

## AV04 TOWER

NAME	DESCRIPTION	MEASUREMENT	Distance to [m]		SENSOR-TYPE	Physical Unit
R4_DT_A12u_1_2	Turm_unten_Biegung 15° /195°	Tower Bending Moment (0° and 180°)	1,14	Transition Piece	DMS	kNm
R4_DT_A12u_3_4	Turm_unten_Biegung 105° / 285	Tower Bending Moment (90° and 270°)	1,14	Transition Piece	DMS	kNm
R4_DT_A12ut	Turm_unten_Torsion 15° /195°	Tower Torsion	1,14	Transition Piece	DMS	kNm
R4_F_A12u1_strain	Turm_unten_Biegung 105°	Strain 0°	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u1_temp	Turm_unten_Biegung 105°	Temperature	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u2_strain	Turm_unten_Biegung 195°	Strain 90°	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u2_temp	Turm_unten_Biegung 195°	Temperature	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u3_strain	Turm_unten_Biegung 285°	Strain 180°	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u3_temp	Turm_unten_Biegung 285°	Temperature	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u4_strain	Turm_unten_Biegung 15°	Strain 270°	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12u4_temp	Turm_unten_Biegung 15°	Temperature	0,64	Transition Piece	FOS - Fiber optic sensor	lambda
R4_D_A12o_1_2	Turm-Mitte Biegung 105°/285°	Tower Bending Moment (0° and 180°)	$31.13 + 1.1 = 32.23$	Transition Piece	DMS	kNm
R4_D_A12o_3_4	Turm-Mitte Biegung 15° / 195°	Tower Bending Moment (90° and 270°)	$31.13 + 1.1 = 32.23$	Transition Piece	DMS	kNm
R4_F_A12o1_strain	Turm_unten_Biegung 105°	Strain 0°	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12o1_temp	Turm_unten_Biegung 105°	Temperature	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12o2_strain	Turm_unten_Biegung 195°	Strain 90°	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda

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R4_F_A12o2_temp	Turm_unten_Biegung 195°	Temperature	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12o3_strain	Turm_unten_Biegung 285°	Strain 180°	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12o3_temp	Turm_unten_Biegung 285°	Temperature	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12o4_strain	Turm_unten_Biegung 15°	Strain 270°	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A12o4_temp	Turm_unten_Biegung 15°	Temperature	$31.13 + 0.5 = 31.63$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_DT_A23o_1_2	Turm_Kopf_Biegung 15°/ 195°	Tower Bending Moment (0° and 180°)	$62.8 - 1.53 = 61.27$	Transition Piece	DMS	kNm
R4_DT_A23o_3_4	Turm_Kopf_Biegung 105°/ 285°	Tower Bending Moment (90° and 270°)	$62.8 - 1.53 = 61.27$	Transition Piece	DMS	kNm
R4_DT-A23o2_1_2	Biegung 0°, 180°	Tower Bending Moment (0° and 180°)	$62.8 - 4.25 = 58.55$	Transition Piece	DMS	kNm
R4_DT-A23o2_3_4	Biegung 90°, 270°	Tower Bending Moment (90° and 270°)	$62.8 - 4.25 = 58.55$	Transition Piece	DMS	kNm
R4_DT-A23ot	Turm_Kopf_Biegung 138° / 318°	Torsion	$62.8 - 1.53 = 61.27$	Transition Piece	DMS	kNm
R4_F_A23o1_strain	Turm_unten_Biegung 105°	Strain 0°	$62.8 - 1.66 = 61.14$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A23o1_temp	Turm_unten_Biegung 105°	Temperature	$62.8 - 1.66 = 61.14$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A23o2_strain	Turm_unten_Biegung 195°	Strain 90°	$62.8 - 1.66 = 61.14$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A23o2_temp	Turm_unten_Biegung 195°	Temperature	$62.8 - 1.66 = 61.14$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A23o3_strain	Turm_unten_Biegung 285°	Strain 180°	$62.8 - 1.66 = 61.14$	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A23o3_temp	Turm_unten_Biegung 285°	Temperature	$62.8 - 1.66 = 61.14$	Transition Piece	FOS - Fiber optic sensor	lambda

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R4_F_A23o4_strain	Turm_unten_Biegung 15°	Strain 270°	62.8 - 1.66 = 61.14	Transition Piece	FOS - Fiber optic sensor	lambda
R4_F_A23o4_temp	Turm_unten_Biegung 15°	Temperature	62.8 - 1.66 = 61.14	Transition Piece	FOS - Fiber optic sensor	lambda
R4_B-A12u(x)	Acceleration in x-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12u(y)	Acceleration in y-Direction 105°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12u(x)_135	Acceleration in x-Direction 135°	Acceleration x-direction	0,64	Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12u(y)_135	Acceleration in y-Direction 135°	Acceleration y-direction	0,64	Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12m(x)	Acceleration in y-Direction 105°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12m(y)	Acceleration in y-Direction 105°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12o(x)	Acceleration in x-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12o(y)	Acceleration in y-Direction 105°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12o(x)_135	Acceleration in x-Direction 135°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A12o(y)_135	Acceleration in y-Direction 135°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A23m(x)	Acceleration in x-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A23m(y)	Acceleration in y-Direction 105°	Acceleration y-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A23o(x)	Acceleration in x-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A23o(y)	Acceleration in y-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A23o(x)_135	Acceleration in x-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_B-A23o(y)_135	Acceleration in y-Direction 105°	Acceleration x-direction		Transition Piece	ICP- Accelerometer	m/s <sup>2</sup>
R4_N-A12u(x)	Inclination angel x-Direction (105° and 330°)	Inclination angle x-direction		Junction box ("Messtechnik außen)	Inclinometer sensor	°
R4_N-A12u(y)	Inclination angel y-Direction (60° and 240°)	Inclination angle y-direction		Junction box ("Gründung")	Inclinometer sensor	°
R4_N-A23o(x)	Inclination angel x-Direction (294° and 114°)	Inclination angle x-direction		Junction box (oben Tower)	Inclinometer sensor	°

NAME	DESCRIPTION	MEASUREMENT	Distance to [m]		SENSOR-TYPE	Physical Unit
R4_N-A23o(y)	Inclination angel y-Direction (24° and 204°)	Inclination angle y-direction		Junction box (oben Tower)	Inclinometer sensor	°
R4_T_A12u	temperature					°C
R4_H_A12u	humidity					%
R4_P_A12u	air-pressure					hPa
R4_T_A12o	temperature					°C
R4_H_A12o	humidity					%
R4_P_A12o	air-pressure					hPa
R4_T_A23o	temperature					°C
R4_H_A23o	humidity					%
R4_P_A23o	air-pressure					hPa