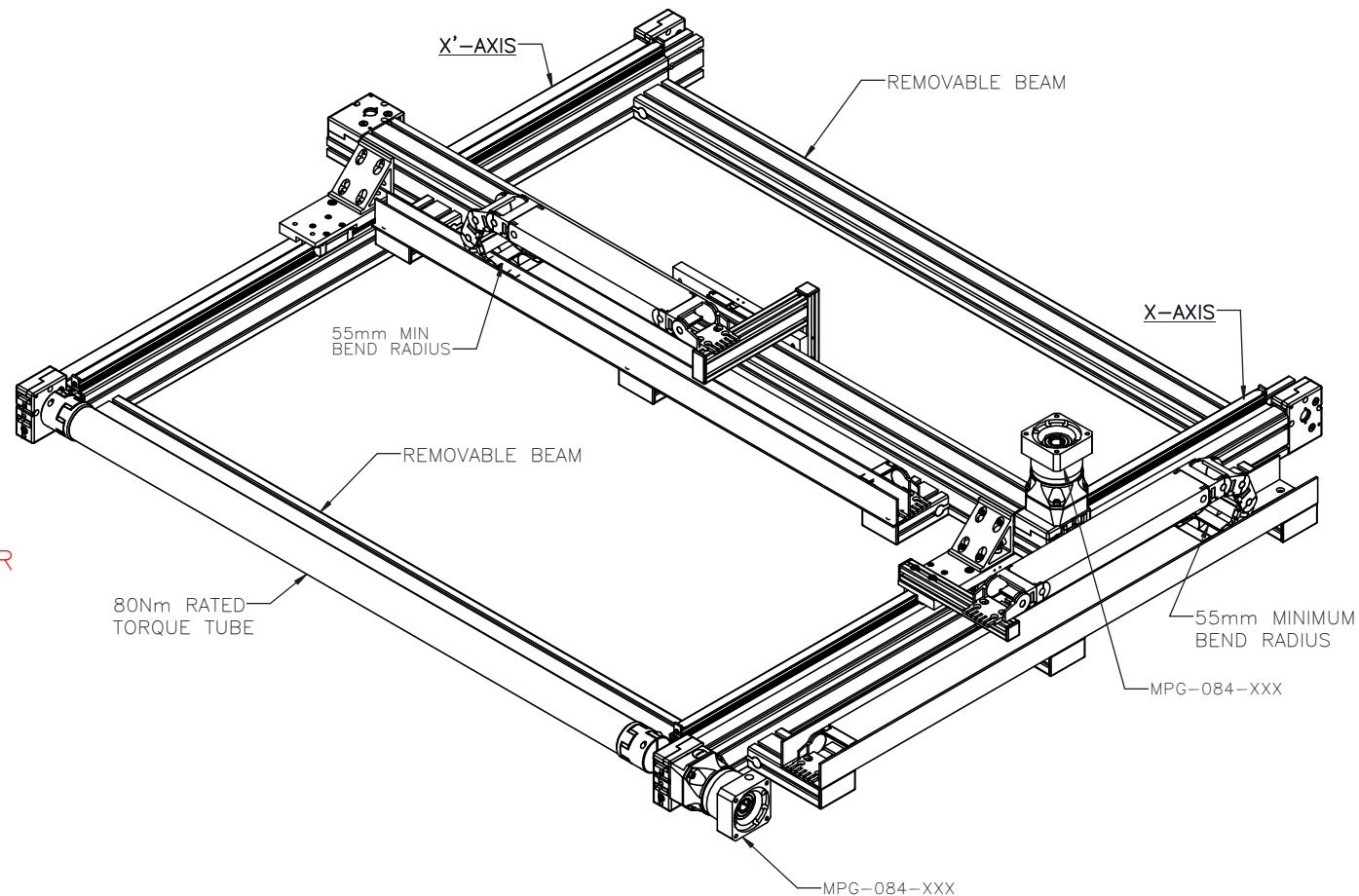
ENTER Y-AXIS TRAVEL

TRAVEL IN INCREMENTS OF 25mm  
TRAVEL LIMITS: 500mm-2950mm

ENTER X-AXIS TRAVEL

TRAVEL IN INCREMENTS OF 25mm  
TRAVEL LIMITS: 150mm-5575mm

\*IF TRAVEL IS  
OUTSIDE LIMITS  
LISTED, CONTACT  
MACRON\*




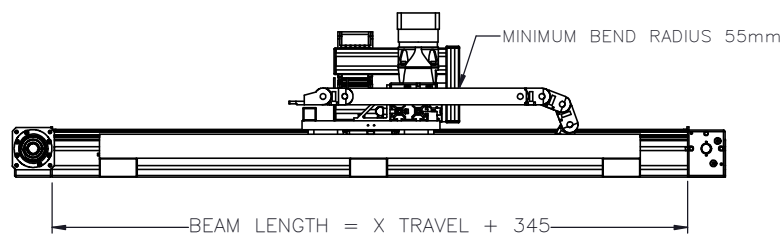
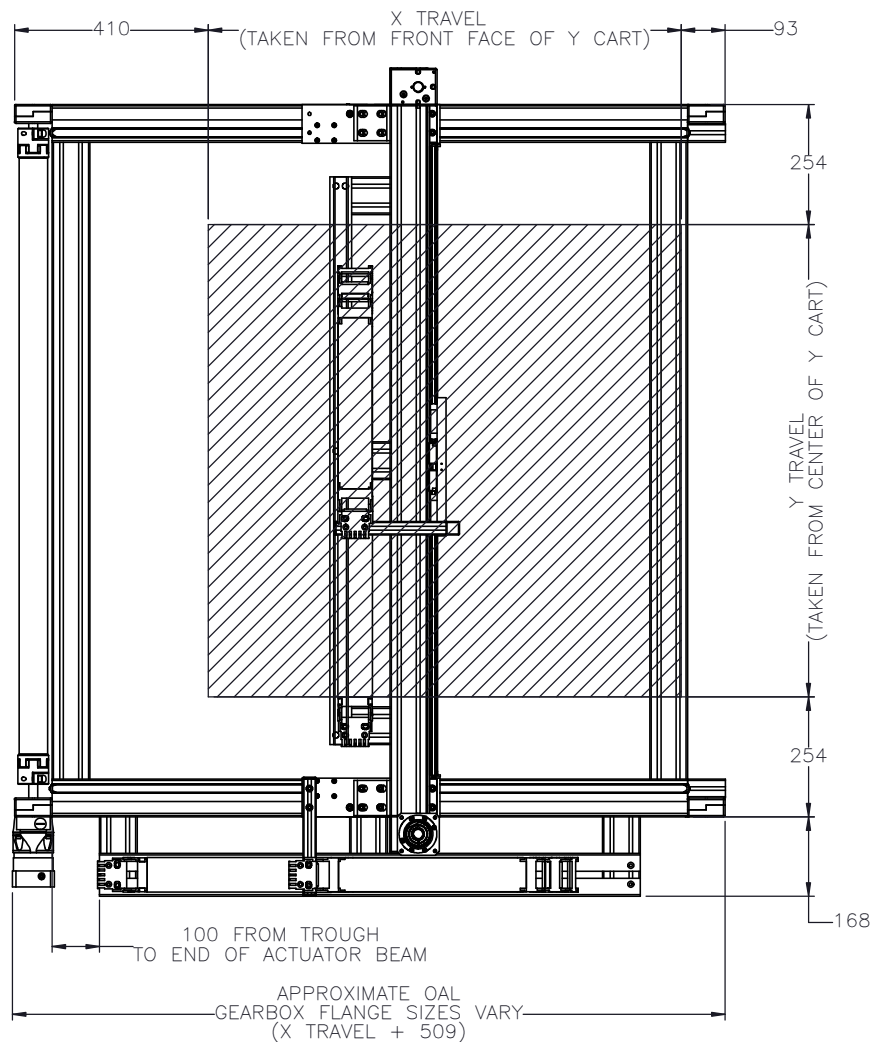
APPROVED:

SIGN & PRINT

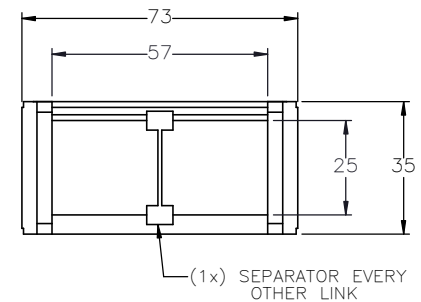
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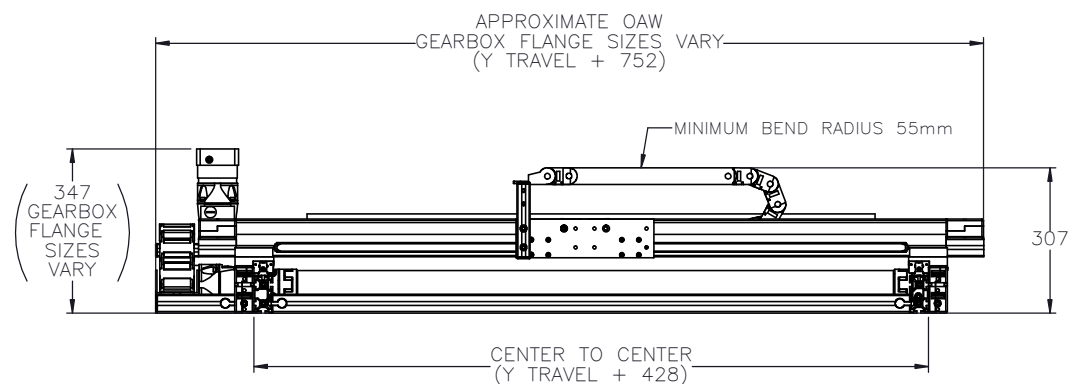
 <b>MACRON DYNAMICS INC</b>	DRAWN BY: PHW	DATE: 11/26/2017	MATERIAL:	TITLE: MACRON R20 XY GANTRY
	CHECKED BY:	DATE: DD/MM/YYYY	FINISH:	
	LAST SAVED BY: TH	DATE: 10/8/2020		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES UNLESS NOTED OTHERWISE: .XX ± .762 .XX ± .254 .XXX ± .127 ANG ± 0°30'
	THIS DRAWING IS THE PROPERTY OF MACRON DYNAMICS. ANY REPRODUCTIONS SHALL BE FOR QUOTATION, MANUFACTURING, OR PURCHASING PURPOSES ONLY. RELEASE OF DRAWINGS TO OTHER CONCERNS DOES NOT CONSTITUTE LICENSING IN ANY WAY. INFORMATION CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL.			
SHEET 1 OF 6		PART NUMBER MGS-R20-X-X-X		REV



## GANTRY FOOTPRINT



### CABLE TRACK CROSS SECTION (SAME FOR BOTH AXES)



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UNLESS OTHERWISE SPECIFIED,  
DIMENSIONS ARE IN MILLIMETERS  
TOLERANCES UNLESS NOTED  
OTHERWISE: ANG ± 0°30'

SURFACE FINISH  
BREAK ALL SHARP EDGES  
DIMENSIONAL LIMITS APPLY AFTER FINISHING  
THIRD ANGLE PROJECTION

MATERIAL:  
FINISH:

SHEET  
2 OF 6

TITLE:  
MACRON R20 XY  
GANTRY

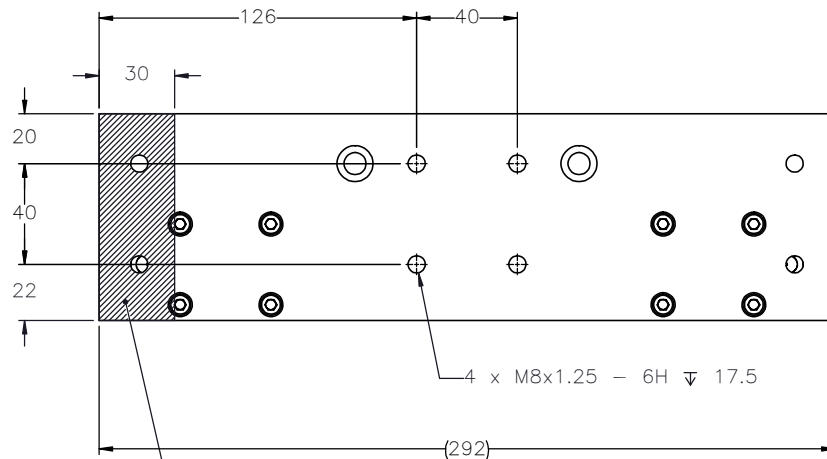
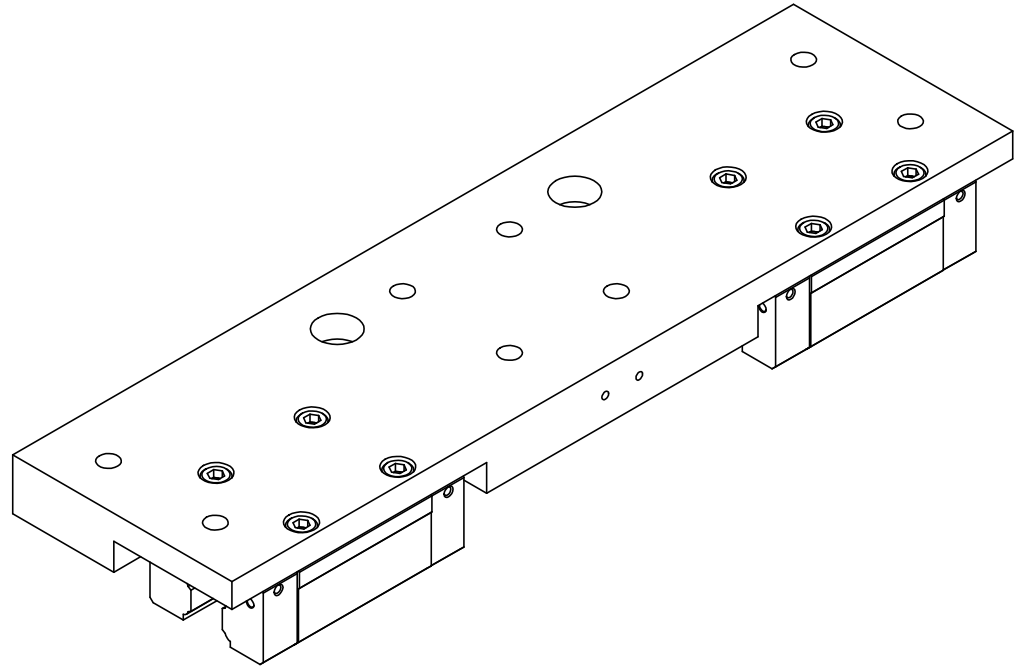
SCALE 1:1 SHEET SIZE C

PART NUMBER  
MGS-R20-X-X-X


REV



# R20 CART MOUNTING FEATURES



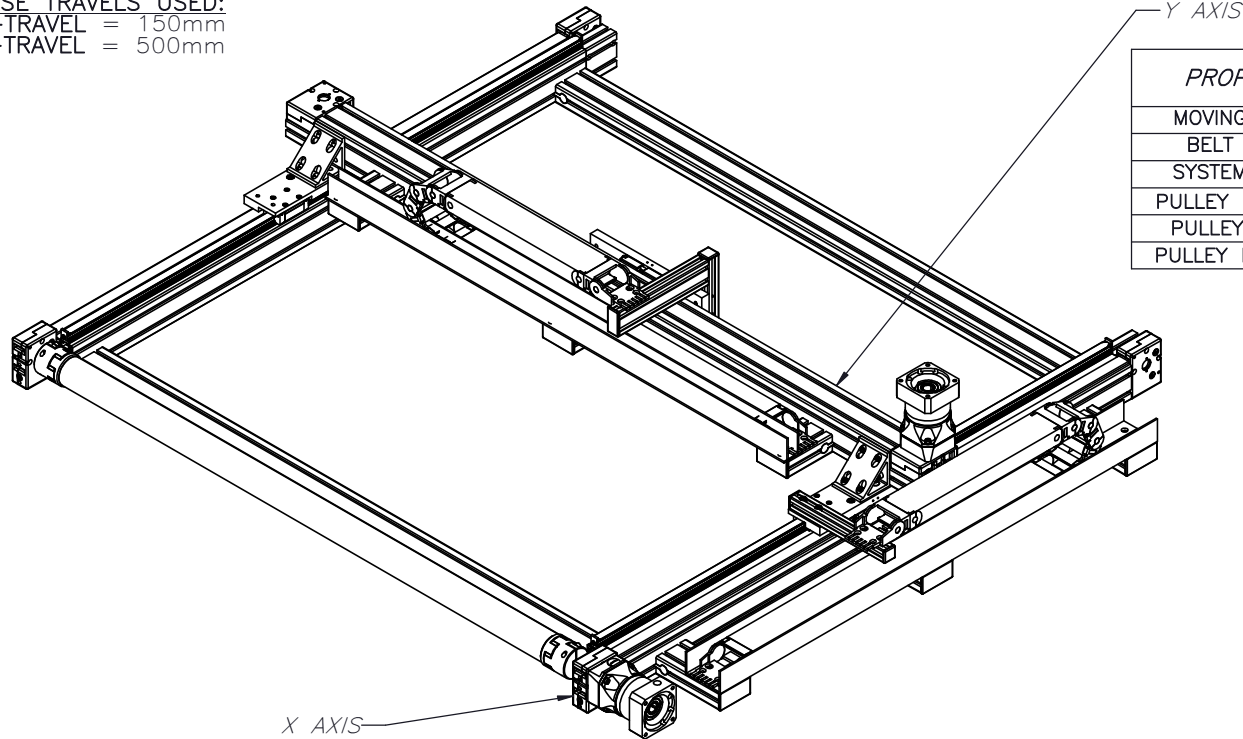
\*HATCHED AREA IS COVERED  
BY CABLE TRACK MOUNTING BRACKET

 <b>MACRON DYNAMICS INC</b>	DRAWN BY: PHW	DATE: 11/26/2017	MATERIAL:	TITLE:
	CHECKED BY:	DATE: DD/MM/YYYY		
	LAST SAVED BY: TH	DATE: 10/8/2020	FINISH:	CSA-R20
	<small>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES UNLESS NOTED OTHERWISE:</small>			
<small>THIS DRAWING IS THE PROPERTY OF MACRON DYNAMICS. ANY REPRODUCTIONS SHALL BE FOR QUOTATION, MANUFACTURING, OR PURCHASING PURPOSES ONLY. RELEASE OF DRAWINGS TO OTHER CONCERNS DOES NOT CONSTITUTE LICENSING IN ANY WAY. INFORMATION CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL.</small>	SURFACE FINISH <input checked="" type="checkbox"/> BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING <b>THIRD ANGLE PROJECTION</b>	SHEET <b>4 OF 6</b>	PART NUMBER	SCALE <b>1:1</b> SHEET SIZE <b>C</b>

# MOTOR SIZING WORKSHEET

(INCREMENTAL ADDERS REFER TO MASS PER TRAVEL LENGTH)

BASE TRAVELS USED:  
X-TRAVEL = 150mm  
Y-TRAVEL = 500mm




PROPERTY	BASE VALUE (T=500mm)
MOVING MASS	3.141(+0.028kg/25mm)
BELT MASS	0.239(+0.006kg/25mm)
SYSTEM MASS	14.595(+0.235kg/25mm)
PULLEY PITCH $\phi$	47.75mm (1.88")
PULLEY WIDTH	28.9mm (1.14")
PULLEY MATERIAL	STEEL

PROPERTY	BASE VALUE (T=150mm)
*MOVING MASS	5.101kg(+.0341kg/25mm)
BELT MASS	0.310kg(.012kg/25mm)
PULLEY PITCH $\phi$	47.75mm (1.88")
PULLEY WIDTH	28.9mm (1.14")
PULLEY MATERIAL	STEEL
**TORQUE TUBE LENGTH	889mm
TORQUE TUBE $\phi$	60mm
**TORQUE TUBE MASS	2.081kg(+.036kg/25mm)
TORQUE TUBE MATERIAL	ANODIZED ALUMINUM ELASTOMER STYLE COUPLINGS WITH HUB
TRAVEL PER REV	150mm

X-TRAVEL = \_\_\_\_\_ mm  
Y-TRAVEL = \_\_\_\_\_ mm

NOTE: ALL SUPPLIED MASSES DO NOT INCLUDE  
CUSTOMER COMPONENTS (MOTORS, CABLES, ETC)

GEARBOX MASS (ADD TO SYSTEM MASSES)	MPG-064	1.0kg
	MPG-084	2.3kg
	MPG-114	5.8kg
	MRG-064	3.0kg
	MRG-084	5.6kg
	MRG-114	15.0kg

TOTAL SYSTEM MASS		$(X-TRAVEL \times .0163) + (Y-TRAVEL \times .0148) + 31.62 = \text{kg}$	
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		DATE: 10/8/2020	
SURFACE FINISH <input checked="" type="checkbox"/>		MATERIAL:	
		FINISH:	
BREAK ALL SHARP EDGES DIMENSIONAL LIMITS APPLY AFTER FINISHING THIRD ANGLE PROJECTION		TITLE: MACRON R20 XY GANTRY	
		SCALE: 1:1 SHEET SIZE: C	
SHEET 5 OF 6		PART NUMBER MGS-R20-X-X-X	

\*SYSTEM MASS OF Y-AXIS NEEDS TO BE ADDED TO THIS

\*\*BASE VALUE AT Y TRAVEL = 500mm

## SPECIFICATIONS

Sensor Type	Inductive
Sensor Size	Fits all 8mm wide T-Slots
Operating Voltage	10–30 VDC
Voltage Drop Across Conducting Sensor	$\leq 1.8$ V at 100 mA
Number of Conductors (AWG)	3x26 AWG
Temperature Range	-40°C to 105°C

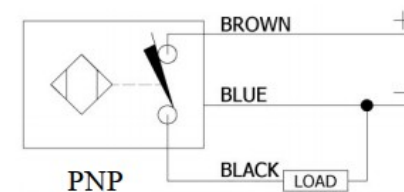
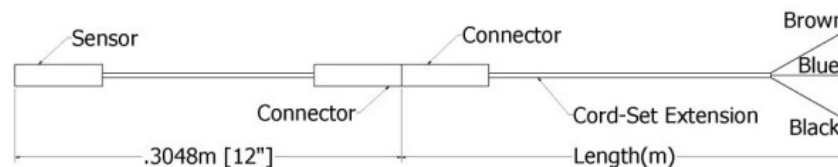
## Part Number Configuration

244-\_-\_-\_-\_-\_-

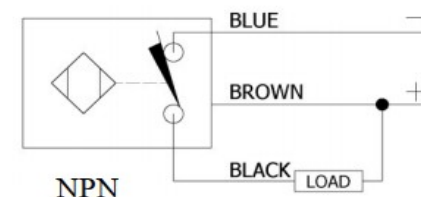
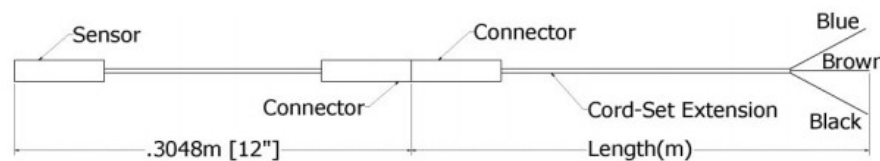
PNP or NPN	NC or NO	02	Meters
PNP or NPN	NC or NO	06	Meters
PNP or NPN	NC or NO	12	Meters

Example: PNP, normally closed, cord-set extension length 6 meters = 244-PNP-NC-06

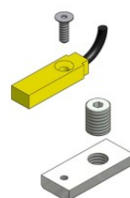
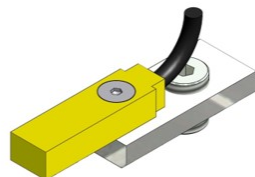
### PNP Diagrams




### NPN Diagrams



KIT INCLUDES – SENSOR, CORDSET EXTENSION, AND MOUNTING HARDWARE



 <b>MACRON DYNAMICS INC</b>	DRAWN BY: PHW	DATE: 11/26/2017	MATERIAL:	TITLE: T-SLOT SENSOR KIT
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	LAST SAVED BY: TH	DATE: 10/8/2020	FINISH:	
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	BREAK ALL SHARP EDGES		SHEET	
	DIMENSIONAL LIMITS APPLY AFTER FINISHING		PART NUMBER	
	THIRD ANGLE PROJECTION		REV	
	6 OF 6		MGS-R20-X-X-X	