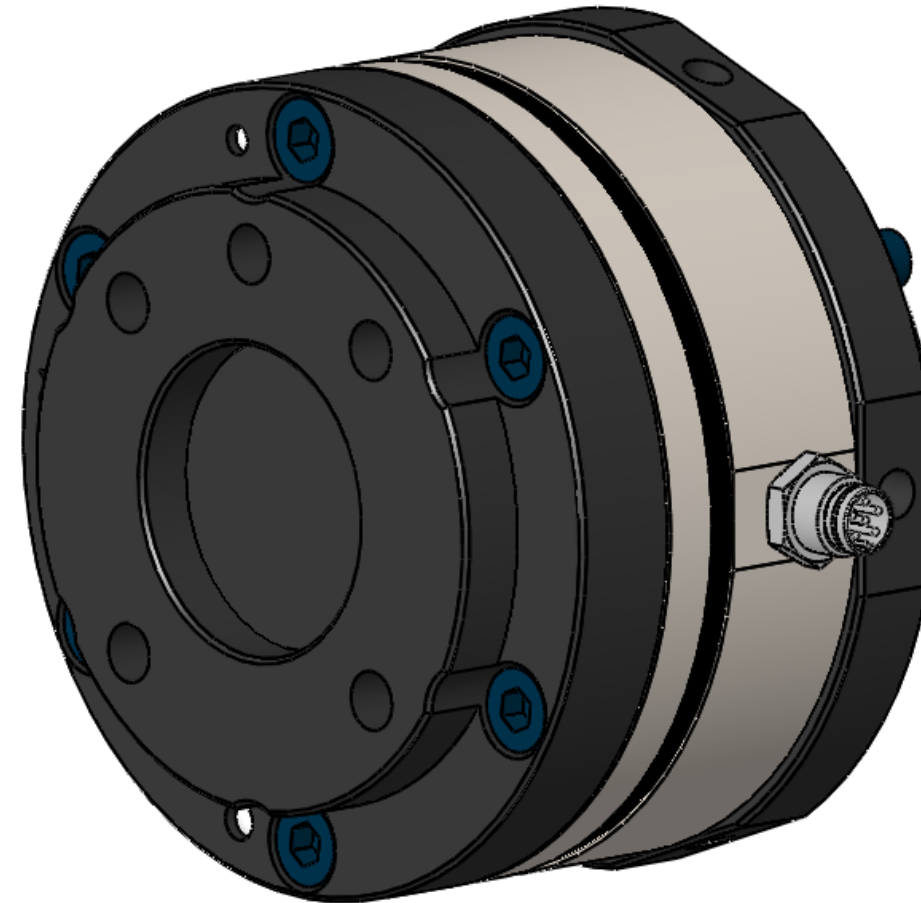


Axia80 F/T Sensor with URe Robot Kit

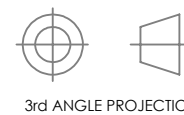
REV.	DESCRIPTION	INITIATOR	DATE
05	ECO 19837; 9105-COB-URE-Axia80-01 was 9105-URE-Axia80	EPR	4/19/2021

Loading Characteristics	Fxy	Fz	Txy	Tz
Rated Range 0	± 500 N	± 900 N	± 20 Nm	± 20 Nm
Rated Range 1	± 200 N	± 360 N	± 8 Nm	± 8 Nm
Overload Rating	± 2500 N	± 4500 N	± 100 Nm	± 100 Nm
Effective Resolution	0.1 N	0.1 N	0.005 Nm	0.005 Nm
Stiffness (Calculated)				
X-axis & Y-axis forces (Kx, Ky)	2.7x10 ⁷ N/m			
Z-axis force (Kz)	4.1x10 ⁷ N/m			
X-axis & Y-axis torque (Ktx, Kty)	2.4x10 ⁴ Nm/rad			
Z-axis torque (Ktz)	4.8x10 ⁴ Nm/rad			
Resonant Frequency (Sensor only)				
Fx, Fy, Tz	2200 Hz			
Fz, Tx, Ty	2600 Hz			
Physical Specifications (Sensor with Interface Plates)				
Weight	0.78 kg			
Center of Mass*	X = 0.24 mm	Y = 0.01 mm	Z = -14.31 mm	
Moments of Inertia (kg * mm ²)*	lxx = 736.22	lxy = 0.08	lxz = -3.36	
	lyx = 0.08	lyy = 728.90	lyz = 2.43	
	lzx = -3.36	lzy = 2.43	lzz = 622.59	
Physical Specifications (Sensor only)				
Weight	0.27 kg			
Center of Mass*	X = 0.46 mm	Y = -0.01 mm	Z = -12.31 mm	
Moments of Inertia (kg * mm ²)*	lxx = 173.47	lxy = -0.07	lxz = -2.06	
	lyx = -0.07	lyy = 170.66	lyz = 0.01	
	lzx = -2.06	lzy = 0.01	lzz = 227.95	
Operational Specifications				
Communication	Serial (RS485)			
Supply Voltage	12-30V DC			
System Resolution	16 Bit			
Max Data Rate	975 Hz (325 Hz at default baud)			
Operating Temperature	0-65°C			
IP Rating	IP64			



NOTES: UNLESS OTHERWISE SPECIFIED.

DO NOT SCALE DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS.



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DRAWN BY: P.Fusco 09/24/18

CHECKED BY: R.Dupree 10/12/18

TITLE

Axia80 F/T Sensor with URe Robot Kit

PROJECT # 180627-1 SHEET 1 OF 4

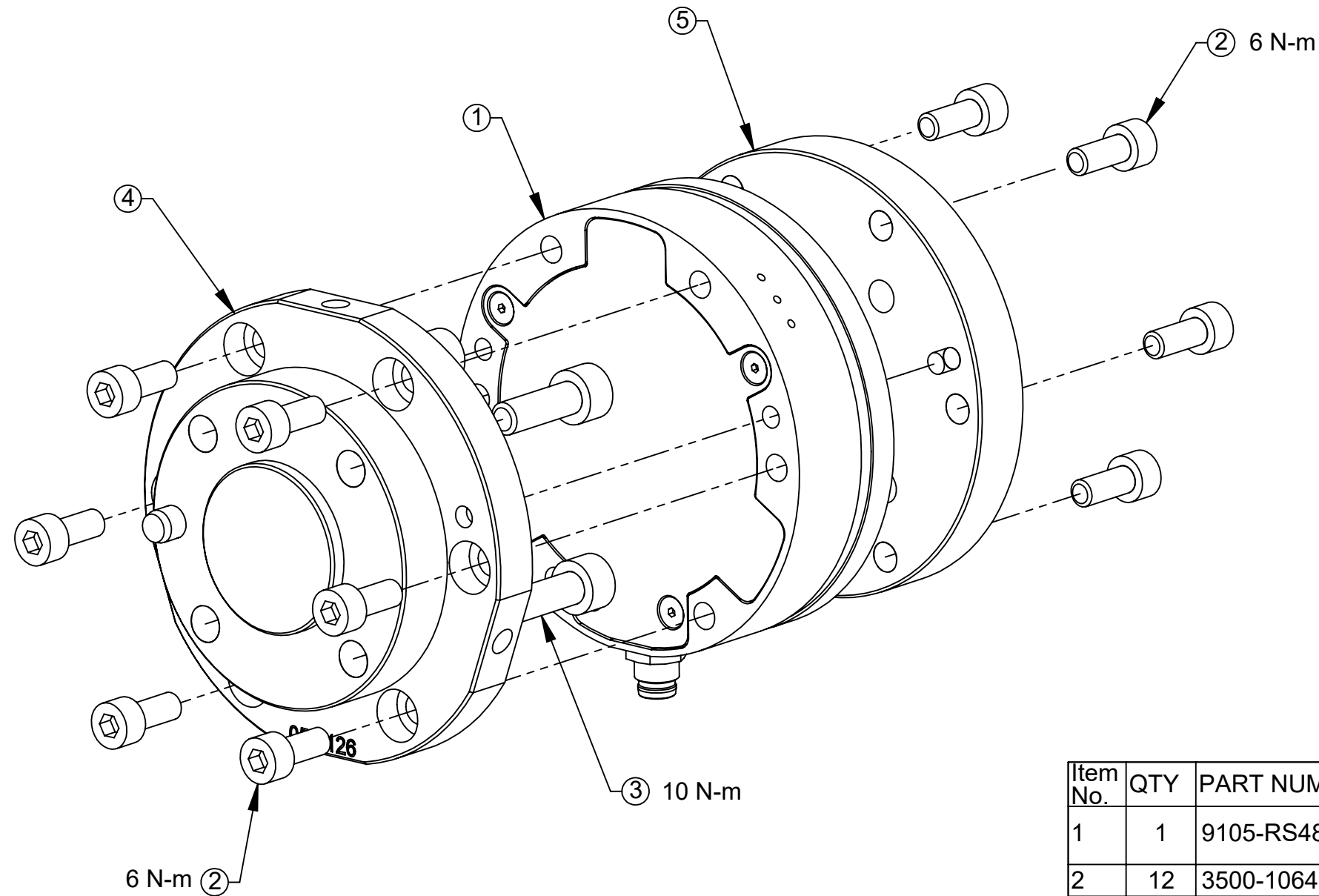
SCALE
2:1.5

SIZE
B

DRAWING NUMBER
9230-05-1546

REVISION
05

*Measurements taken from Sensing Reference Frame Origin



Item No.	QTY	PART NUMBER	DESCRIPTION
1	1	9105-RS485-Axia80	Axia80 RS485 F/T Sensor, IP64 dust-proof protection, 6 Pin M8
2	12	3500-1064012-15	M5-0.8 x 12mm SHCS, Blue
3	4	3500-1066018-15	M6-1 x 18mm SHCS, Blue
4	1	3700-05-2126	IP for Axia80 Transducer MAP to BC 50, (4)M6, Boss 31.5, Dowel 6 (at -Y) w/ Cable Mount
5	1	3700-05-2191	IP for AXIA80 TAP to BC50, (4) M6TAPPED, RECESS 31.5, D6
6	1	3810-05-2182	L-Wrench, Ball End Tip, 4mm Hex, Stubby
7	1	9105-C-ZC44-ZC45-0.15	Cable, 6 Pin Axia sensor to 8 pin M8, 0.15m

See Note 4.
See Note 3. & 4.

- Notes:
1. Material: Aluminum
 2. Do not touch internal electronics or instrumentation. This could damage transducer and will void the warranty.
 3. See Sheet 4 for pinout and cable lengths.
 4. Item not shown for clarity.

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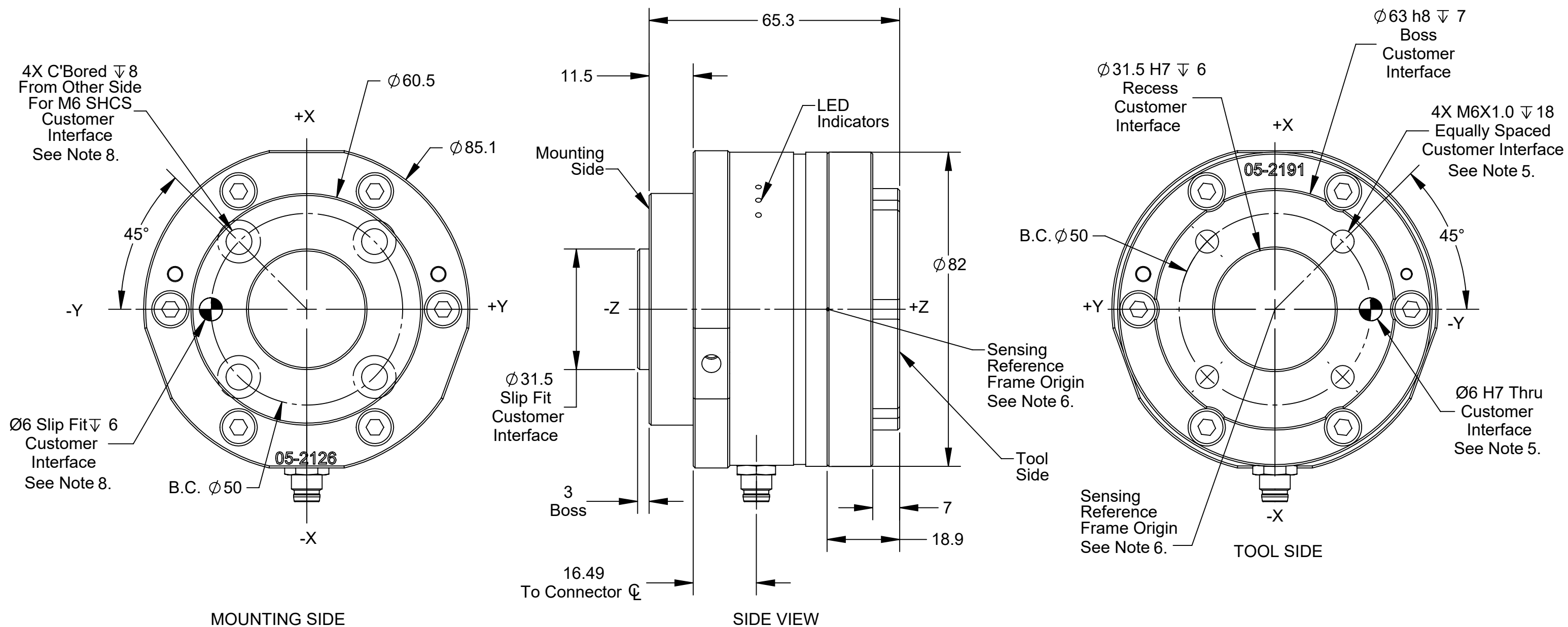
3rd ANGLE PROJECTION



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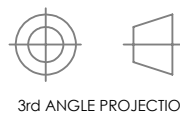
DRAWN BY: P.Fusco 09/24/18		TITLE		
CHECKED BY: R.Dupree 10/12/18		Axia80 F/T Sensor with URe Robot Kit		
PROJECT # 180627-1	SHEET 2 OF 4	SCALE	SIZE	DRAWING NUMBER
		1:1	B	9230-05-1546
				REVISION
				05



- Notes:
- Do not exceed interface depth, may cause incorrect readings.
 - User may adjust Tool Center Point. Refer to User Manual.
 - Axis labels based on F/T sensor coordinate system.
 - Item not shown for clarity.

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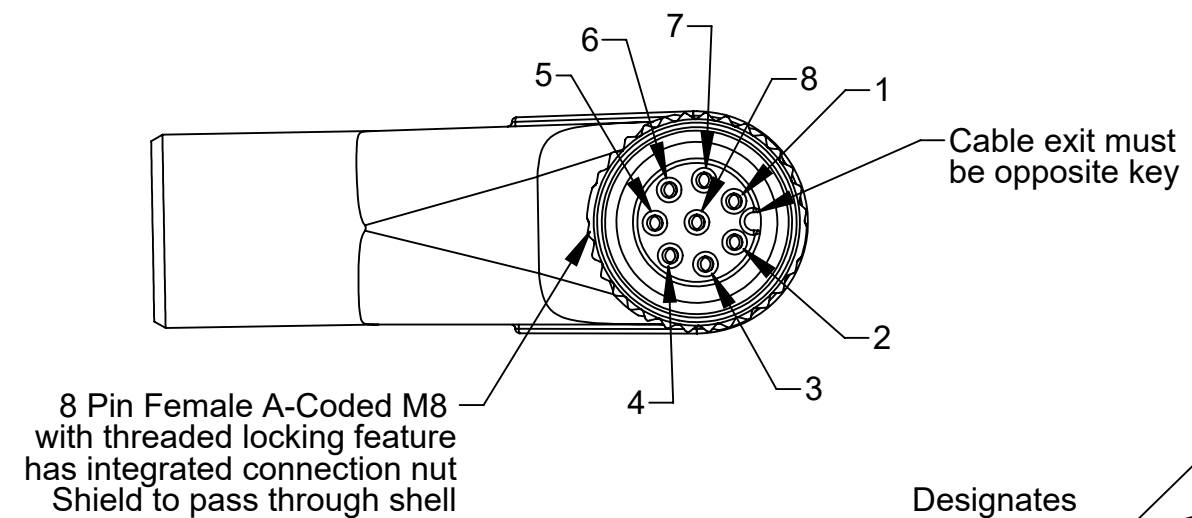
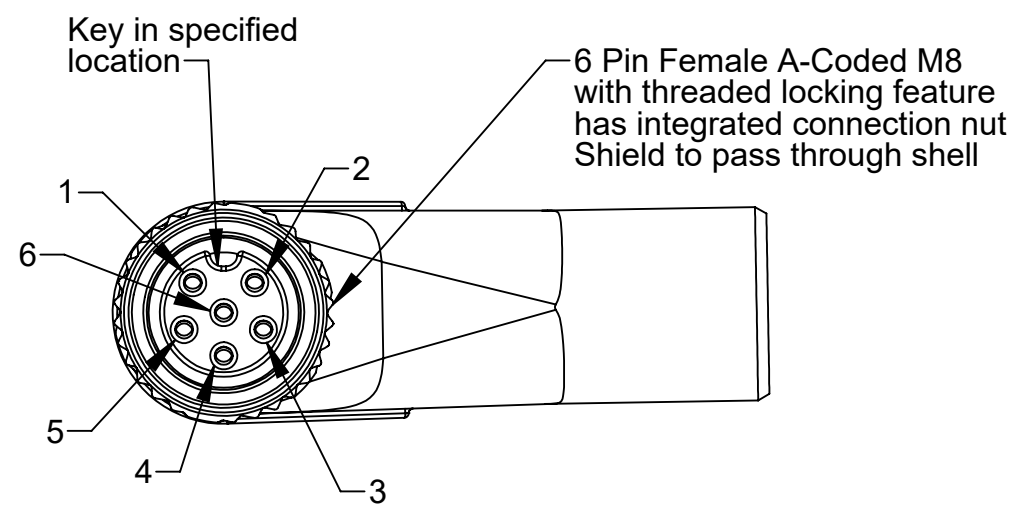
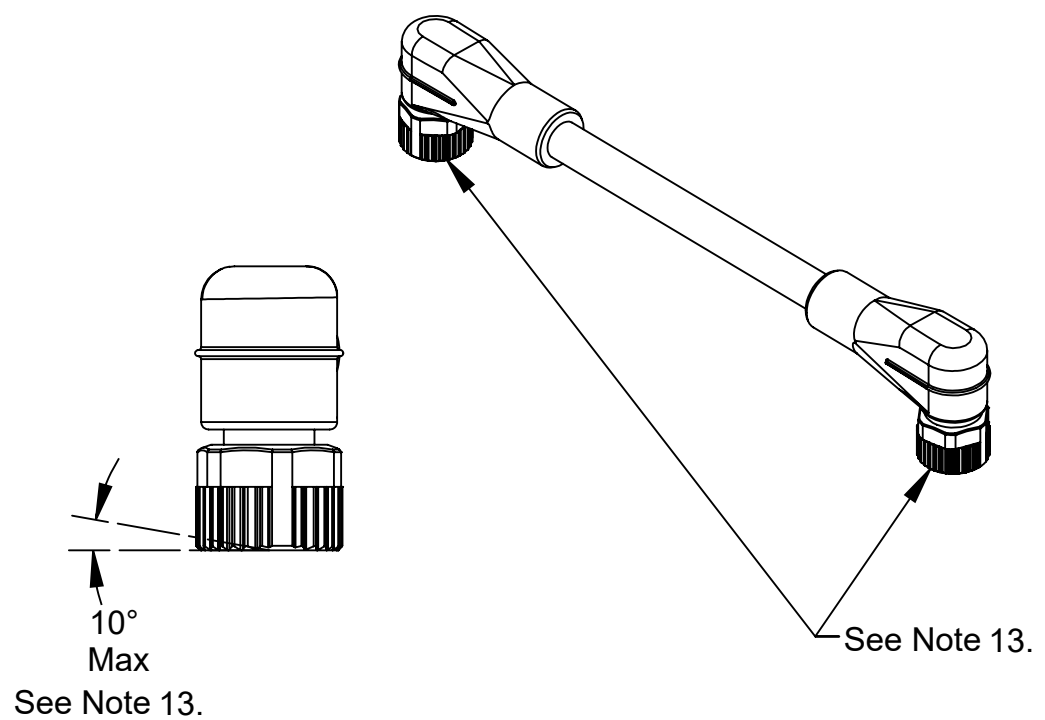
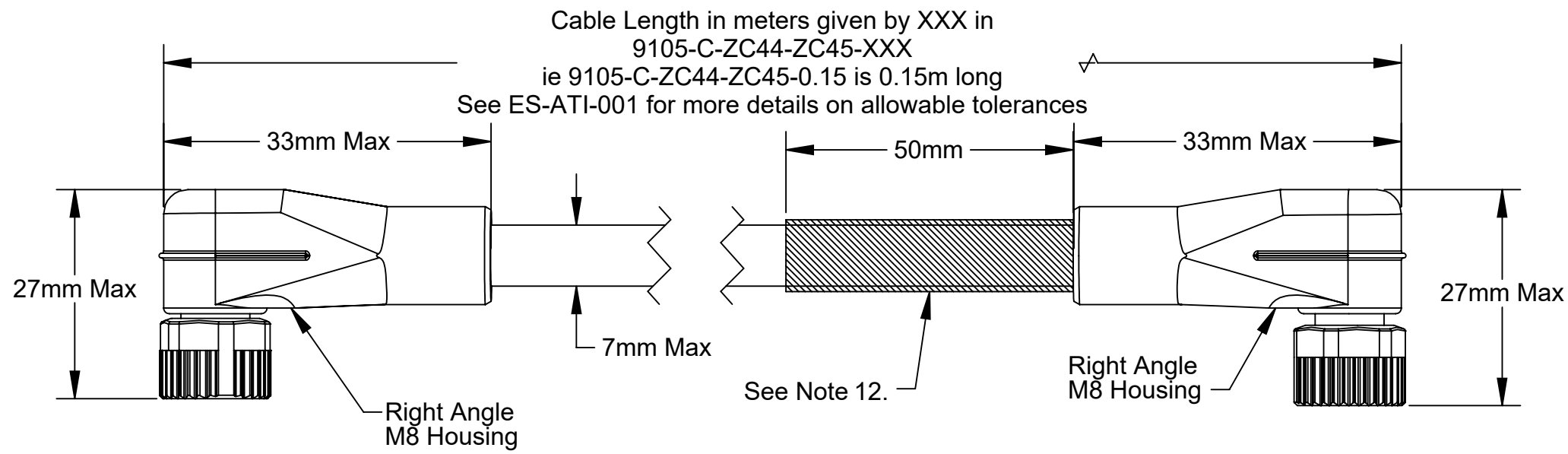
DRAWN BY: P.Fusco 09/24/18

CHECKED BY: R.Dupree 10/12/18

PROJECT # 180627-1 SHEET 3 OF 4

TITLE
 Axia80 F/T Sensor with URe Robot Kit

SCALE	SIZE	DRAWING NUMBER	REVISION
1:1	B	9230-05-1546	05



Designates twisted pair

6 Pin M8	Signal	8 Pin M8
1	TX+	1
2	TX-	2
3	--	3
4	--	4
5	V+	5
6	V-	8
--	--	6
--	--	7
Shell	Shield	Shell

- Notes:
1. Cable Assembly to be RoHS compliant.
 2. Minimum Operating Temperature = -25°C
 3. Maximum Operating Temperature = 85°C
 4. Cable must pass shielded Cat 5e test
 5. Current Rating = 0.25A
 6. Voltage Rating = 30V
 7. Cable to be rated to at least IP54 when connectors mated on both ends
 8. Cable Jacket Color: Black
 9. Cable Jacket Material: TPE
 10. Overmold Color: Black
 11. Cable conductors to be 26AWG or larger
 12. ATI PN to be laser printed legibly and indelibly on cable jacket in white text located on 8 pin cable end in zone shown. ex "ATI 9105-C-ZC44-ZC45-0.15" for a 0.15m cable
 13. Direction of connector faces shall be oriented in the same direction within specified tolerance.

NOTES: UNLESS OTHERWISE SPECIFIED.

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CHECKED BY: R.Dupree 10/12/18

PROJECT # 180627-1 SHEET 4 OF 4

TITLE: Axia80 F/T Sensor with URe Robot Kit

SCALE: 2:1	SIZE: B	DRAWING NUMBER: 9230-05-1546	REVISION: 05
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