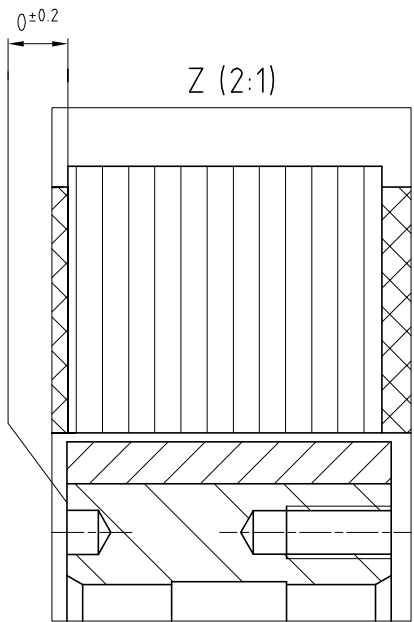


Torque Motors

TMM INTERFACE DRAWINGS

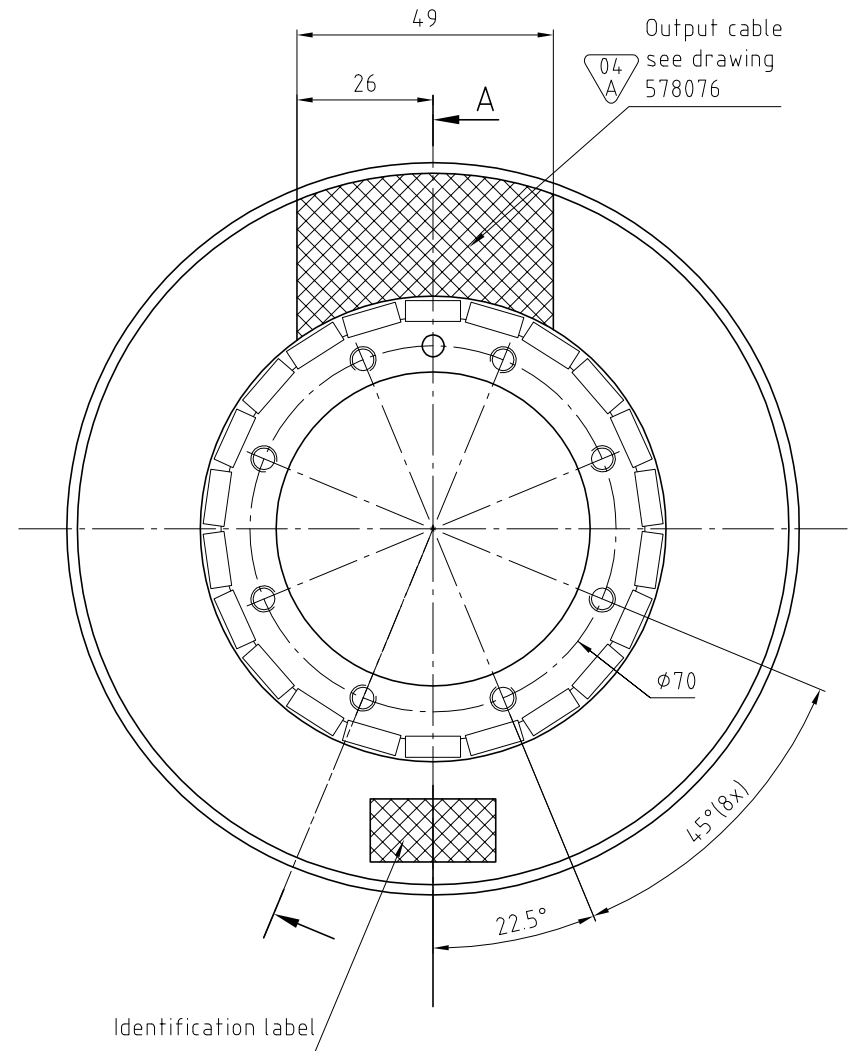
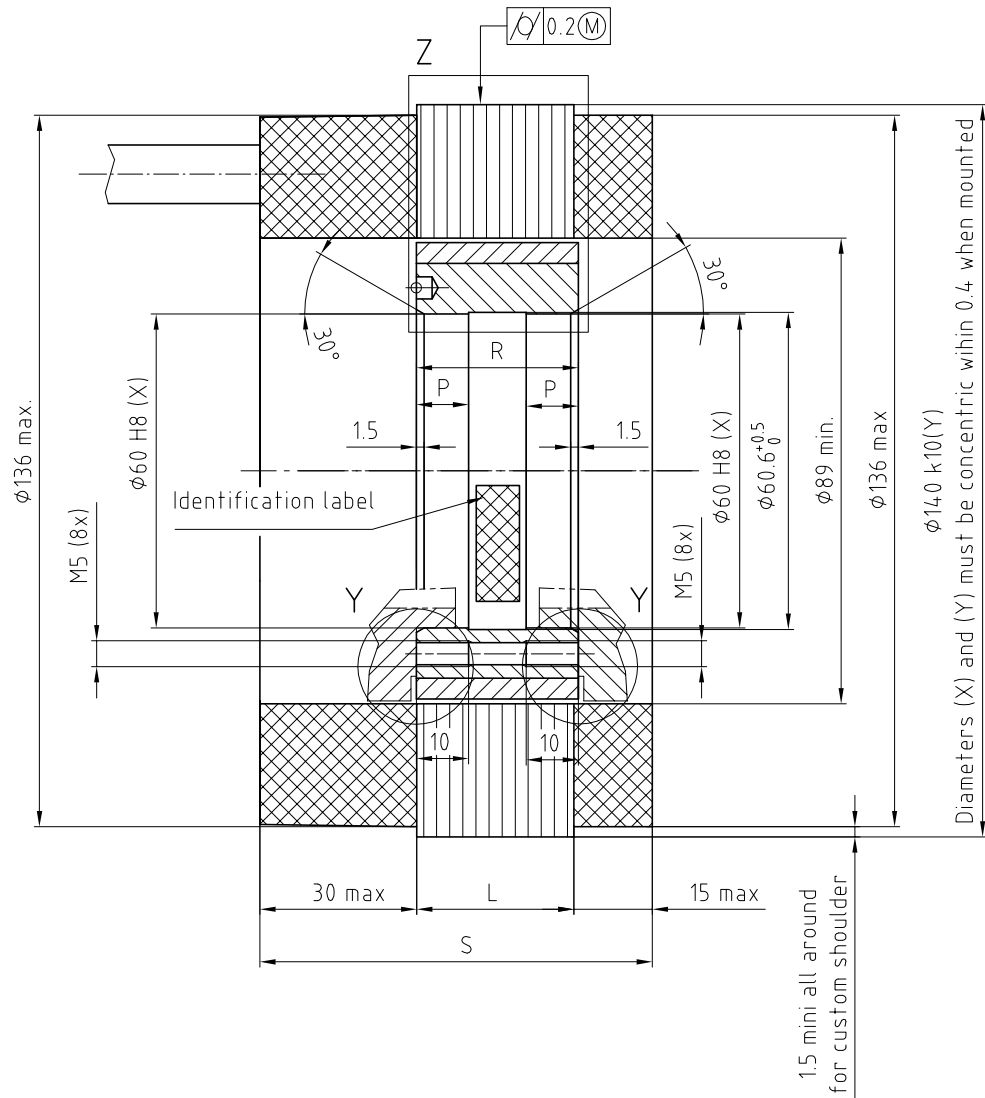
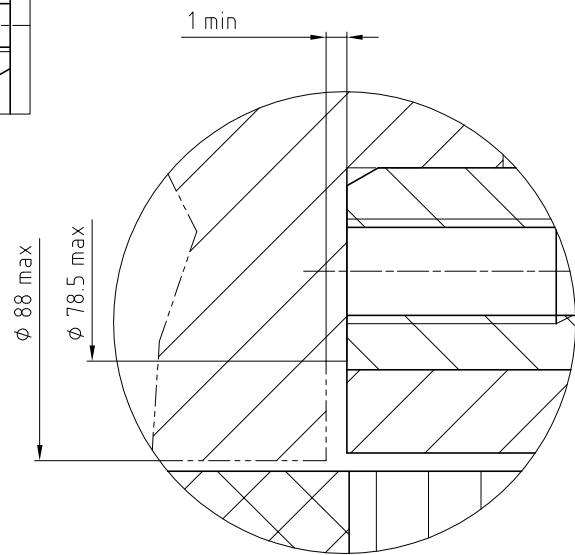
ETEL

Mounting condition



$\frac{0.4}{A}$ Detail: Y
Magnets safety clearance

Y (4:1)

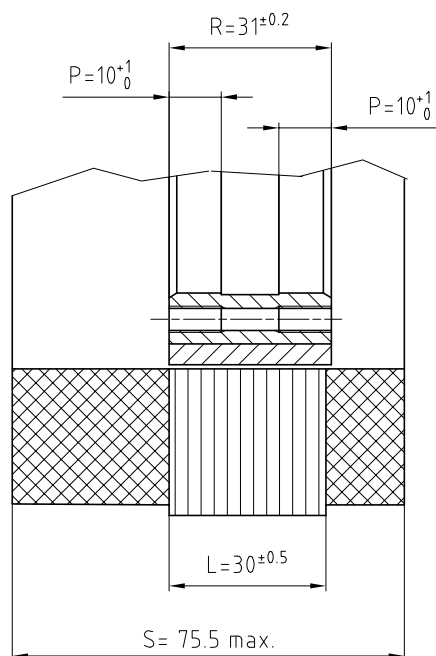


Power cable connection

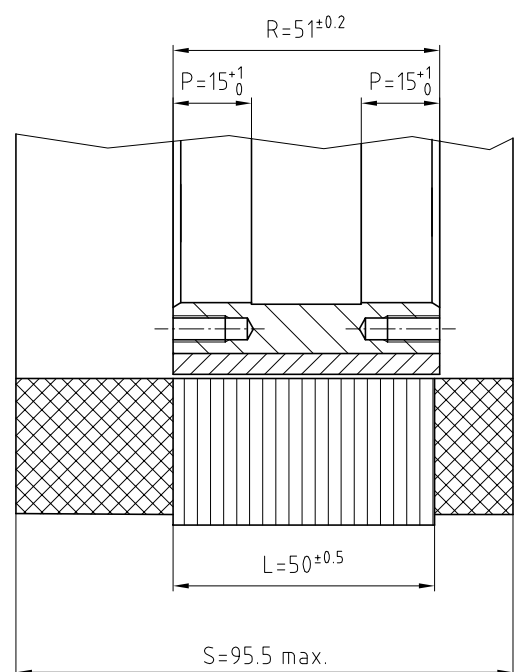
- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

For temperature sensor configuration, see Handbook

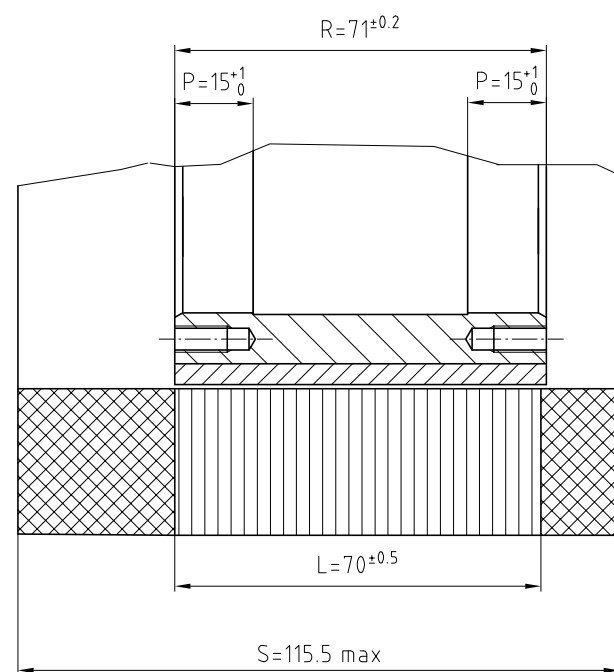
Tmm0140-030



Tmm0140-050



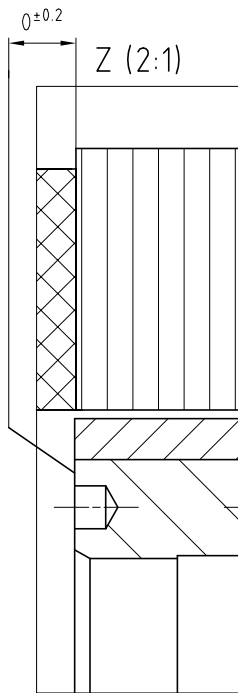
Tmm0140-070



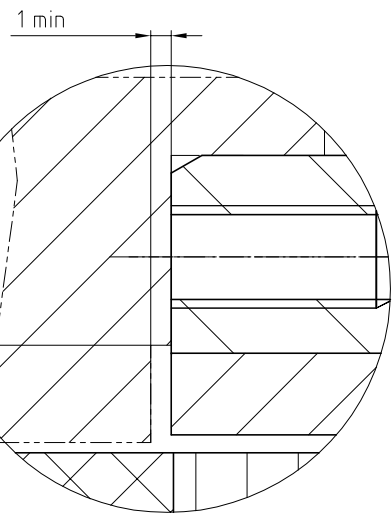
$\frac{0.4}{A}$	ECO N°	Nom	Date	Description	Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mK								Equivalence rugosité		
	C29035	MBO	22.10.2012	-	Dimension nominale	Linéaire	Rayon Chanfrein		Dimension nominale					Ra	µm
Remarque	Annexe	0,5 ... 3	±0,1	±0,2	> 3 ... 6	±0,1	±0,5		> 10 ... 30					0,05	0,4
		> 6 ... 30	±0,2	±1	> 30 ... 100	±0,2	±2	> 30 ... 100	0,1	0,4	0,6	12,5	N10		
		> 120 ... 400	±0,5	±4	> 100 ... 300	±0,4	±2	> 100 ... 300	0,4	0,6	0,6	6,3	N9		
		> 400 ... 1000	±0,8	±4	> 300 ... 1000	±0,6	±2	> 300 ... 1000	0,6	0,8	0,8	3,2	N8		
		> 1000 ... 2000	±1,2	±4	> 1000 ... 3000	0,8	1	> 1000 ... 3000	0,8	1	1	1,6	N7		
												0,8	N6		
												0,4	N5		
												0,2	N4		
												0,1	N3		
												0,05	N2		
												0,025	N1		

Arêtes de formes ISO 13715		Torque motor		Auteur	Vérificateur	Libérateur
		Interface drawing Tmm0140-030 / 050 / 070		M. Tabasso		
φ140	k10	-0,16	140	Ancien n° : 0501m-i40-02d		
φ60	H8	+0,046	60	Version	Revision	Feuille
Cote	Ajustement	ETEL S.A. CH-2112 Möllers SWITZERLAND		577551	- 04-	A-01
		Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.		1:1	1/1	

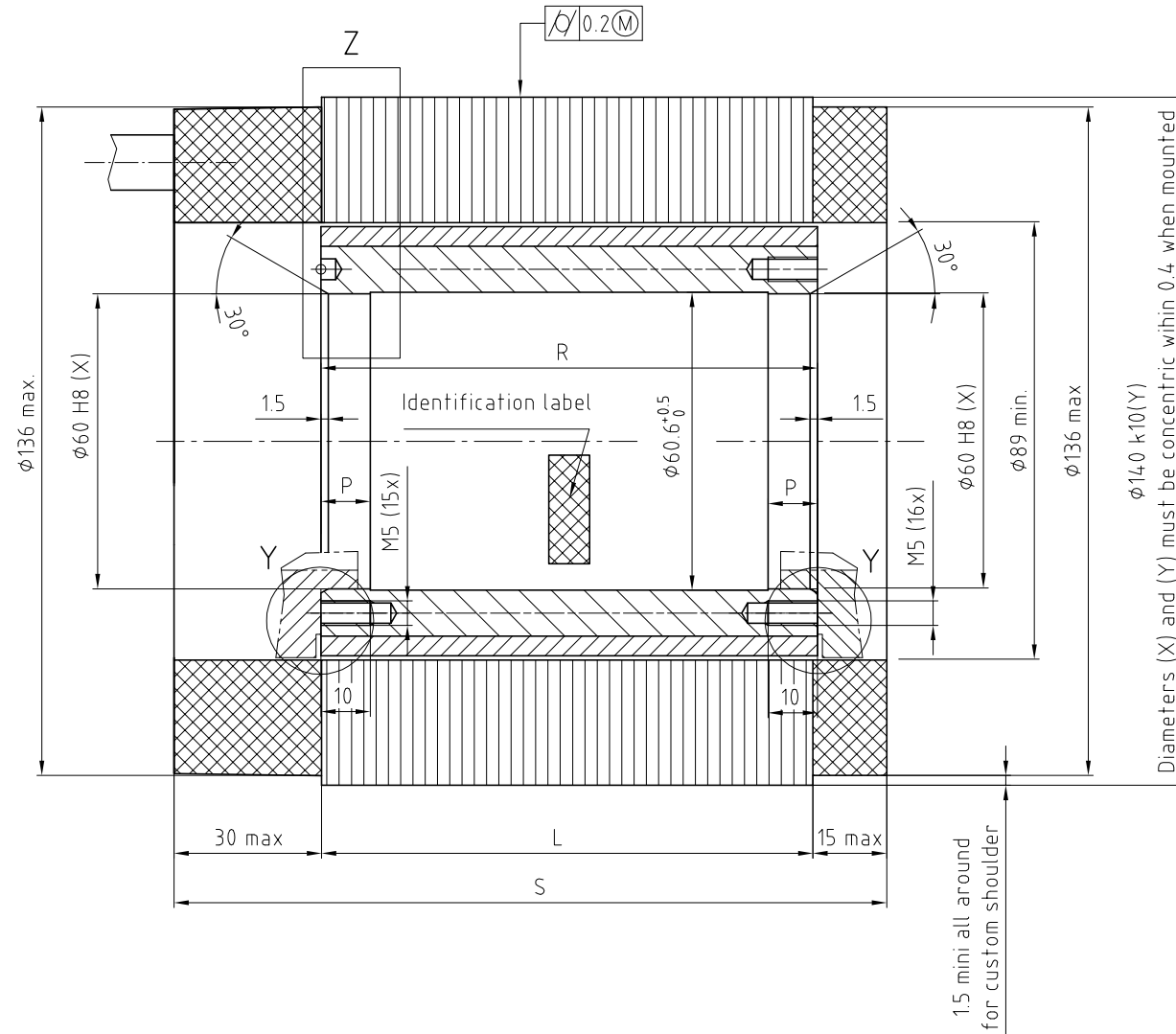
Mounting condition



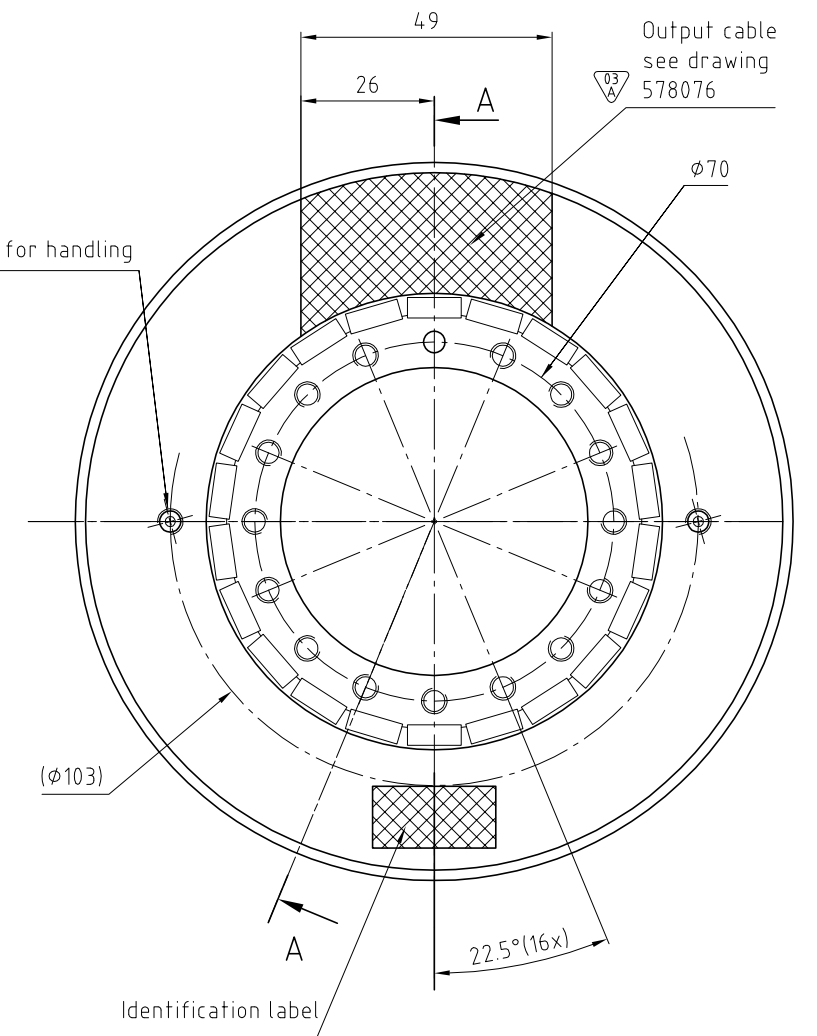
Detail:Y
Magnets safety clearance
Y (4:1)



A-A



$\phi 140$	k10	$0^{+0.16}$	140.16
$\phi 60$	H8	$0^{-0.046}$	60.046
Cote	Ajustement		

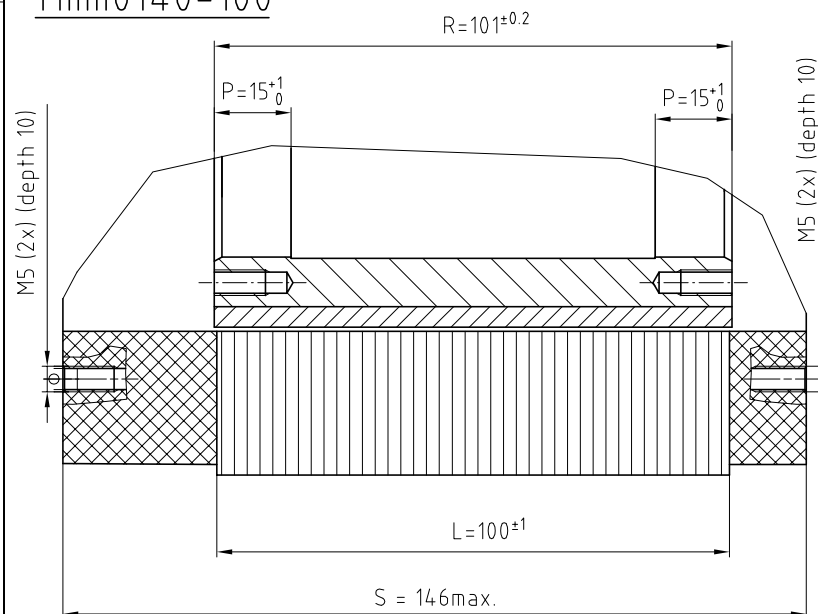


Power cable connection

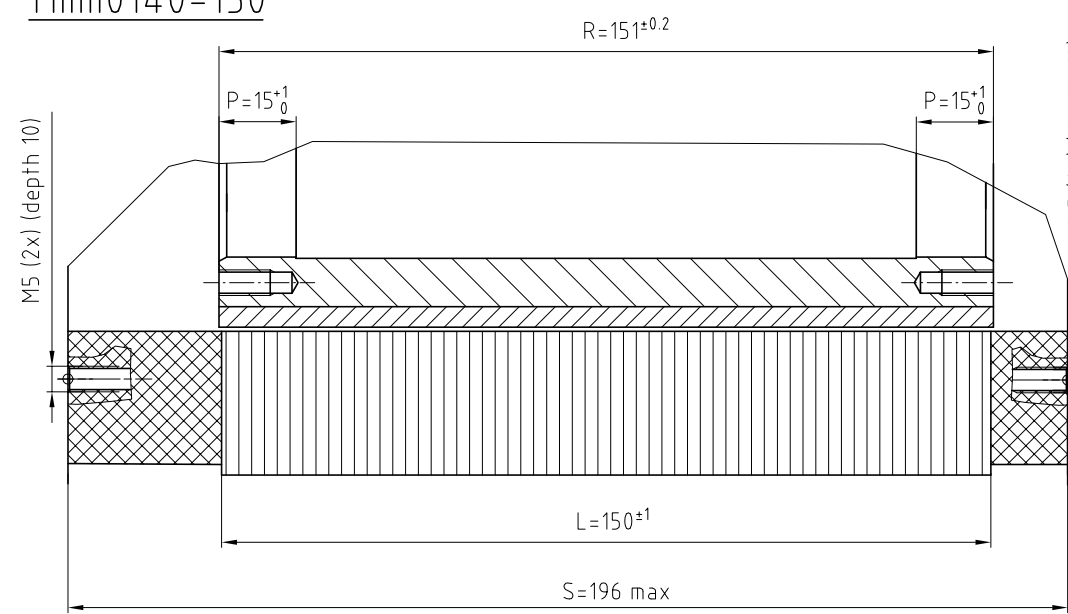
- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

For temperature sensor configuration, see Handbook

Tmm0140-100



Tmm0140-150



ECO N° C29035	Nom MBO	Date 18.10.2012	Description :					
			-					
Matière :			Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mK				Equivalence rugosité	
Remarque :			Dimension nominale	Linéaire	Rayon Chanfrein	Dimension nominale	Ra μm	Classe
Annexe :			0.5 ... 3	± 0.1	± 0.2	... 10	0.05	0.4
			> 3 ... 6	± 0.1	± 0.5	> 10 ... 30	0.1	0.4
			> 6 ... 30	± 0.2	± 1	> 30 ... 100	0.2	0.4
			> 30 ... 120	± 0.3	± 2	> 100 ... 300	0.4	0.6
			> 120 ... 400	± 0.5	± 4	> 300 ... 1000	0.6	0.8
			> 400 ... 1000	± 0.8		> 1000 ... 3000	0.8	1
			> 1000 ... 2000	± 1.2				
Arêtes de formes ISO 13715			Torque motor			Auteur		
-0.3			+0.3			S. Perrot		
			Interface drawing Tmm0140-100 / 150			Vérificateur		
						Libérateur		
						07.04.2006		
						Ancien n° : 0501m-140-03c		
						Version		
						Revision		
						Feuille		
						Page		
						587818 - 03- A-01		
						1/1		

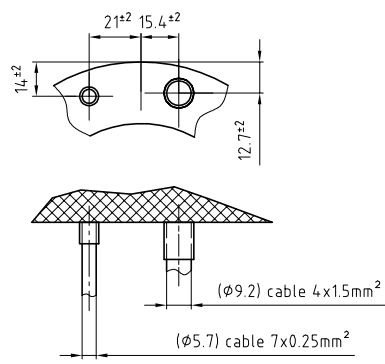


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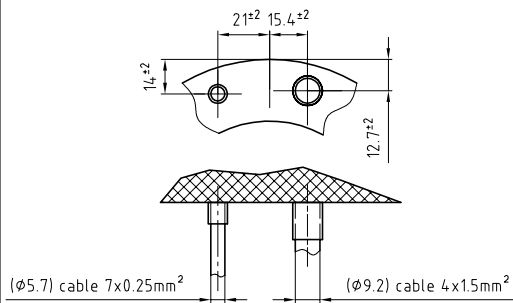
Projection
Format
Echelle
A2
1:1

Numero de document

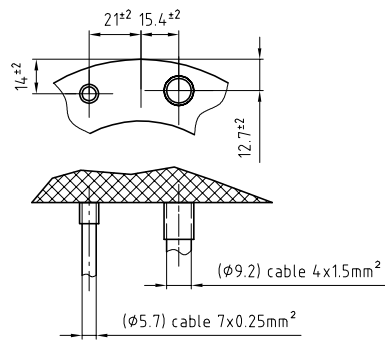
TMM0140-030-3RAS-S##



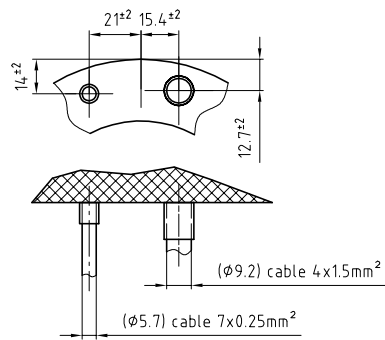
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TMM0140-030-3TBS-S##



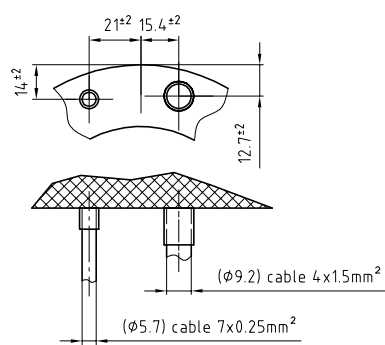
TMM0140-050-3RAS-S##



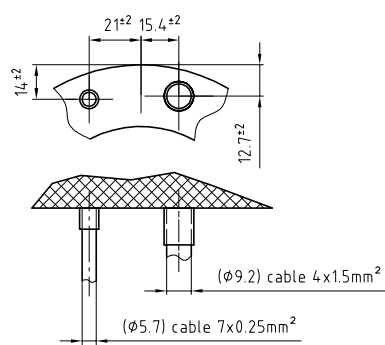
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TMM0140-050-3TBS-S##



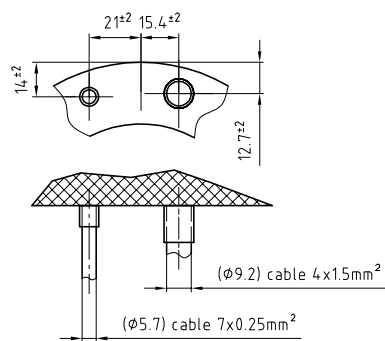
TMM0140-070-3RBS-S##



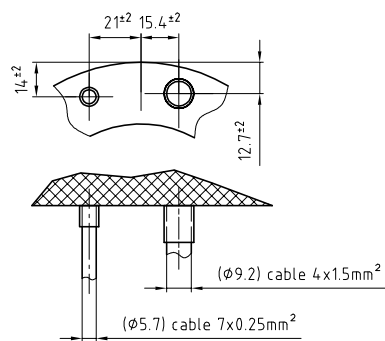
TMM0140-070-3UBS-S##



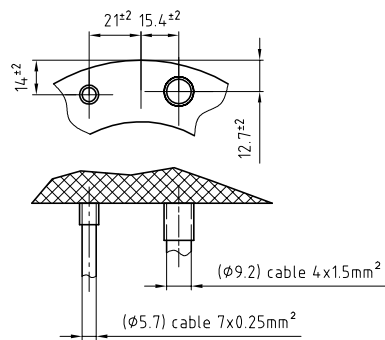
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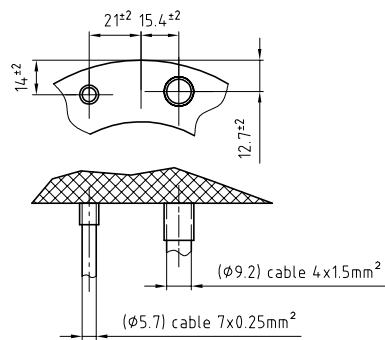
TMM0140-100-3UBS-S##



TMM0140-150-3RBS-S##

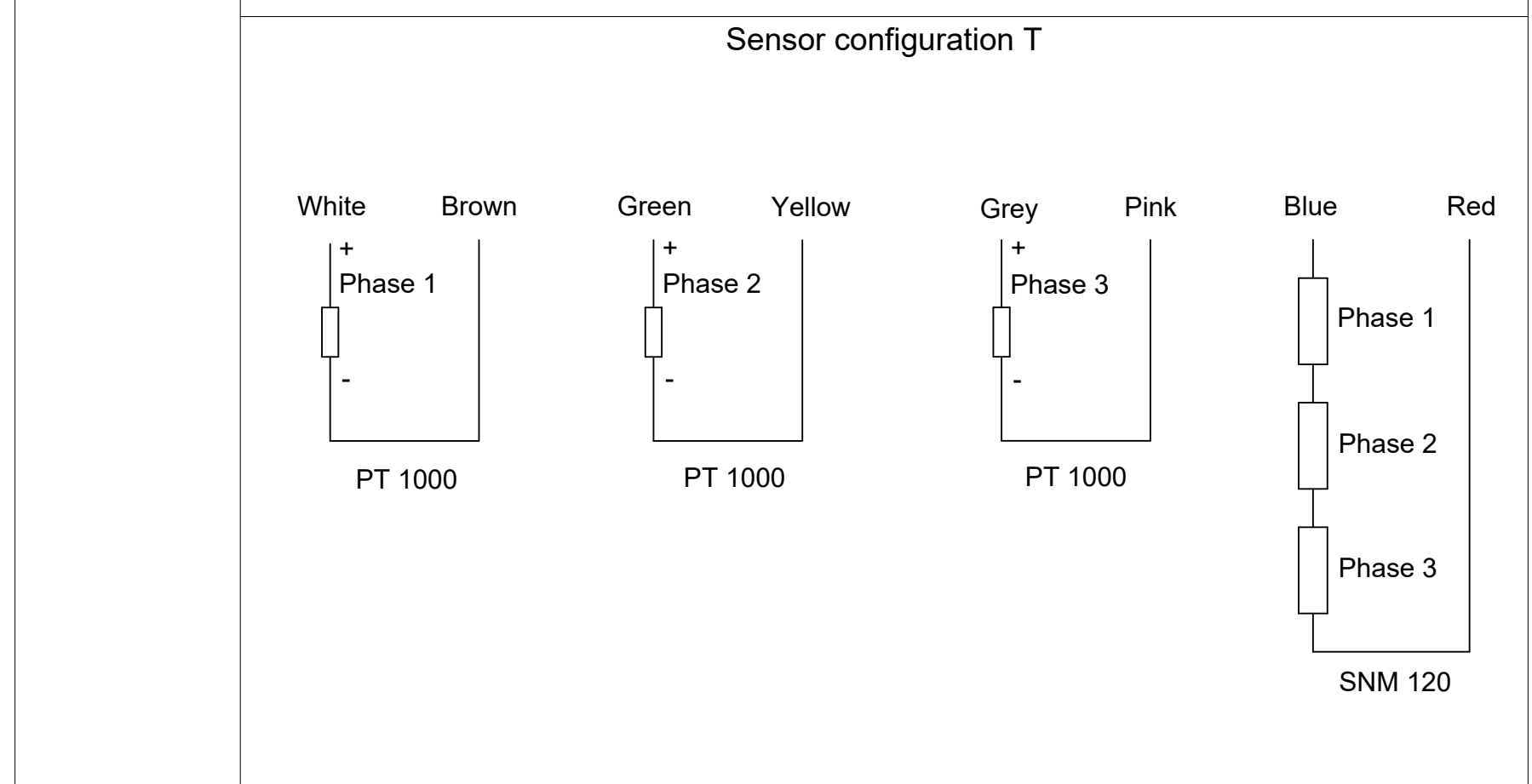
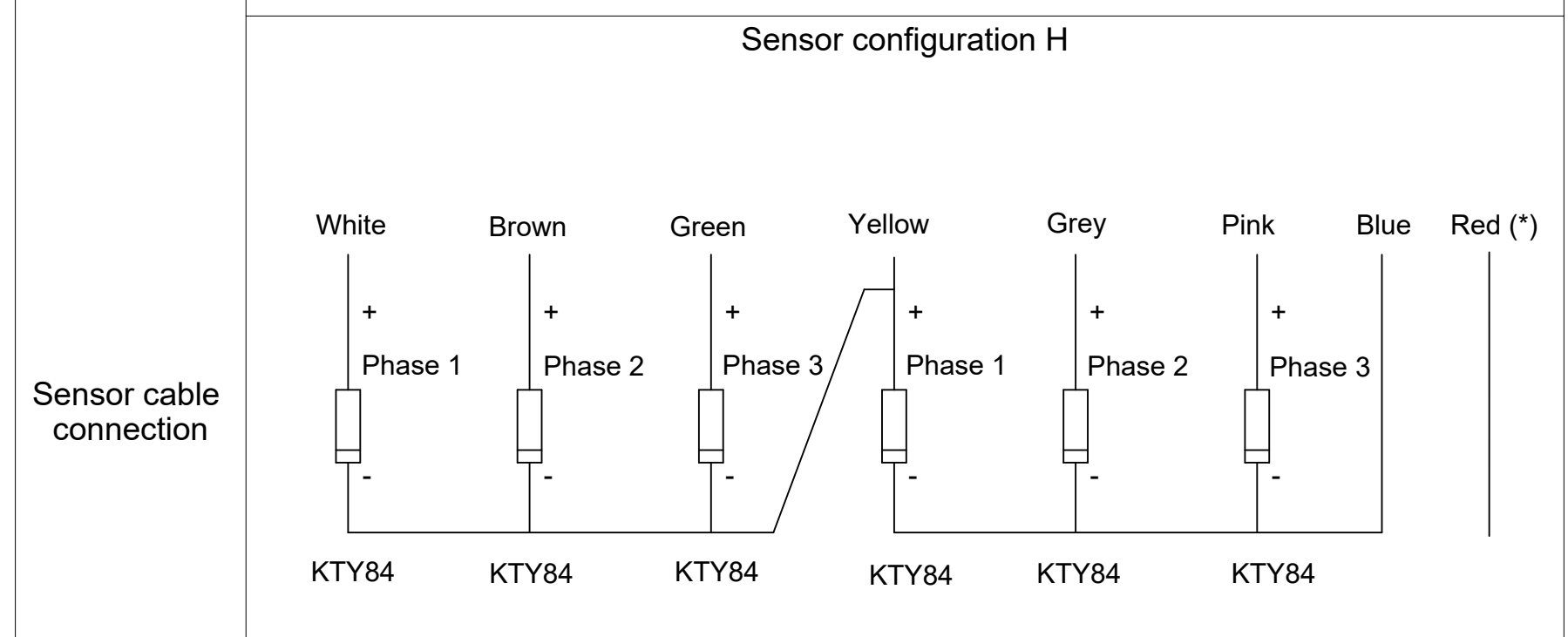
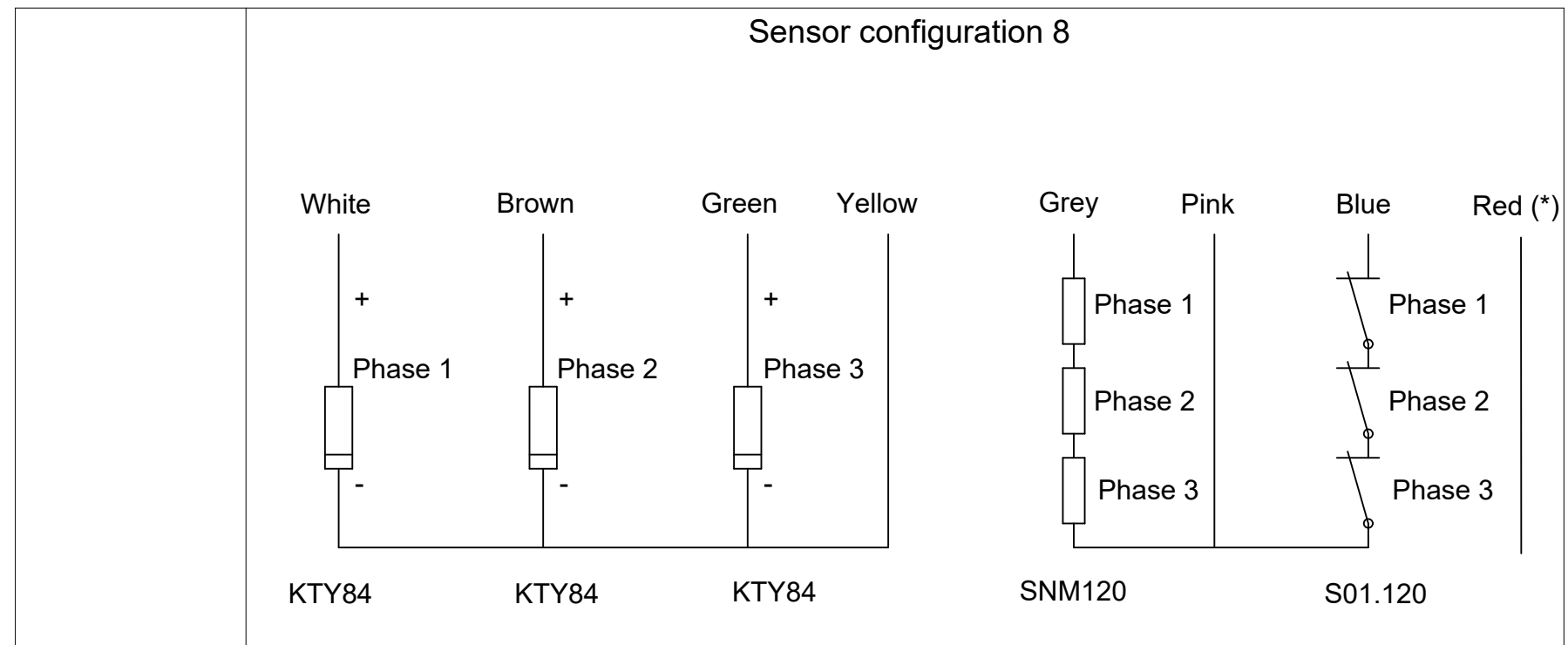


TMM0140-150-3UBS-S##



06
A

06	FSM N° C064.986-5	Nom JGU	Date 02.10.2017	Description Elbowed output cable removed	
Matière: -				Equivalence rugosité	
Remarque: -				Ra µm Classe	
Annexe: -				50 N12	
				25 N11	
				12.5 N10	
				6.3 N9	
				3.2 N8	
				1.6 N7	
				0.8 N6	
				0.4 N5	
				0.2 N4	
				0.1 N3	
				0.05 N2	
				0.025 N1	
Arêtes de formes ISO 13715 -0.3 +0.3		Torque motor TMM0140 cables outputs		Auteur	Vérificateur
		Moteur coupleur fer TMM0140 sorties de câbles		M. Tabasso	-
				06.10.2005	-
				Libérateur	-
ETEL S.A. CH-2102 Môtiers SWITZERLAND		Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite, être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.		Projetion	Format
				A1	
				Echelle	
				Ancien n°: 050Tm-14-0-01	Version
				578076	-06-A-01
				Revision	Feuille
					1/1
				Page	



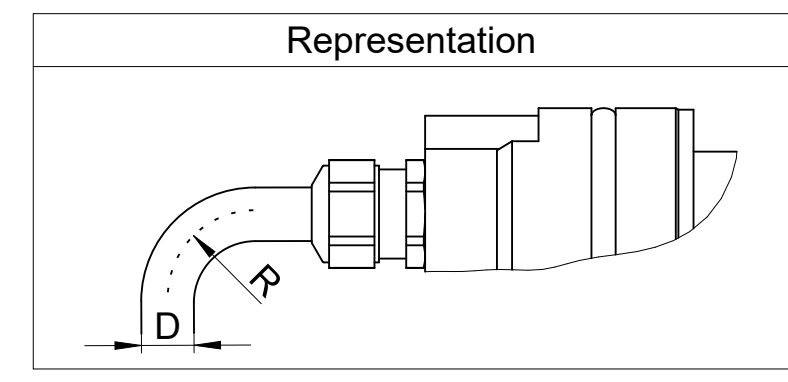
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

Wire section (mm²)

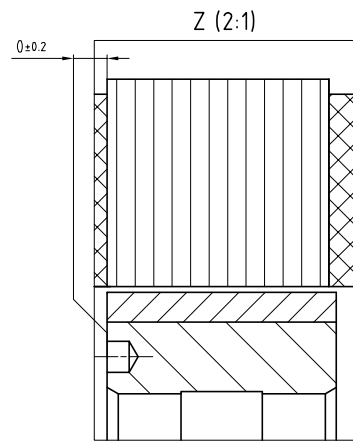
Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D



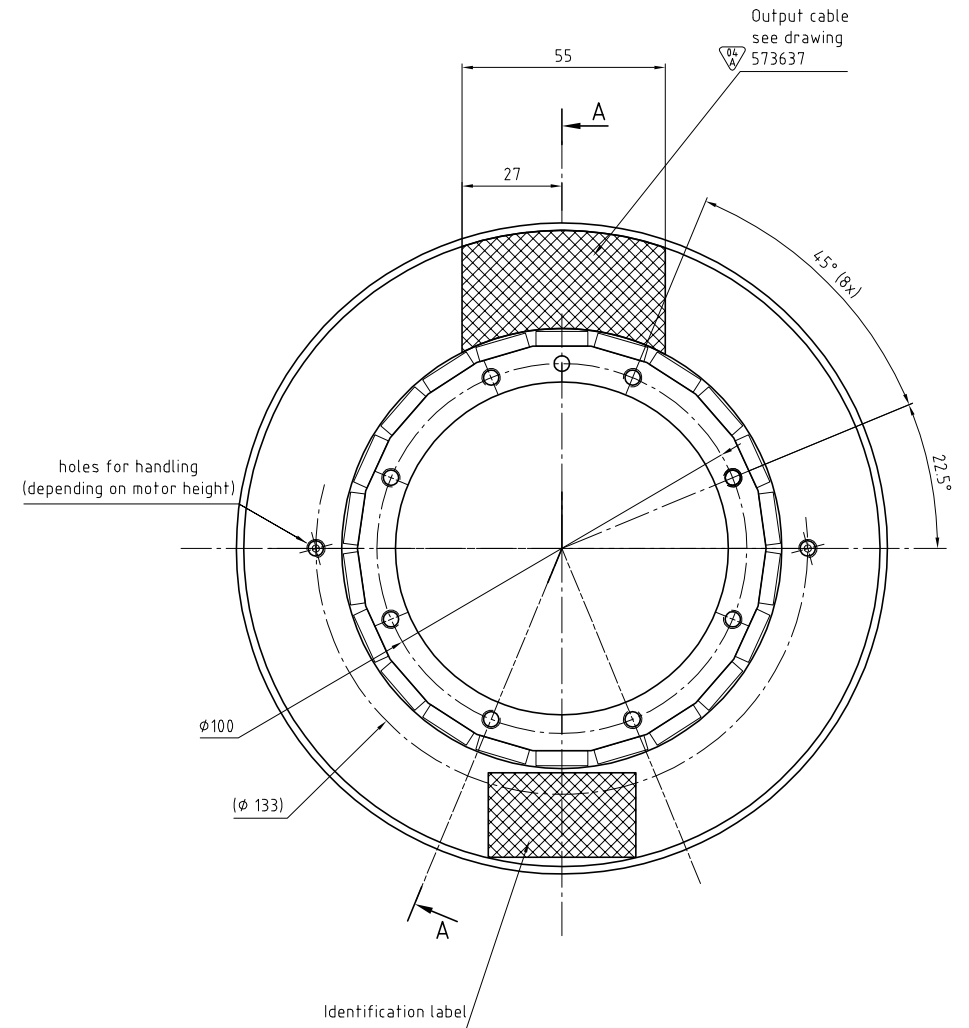
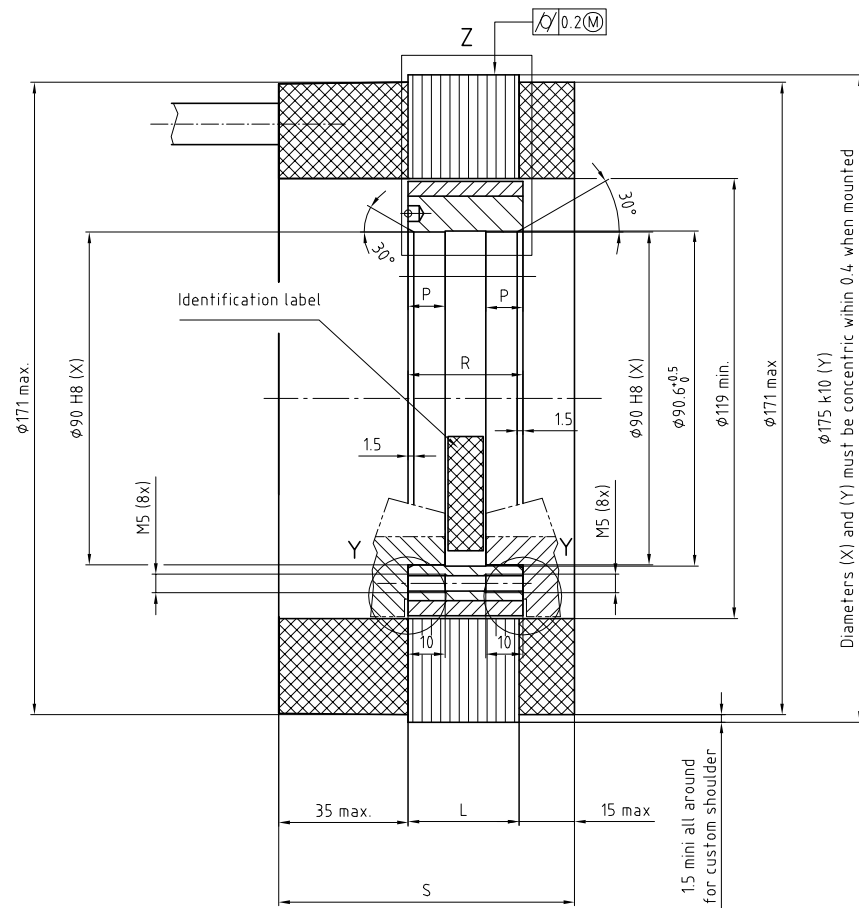
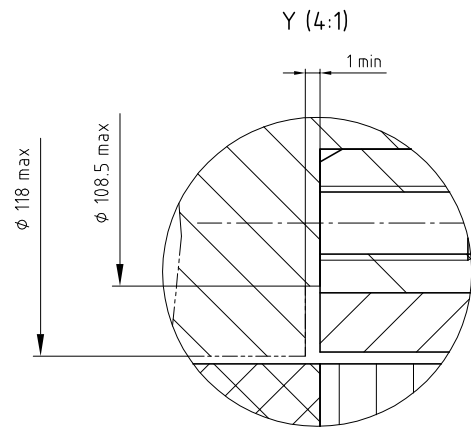
(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

Text:		ID number:
Original drawing		Change No. C145178-05
Scale		Released: 20-Sep-22
Format		Tolerances as per ISO 8015 : 2011
Dimensions in mm		Tolerances selon ISO 8015 : 2011
1:1	A2	Dimensions without tolerance ± 0,2
Mating Dimensions / Cotes d'encombrement		Dimensions sans tolérances
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ETEL ETEL S.A. 2112 Môtiers SWITZERLAND		Version Revision Sheet Page
1389869-00 - A-01		1 of 1
Document number		

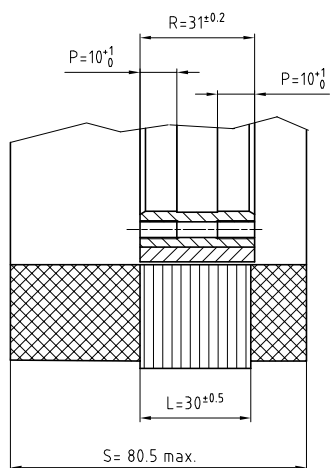
Mounting condition



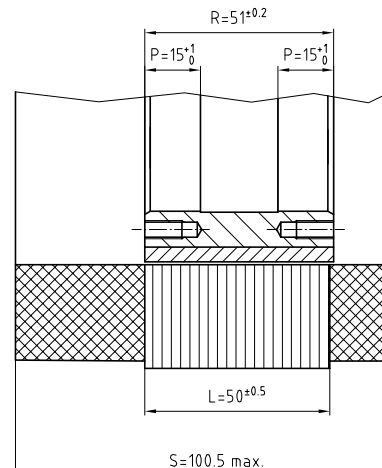
Detail: Y
Magnets safety clearance



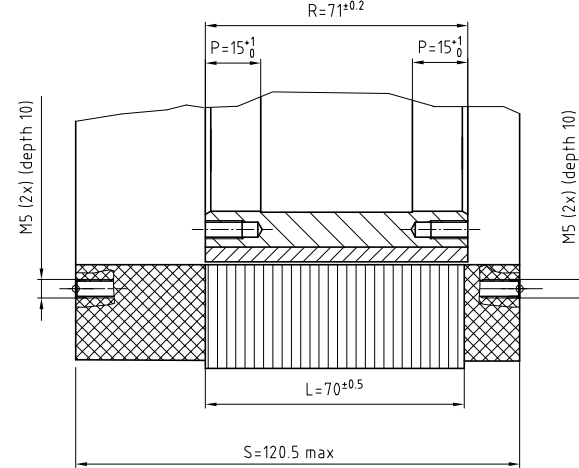
Tmm0175-030



Tmm0175-050



Tmm0175-070



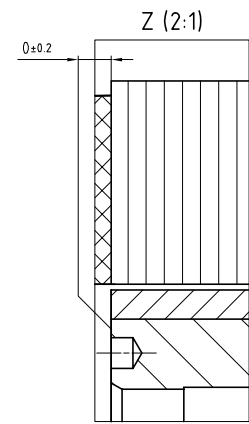
Power cable connection

- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

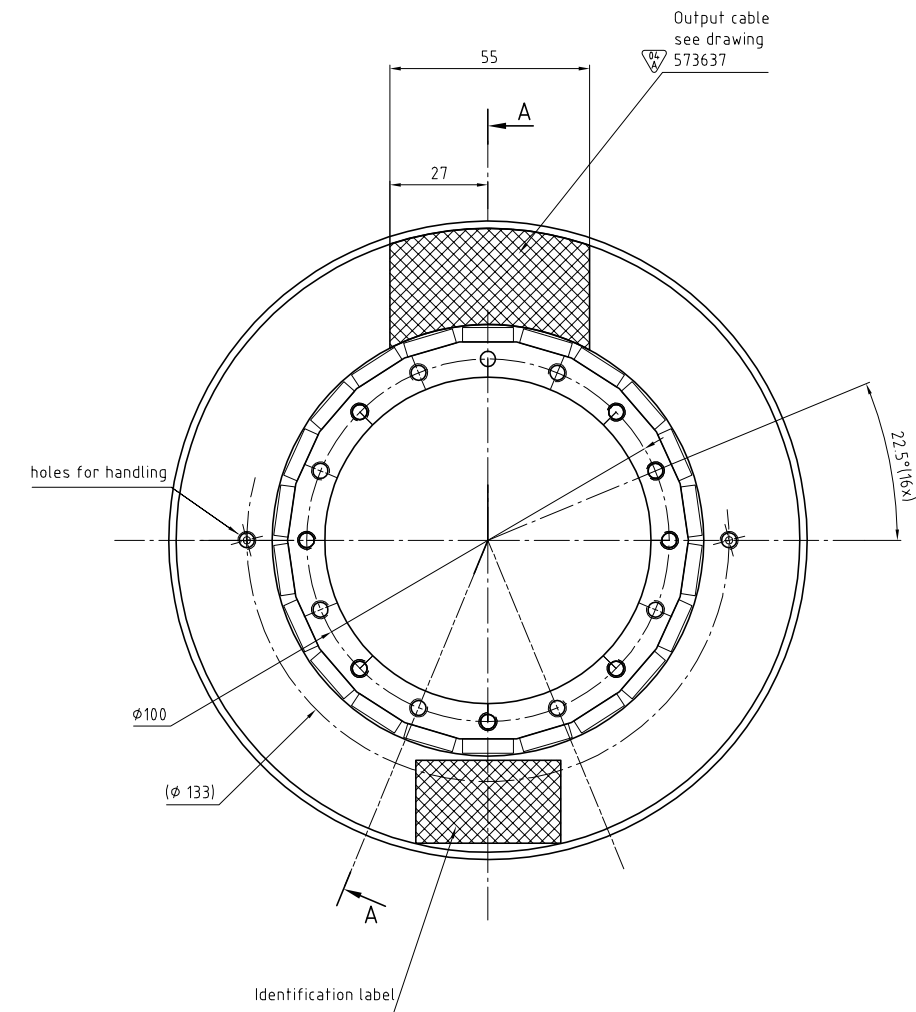
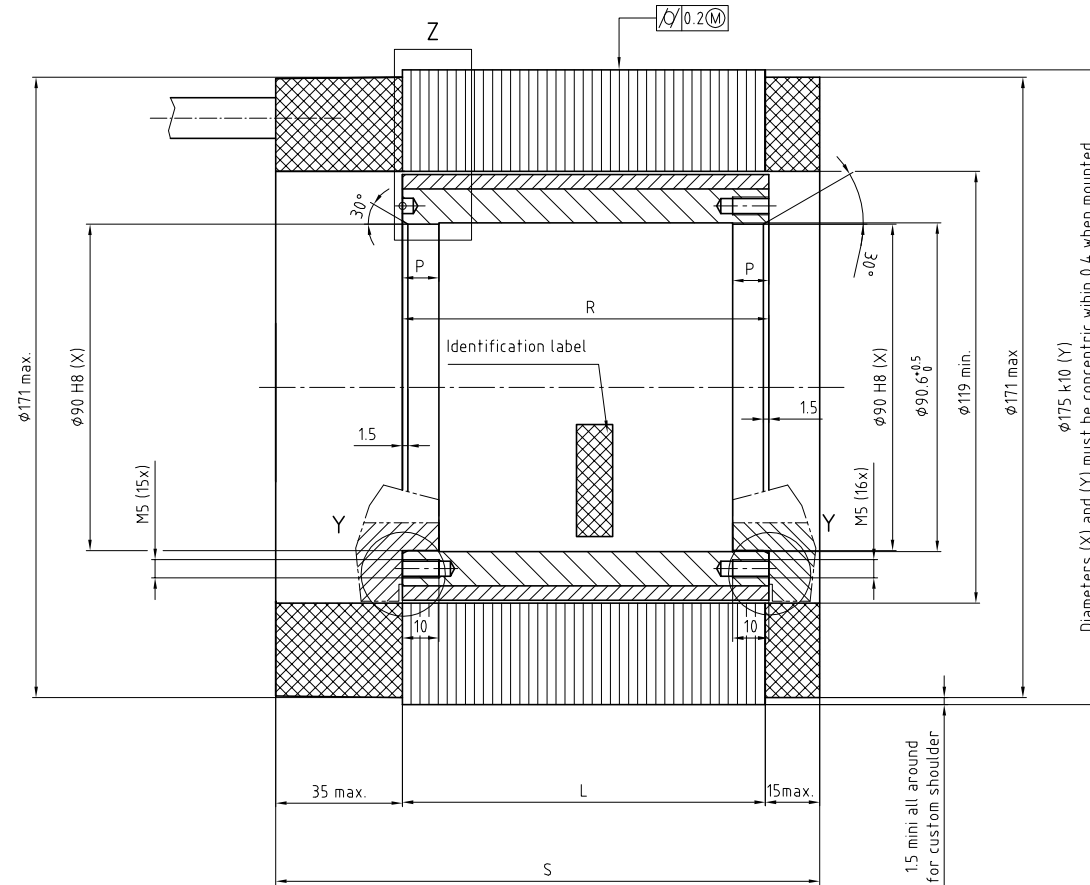
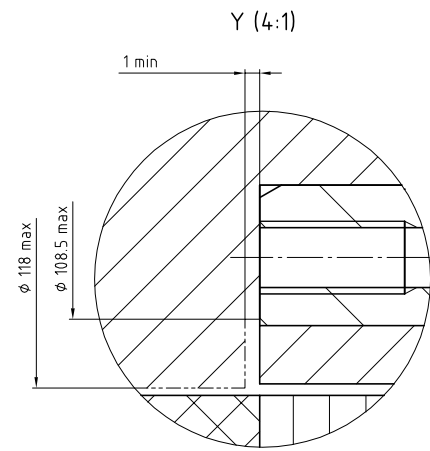
For temperature sensor configuration, see Handbook

ECO N°	29635	Nom	MBD	Date	23.10.2012	Description	
<p>Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mk</p>							
Matériau	-						Equivalence rugosité
Remarque	Dimension nominale	Linéaire	Rayon	Chanfrein	Dimension nominale	Ra	µm
Annexe	0,5 - 3	+0,1	+0,2		10 - 30	0,4	0,6
	3 - 6	+0,1	+0,5		30 - 100	0,1	0,4
	6 - 30	+0,2	+1		100 - 300	0,2	0,4
	30 - 120	+0,3	+2		300 - 1000	0,4	0,6
	120 - 400	+0,5	+4		1000 - 3000	0,6	0,8
	400 - 1000	+0,8	+6		10 - 50	± 1°	
	1000 - 2000	+1,2	+12		50 - 120	± 20'	
	2000 - 2500	+1,2	+12		120 - 400	± 10'	
Arêtes de formes ISO 13715	-						
	Torque motor						
	Interface drawing Tmm0175-030 / 050 / 070						
	Autre						Vérificateur
	C. Blaser						Libérateur
	22.12.2005						
φ175	k10	±0.1	0.15				
φ90	H8	+0.05	0.05				
Cote	Ajustement						
<p>Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite, être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.</p>							
ETEL S.A. 01-2102 Meters SWITZERLAND				Projection		Format	Echelle
				A1		1:1	
				Ancien n° : 0506m-140-06d		Version	Revison
				22.12.2005		582052 -04- A-01	
				Interface drawing Tmm0175-030 / 050 / 070		Feuille Page	
						01/1	

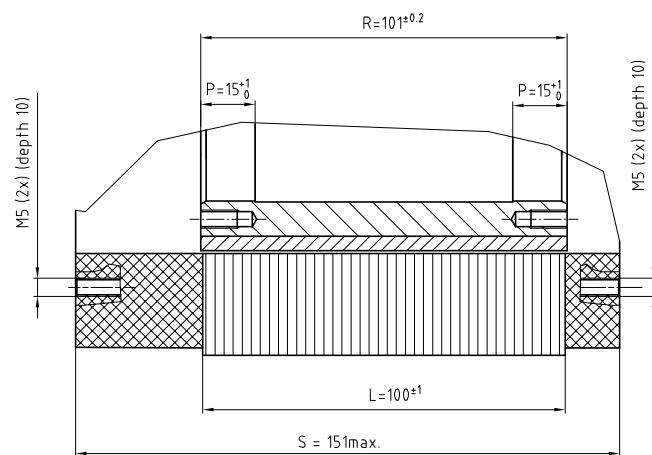
Mounting condition



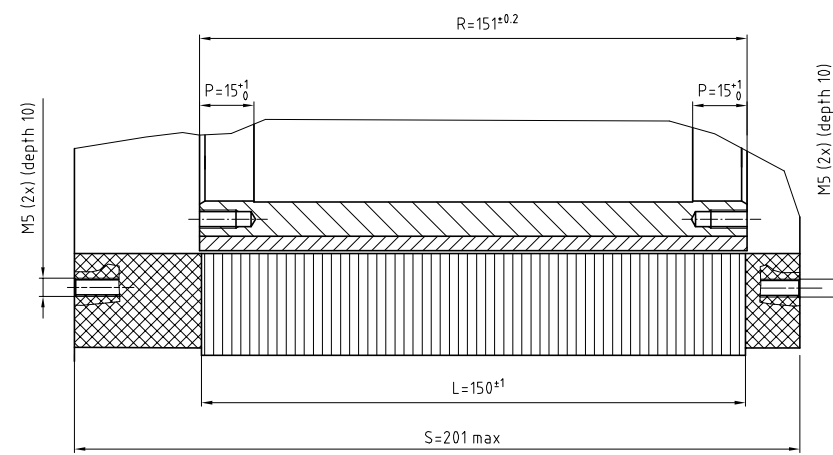
Detail:Y
Magnets safety clearance



Tmm0175-100



Tmm0175-150

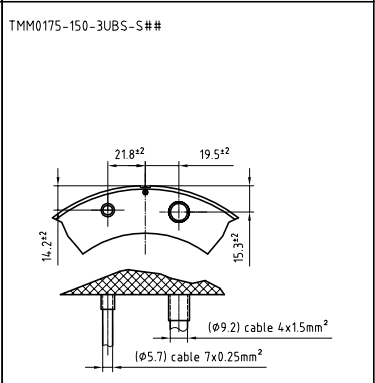
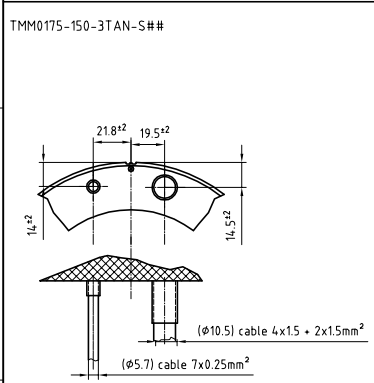
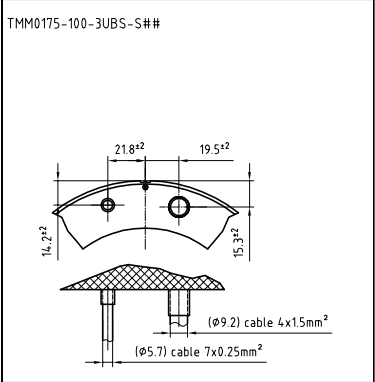
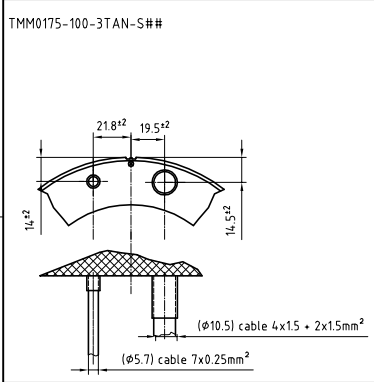
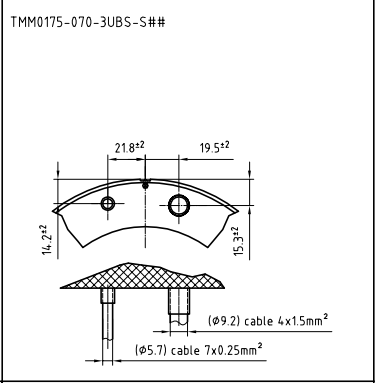
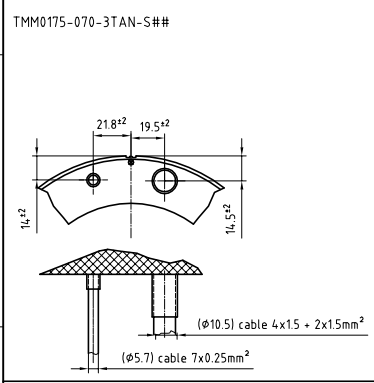
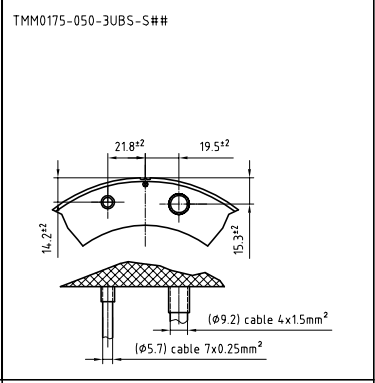
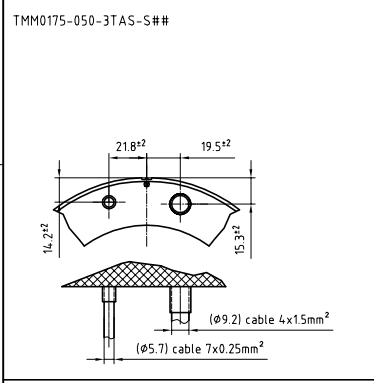
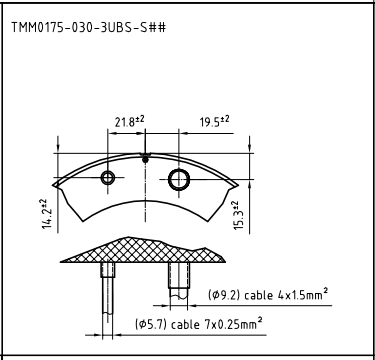
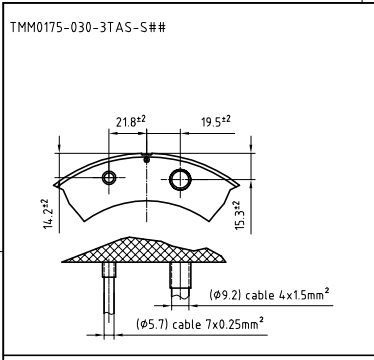


Power cable connection

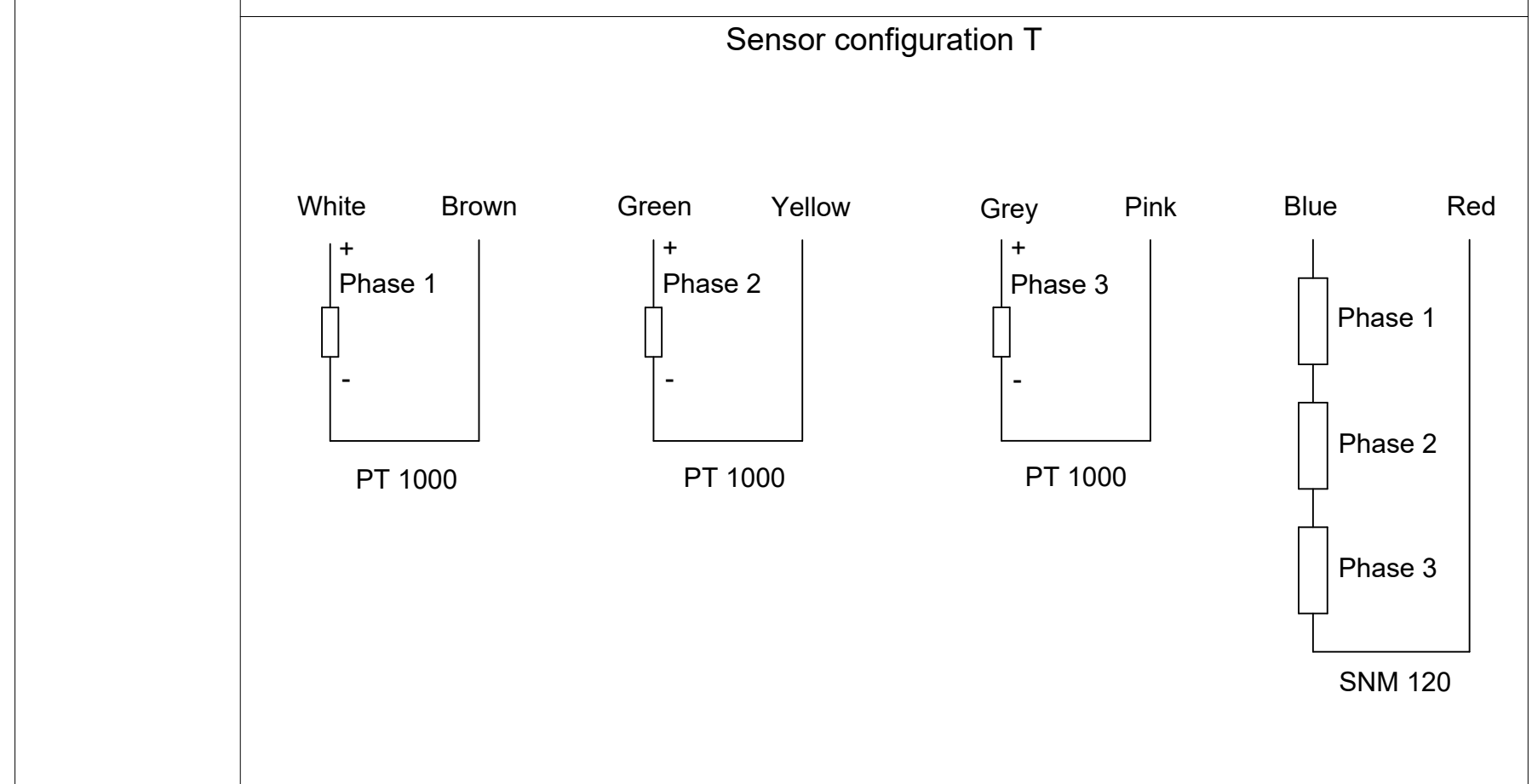
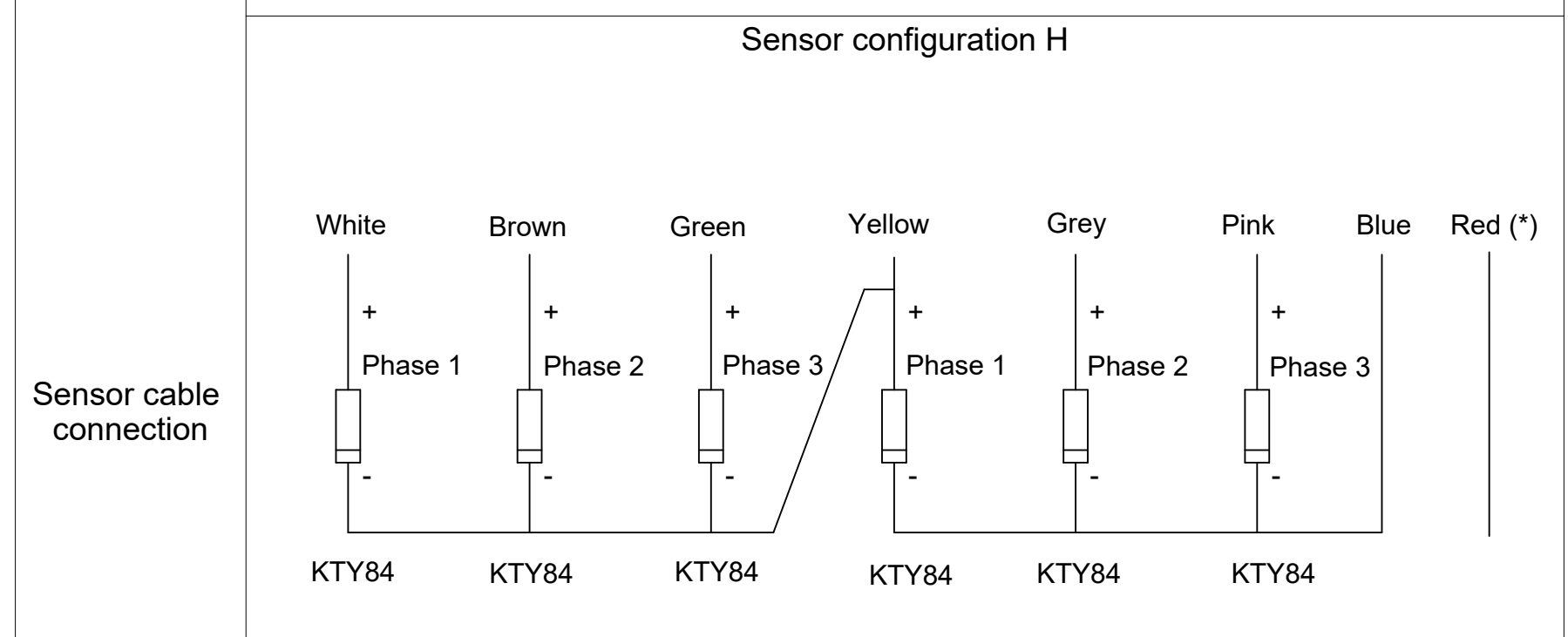
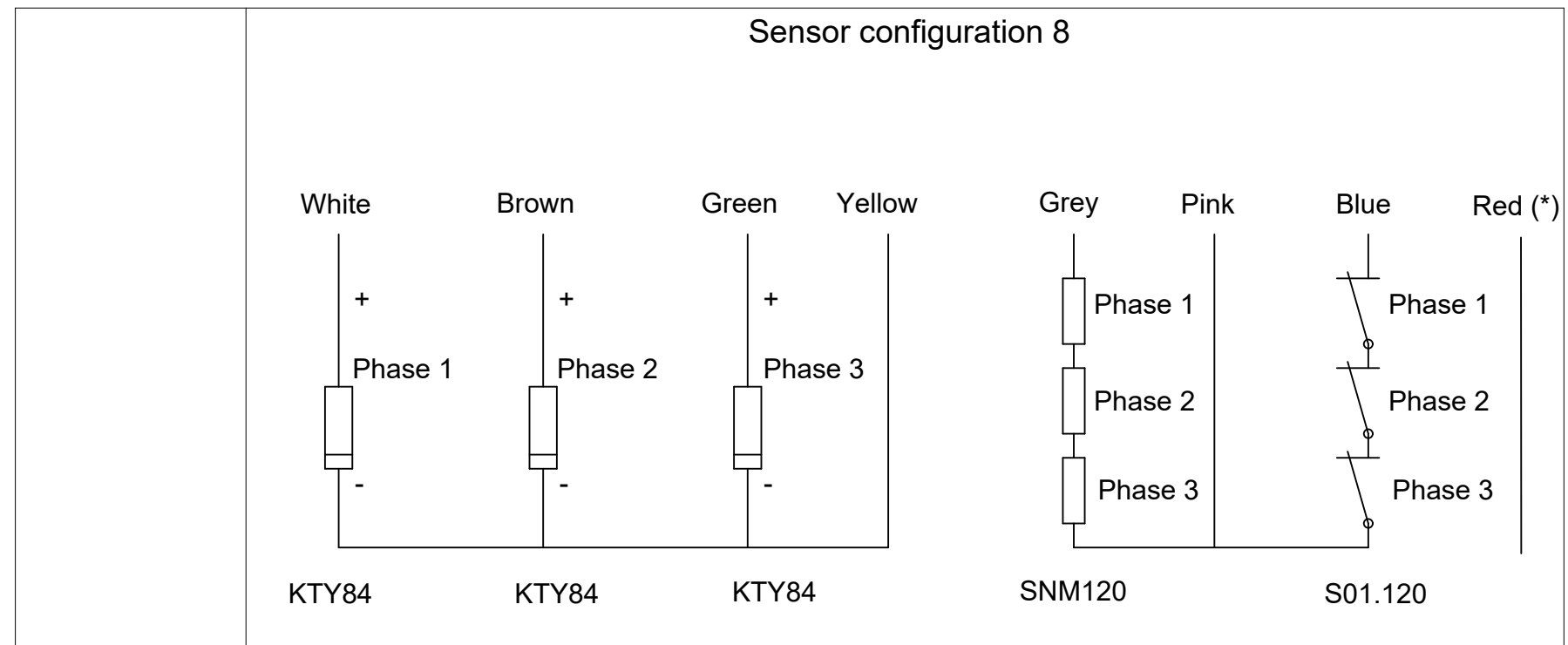
- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- ⚠ Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

For temperature sensor configuration, see Handbook

ECO N°	29035	Nom	NBO	Date	18.10.2012	Description	
Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mk							
Matière		Dimension nominale	Linéaire	Rayon	Châtrifren	Dimension nominale	Equivalence rugosité
Remarque		0.5 - 3	±0.1	±0.2			50 N12
		3 - 6	±0.1	±0.5			25 N11
		6 - 30	±0.2	±1			12.5 N10
Annexe		30 - 120	±0.3	±2			6.3 N9
		120 - 400	±0.5	±4			3.2 N8
		400 - 1000	±0.8	±10			1.6 N7
		1000 - 2000	±1.2	±20			0.8 N6
Arêtes de formes ISO 13715							
Torque motor							
Interface drawing Tmm0175-100/150							
						Auteur	S. Perrot
						Vérificateur	
						Libérateur	
						01.09.05	



		FSM N°	Rev	Date	Description		
		C064366-5	REV	04.10.2017	Elbowed output cable removed		
Matière : Remarque : Annexe :						Équivalence rugosité Ra µm Classe 3.2 NF 6.3 NF 12.5 NF 25 NF 50 NF 100 NF 200 NF 400 NF 800 NF	
Arêtes de formes ISO 9175 		Torque motor TMM0175 cables outputs				Auteur : S. Perrot	
		Meilleur couple fer TMM0175 sorties de câbles				Vérificateur : S. Perrot Libérateur :	
		ETEL S.A. CH-2128 NEN SWITZERLAND Tous plans sans contre-approbation de l'acheteur sont, sans motif particulier, considérés comme non valides. L'acheteur est le seul responsable de l'usage et de l'entretien de l'équipement.				Projection : Format : Echelle : Accessoires : 0556cm-14.0-04 Version : Revision : Feuille : Page : 573637 -06- A-1	



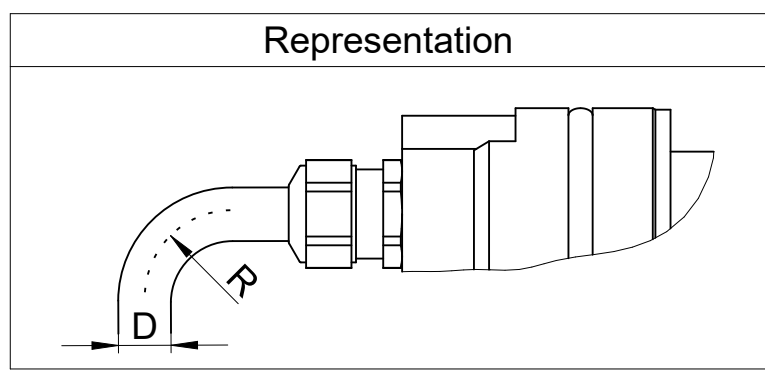
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

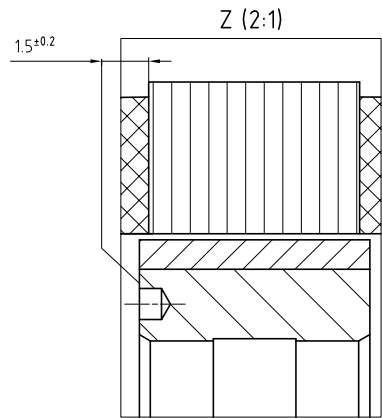
Wire section (mm²)

Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D

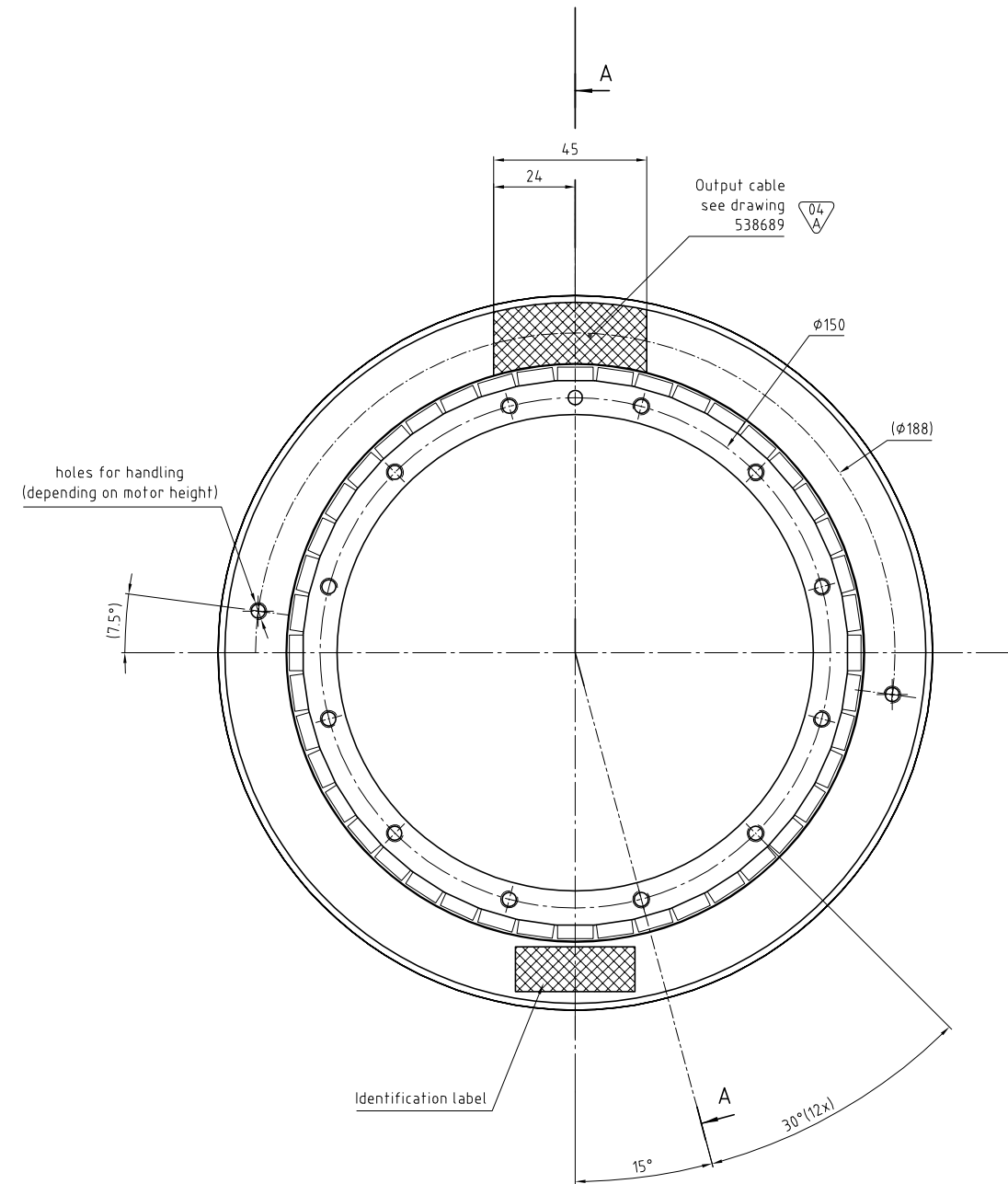
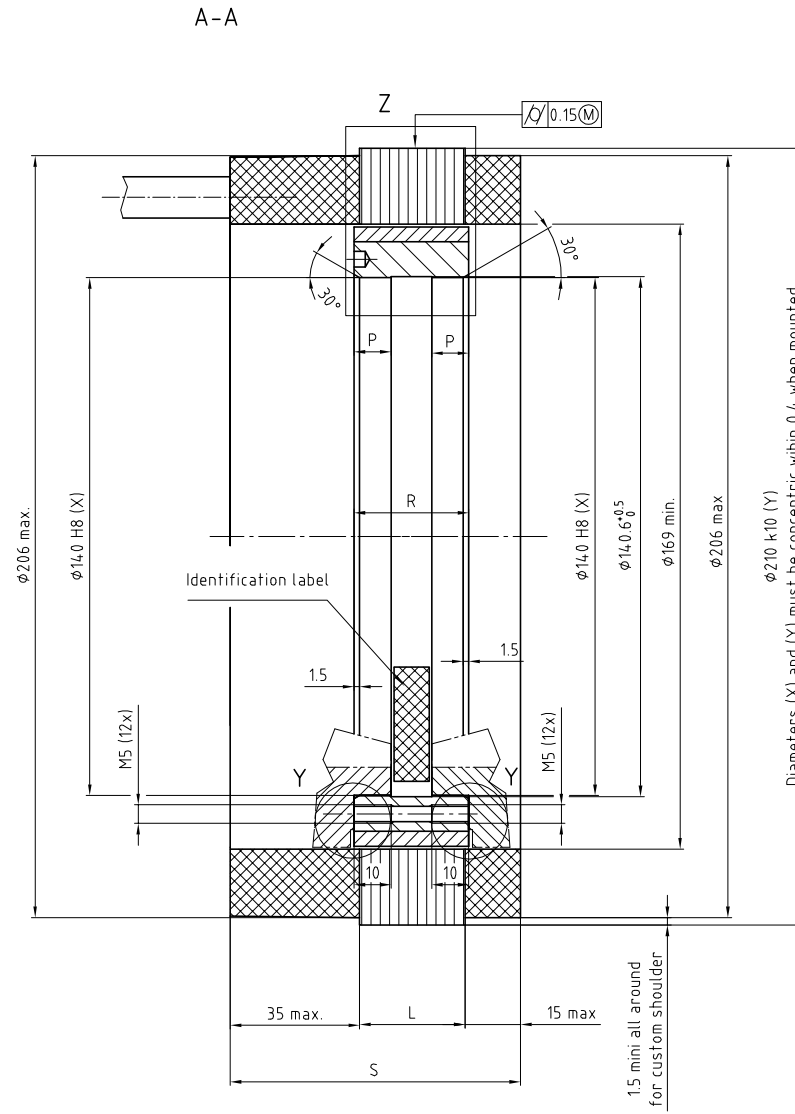
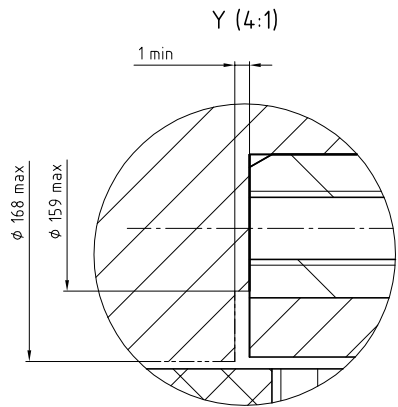


(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

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Scale		Released: 20-Sep-22
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Dimensions in mm		Tolerances selon ISO 8015 : 2011
1:1	A2	Dimensions without tolerance ± 0,2
Mating Dimensions / Cotes d'encombrement		Dimensions sans tolérances
The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or design. (ISO 16016)		
ETEL ETEL S.A. 2112 Môtiers SWITZERLAND		Version Revision Sheet Page
1389869-00 - A-01		1 of 1
Document number		



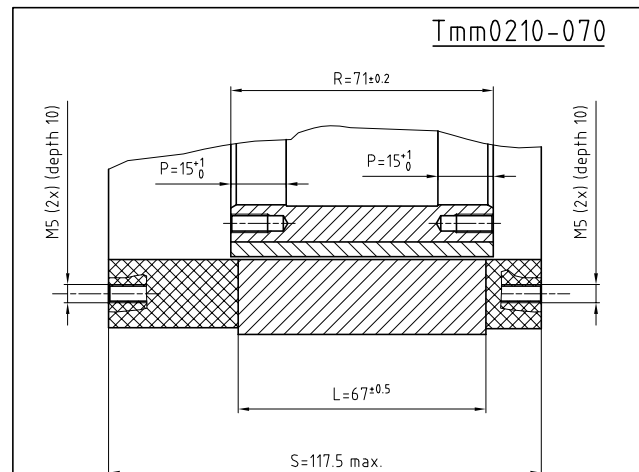
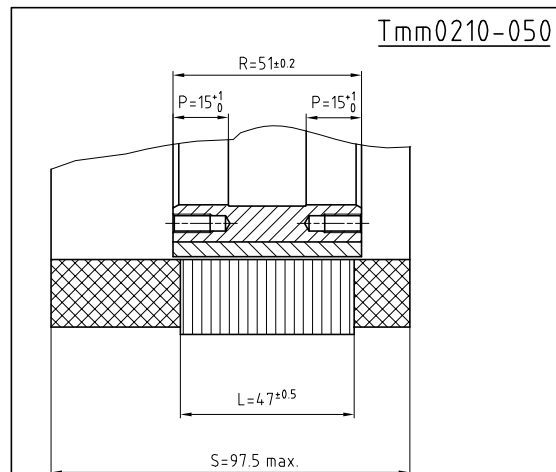
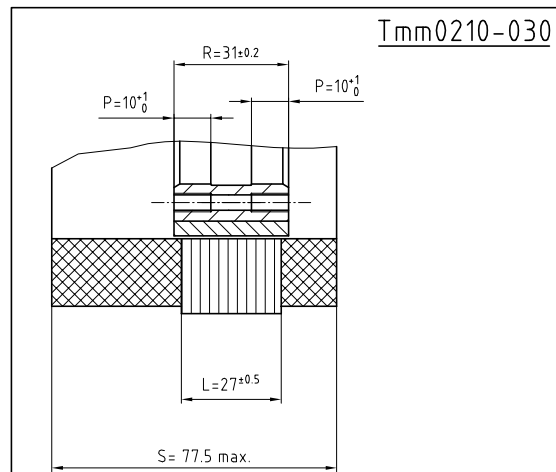
Detail: Y
Magnets safety clearance



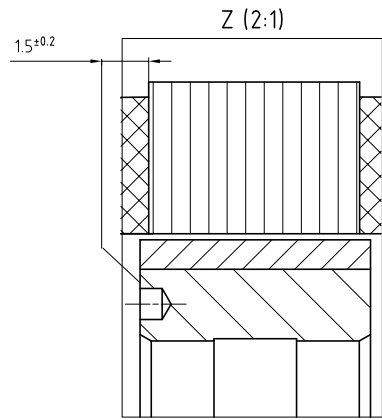
Power cable connection

- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Not connected = Wire 6 or Br2 or Black

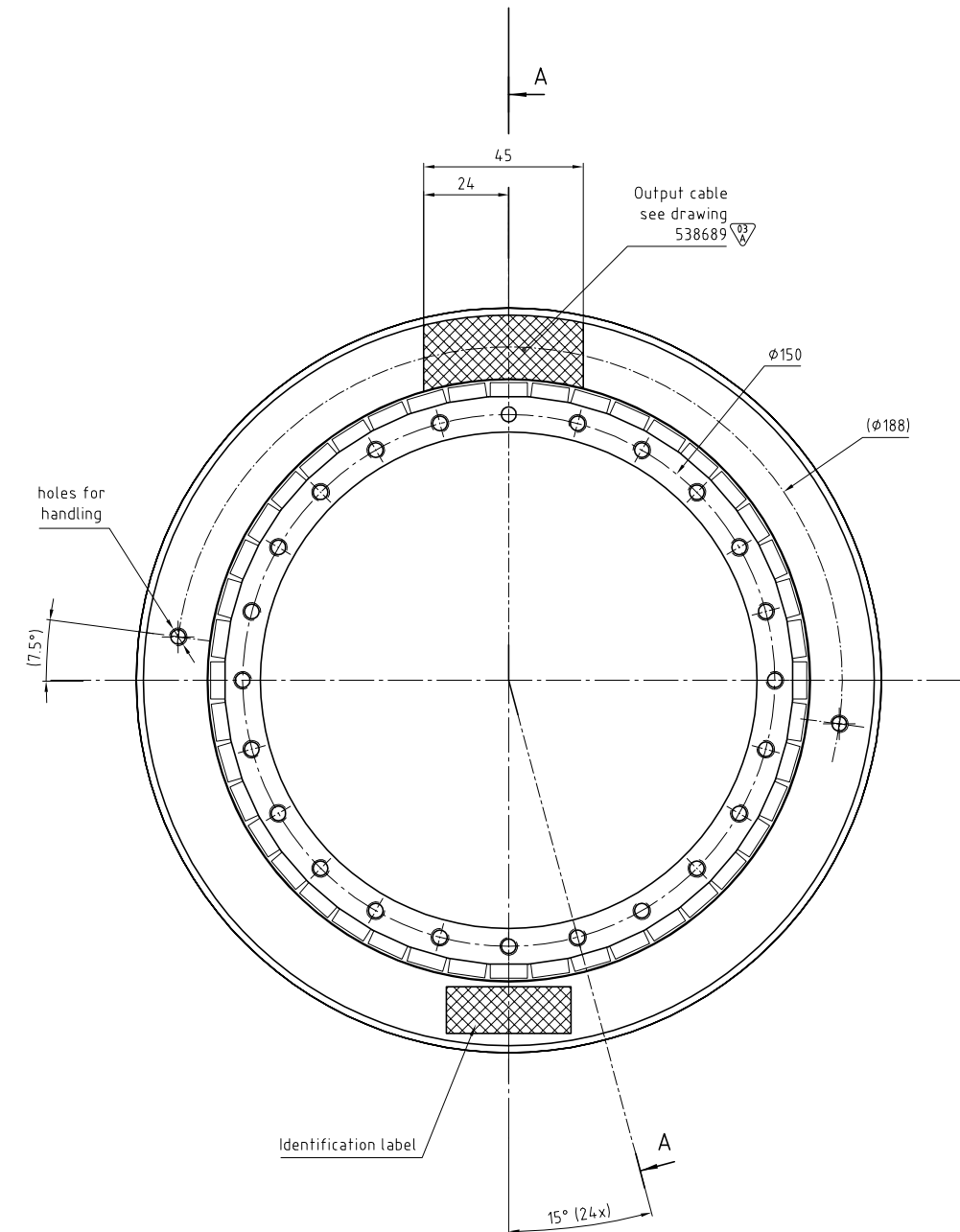
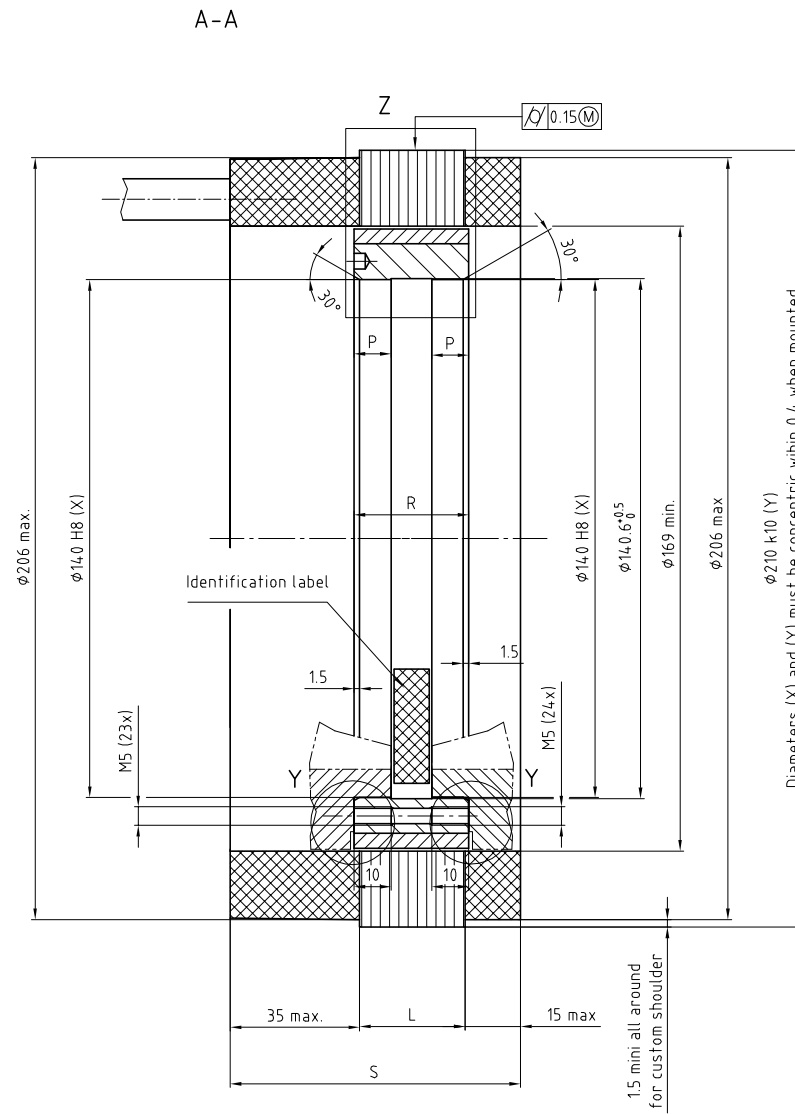
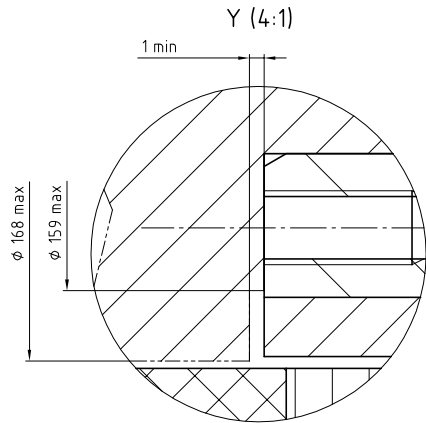
For temperature sensor configuration, see Handbook



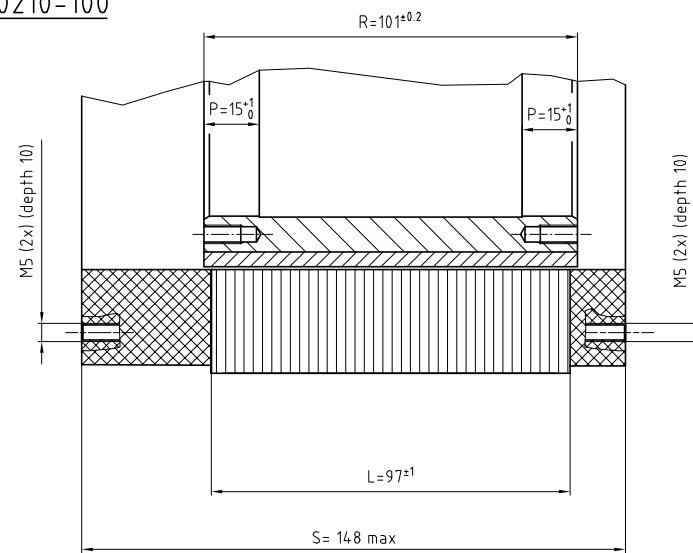
ECO N°	29635	Nom	MB0	Date	22.10.2012	Description																																																																	
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Dimension nominale	Linéaire	Rayon	Chanfrein	Dimension nominale	Ra µm	Classe	Equivalence rugosité																																																																
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6 - 30	±0.2	±1		30 - 100	0.2	0.4	0.6																																																																
30 - 120	±0.3	±2		100 - 300	0.4	0.6	0.6																																																																
120 - 400	±0.5	±4		300 - 1000	0.6	0.8	0.8																																																																
400 - 1000	±0.8	±8		1000 - 3000	0.8	1	1																																																																
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<table border="1"> <thead> <tr> <th>Arêtes de formes ISO 13715</th> <th>Torque motor</th> <th>Auteur</th> <th>Vérificateur</th> <th>Libérateur</th> </tr> </thead> <tbody> <tr> <td>±0.3</td> <td>±0.3</td> <td>S. Perrot</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>18.07.05</td> <td></td> <td></td> </tr> </tbody> </table>								Arêtes de formes ISO 13715	Torque motor	Auteur	Vérificateur	Libérateur	±0.3	±0.3	S. Perrot					18.07.05																																																			
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<table border="1"> <tr> <td>Φ210</td> <td>k10</td> <td>±0.05</td> <td>±0.05</td> <td>±0.05</td> </tr> <tr> <td>Φ14.0</td> <td>H8</td> <td>±0.03</td> <td>±0.03</td> <td>±0.03</td> </tr> <tr> <td>Cote</td> <td>Ajustement</td> <td></td> <td></td> <td></td> </tr> </table>	Φ210	k10	±0.05	±0.05	±0.05	Φ14.0	H8	±0.03	±0.03	±0.03	Cote	Ajustement				<table border="1"> <tr> <td>Projection</td> <td>Format</td> <td>Echelle</td> <td>Ancien n°</td> <td>Version</td> <td>Revision</td> <td>Feuille</td> <td>Page</td> </tr> <tr> <td></td> <td>A1</td> <td>1:1</td> <td>560641 - 04 - A-01</td> <td></td> <td></td> <td>1</td> <td>1</td> </tr> </table>	Projection	Format	Echelle	Ancien n°	Version	Revision	Feuille	Page		A1	1:1	560641 - 04 - A-01			1	1																																							
Φ210	k10	±0.05	±0.05	±0.05																																																																			
Φ14.0	H8	±0.03	±0.03	±0.03																																																																			
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Projection	Format	Echelle	Ancien n°	Version	Revision	Feuille	Page																																																																
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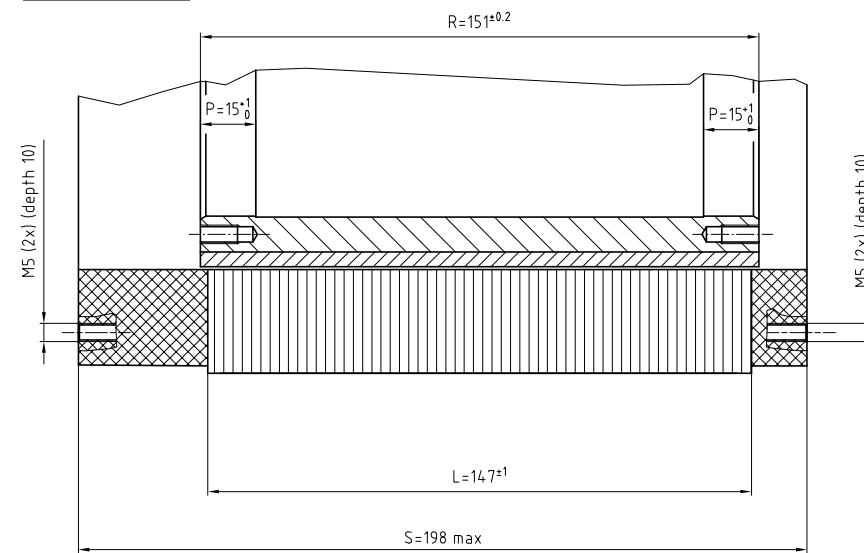
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Magnets safety clearance



Tmm0210-100



Tmm0210-150



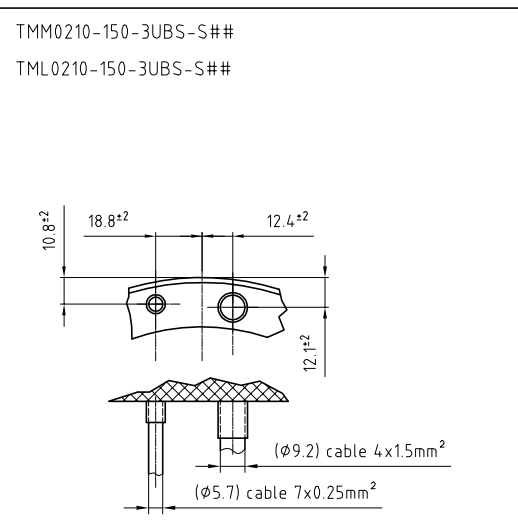
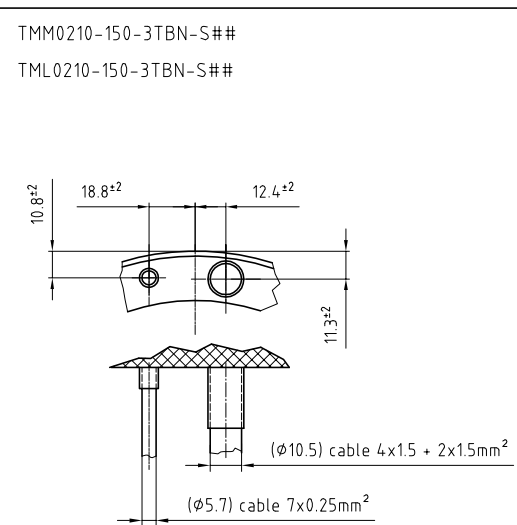
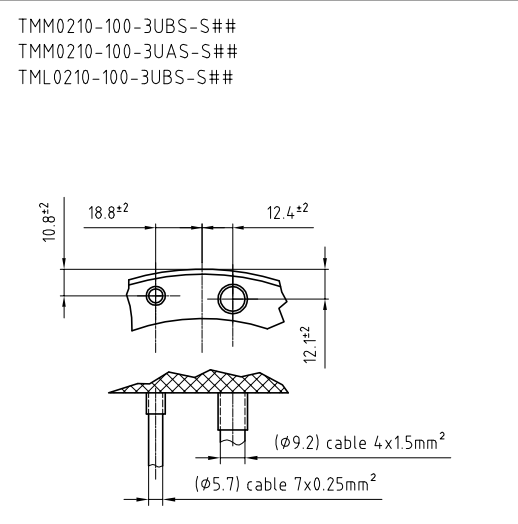
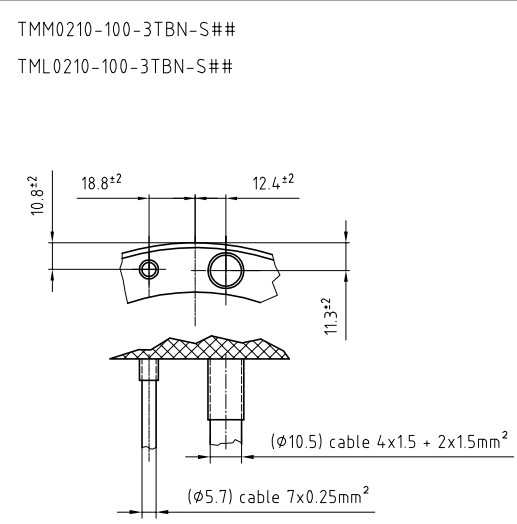
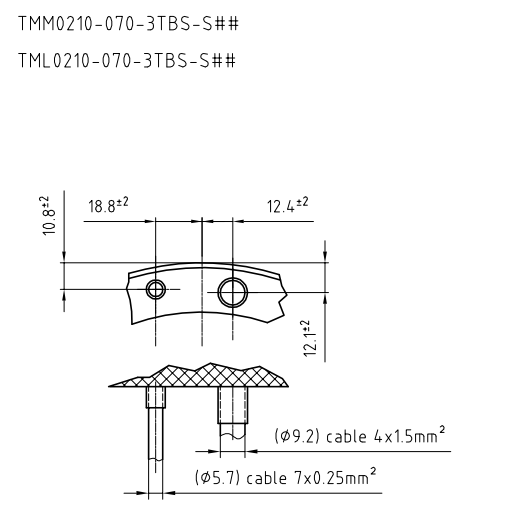
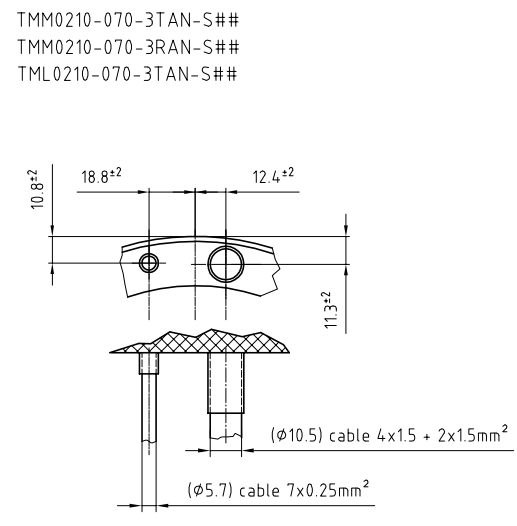
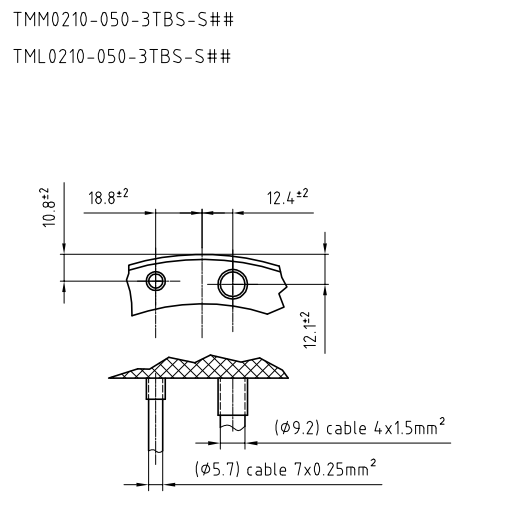
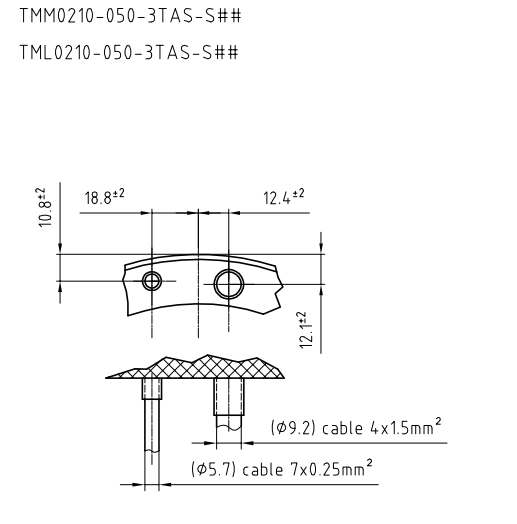
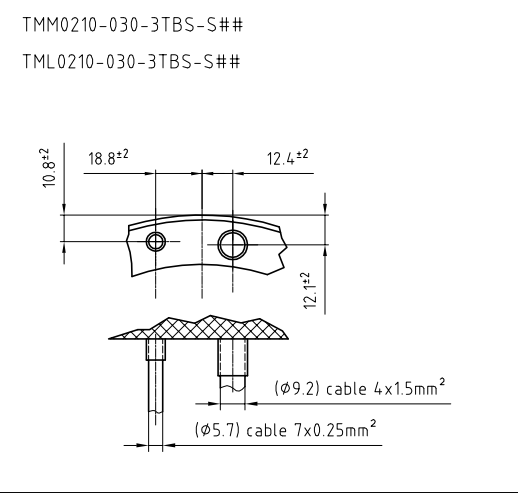
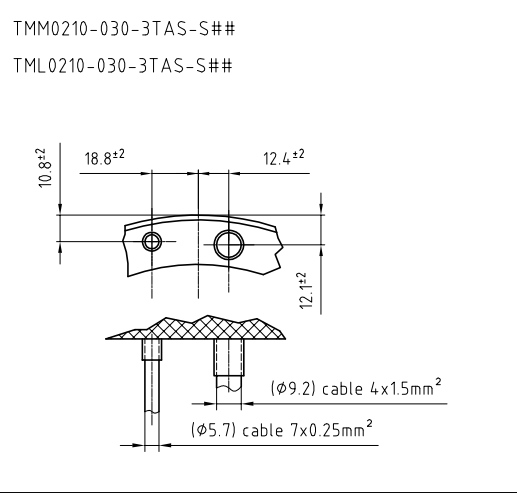
Power cable connection

- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

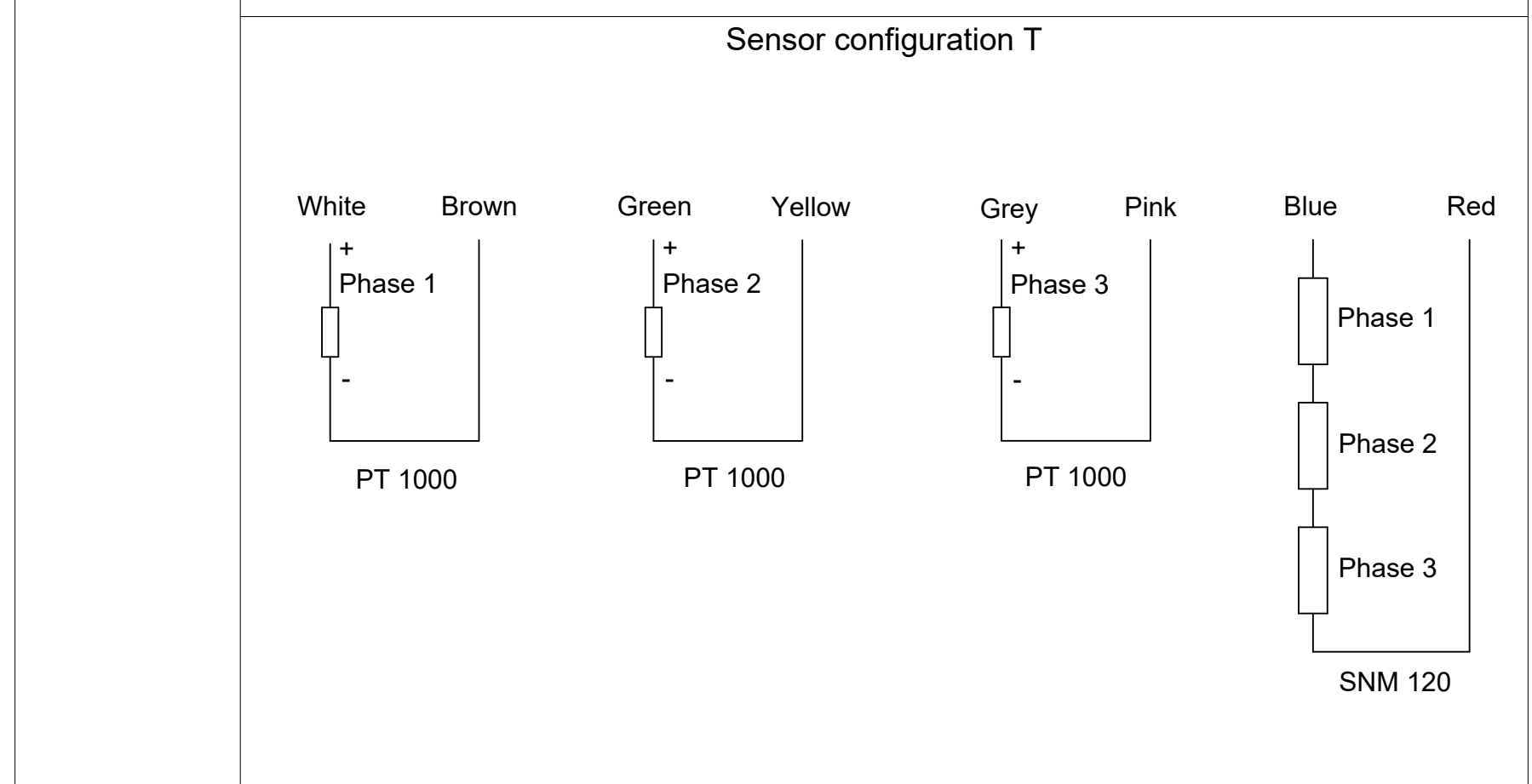
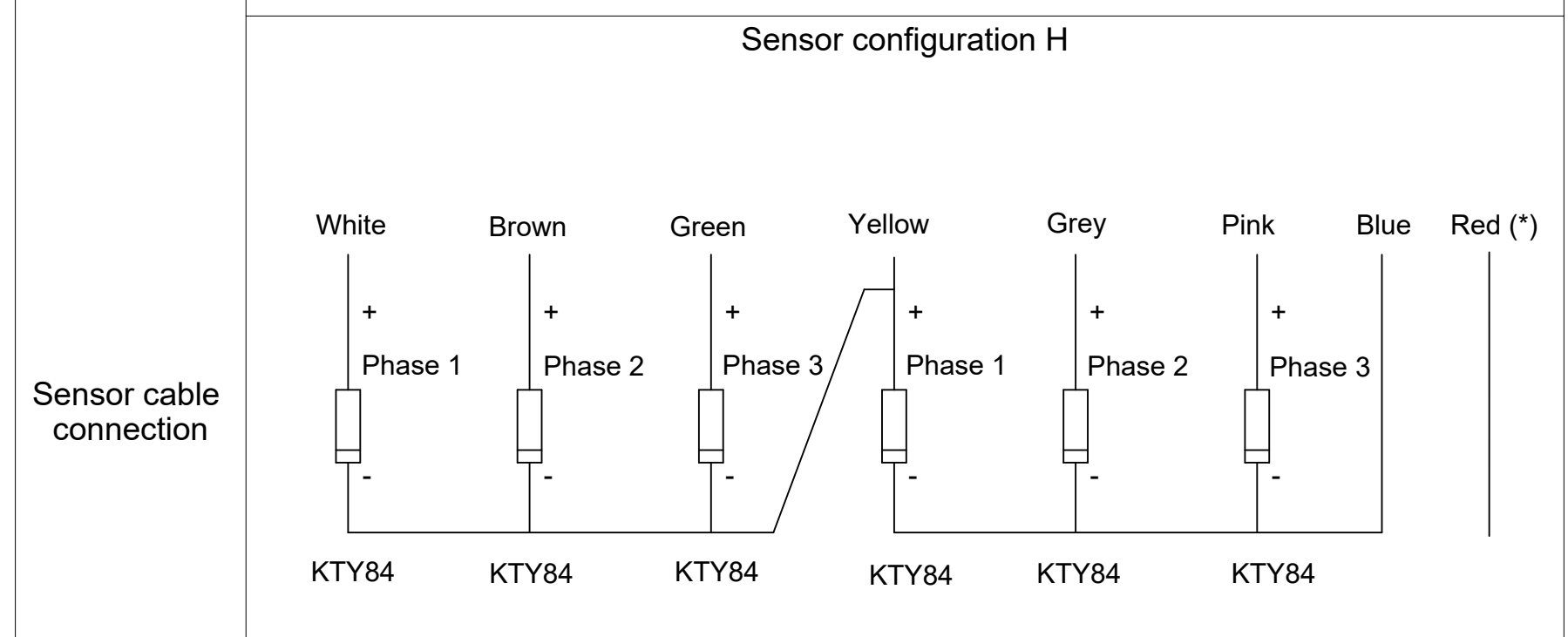
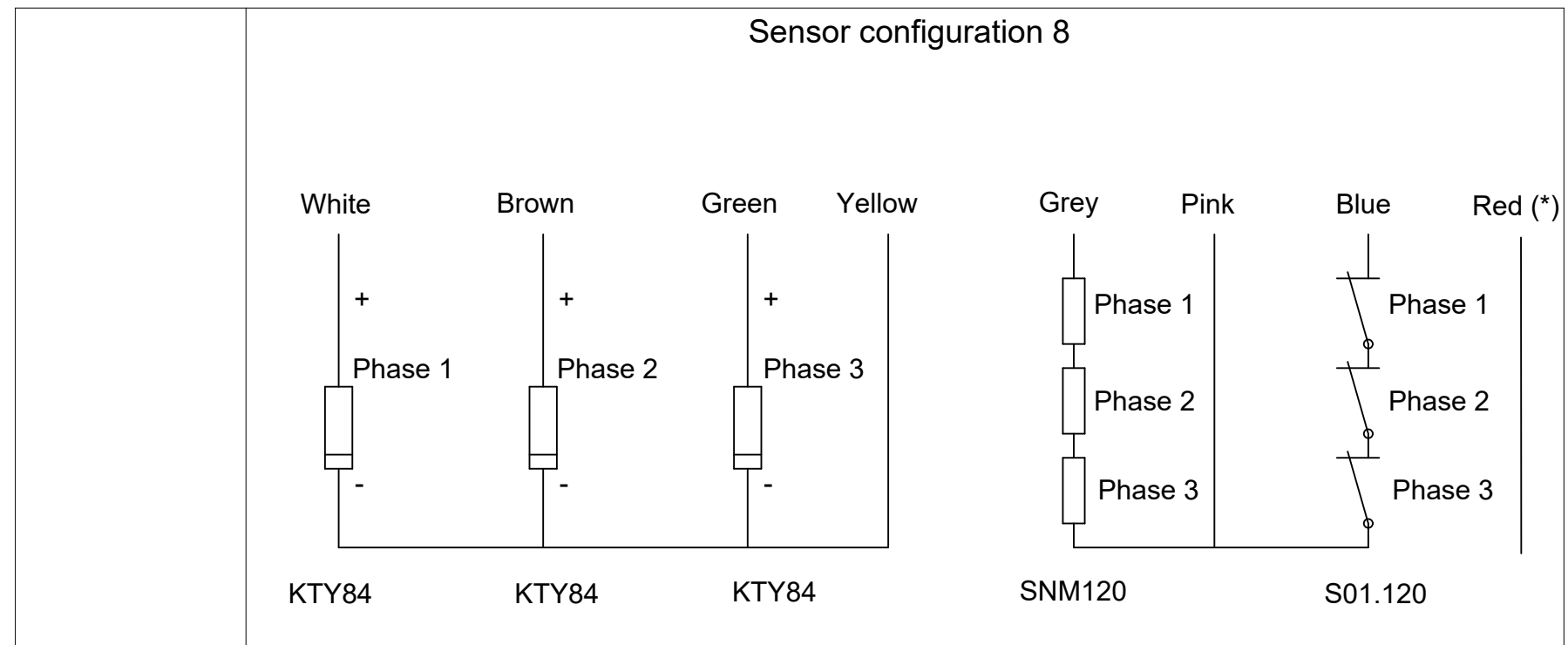
For temperature sensor configuration, see Handbook

ECO N°	29635	Nom	MB0	Date	24.10.2012	Description	
<p>Procédé de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mk</p>							
Matériau		Dimension nominale	Linéaire	Rayon	Chanfrein	Dimension nominale	Equivalence rugosité
Remarque		0.5 - 3	±0.1	±0.2		10 - 100	50 N12
Annexe		3 - 6	±0.1	±0.5		10 - 30	25 N11
		6 - 30	±0.2	±1		10 - 100	12.5 N10
		30 - 120	±0.3	±2		10 - 100	6.3 N9
		120 - 400	±0.5	±4		10 - 100	3.2 N8
		400 - 1000	±0.8	±8		10 - 100	1.6 N7
		1000 - 2000	±1.2	±12		10 - 100	0.8 N6
<p>Arêtes de formes ISO 13715</p>							
<p>Torque motor</p>							
<p>Interface drawing Tmm0210-100 / 150</p>							
<p>Auteur Vérificateur Libérateur</p>							
<p>S. Perrot</p>							
<p>1104.06</p>							
<p>Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite, être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.</p>							
φ 210	k10	φ 14.0	H8	φ 14.0	h6/5	φ 169	min
Cote	Ajustement						
Projection	Format	Echelle	Ancien n°: 0511m-i4.0-05c		Version	Revision	Feuille
	A1	1:1	588602 - 03- A-01				1/1

08
A



FSM N°	Nom	Date	Description: Elbowed output cable removed	
C064986-5	JGU	04.10.17		
Matière:				Equivalence rugosité
Remarque:				Ra µm Classe
Annexe:				50 N12
				25 N11
				12.5 N10
				6.3 N9
				3.2 N8
				1.6 N7
				0.8 N6
				0.4 N5
				0.2 N4
				0.1 N3
				0.05 N2
				0.025 N1
Arêtes de formes ISO 13715	Torque motor TMM & TML 210 cables outputs		Auteur	Vérificateur
↙ -0.3 ↘ +0.3	Moteur coupleur fer TMM & TML 0210 sorties de câbles		S. Perrot	-
ETEL S.A. CH-2102 Mülheim SWITZERLAND		Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite, être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.	18.07.2005	-
Projection	Format	Echelle	Ancien n°	Version
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			Feuille	
			1/1	



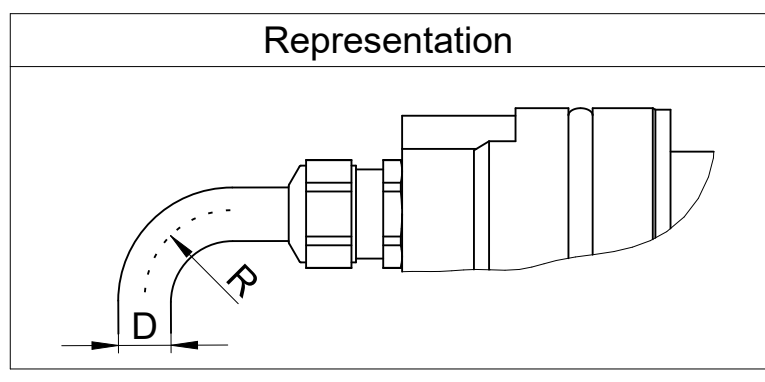
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

Wire section (mm²)

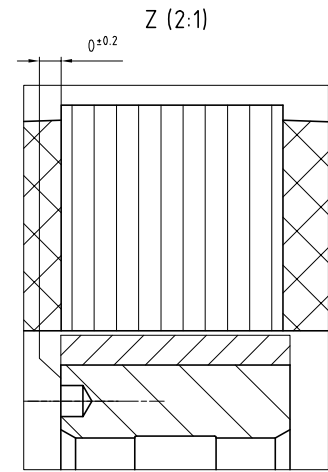
Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D



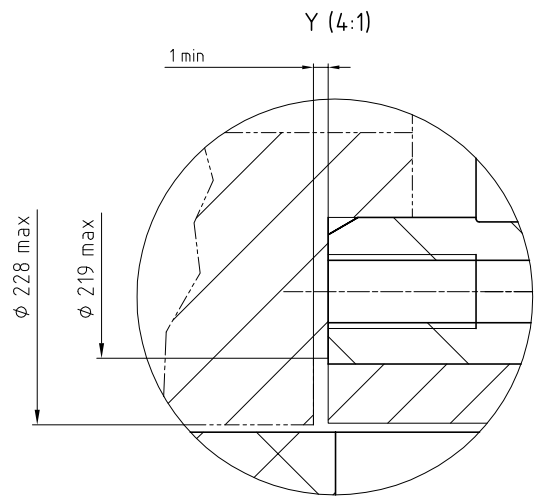
(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

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Scale		Released: 20-Sep-22	
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Dimensions in mm		Tolerances selon ISO 8015 : 2011	
1:1		Dimensions without tolerance ± 0,2	
A2		Dimensions sans tolérances	
Mating Dimensions / Cotes d'encombrement			
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ETEL		ETEL S.A. 2112 Môtiers SWITZERLAND	
Version		Revision	
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1		1	
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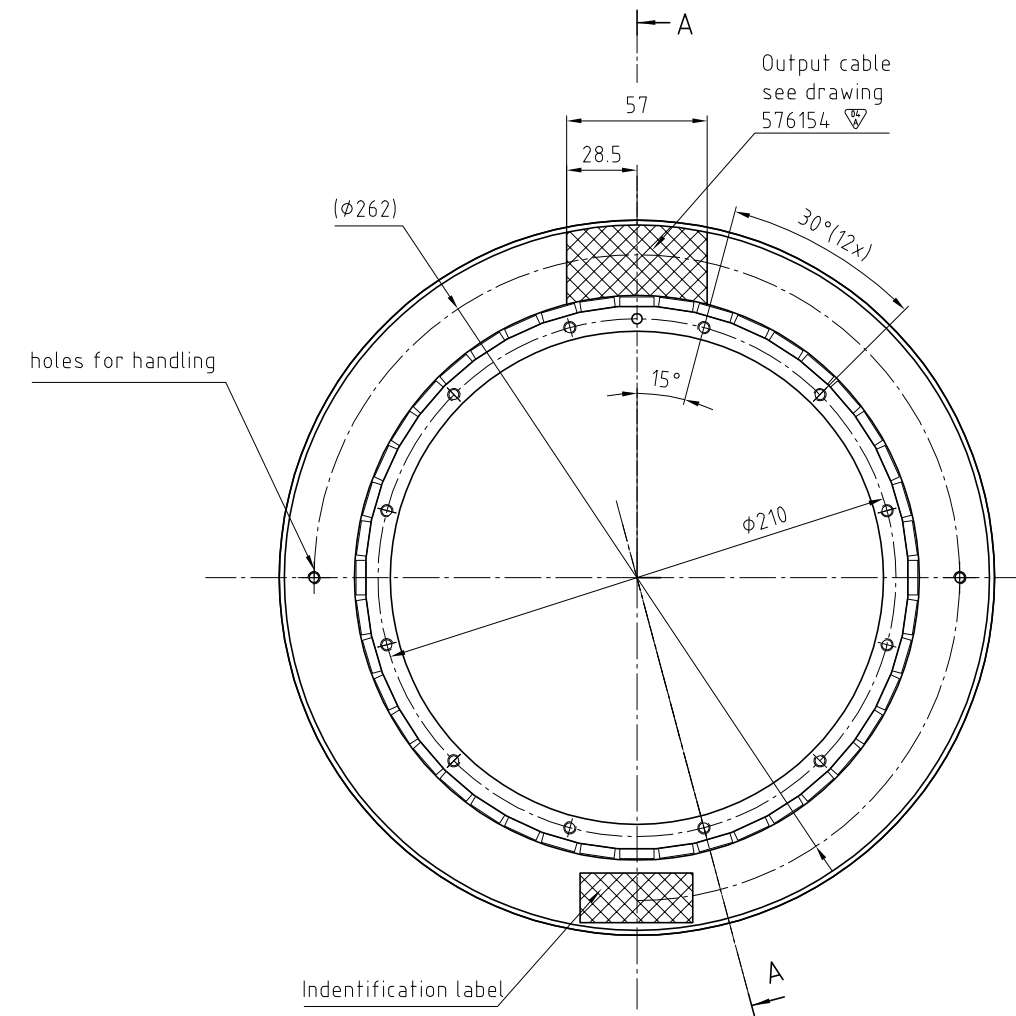
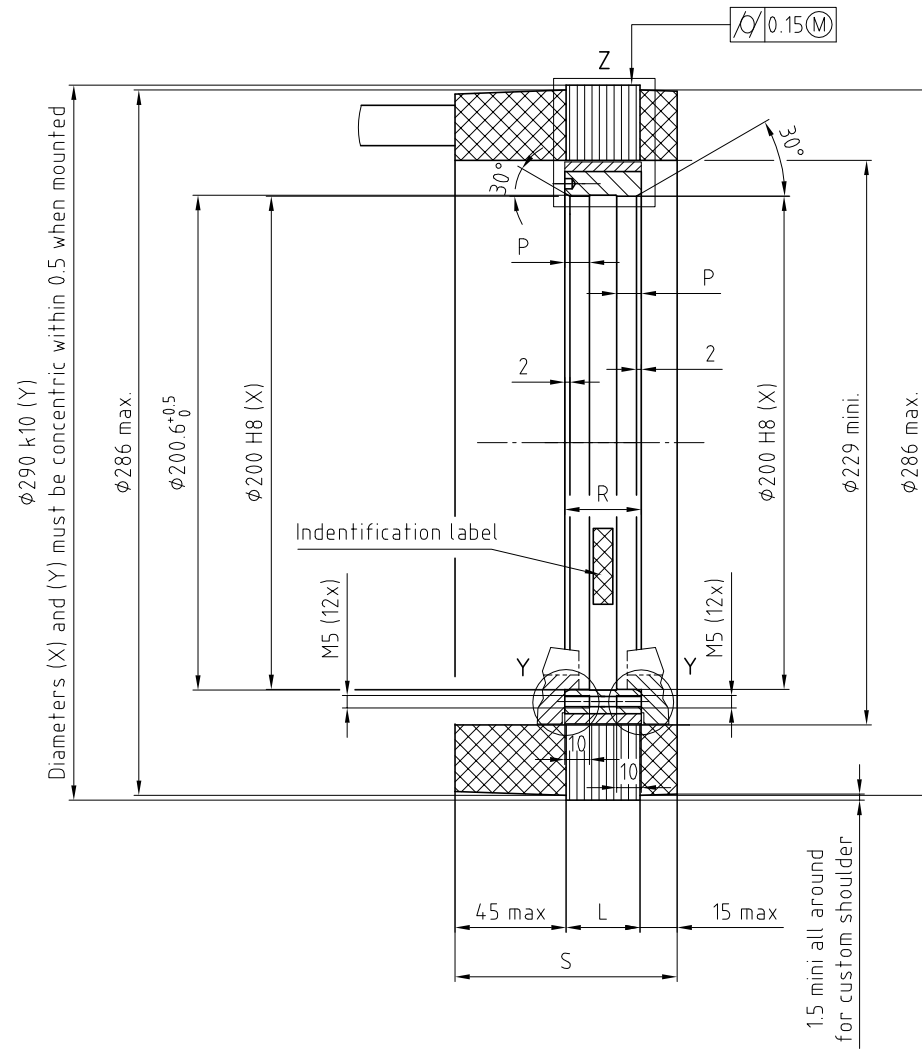
Mounting condition



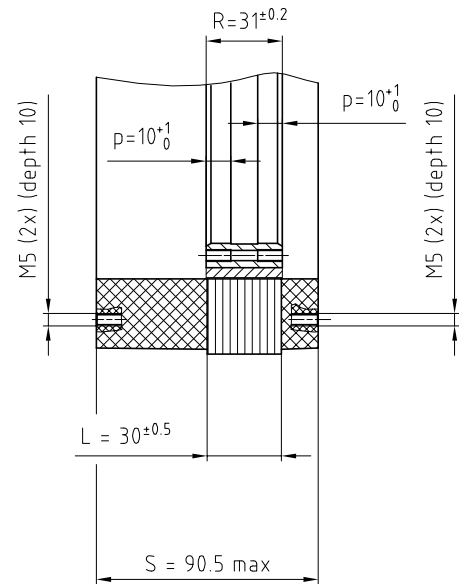
Detail: Y
Magnets safety clearance



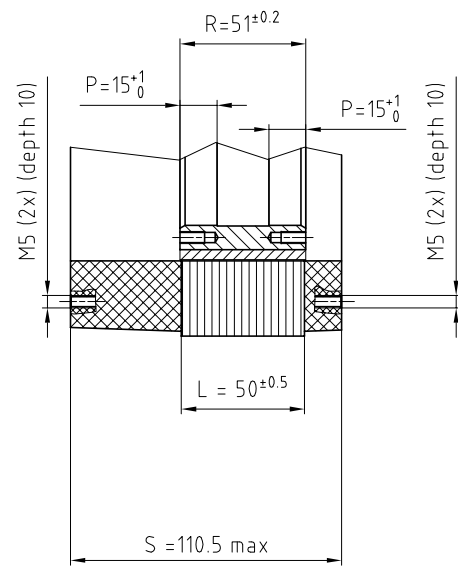
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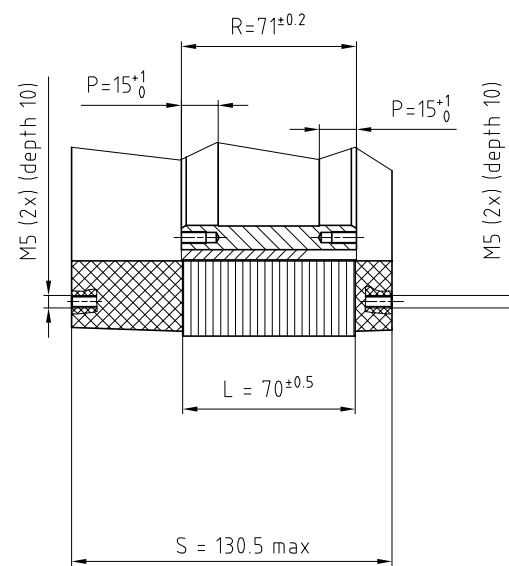
Tmm0291-030



Tmm0291-050



Tmm0291-070



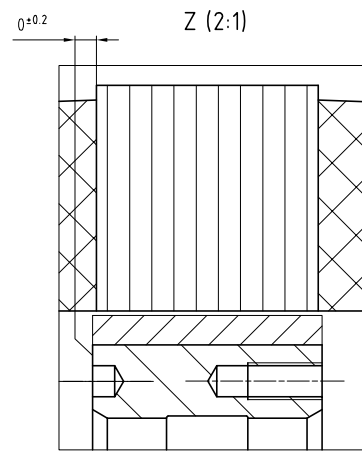
Power cable connection

- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

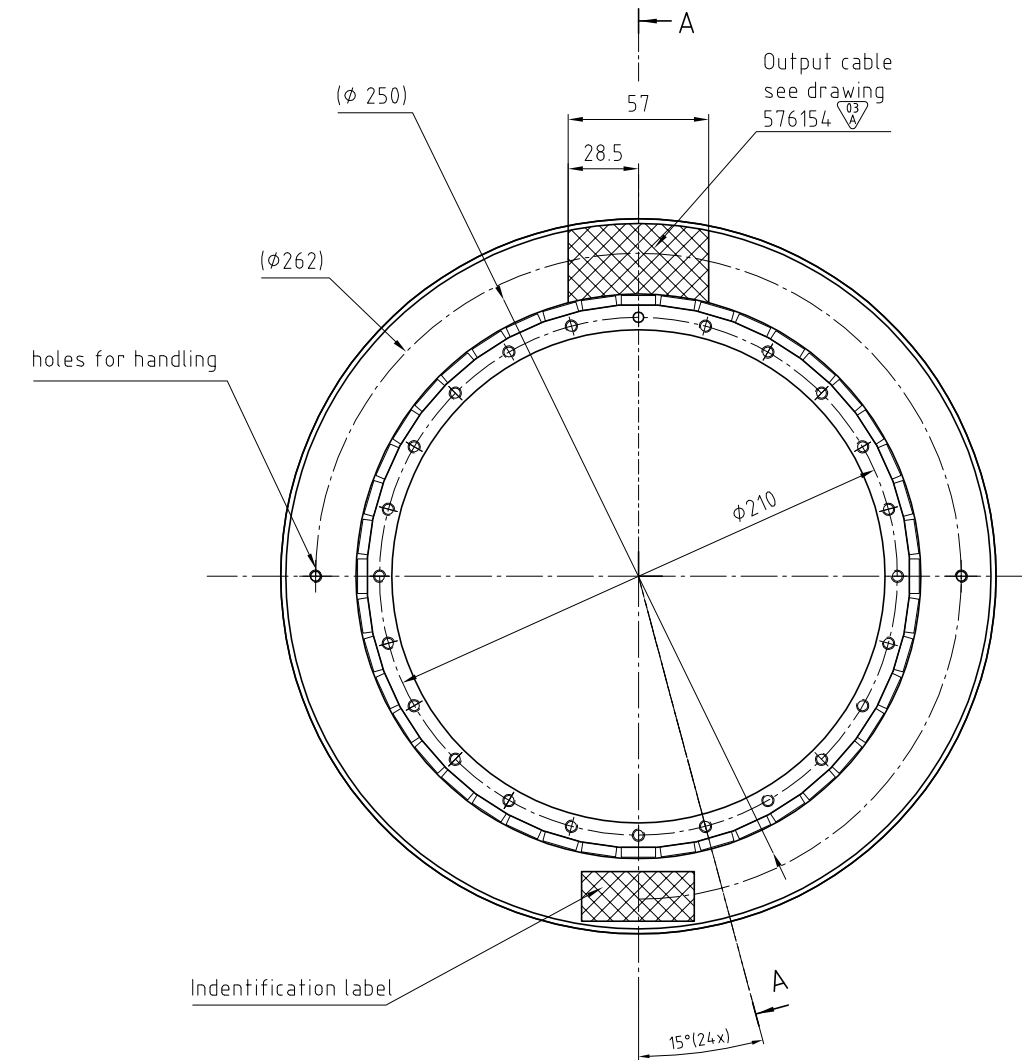
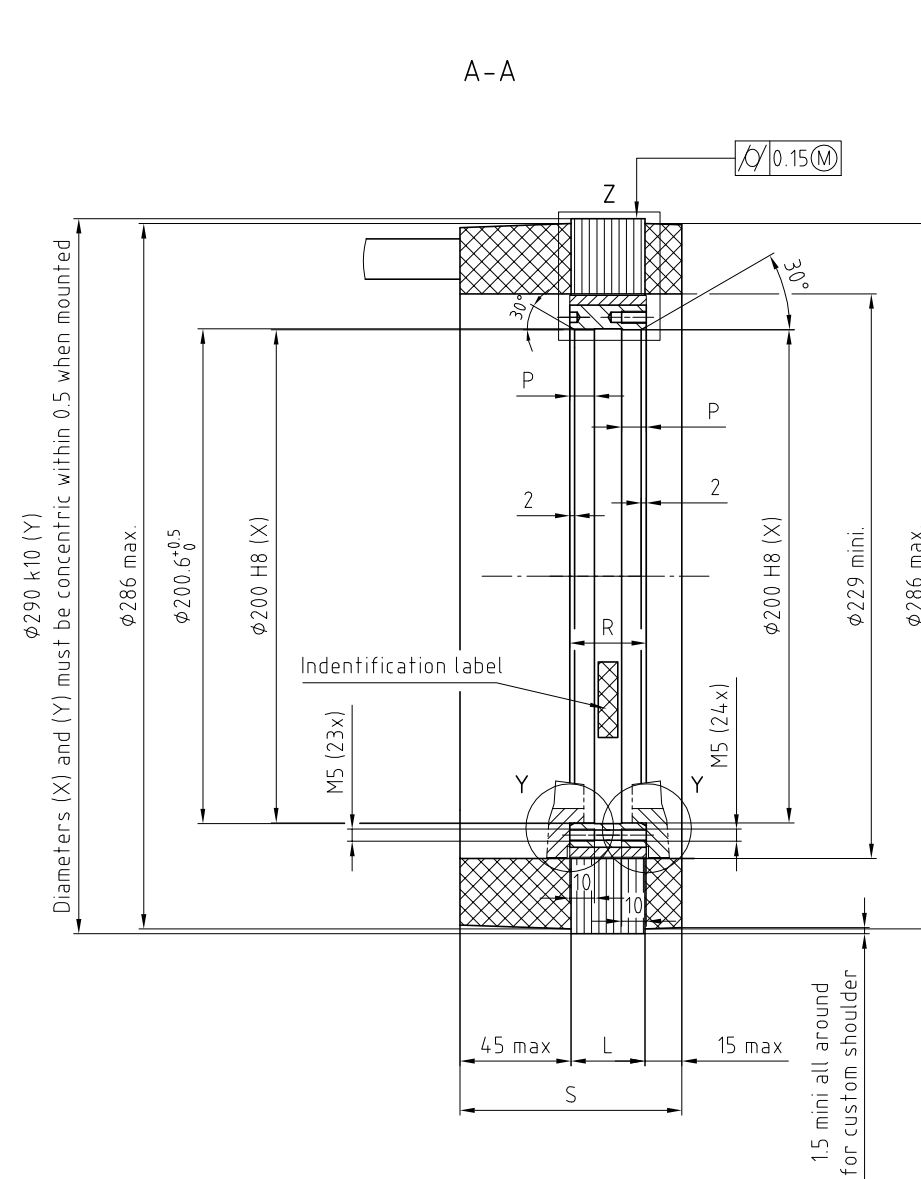
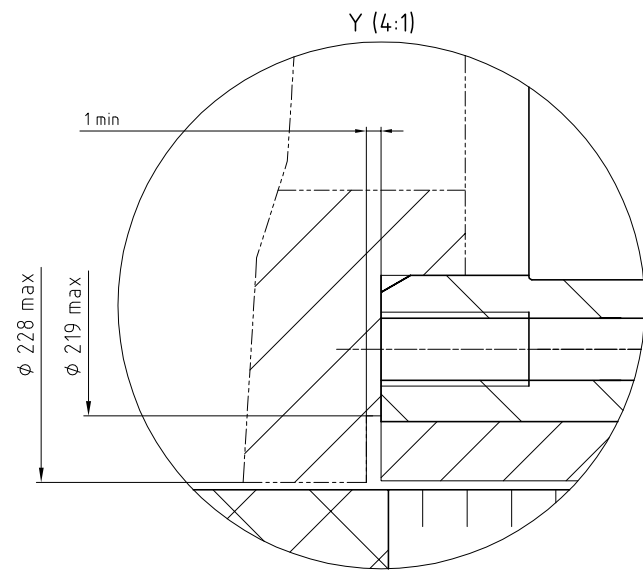
For temperature sensor configuration, see Handbook

ECO N°	29021	Nom	MB0	Date	23.10.2012	Description	
<p>Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mk</p>							
Dimension nominale		Linéaire	Rayon	Chanfrein	Dimension nominale		
3 - 4		+0.1	+0.2	+0.5	10	0.05	0.4
6 - 30		+0.2	+1	+1	30	0.1	0.6
30 - 120		+0.3	+2	+2	100	0.2	0.6
120 - 400		+0.5	+4	+4	300	0.4	0.6
400 - 1000		+0.8	+8	+8	1000	0.6	0.8
1000 - 2000		+1.2	+12	+12	2000	0.8	1
<p>Arêtes de formes ISO 13715</p>							
L=0.3		L=0.3		Torque motor			
10.0166		10.0166		S. Perrot			
<p>Interface drawing Tmm0291-030 / 050 / 070</p>							
φ290	k10	+0.21	290	Echelle			
φ200	H8	+0.072	200	A1			
Cote		Ajustement		1:1.5			
<p>ETEL S.A. - 01-2102 - Mülheim - SWITZERLAND</p>				<p>582053 - 04 - A-01</p>			

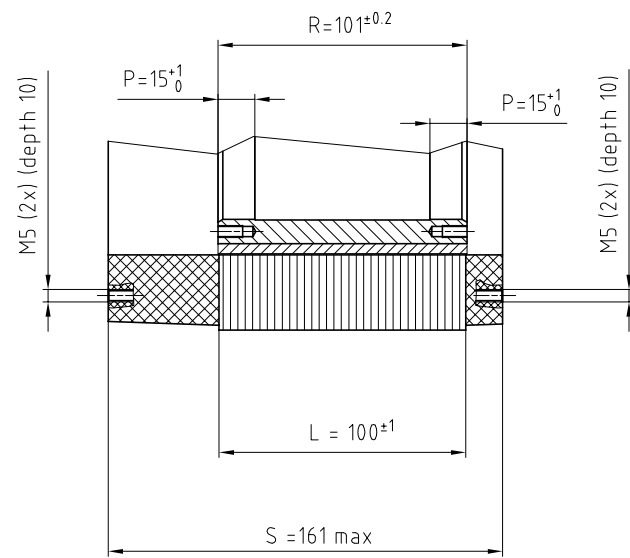
Mounting condition



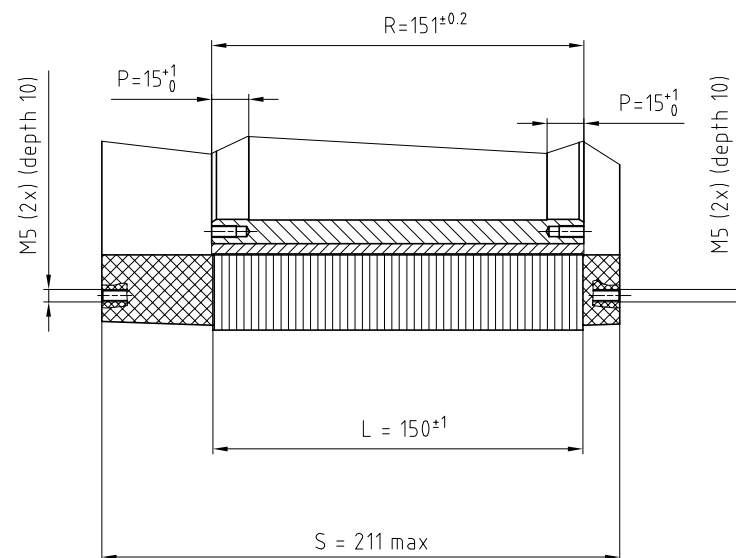
Detail: Y Magnets safety clearance



Tmm0291-100



Tmm0291-150

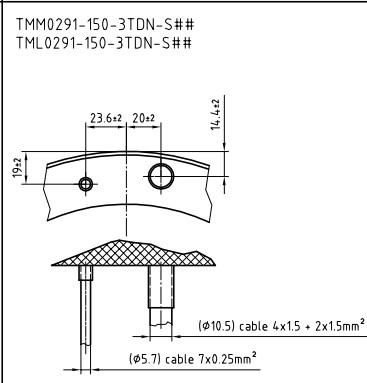
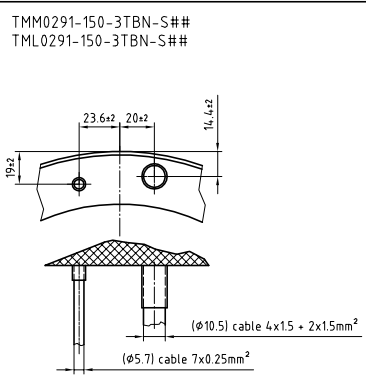
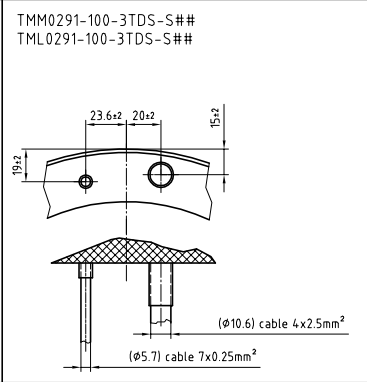
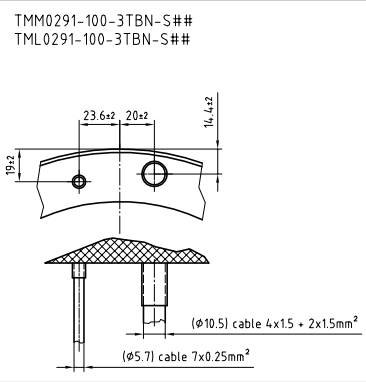
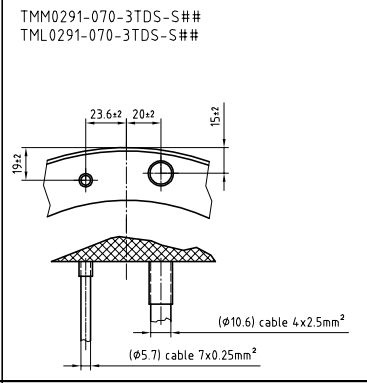
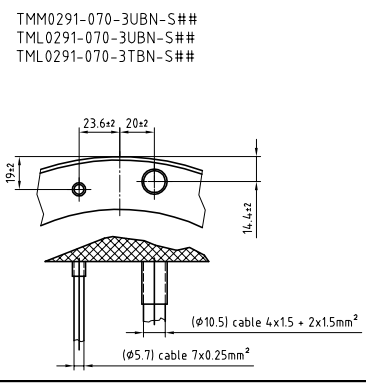
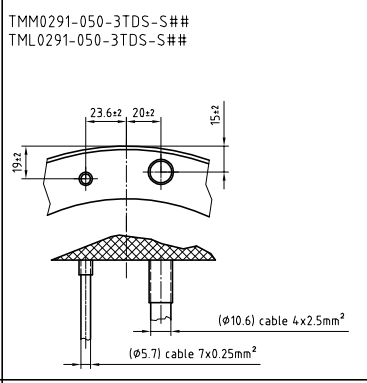
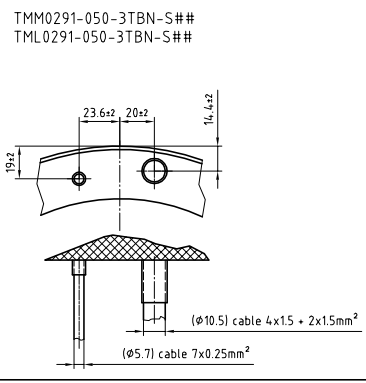
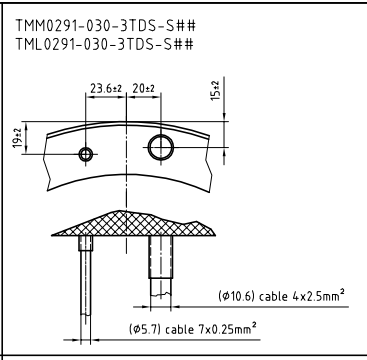
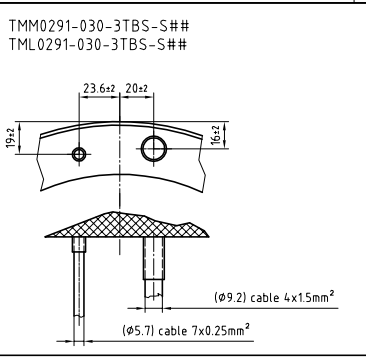


Power cable connection

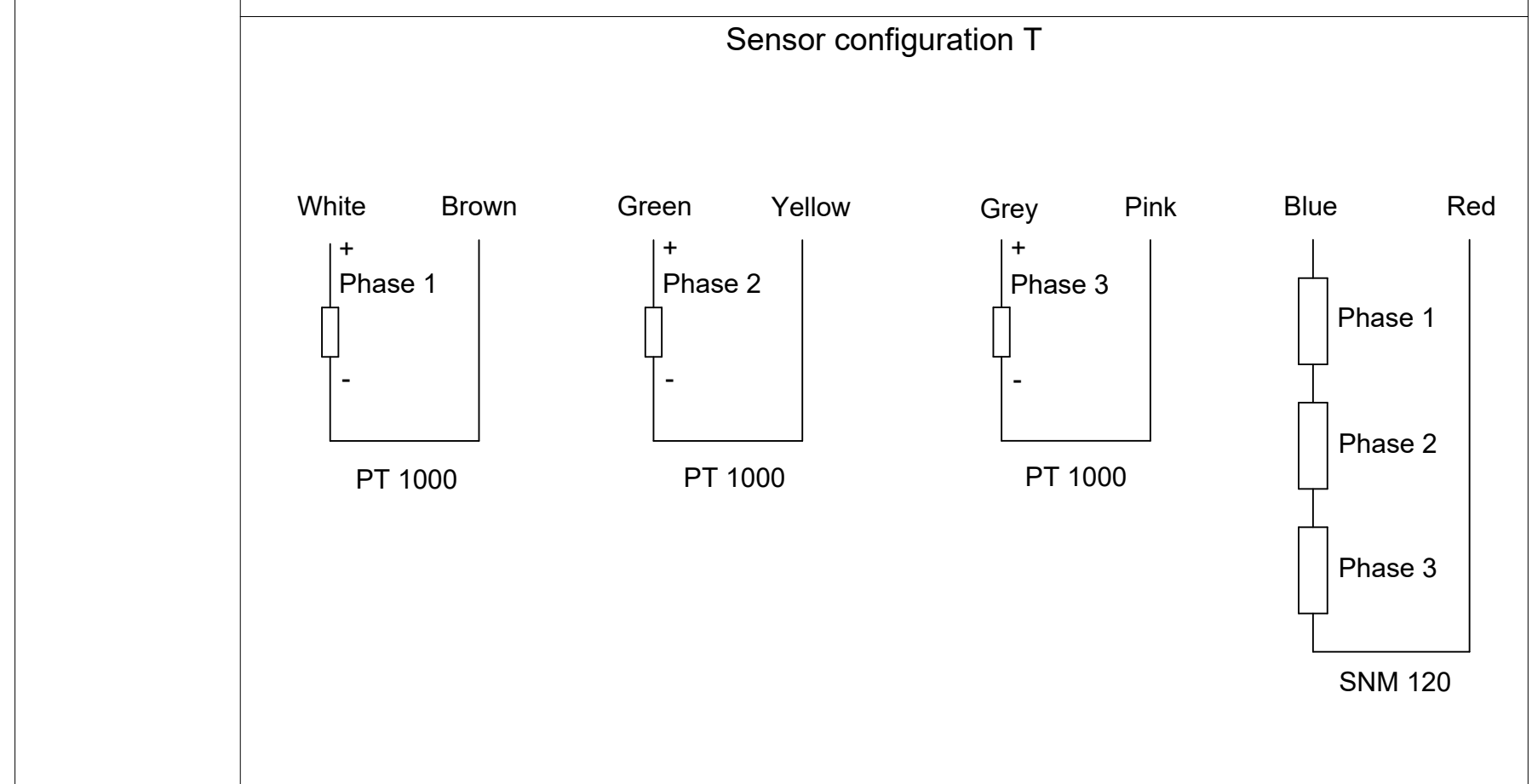
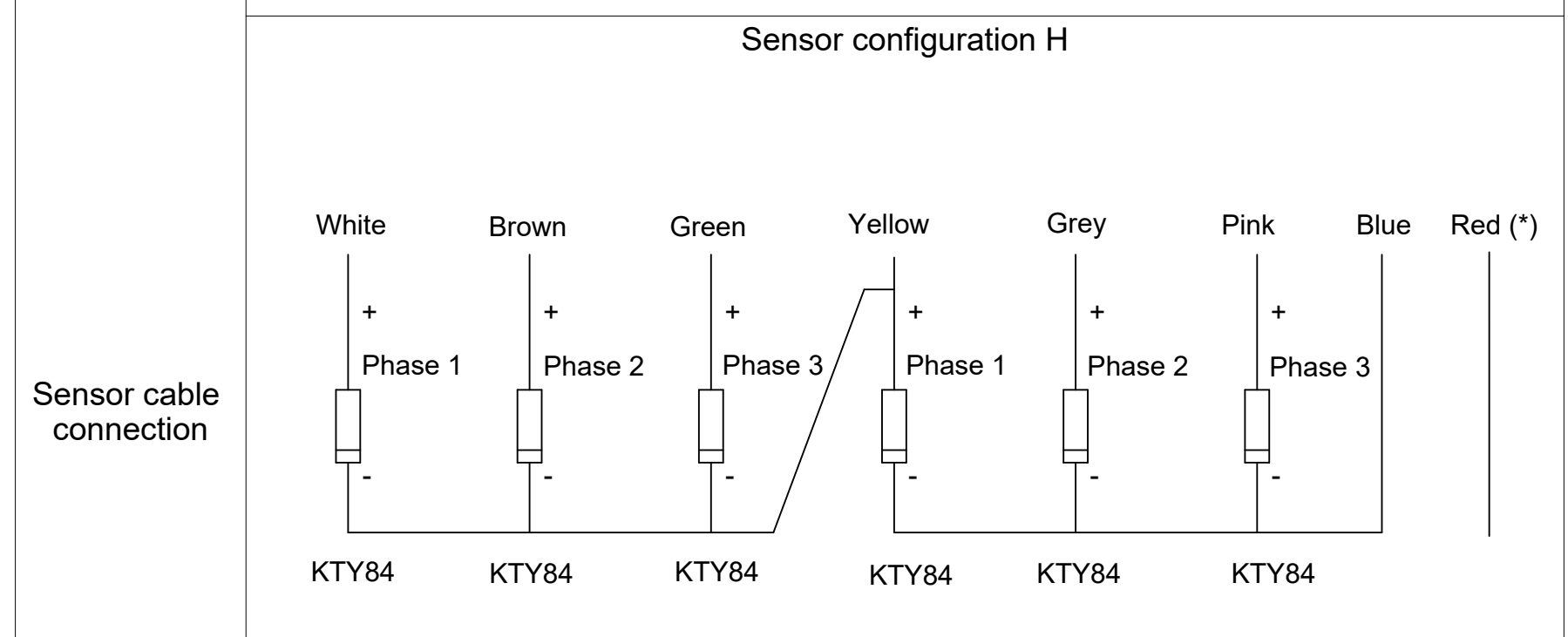
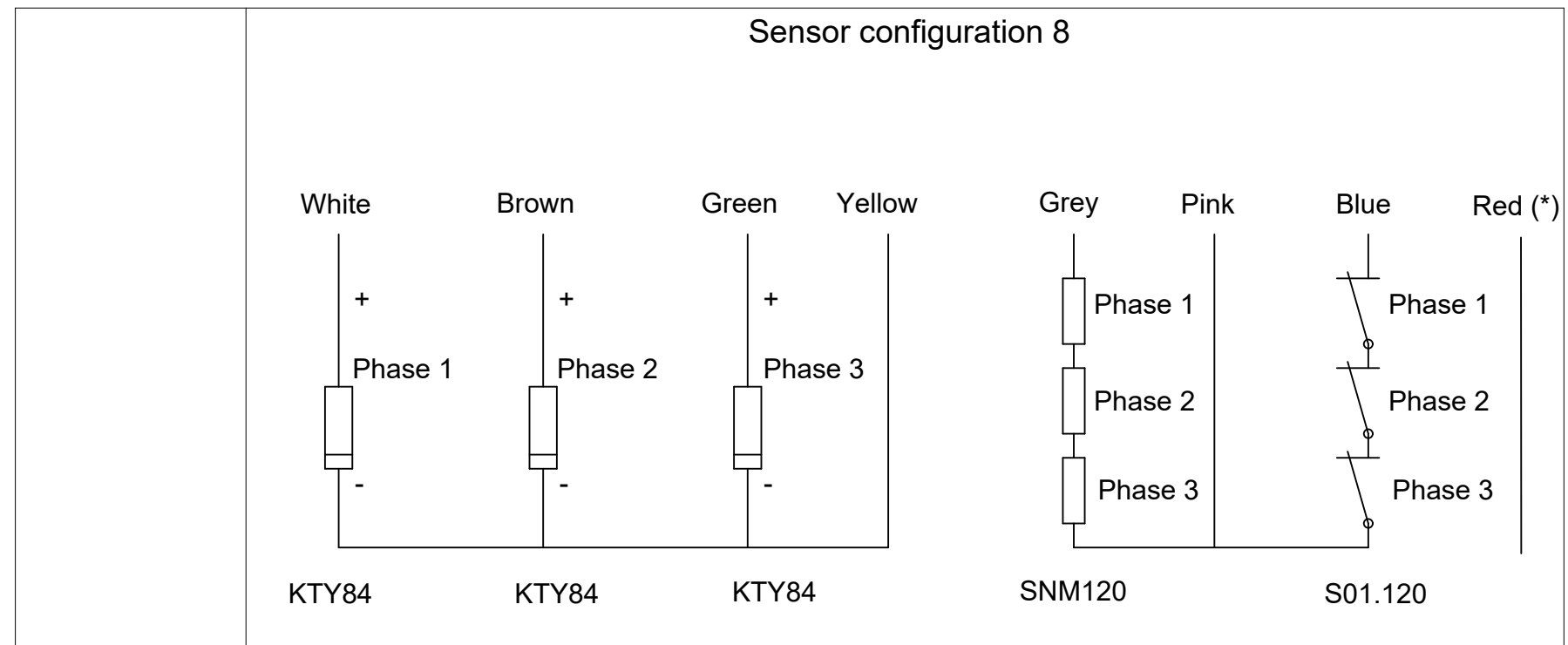
- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

For temperature sensor configuration, see Handbook

ECO N°	29021	Nom	MBO	Date	25.10.2012	Description							
<p>Procédé de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mk</p>													
Matériau							Equivalence rugosité						
Remarque	Dimension nominale	Linéaire	Rayon	Chanfrein	Dimension nominale	Ra µm	Classe						
Annexe	0,5 - 3	±0,1	±0,2	α	10	0,05	0,4						
	3 - 6	±0,1	±0,5	α	10 - 30	0,1	0,4						
	6 - 30	±0,2	±1	α	30 - 100	0,2	0,4						
	30 - 120	±0,3	±2	α	100 - 300	0,4	0,6						
	120 - 400	±0,5	±4	α	300 - 1000	0,6	0,8						
	400 - 1000	±0,8	±6	α	1000 - 3000	0,8	1						
	1000 - 2000	±1,2	±10	α									
Arêtes de formes ISO 13715	Torque motor						Auteur	Vérificateur	Libérateur				
±0,3							S. Perrot						
Interface drawing Tmm0291-100 / 150							12.04.06						
φ290	k10	±0.21	290.21	290									
φ200	H8	±0.072	200.072	200									
Cote	Ajustement												
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ETEL S.A.		CH-2102 Môtiers		SWITZERLAND		Projection	Format	Echelle	Ancien n°	Version	Revision	Feuille	Page
						1st	A1	1:1.5	588613	- 03-	A-01	1/1	



FSM N° C064306-S	Non	Date 05.10.17	Description: Elbowed output cable removed
Matière:			Équivalence rugosité
Remarque:			50 µm Classe
Annexe:			50 25 0.5 6.3 3.2 1.6 0.8 0.4 0.2 0.1 0.05 0.025
Arêtes de formes ISO 9315		Torque motor TMM & TML0291 cables outputs	Auteur: S. Bernini
1x3			Vérificateur: -
1x3			Libérateur: -
Meilleur couple for TMM & TML0291 series de câbles			Date: 22.09.2015
Ces plans sont réservés à l'usage interne de la division. Toute réimpression sans autorisation écrite de STET est formellement interdite. STET S.A. - CH-2700 Nyon - SWITZERLAND		Projection: A1	Version: 05.16mm-14.0-01
Echelle: 1/1		Access: 576154 -06-A-01	



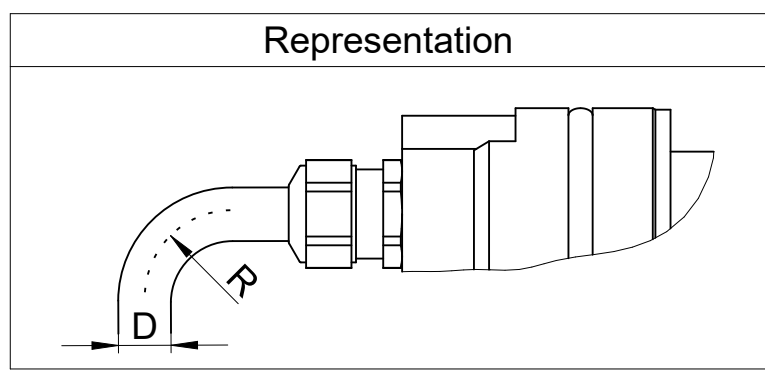
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

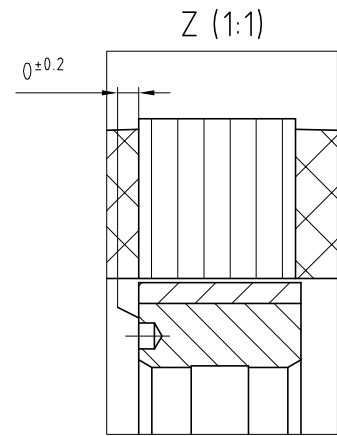
Wire section (mm²)

Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D

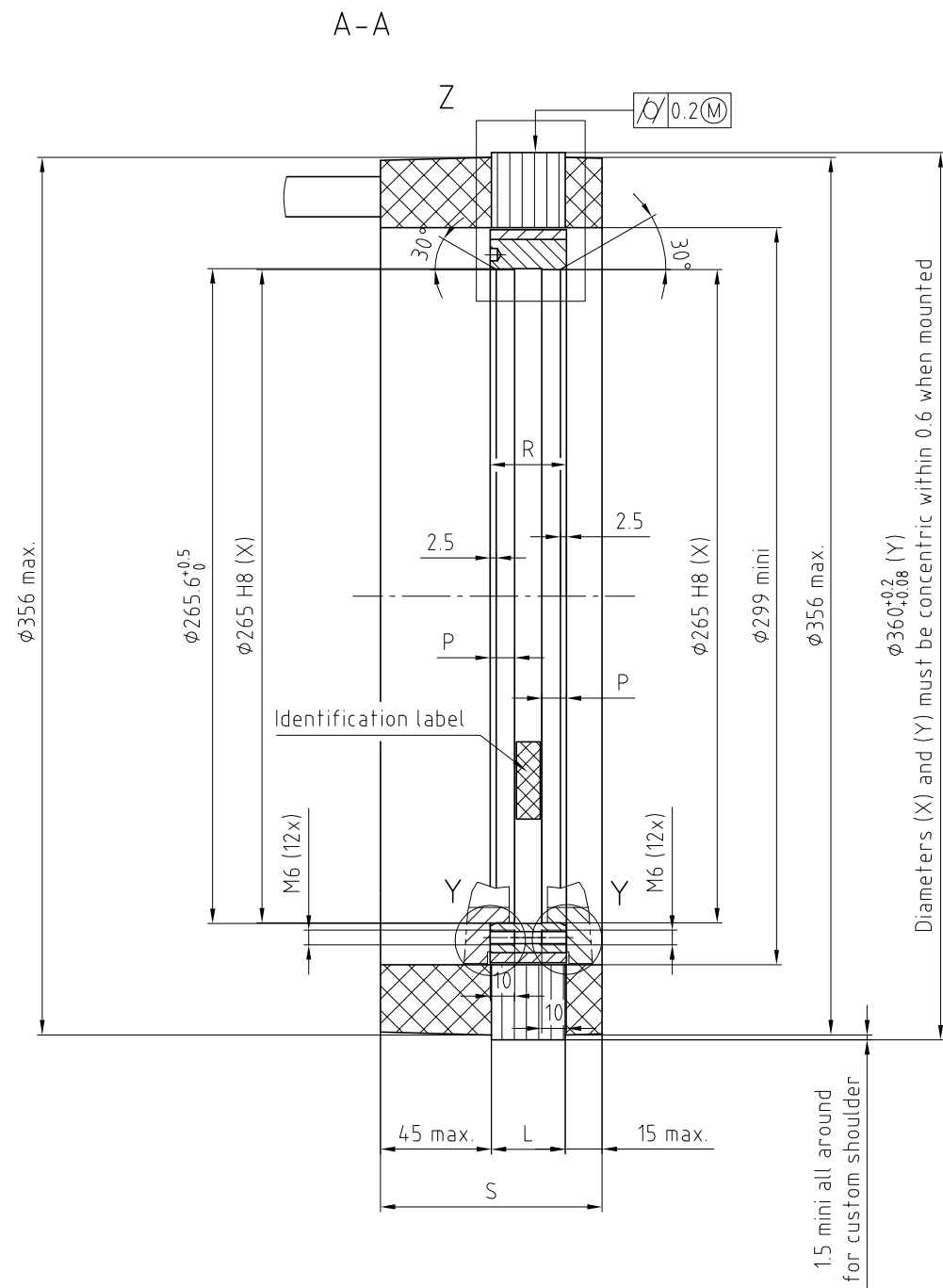
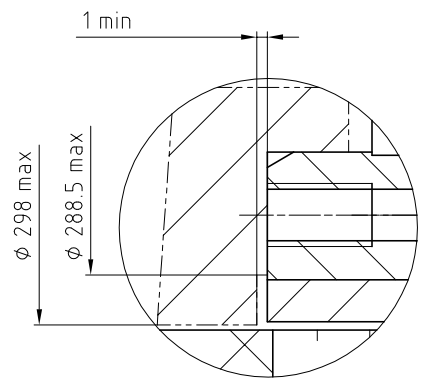


(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

Text:		ID number:
Original drawing		Change No. C145178-05
Scale		Released: 20-Sep-22
Format		Tolerances as per ISO 8015 : 2011
Dimensions in mm		Tolerances selon ISO 8015 : 2011
1:1	A2	Dimensions without tolerance ± 0,2
Mating Dimensions / Cotes d'encombrement		Dimensions sans tolérances
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ETEL ETEL S.A. 2112 Môtiers SWITZERLAND		Version Revision Sheet Page
1389869-00 - A-01		1 of 1
Document number		

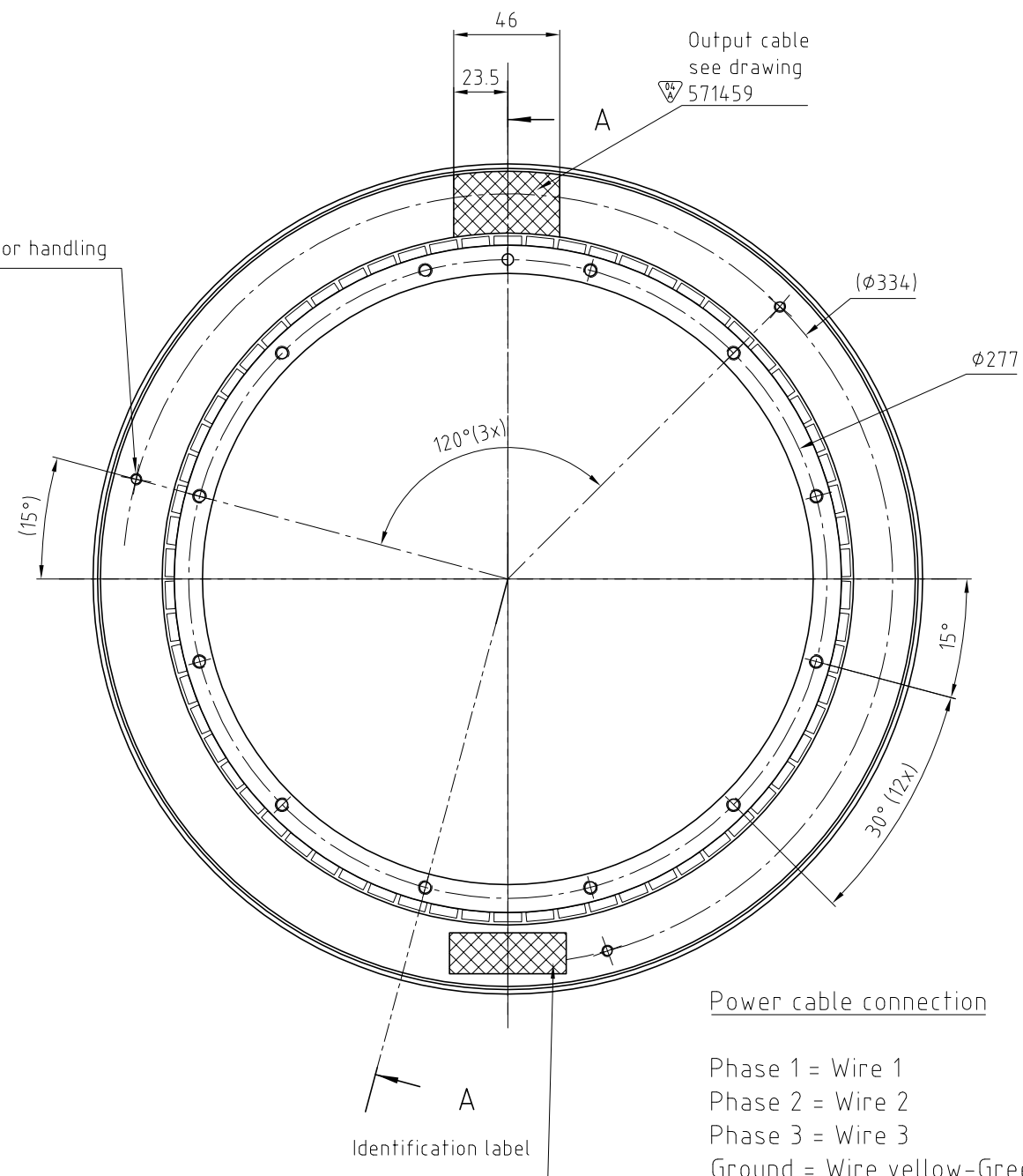


Detail: Y
Magnets safety clearance
Y (2:1)



Diameters (X) and (Y) must be concentric within 0.6 when mounted

holes for handling



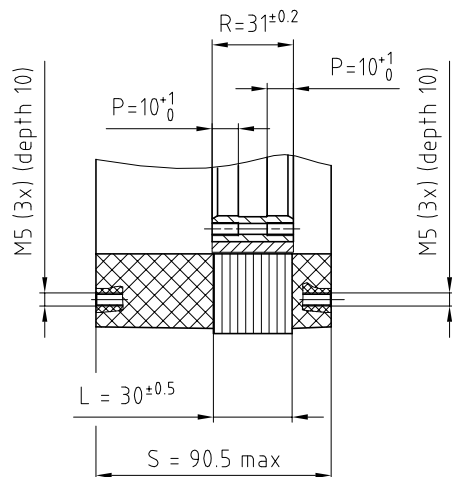
Output cable
see drawing
571459

Power cable connection

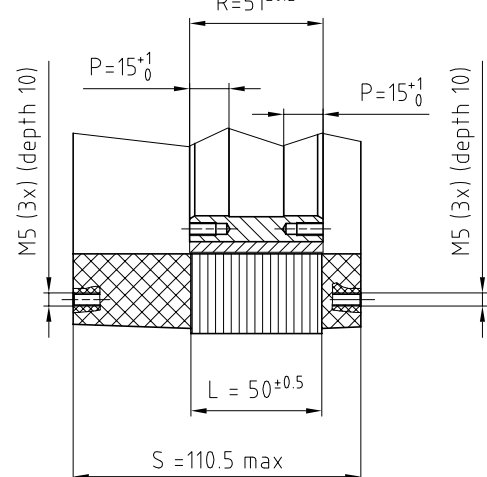
- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

Ø265	H8	+0.081	0.265	0.081	265
Cote	Ajustement				

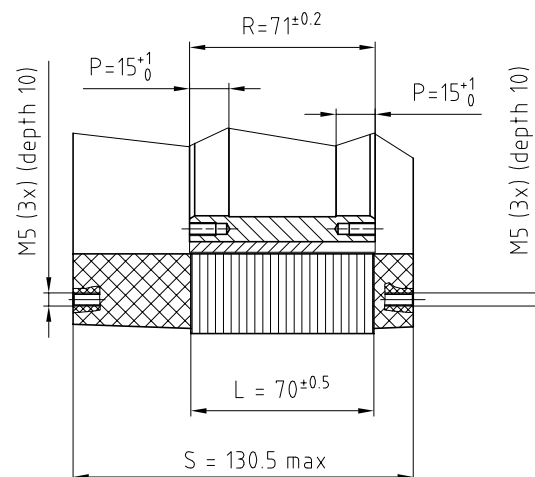
Tmm0360-030



Tmm0360-050



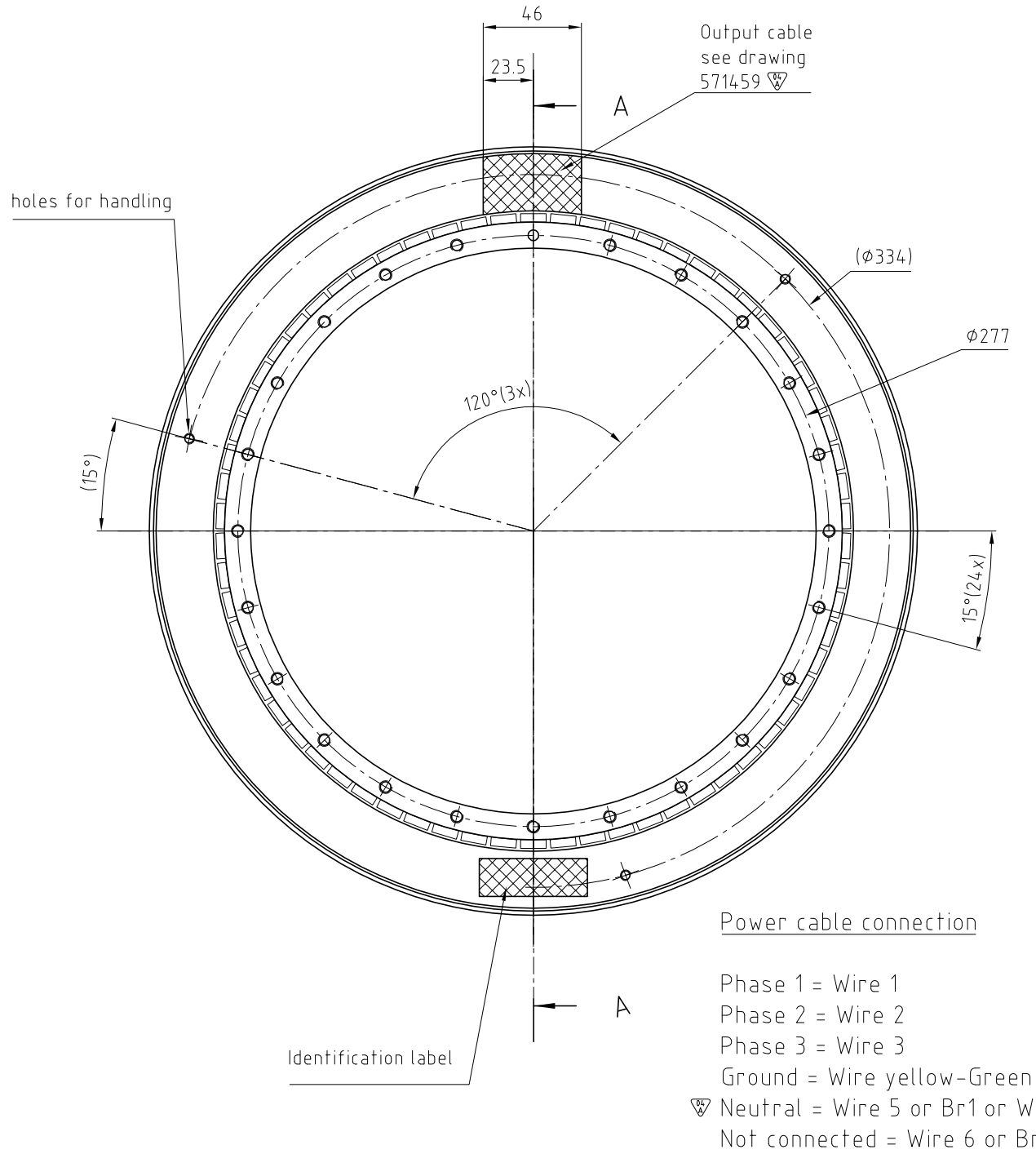
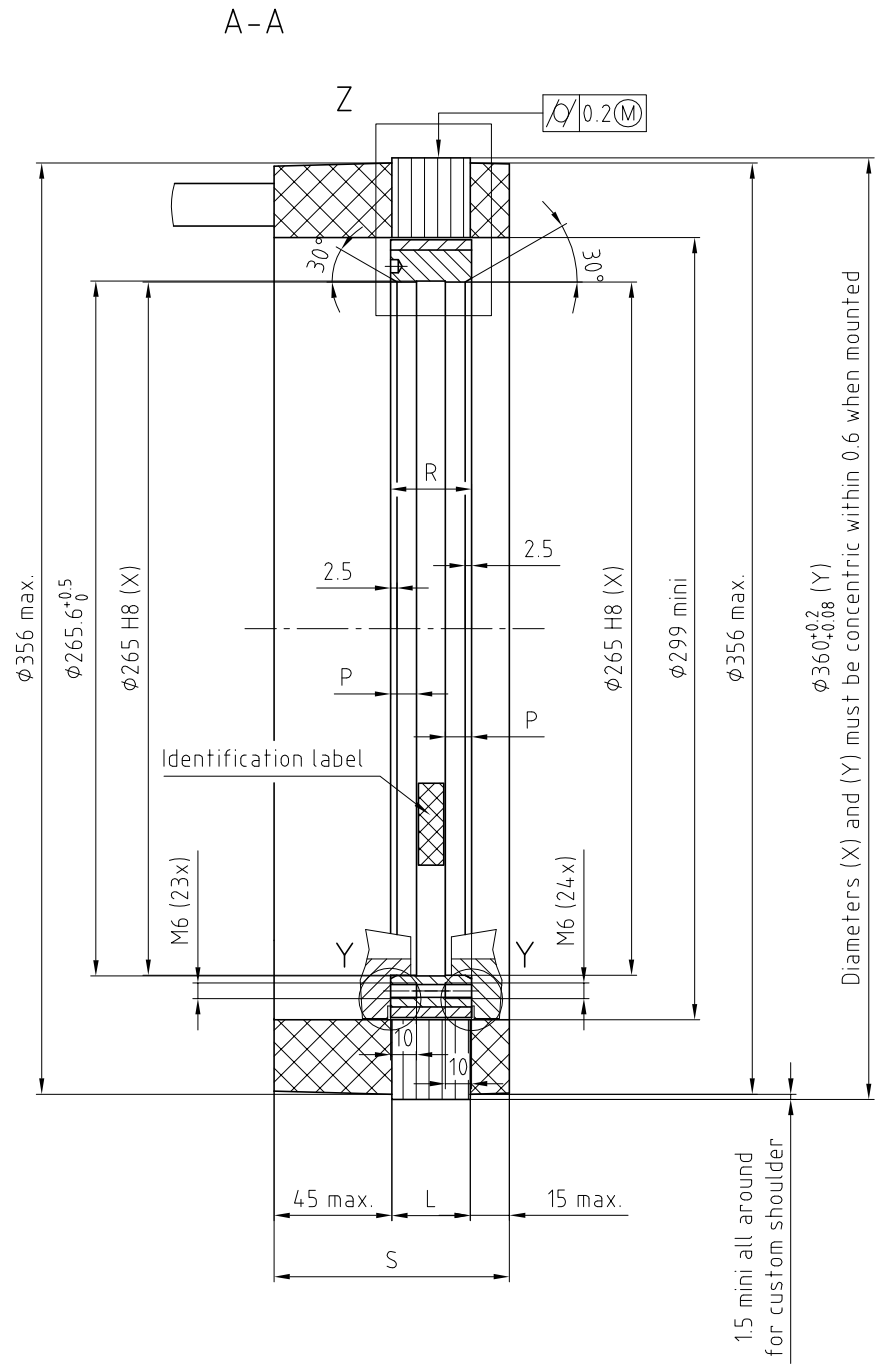
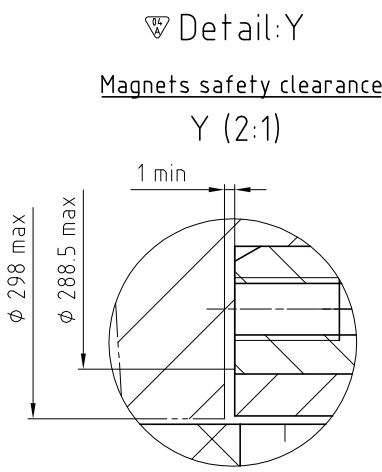
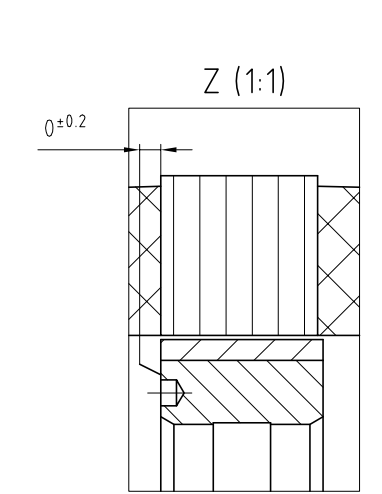
Tmm0360-070



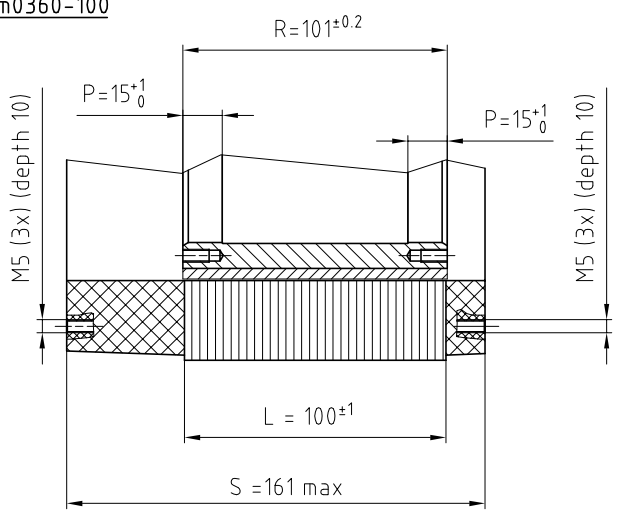
For temperature sensor configuration, see Handbook

ECO N° C29035	Nom MBO	Date 18.10.2012	Description	Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mK						Equivalence rugosité				
				Dimension nominale	Linéaire	Rayon Chanfrein	α	Dimension nominale	Ra		Classe			
Remarque	Annexe	Arêtes de formes ISO 13715 -0,3	Torque motor Interface drawing Tmm0360-030 / 050 / 070	0,5 ... 3	±0,1	± 0,2	Lks	10	0,05	0,4	0,6	50	N12	
				> 3 ... 6	±0,1	± 0,5		30	0,1	0,4	0,6	12,5	N10	
				> 6 ... 30	±0,2	± 1	α	100	0,2	0,4	0,6	6,3	N9	
				> 30 ... 120	±0,3	± 2		30	0,2	0,4	0,6	0,2	3,2	N8
				> 120 ... 400	±0,5	± 4	50	0,4	0,6	0,6		1,6	N7	
				> 400 ... 1000	±0,8		120	0,6	0,8	0,8		0,8	N6	
				> 1000 ... 2000	±1,2		400	0,8	1	1		0,4	N5	
								1000	0,8	1	1	0,2	N4	
												0,1	N3	
												0,05	N2	
												0,025	N1	
ETEL S.A. CH-2112 Möllers SWITZERLAND				Projection	Format	Echelle	Ancien n° : 0521m-i4.0-04 d		Version	Revision	Feuille	Page		
560647 - 04 - A-01				A2	A2	1:2	560647 - 04 - A-01				1/1			

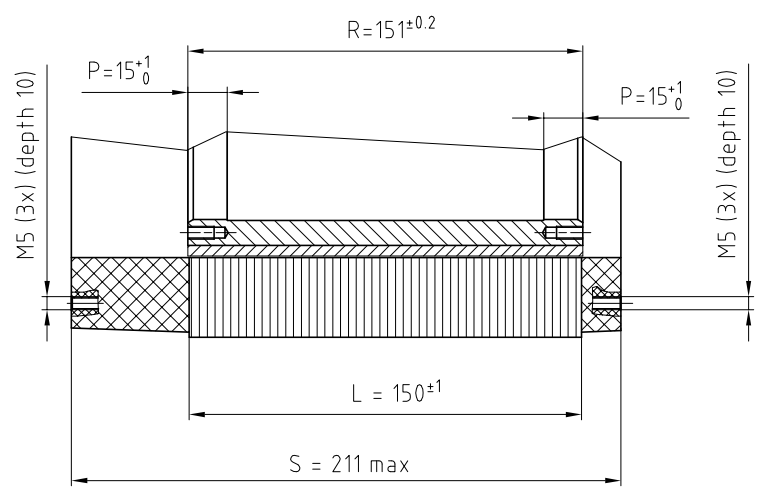
F E D C B A



Tmm0360-100



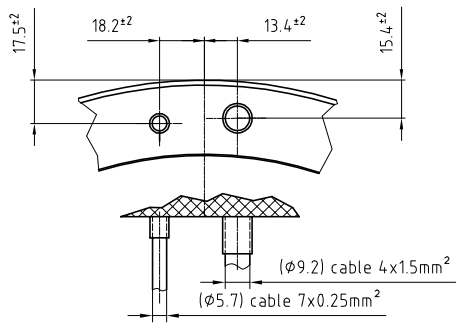
Tmm0360-150



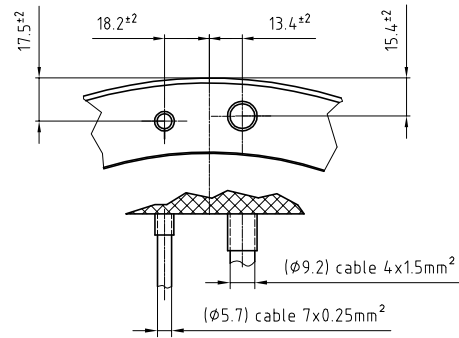
For temperature sensor configuration, see Handbook

ECO N° C29035	Nom MBO	Date 23.10.2012	Description
Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mK			
Matière:	Dimension nominale	Linéaire	Rayon Chanfrein
	Remarque:	Annexe:	Equivalence rugosité
Arêtes de formes ISO 13715		Torque motor	Auteur
Interface drawing Tmm0360-100 / 150		Vérificateur	
Cote Ajustement		Libérateur	
Projection		Auteur	
Format		S.Perrot	
Echelle		06.07.05	
Ancien n° : 0521m-i40-05d		Version	
560643 - 04 - A-01		Revision	
Numero de document		Feuille	
		Page	

TMM0360-030-3VAS-S##
TML0360-030-3VAS-S##

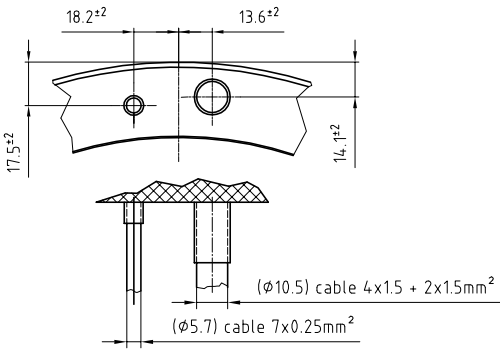


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TML0360-030-3VBS-S##

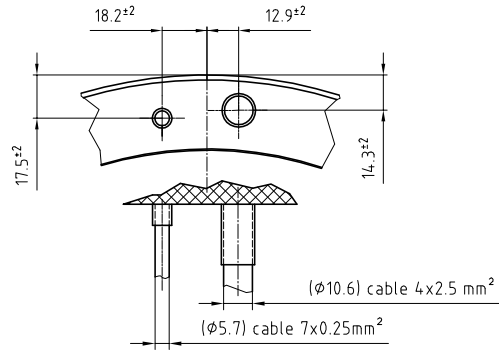


07
A

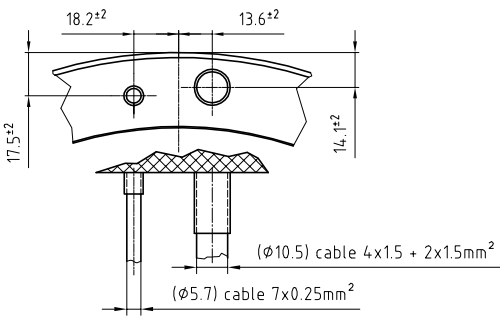
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TML0360-050-3VAN-S##



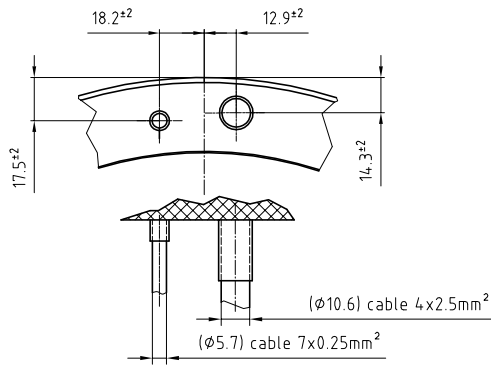
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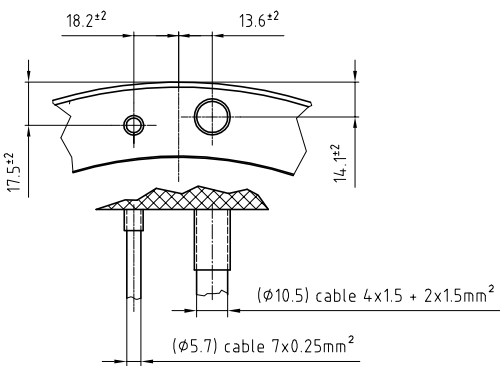
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TML0360-070-3VBN-S##



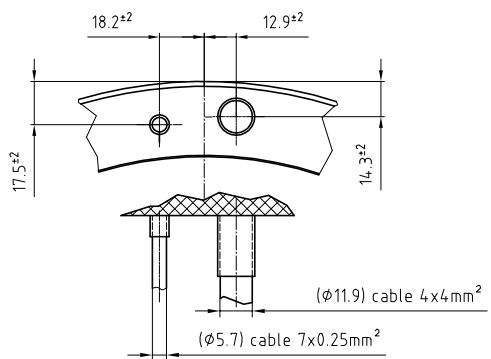
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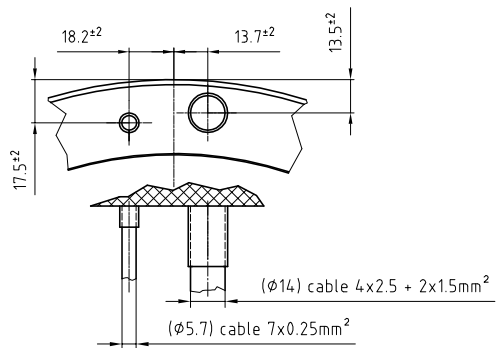
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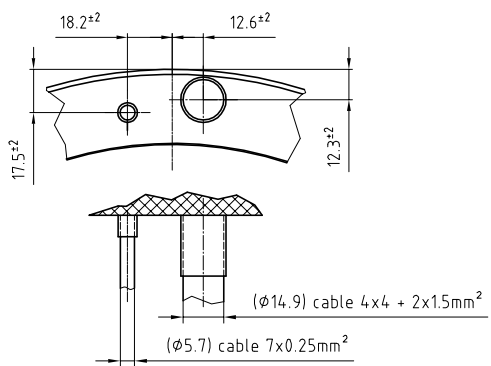
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TML0360-100-3TFS-S##



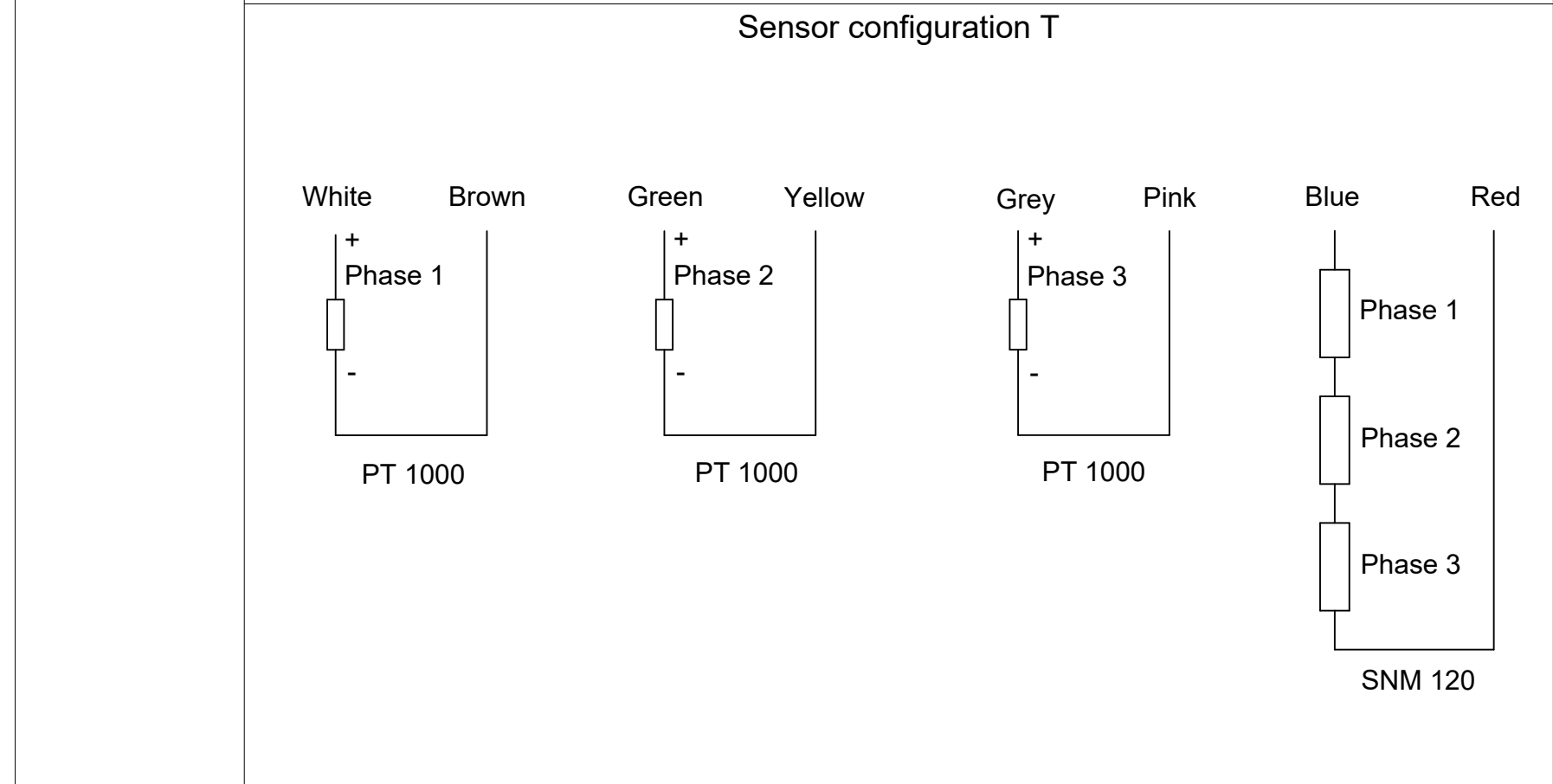
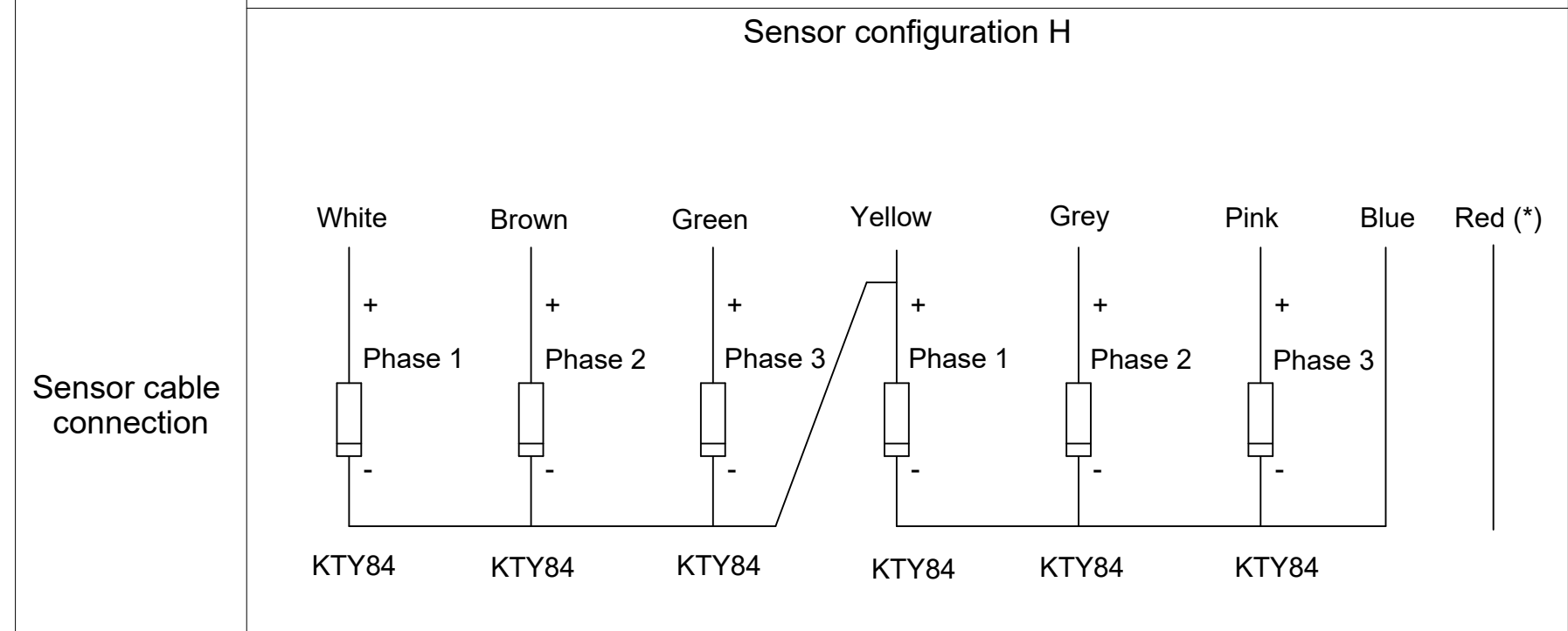
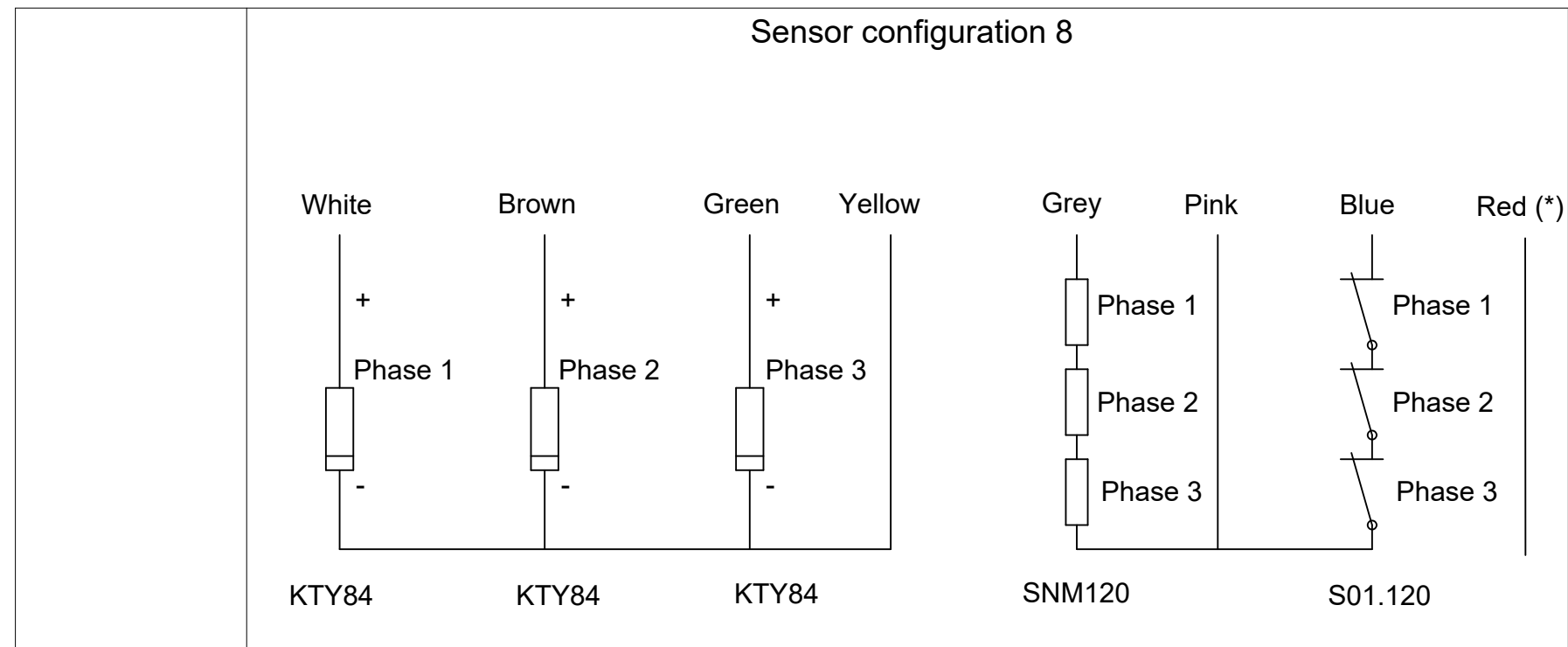
TMM0360-150-3XBN-S##
TML0360-150-3XBN-S##



TMM0360-150-3UFN-S##
TML0360-150-3UFN-S##



07	FSM N°	Nom	Date	Description : Elbowed output cable removed
	C064986-5	JGU	05.10.17	
Matière : -				Equivalence rugosité
Remarque : -				Ra µm Classe
Annexe : -				50 N12
				25 N11
				12.5 N10
				6.3 N9
				3.2 N8
				1.6 N7
				0.8 N6
				0.4 N5
				0.2 N4
				0.1 N3
				0.05 N2
				0.025 N1
Arêtes de formes ISO 13715		Torque motor TMM & TML0360 cables outputs		Auteur
-0.3		+0.3		Vérificateur
		Moieur couple fer TMM & TML0360 sorties de câbles		Libérateur
				S. Perrot
				30.06.05
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ETEL S.A.		CH-2102 Môtiers SWITZERLAND		Format
				Echelle
				Ancien n° : 0521m-14.0-06 Version
				Revision
				Feuille
				Page
				571459 -07- A-1
				1/1



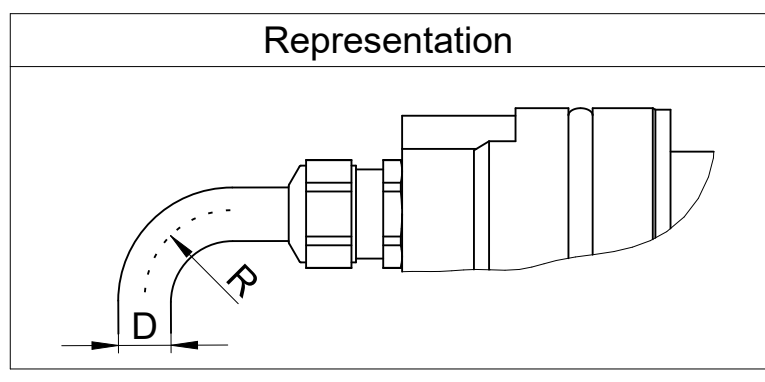
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

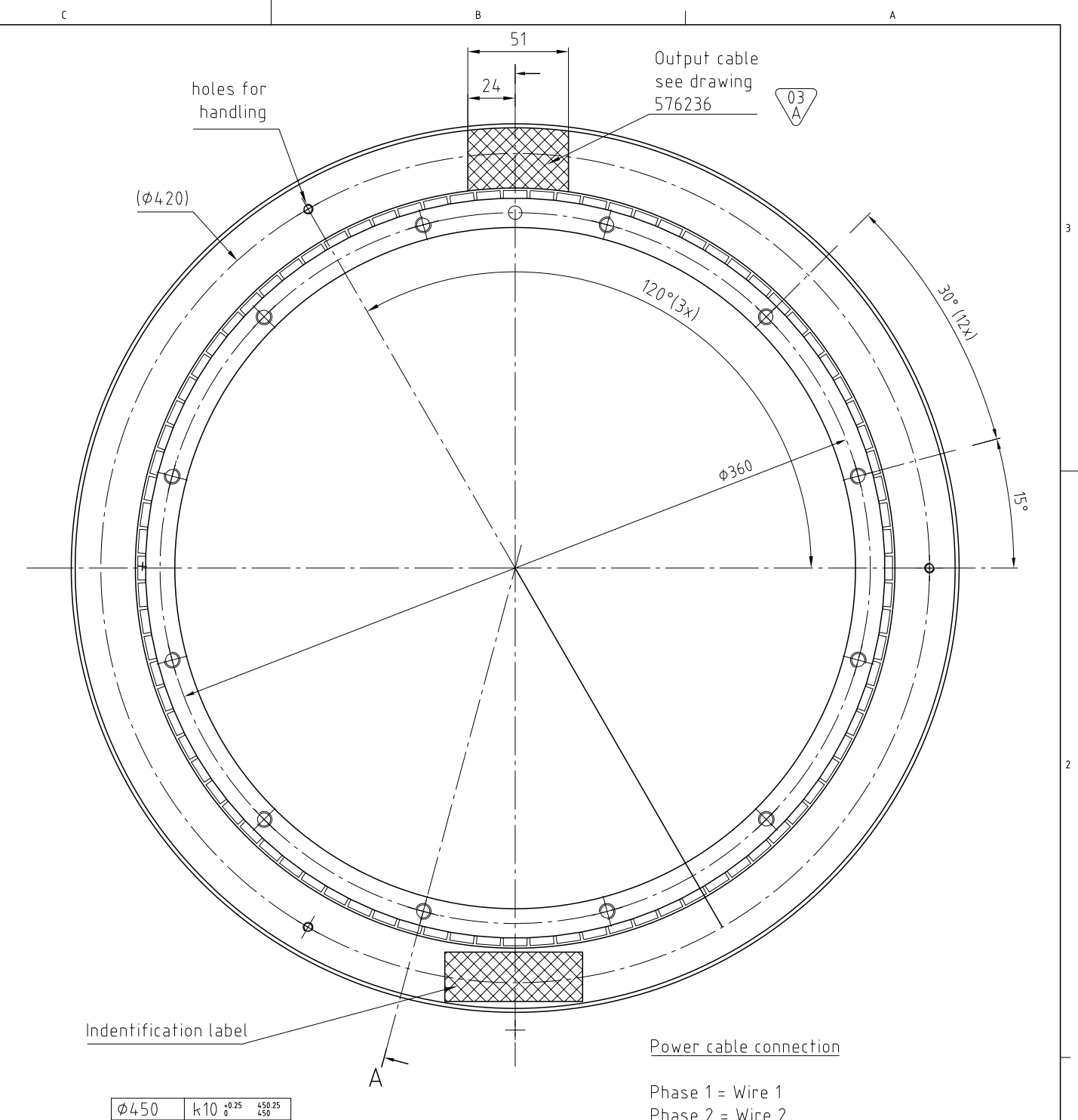
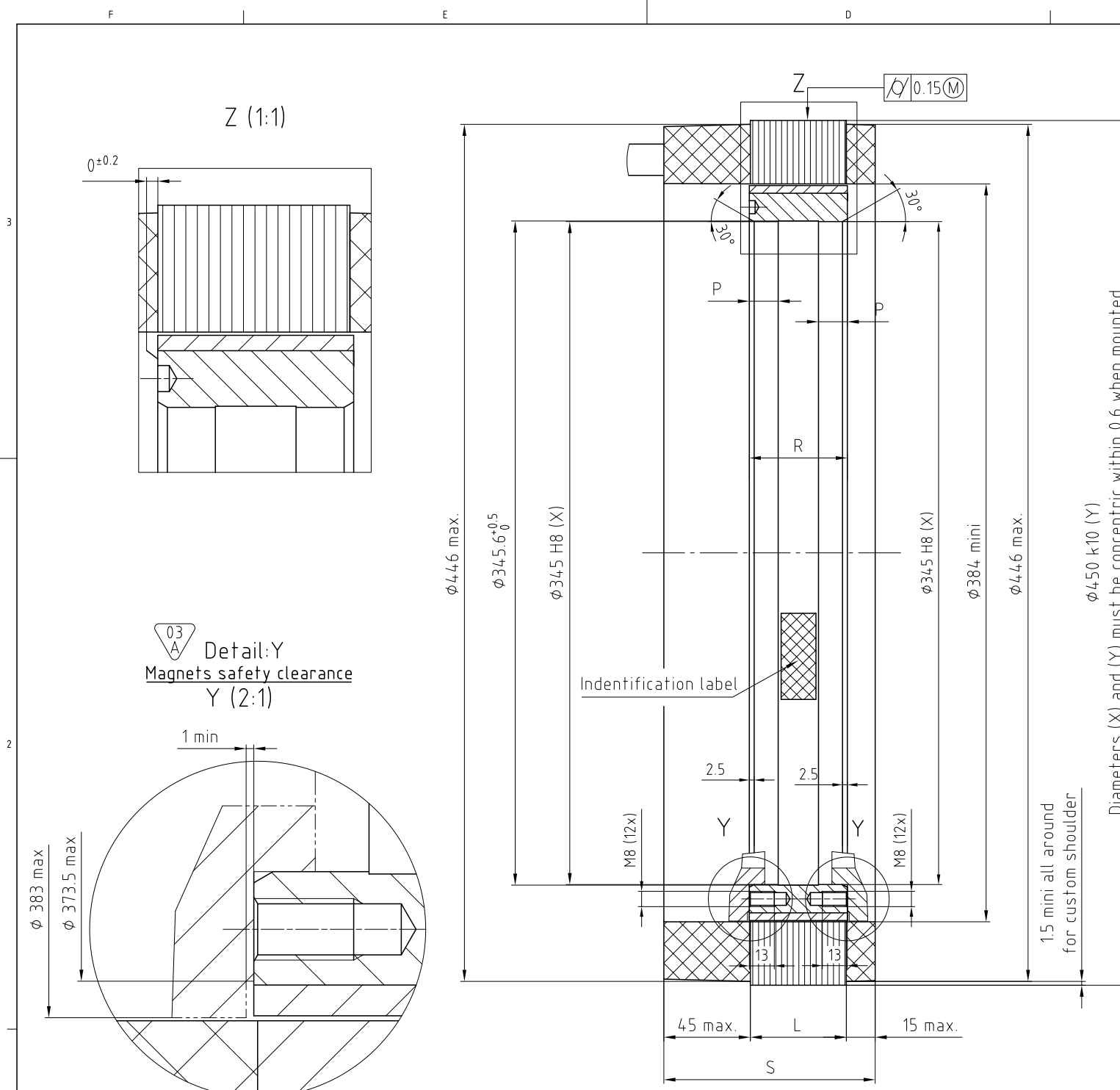
Wire section (mm²)

Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D



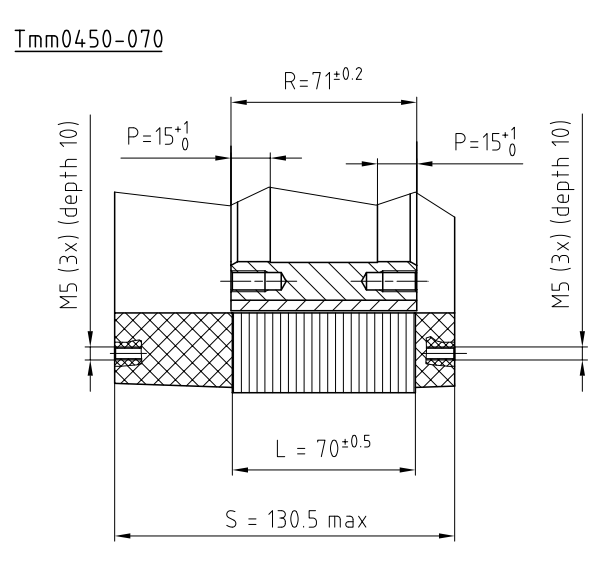
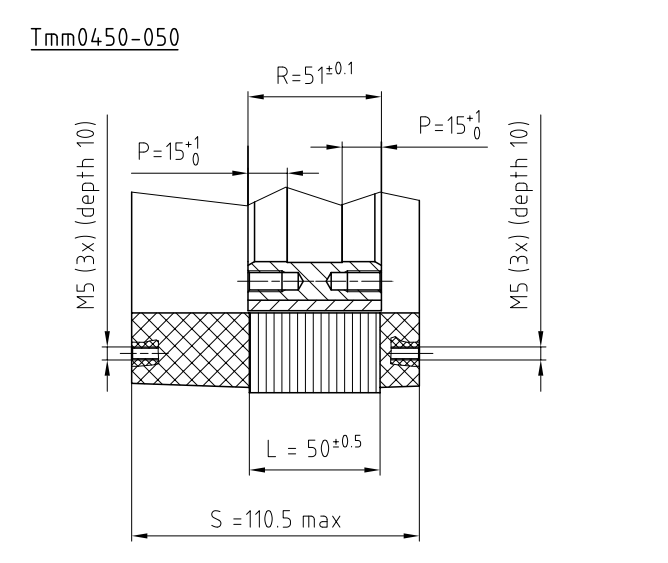
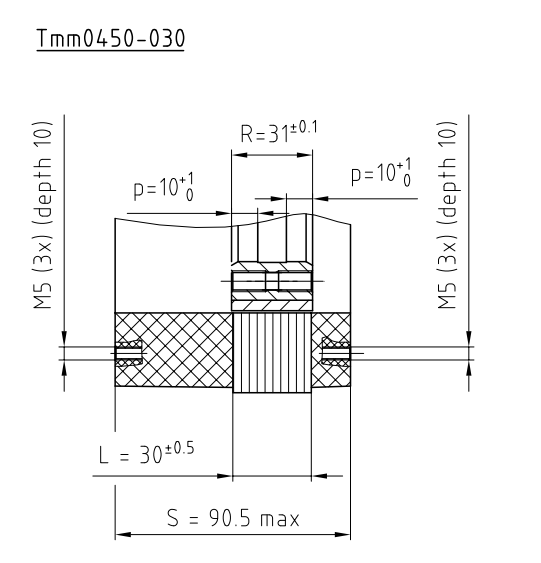
(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

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Original drawing		Change No. C145178-05
Scale		Released: 20-Sep-22
Format		Tolerances as per ISO 8015 : 2011
Dimensions in mm		Tolerances selon ISO 8015 : 2011
1:1	A2	Dimensions without tolerance ± 0,2
Mating Dimensions / Cotes d'encombrement		Dimensions sans tolérances
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ETEL ETEL S.A. 2112 Môtiers SWITZERLAND		Version Revision Sheet Page
1389869-00 - A-01		1 of 1
Document number		



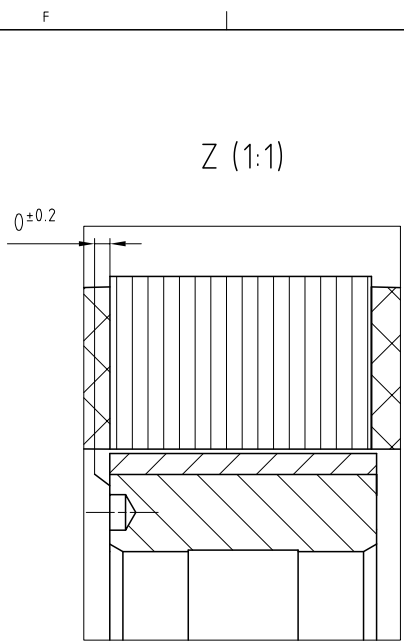
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Ø345	H8	$\begin{matrix} +0.089 \\ 0 \end{matrix}$	$\begin{matrix} 345.089 \\ 345 \end{matrix}$
Cote	Ajustement		

- Power cable connection
- Phase 1 = Wire 1
 - Phase 2 = Wire 2
 - Phase 3 = Wire 3
 - Ground = Wire yellow-Green
 - Neutral = Wire 5 or Br1 or White
 - Not connected = Wire 6 or Br2 or Black

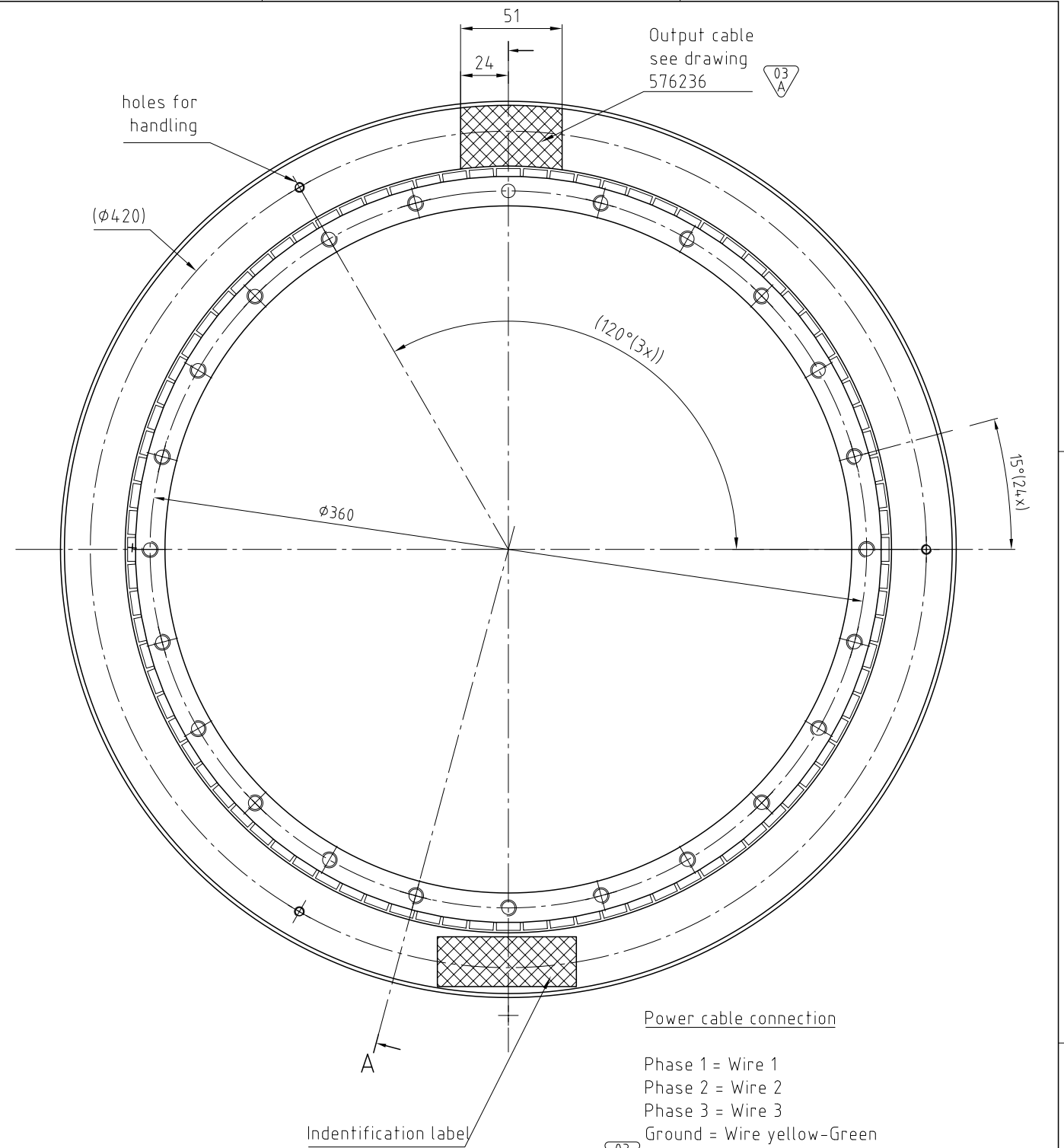
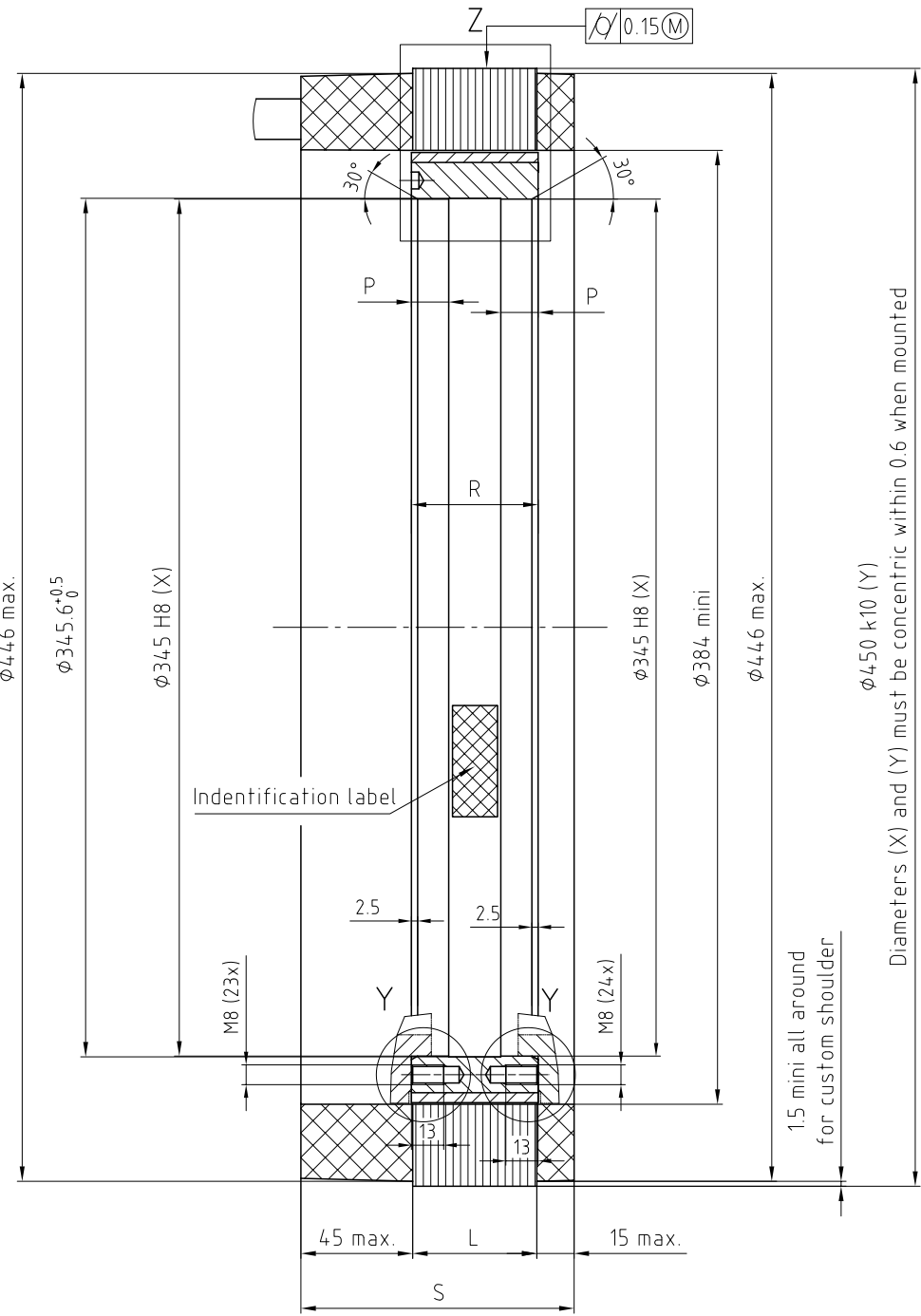
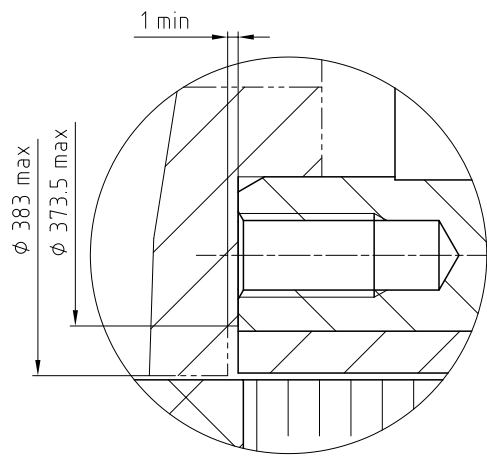


For temperature sensor configuration, see Handbook

03 A	ECO N°	Nom	Date	Description :	Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mK				Equivalence rugosité		
	C29035	GRO	23.01.2013		Dimension nominale	Linéaire	Rayon Chanfrein	Dimension nominale		Ra µm	Classe
Matière :					0,5 ... 3	±0,1	±0,2	> 10 ... 30	0,05	0,4	0,6
Remarque :					> 3 ... 6	±0,1	±0,5	> 30 ... 100	0,2	0,4	0,6
Annexe :					> 6 ... 30	±0,2	±1	> 100 ... 300	0,4	0,6	0,6
					> 120 ... 400	±0,5	±4	> 300 ... 1000	0,6	0,8	0,8
					> 400 ... 1000	±0,8		> 1000 ... 3000	0,8	1	1
					> 1000 ... 2000	±1,2					
Arêtes de formes ISO 13715					Torque motor		Auteur		Verificateur	Libérateur	
-0,3					+0,3		S. Perrot				
					Interface drawing Tmm0450-030 / 050 / 070		12.04.06				
ETEL ETEL S.A. CH-2112 Möhlers SWITZERLAND					Projection	Format	Echelle	Ancien n° : 0526m-i40-04c	Version	Revision	Feuille
					A2	1:2	588699 - 03- A-01				1/1
					Numéro de document						



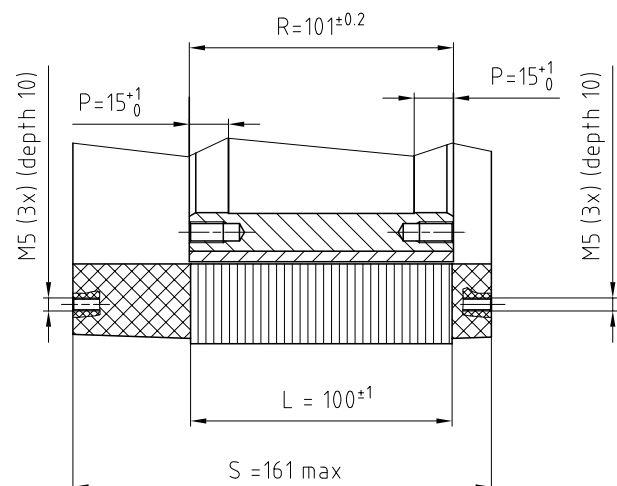
03 A Detail:Y
Magnets safety clearance
Y (2:1)



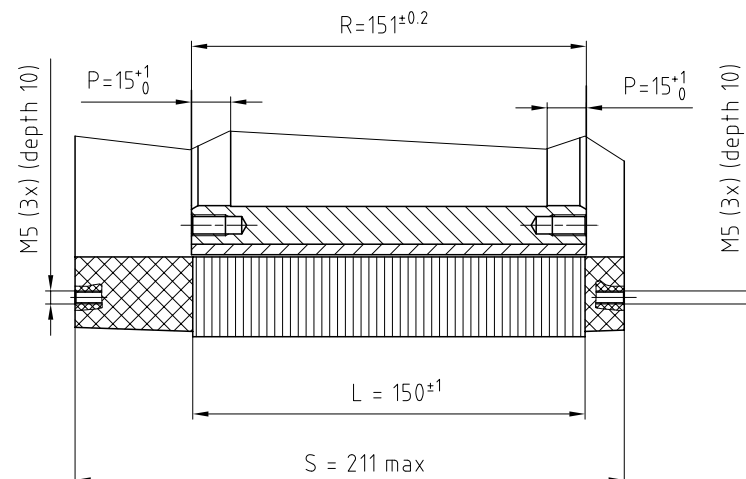
Power cable connection
 Phase 1 = Wire 1
 Phase 2 = Wire 2
 Phase 3 = Wire 3
 Ground = Wire yellow-Green
 Neutral = Wire 5 or Br1 or White
 Not connected = Wire 6 or Br2 or Black

For temperature sensor configuration, see Handbook

Tmm0450-100



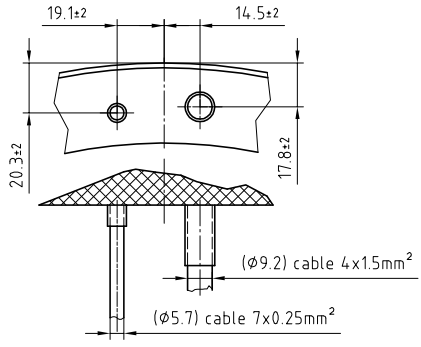
Tmm0450-150



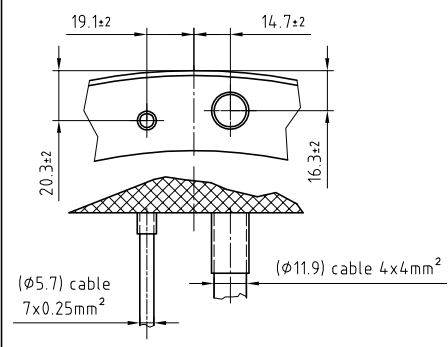
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Matière : -					
Remarque : -					
Annexe : -					
Arêtes de formes ISO 13715					
Torque motor					
Interface drawing Tmm0450-100 / 150					
Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-mK					
Equivalence rugosité					
Dimension nominale	Linéaire	Rayon Chanfrein	Dimension nominale	Ra µm	Classe
0,5 ... 3	±0,1	± 0,2	> 10 ... 30	0,05	0,4
> 3 ... 6	±0,1	± 0,5	> 30 ... 100	0,1	0,4
> 6 ... 30	±0,2	± 1	> 100 ... 300	0,2	0,4
> 30 ... 120	±0,3	± 2	> 300 ... 1000	0,4	0,6
> 120 ... 400	±0,5	± 4	> 1000 ... 3000	0,6	0,8
> 400 ... 1000	±0,8			0,8	1
> 1000 ... 2000	±1,2			1	1
Auteur					
Verificateur					
Libérateur					
S. Perrot					
12.04.06					

0450	k10	+0.25	450.25	450	ETEL S.A.	Projection	Format	Echelle	Ancien n° : 0526m-i40-05c	Version	Revision	Feuille	Page
0345	H8	+0.089	345.089	345	EH-2112 Möhlers SWITZERLAND	A2	A2	1:2	588700 - 03- A-01			1/1	
Cote A ajustement													

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TML0450-030-3VBS-S##

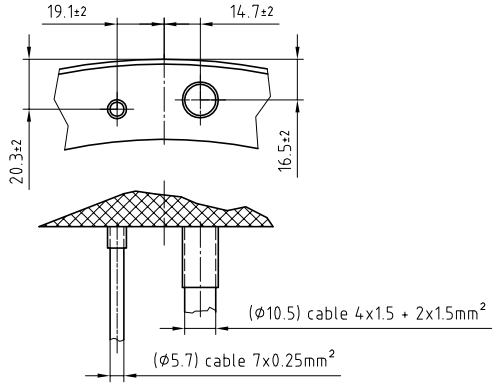


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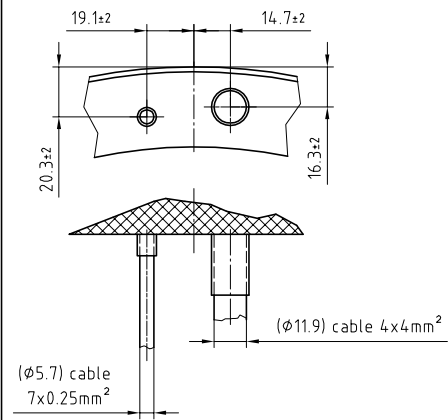


07
A

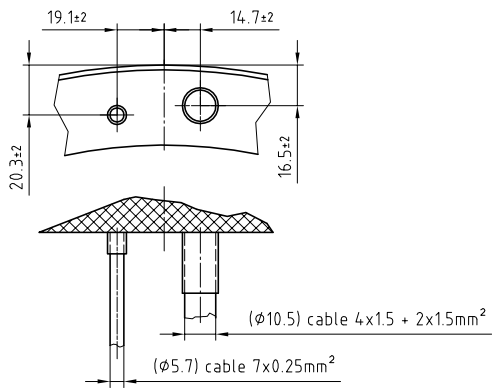
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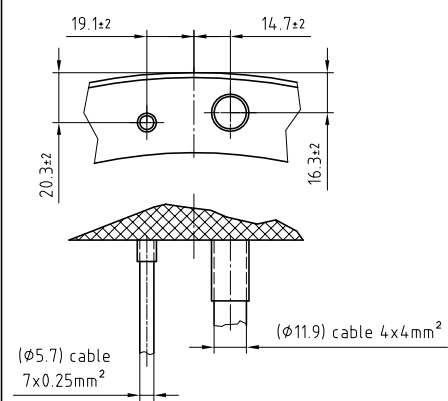
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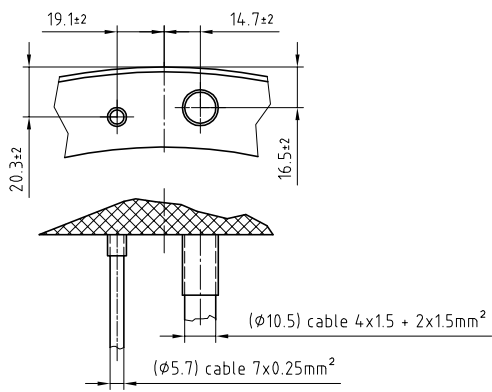
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TML0450-070-3VBN-S##



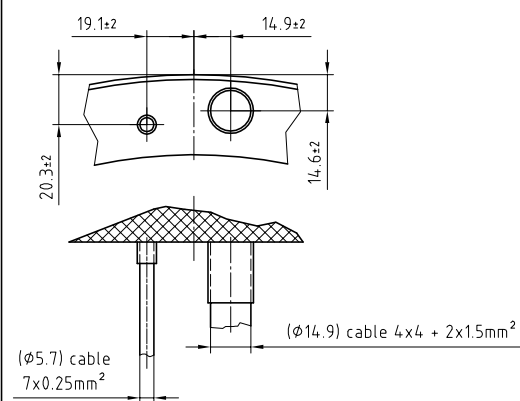
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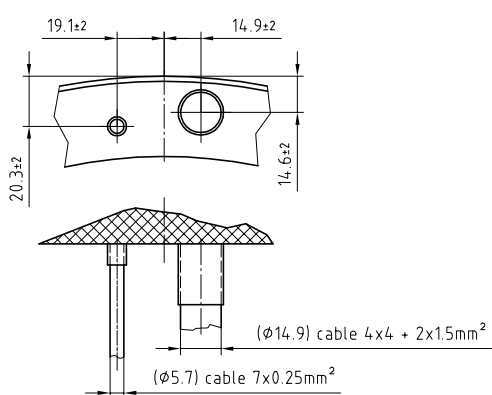
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TML0450-100-3VBN-S##



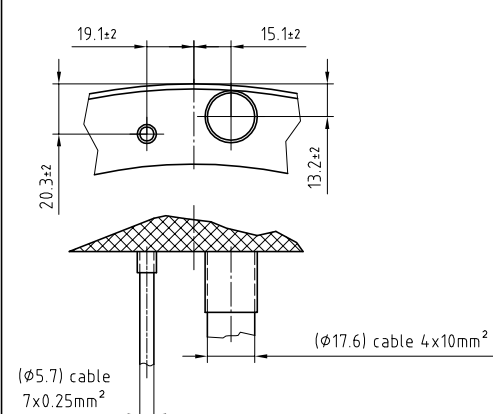
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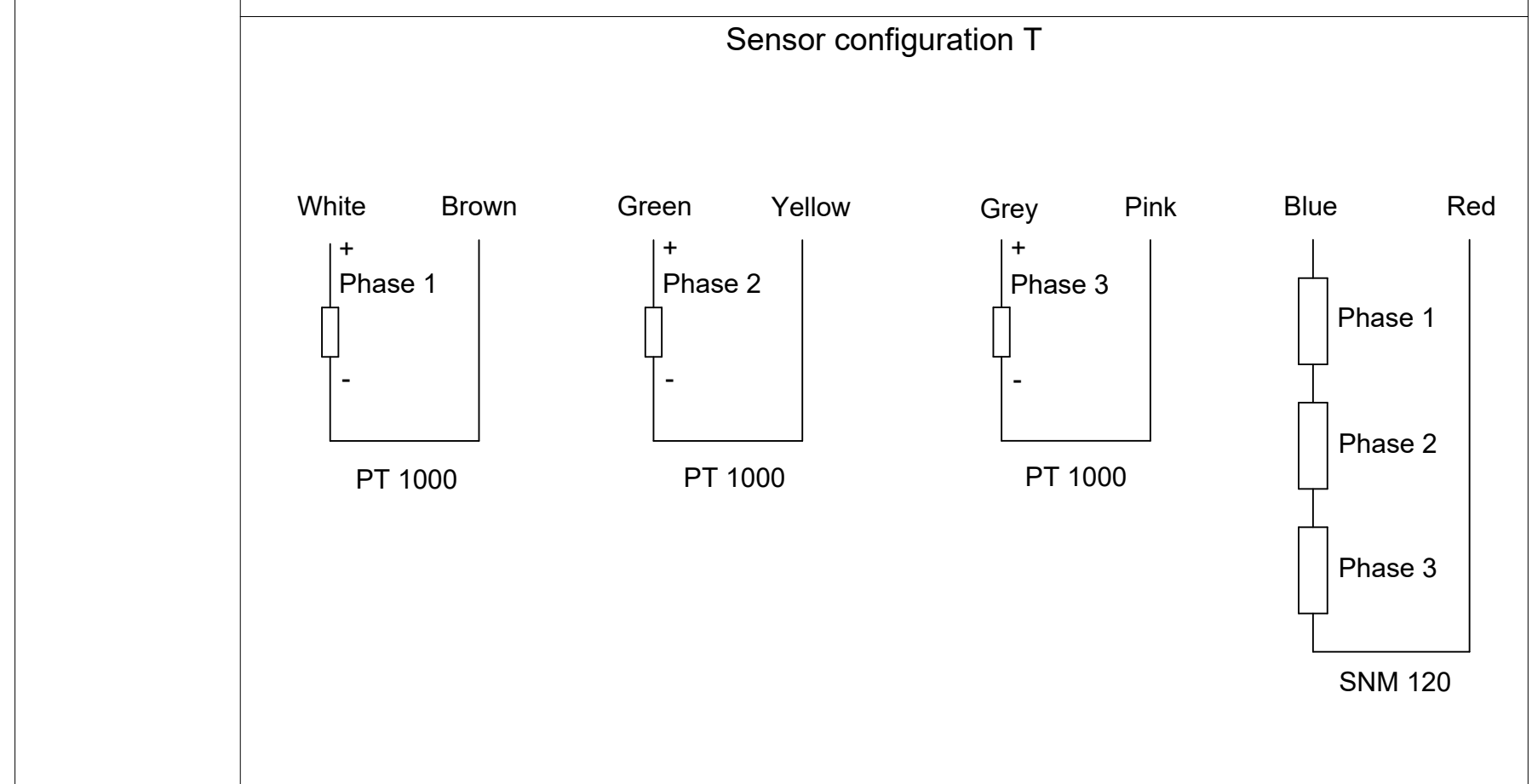
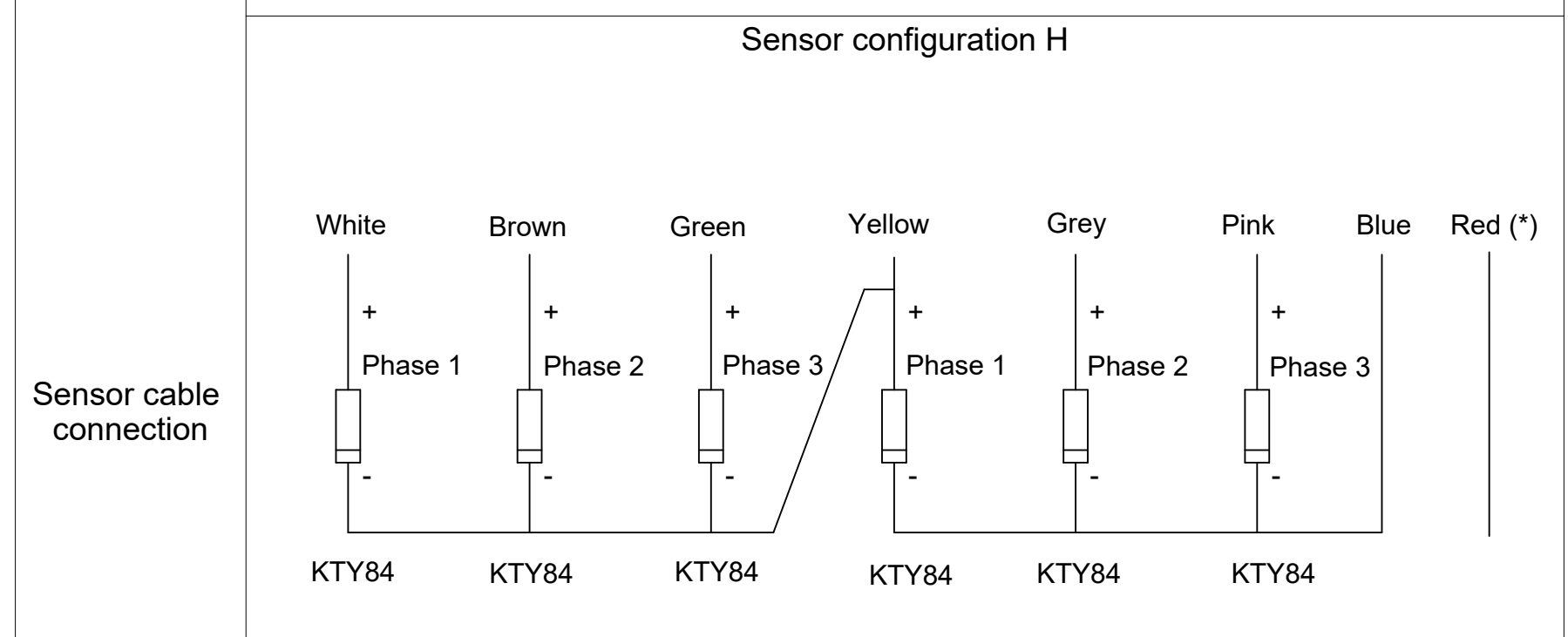
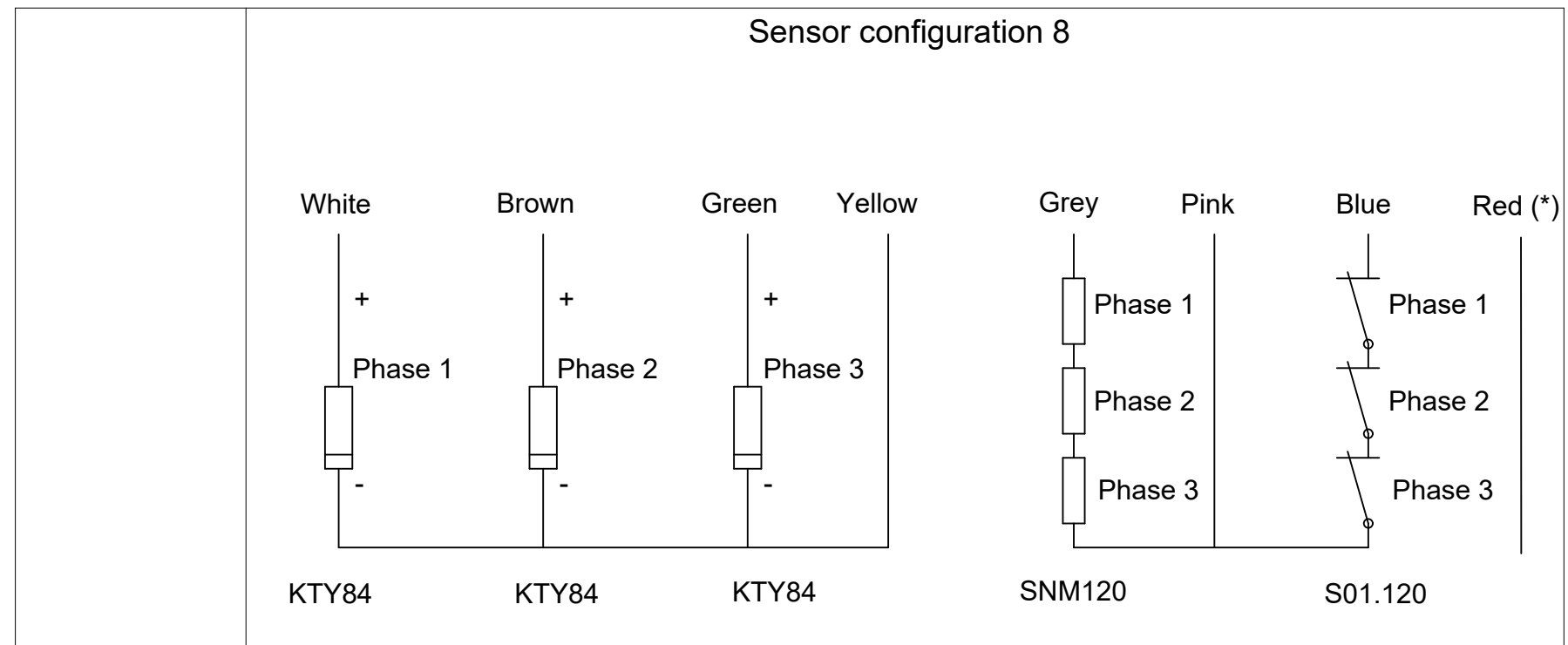
TMM0450-150-3VDN-S##
TML0450-150-3VDN-S##



TMM0450-150-3VHS-S##
TML0450-150-3VHS-S##



07 A	FSM N°	Nom	Date	Description: Elbowed output cable removed			
	C064986-5	JGU	05.10.17				
Matière: -							Equivalence
Remarque: -							Ra µm Classe
Annexe: -							50 N12
							25 N11
							12.5 N10
							6.3 N9
							3.2 N8
							1.6 N7
							0.8 N6
							0.4 N5
							0.2 N4
							0.1 N3
							0.05 N2
							0.025 N1
Arêtes de formes ISO 13715		Torque motor TMM & TML0450 cables outputs		Auteur	Vérificateur	Libérateur	
-0.3		+0.3		S. Iervolino	-	-	
Moteur couple fer TMM & TML0450 sorties de câbles				22.09.2005	-	-	
ETEL S.A. CH-2102 Môtiers SWITZERLAND		Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite, être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.		Projection	Format	Echelle	Ancien n° / 0526m-14.0-01 / Version / Revision / Feuille / Page
ETEL				1st Ang	A1		576236 -07- A-01 / 1



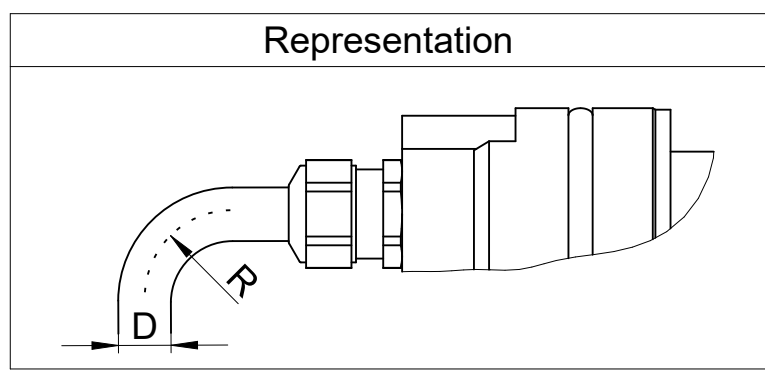
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

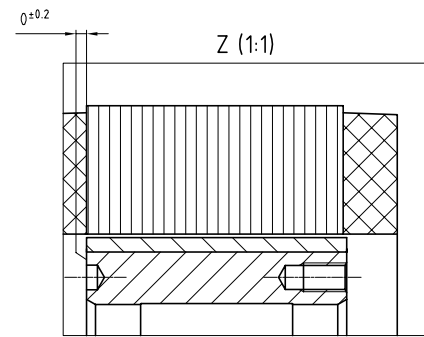
Wire section (mm²)

Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D

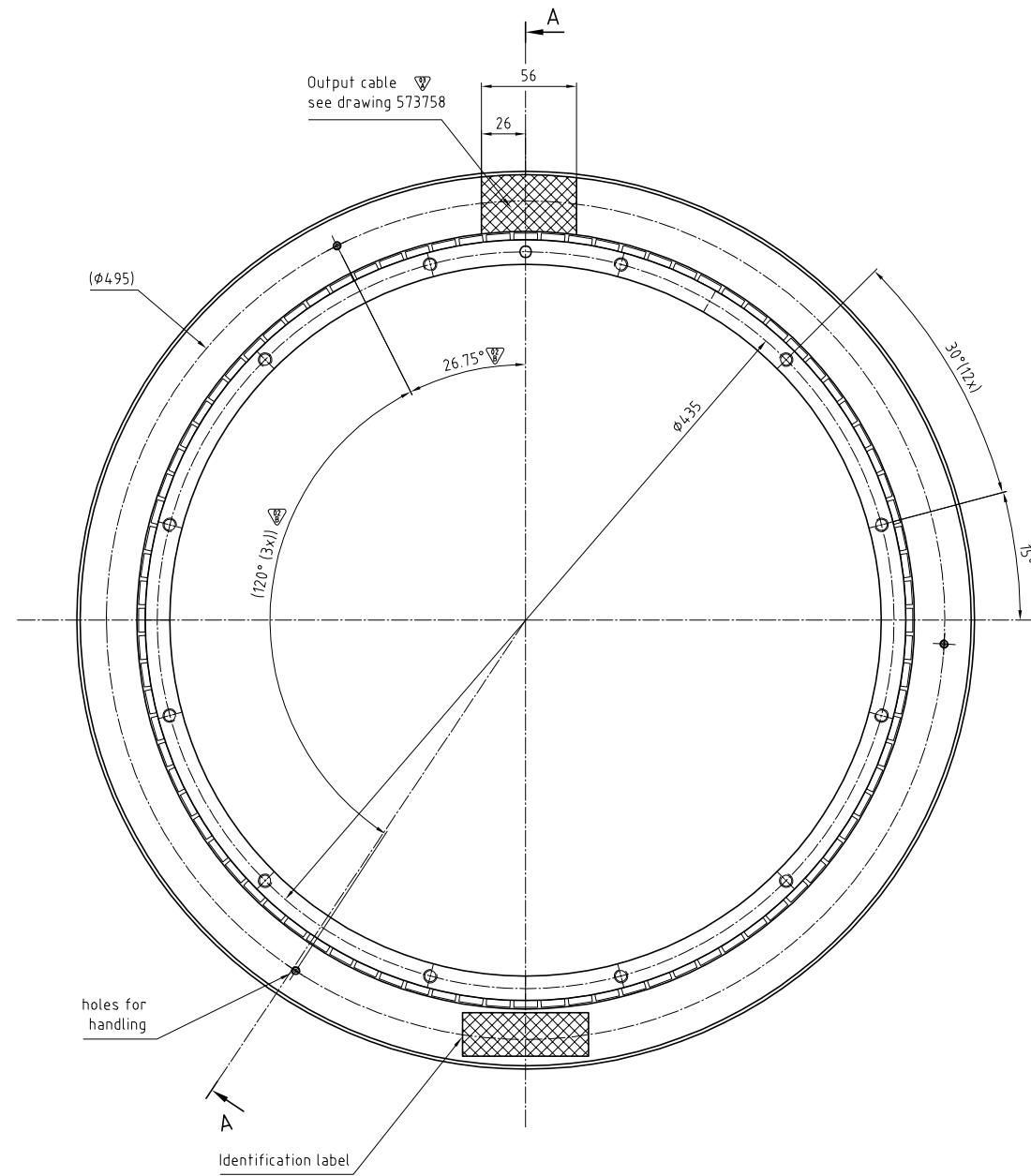
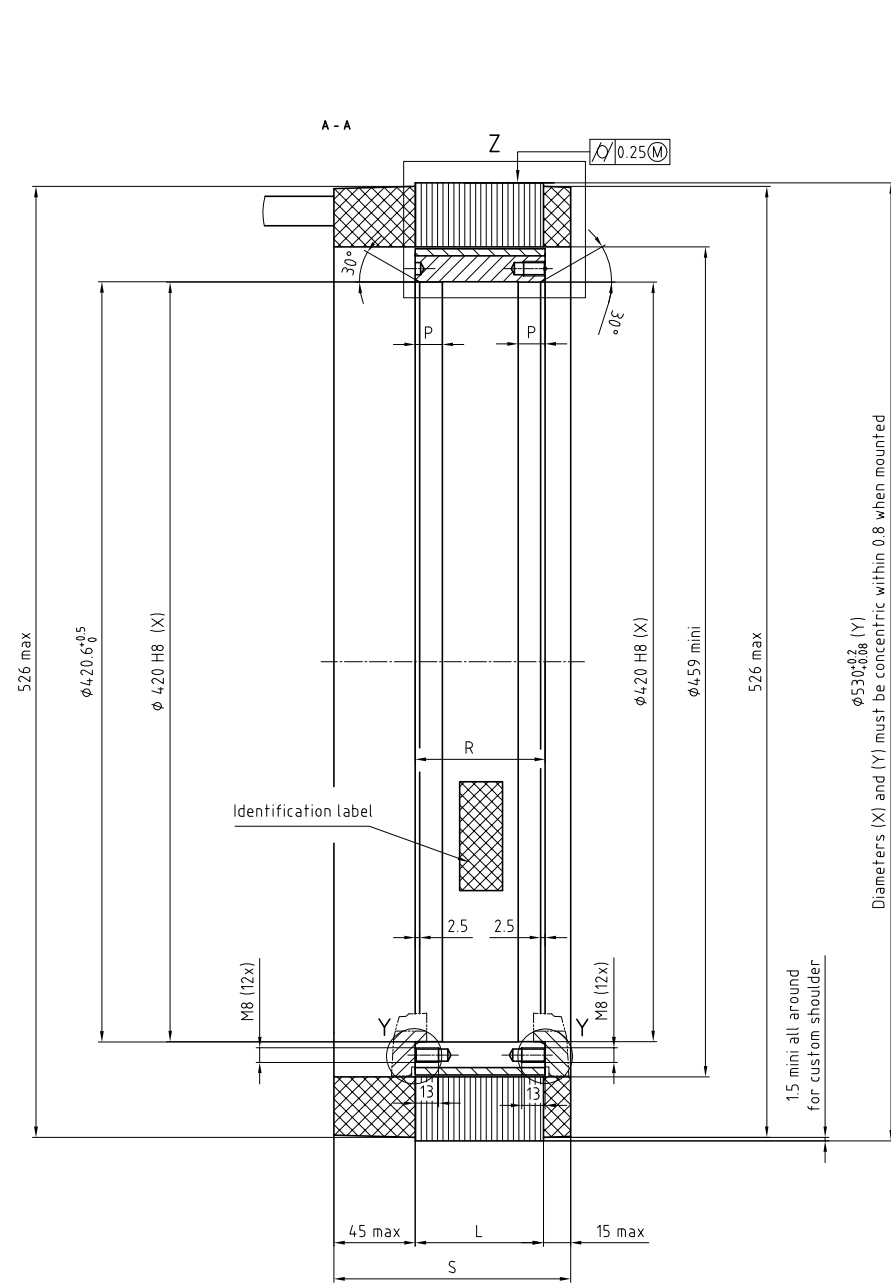
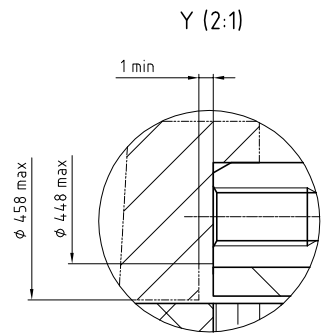


(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

Text:		ID number:
Original drawing		Change No. C145178-05
Scale		Released: 20-Sep-22
Format		Tolerances as per ISO 8015 : 2011
Dimensions in mm		Tolerances selon ISO 8015 : 2011
1:1	A2	Dimensions without tolerance ± 0,2
Mating Dimensions / Cotes d'encombrement		Dimensions sans tolérances
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ETEL ETEL S.A. 2112 Môtiers SWITZERLAND		Version Revision Sheet Page
1389869-00 - A-01		1 of 1
Document number		



Detail: Y
Magnets safety clearance

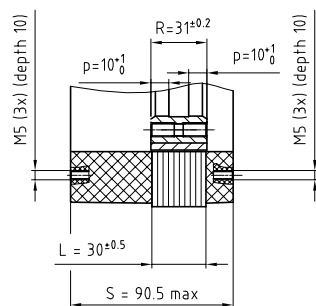


Power cable connection

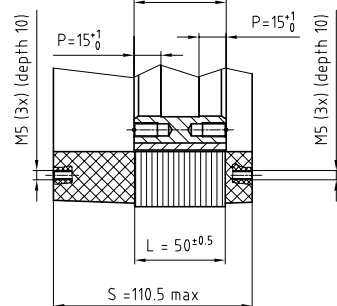
- Phase 1 = Wire 1
- Phase 2 = Wire 2
- Phase 3 = Wire 3
- Ground = Wire yellow-Green
- Neutral = Wire 5 or Br1 or White
- Not connected = Wire 6 or Br2 or Black

For temperature sensor configuration, see Handbook

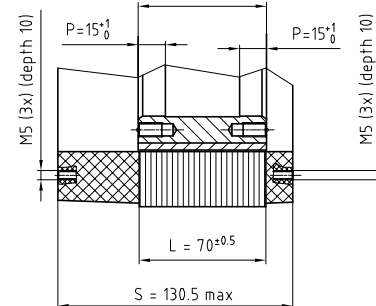
Tmm0530-030



Tmm0530-050

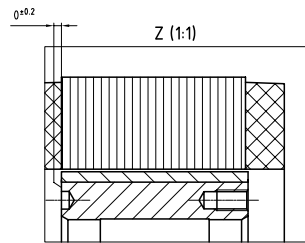


Tmm0530-070

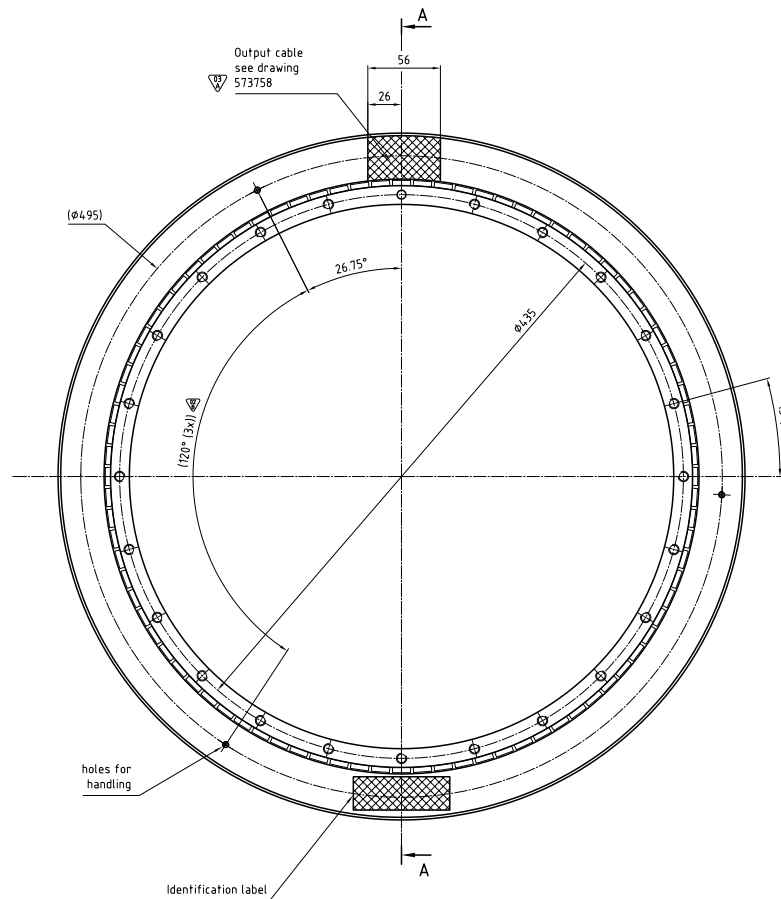
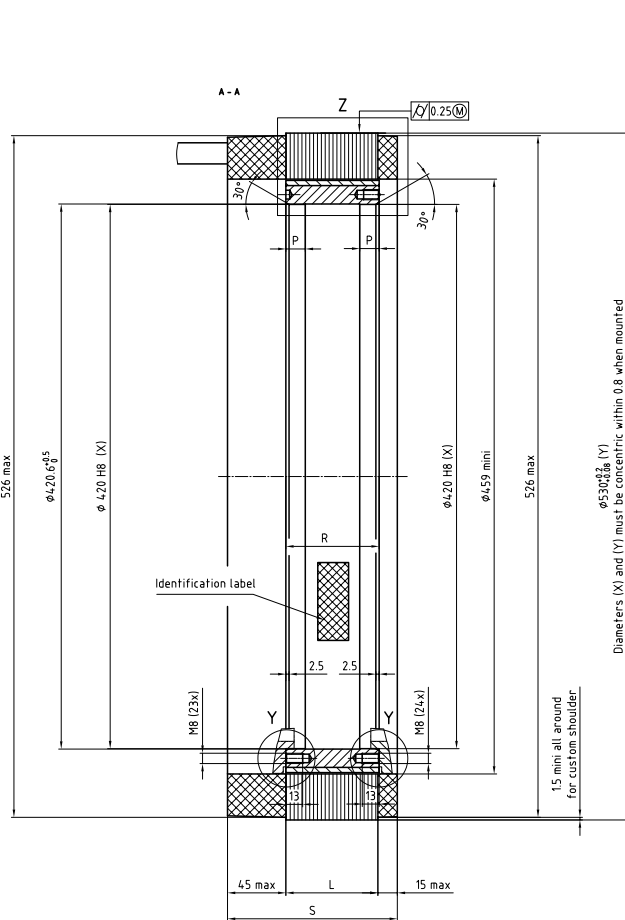
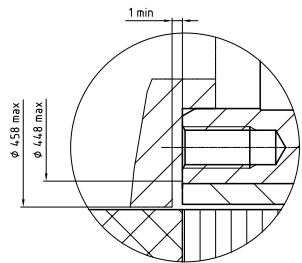


420 H8 +0.097 420.097 420
Cote Ajustement

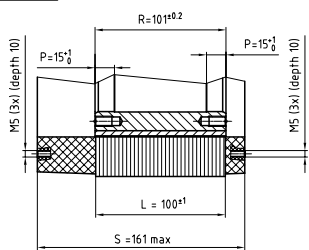
FSM N°	Nom	Date	Description
C29835	M80	18.10.2012	
Matière: -			
Principe de tolérancement de base ISO 8015 et tolérance générale selon ISO 2768-MS			
Remarque: -	Dimension nominale	Linéaire	Rayon Chamfrein
	0,5 - 3	±0,1	±0,2
Annexe: -	3 - 6	±0,1	±0,5
	6 - 30	±0,2	±1
	30 - 100	±0,3	±2
	100 - 400	±0,5	±4
	400 - 1000	±0,8	±8
	1000 - 2000	±1,2	±12
Dimension nominale		Lks	α
10 - 30	0,05	0,4	0,6
30 - 100	0,1	0,4	0,6
100 - 300	0,2	0,4	0,6
300 - 1000	0,4	0,6	0,8
1000 - 3000	0,8	1	1
Arêtes de formes ISO 13175			
±0,3	±0,3	Torque motor	
S. Perret		Auteur	Verificateur
Libérateur		-	
Interface drawing Tmm0530-030/050/070		12.04.06	
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ETEL S.A. CH-2102 Môtiers SWITZERLAND		A1	1:2
Ancien n°: 0531m-i40-04c (Version/Revision)		Feuille	
588730 -03- A-01		1/1	



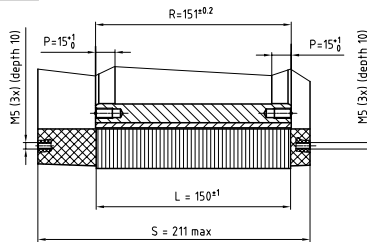
Detail: Y
Magnets safety clearance
Y (2:1)



Tmm0530-100



Tmm0530-150



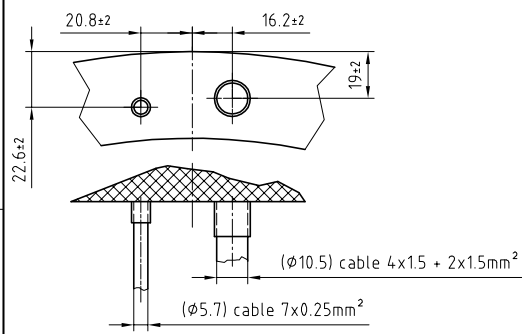
Power cable connection

- Phase 1 = Wire 1
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- Phase 3 = Wire 3
- Ground = Wire yellow-Green
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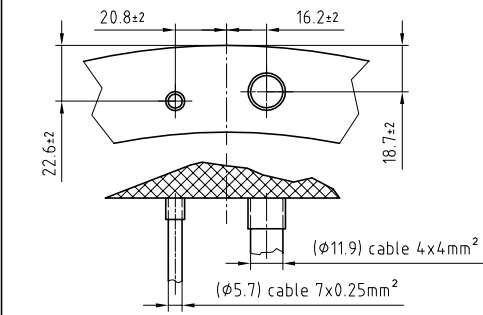
For temperature sensor configuration, see Handbook

FSM N°	Rev	Date	Description																																								
C2935	G00	23/01/2013																																									
<table border="1"> <thead> <tr> <th>Dimension nominale</th> <th>Tolérance</th> <th>Rayon</th> <th>Ra μm</th> <th>Classé</th> </tr> </thead> <tbody> <tr> <td>0.5 - 3</td> <td>± 0.1</td> <td>± 0.2</td> <td></td> <td>50 M12</td> </tr> <tr> <td>3 - 6</td> <td>± 0.1</td> <td>± 0.5</td> <td></td> <td>25 M11</td> </tr> <tr> <td>6 - 30</td> <td>± 0.2</td> <td>± 1</td> <td></td> <td>12.5 M9</td> </tr> <tr> <td>30 - 120</td> <td>± 0.5</td> <td>± 2</td> <td></td> <td>6.3 M7</td> </tr> <tr> <td>120 - 400</td> <td>± 1</td> <td>± 4</td> <td></td> <td>3.2 M6</td> </tr> <tr> <td>400 - 1000</td> <td>± 2</td> <td>± 8</td> <td></td> <td>1.6 M4</td> </tr> <tr> <td>1000 - 2000</td> <td>± 4</td> <td>± 16</td> <td></td> <td>0.8 M3</td> </tr> </tbody> </table>				Dimension nominale	Tolérance	Rayon	Ra μm	Classé	0.5 - 3	± 0.1	± 0.2		50 M12	3 - 6	± 0.1	± 0.5		25 M11	6 - 30	± 0.2	± 1		12.5 M9	30 - 120	± 0.5	± 2		6.3 M7	120 - 400	± 1	± 4		3.2 M6	400 - 1000	± 2	± 8		1.6 M4	1000 - 2000	± 4	± 16		0.8 M3
Dimension nominale	Tolérance	Rayon	Ra μm	Classé																																							
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3 - 6	± 0.1	± 0.5		25 M11																																							
6 - 30	± 0.2	± 1		12.5 M9																																							
30 - 120	± 0.5	± 2		6.3 M7																																							
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400 - 1000	± 2	± 8		1.6 M4																																							
1000 - 2000	± 4	± 16		0.8 M3																																							
<table border="1"> <thead> <tr> <th>Arches de formes ISO 10175</th> <th>Auteur</th> <th>Vérificateur</th> <th>Libraire</th> </tr> </thead> <tbody> <tr> <td>$R=10$</td> <td>S. Perrel</td> <td></td> <td></td> </tr> <tr> <td>$R=15$</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Arches de formes ISO 10175	Auteur	Vérificateur	Libraire	$R=10$	S. Perrel			$R=15$																															
Arches de formes ISO 10175	Auteur	Vérificateur	Libraire																																								
$R=10$	S. Perrel																																										
$R=15$																																											
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Cote	Ajustement																																										

TML0530-030-3VBN-S##
TMM0530-030-3VBN-S##

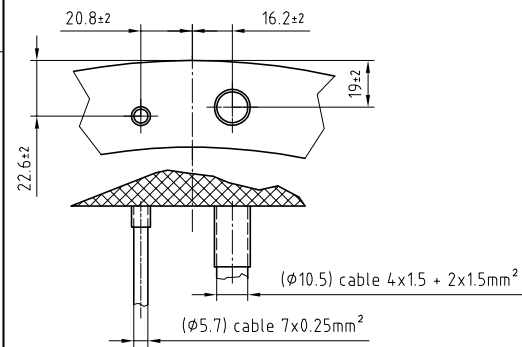


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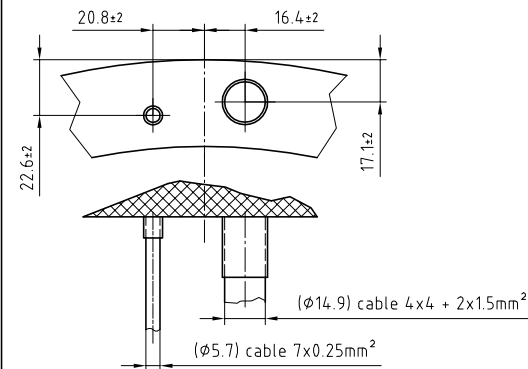


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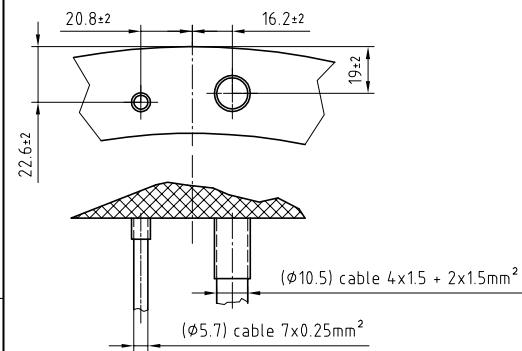
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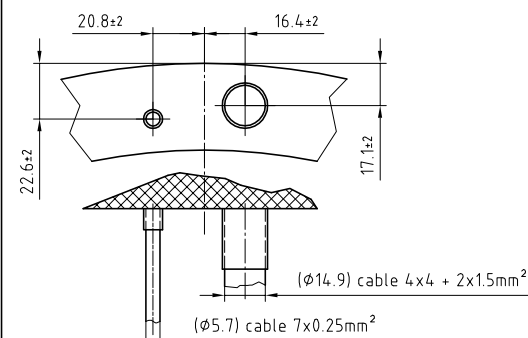
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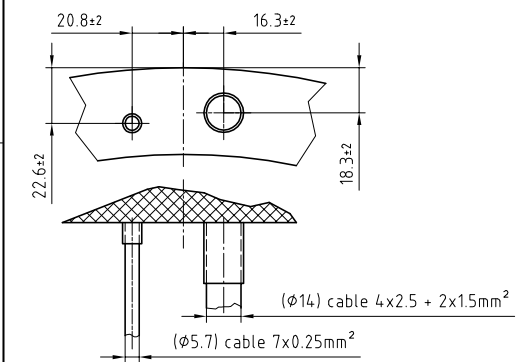
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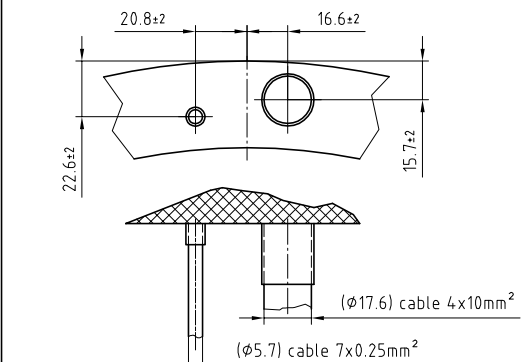
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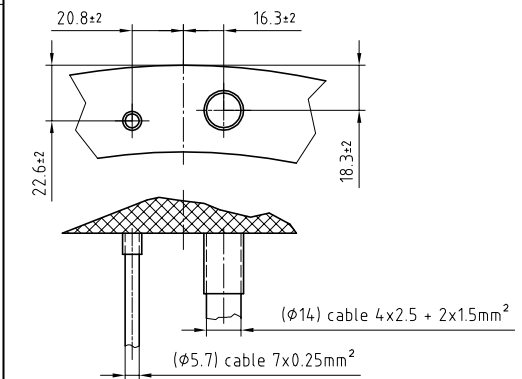
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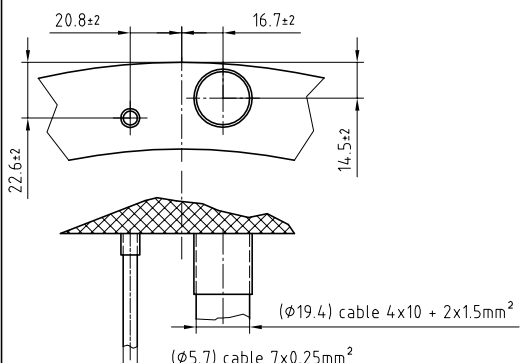
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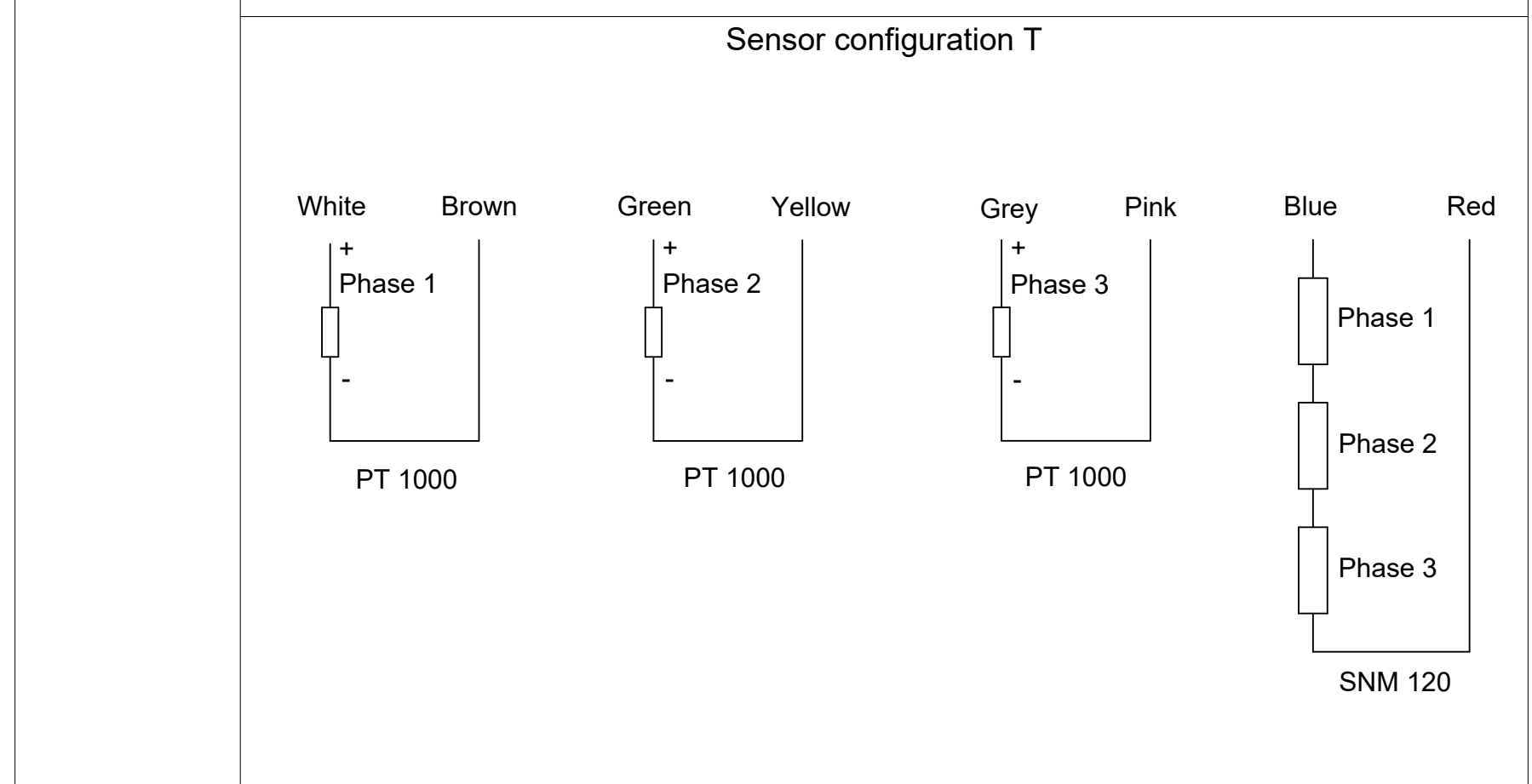
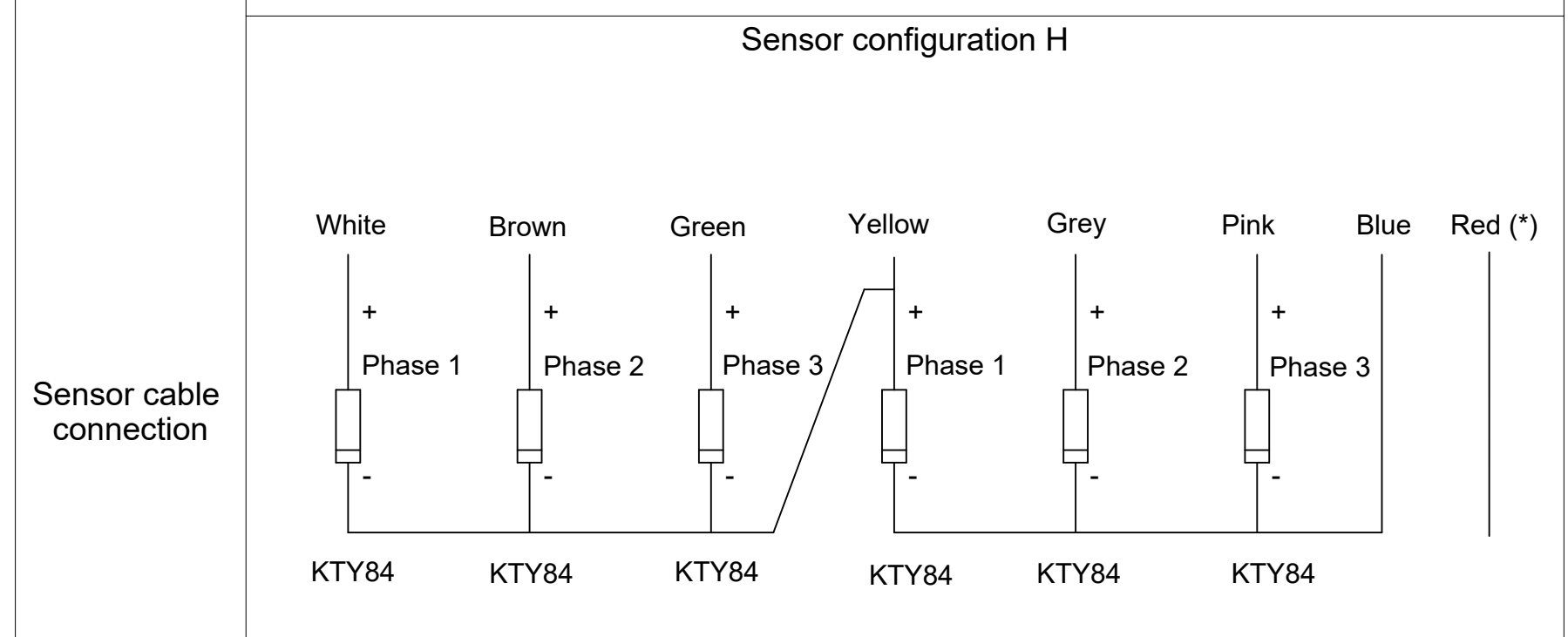
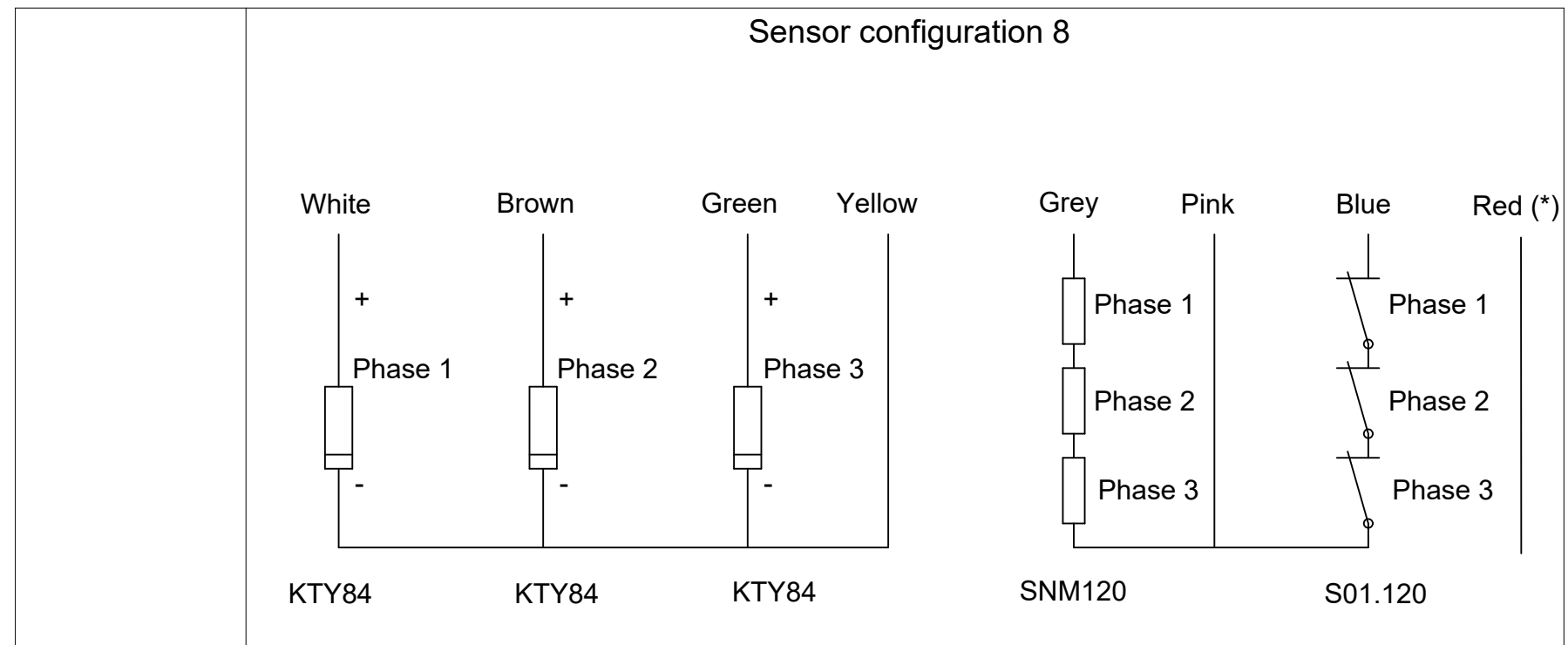
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TMM0530-150-3VDN-S##



TML0530-150-3VHN-S##
TMM0530-150-3VHN-S##



FSM N°	Nom	Date	Description	Elbowed output cable removed	
C064986-5	JGU	05.10.17			
Matière					Equivalence rugosité
Remarque					Ra µm Classe
Annexe					50 N12 25 N11 12.5 N10 6.3 N9 3.2 N8 1.6 N7 0.8 N6 0.4 N5 0.2 N4 0.1 N3 0.05 N2 0.025 N1
Arêtes de formes ISO 13715	Torque motor TMM & TML0530 cables outputs		Auteur	Vérificateur	Libérateur
↙ -0.3 ↘ ↙ +0.3 ↘	Moteur couple fer TMM & TML0530 sorties de câbles		S. Nervalino	-	-
ETEL S.A. CH-2102 Môtiers SWITZERLAND			Projection	Format	Echelle
Ces plans sont notre propriété. Ils ne doivent pas, sans notre autorisation écrite, être copiés, reproduits, communiqués à des tiers. Leur utilisation est strictement réservée à ETEL S.A.			↙ ↘	A1	
			Ancien n°	0531m-14.0-01	Version
			573758	-08-	A-01
			Revision		Feuille
					1/1
			Numero de document		



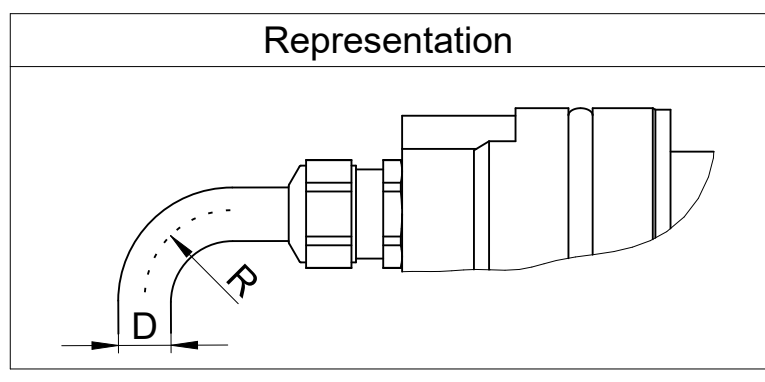
Power cable connection

Color and wire number	Function	Drawing
Black wire with number 1 or U	Phase 1 (PH1)	
Black wire with number 2 or V	Phase 2 (PH2)	
Black wire with number 3 or W	Phase 3 (PH3)	
Yellow and green wire	Ground (GND)	
Black wire with number Br1 or 5 or white cable	Neutral point wire (present only on some motor types)	
Black wire with number Br2 or 6 or black wire without label	None(**)	

(**): This wire is automatically present when the neutral point wire (which is an option) is added in the motor as it is a 2 x 1.5 mm² cable.

Wire section (mm²)

Characteristics	4 x 1.5	4 x 1.5 + 2 x 1.5	4 x 2.5	4 x 2.5 + 2 x 1.5	4 x 4	4 x 4 + 2 x 1.5	4 x 10	4 x 10 + 2 x 1.5	Sensor cable
Applicable motors: TMM / TML	0140 0175 0210 0291 0360 0450	0175 0210 0291 0360 0450 0530	0291 0360	0360 0530	0360 0450 0530	0360 0450 0530	0450 0530	0530	All TMM / TML
Minimum bend radius for fixed cable	R = 4 X D	R = 5 X D	R = 4 X D	R = 5 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 4 X D	R = 6 X D
Minimum bend radius for moving cable	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 7.5 X D	R = 12 X D



(*): Red wire (if present) is not connected on the motor side and cutted flush on cable extremity.

Text:		ID number:	
Original drawing		Change No. C145178-05	
Scale		Released: 20-Sep-22	
Format		Tolerances as per ISO 8015 : 2011	
Dimensions in mm		Tolerances selon ISO 8015 : 2011	
1:1		Dimensions without tolerance ± 0,2	
A2		Dimensions sans tolérances	
Mating Dimensions / Cotes d'encombrement			
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Version		Revision	
Sheet		Page	
1		1	
Document number		1389869-00-A-01	