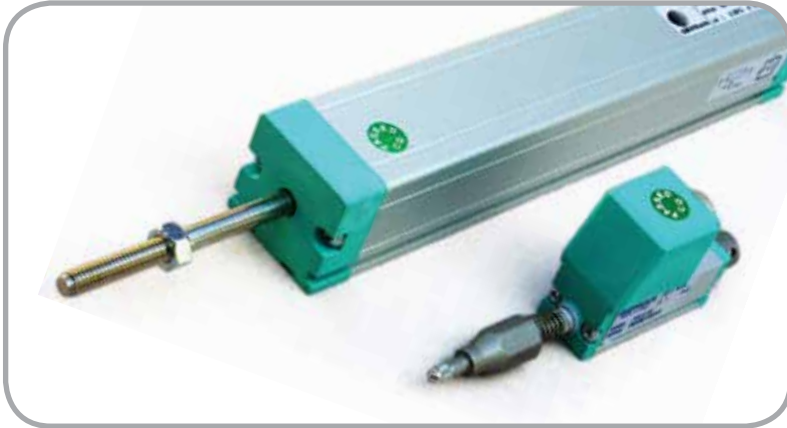




**Thermon**  
South Africa (Pty) Ltd.

**GEFRAN**



## Linear Displacement Transducers

Rectilinear displacement transducers are used to measure the travel of sliding or moving parts. Typical fields of use are plastics injection moulding machines as well as pneumatic or hydraulic installations.

The LT, PC and PK series are cost efficient, based on a cursor sliding along a resistive strip. The measuring principle is that of a potentiometer.

MK4A are contactless transducers using magnetostriction. The advantages of contactless transducers are wear and tear free operation, a virtually unlimited lifetime, high immunity to dust, dirt and moisture and resistance to vibration or mechanical shock.

For the hydraulic industry we offer the PMI and RK models, suitable for monitoring inside hydraulic actuators.

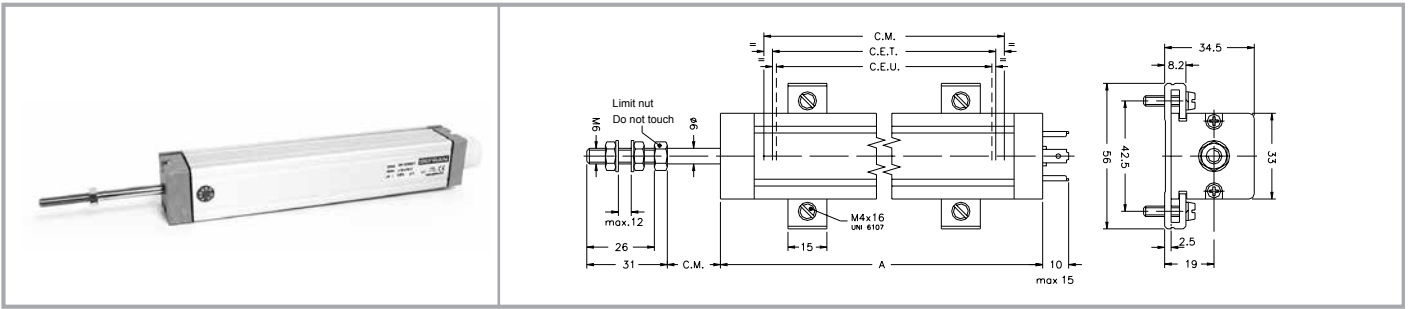
stock code	stroke length
<b>Model LT</b> Rectilinear transducers, IP65 protection	
UCGD-LTM-100-P-	100mm
UCGD-LTM-130-P-	130mm
UCGD-LTM-150-P-	150mm
UCGD-LTM-175-P-	175mm
UCGD-LTM-200-P-	200mm
UCGD-LTM-225-P-	225mm
UCGD-LTM-275-P-	275mm
UCGD-LTM-300-P	300mm
UCGD-LTM-375-P-	375mm
UCGD-LTM-400-P-	400mm
UCGD-LTM-450-P-	450mm
UCGD-LTM-500-P	500mm
UCGD-LTM-600-P-	600mm
UCGD-LTM-750-P-	750mm
UCGD-LTM-900-P-	900mm
<b>Model MK</b> contactless transducers, 0-10Vdc output	
UCGD-MK4AB100N	100mm
UCGD-MK4AB150N	150mm
UCGD-MK4AB200N	200mm
UCGD-MK4AB225N	225mm
UCGD-MK4AB250N	250mm
UCGD-MK4AB300N	300mm
UCGD-MK4AB350N	350mm
UCGD-MK4AB400N	400mm
UCGD-MK4AB450N	450mm

stock code	stroke length	
<b>Model PC</b> Selfloading Rectilinear Displacement Transducers with Cylindrical Case, IP65 protection, independent linearity: 0.05%		
UCGD-PCM-50	50mm	
UCGD-PCM-100	100mm	
UCGD-PCM-130	130mm	
UCGD-PCM-200	200mm	
UCGD-PCM-225	225mm	
UCGD-PCM-300	300mm	
UCGD-PCM-375	375mm	
UCGD-PCM-400	400mm	
UCGD-PCM-450	450mm	
UCGD-PCM-500	500mm	
<b>Model PK</b> Rodless Rectilinear Displacement Transducers (PK-M=4pole DIN/ISO connector), IP40 protection, independent linearity: 0.01%		
stock code	stroke length	kohms
UCGD-PKM-150-L-	150mm	5
UCGD-PKM-225-L-	225mm	5
UCGD-PKM-300-L-	300mm	5
UCGD-PKM-400-L-	400mm	10
UCGD-PKM-450-L-	450mm	10
UCGD-PKM-500-L-	500mm	10
UCGD-PKM-600-L-	600mm	10
UCGD-PKM-750-L-	750mm	10
UCGD-PKM-900-L-	900mm	10
UCGD-PKM-1000-L	1000mm	10
UCGD-PKM-1250-L	1250mm	20

Accessories	
stock code	
UCGM-CON021	6 pin connector for d=5mm Cable, for MK4A
UCGM-CON023	6 pin connector, angled for d=5mm Cable, for MK4A
UCGM-PCUR035	sliding cursor, axial joint (standard) for MK4A
UCGM-PCUR037	sliding cursor, angled joint for MK4A
UCGM-PKIT-091-01	Mounting bracket, interaxis 50mm, for MK4A
UCGM-CON006	4 pole connector for LTM and PKM
UCGM-CON008	4 pole connector for PCM
UCGM-CON002	3 pole connector for PCM

# LT

## centre shaft type, resistive track



### Order code



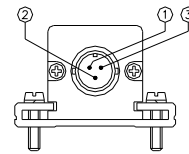
Connector output	
3 pole connector output	H
4 pole connector output DIN43650 ISO4400	M
5 pole connector output DIN43322	B
3 pole PVC cable output 3x0,25, tail length=1m	F
Stroke length (mm)	
Protection	
Standard version IP60	S
Version IP65	P

### Example: LT - M - 275 - S

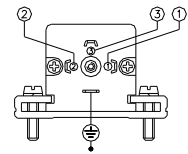
Displacement transducer model LT, 4 pole connector output  
DIN 43650 - ISO 4400, useful electrical stroke (C.E.U.)  
275mm, standard version IP60.

Note: LT transducers are supplied complete with fixing kit

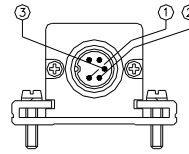
### Electrical connections



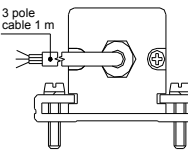
LTH output



LTM output

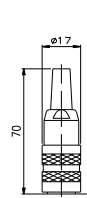


LTB output

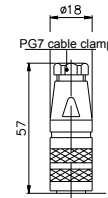


LTF output

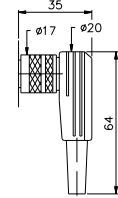
### Accessories



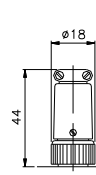
CON011 - IP40 Prot.  
(DIN43322 5 pole  
female connector)  
for LTB



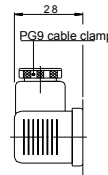
CON012 - IP67 Prot.  
(DIN43322 5 pole  
female connector)  
for LTB



CON013 - IP40 Prot.  
(DIN43322 5 pole  
female connector)  
for LTB

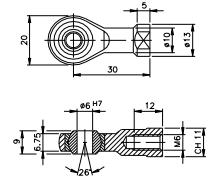


CON002 - IP40 Prot.  
(3 pole female  
connector)  
for LTH



CON006 - IP65 Prot.  
(DIN43650 4 pole  
female connector)  
for LTM

Extraction length of the connector  
10mm. Coupling ball-joint - PKIT015

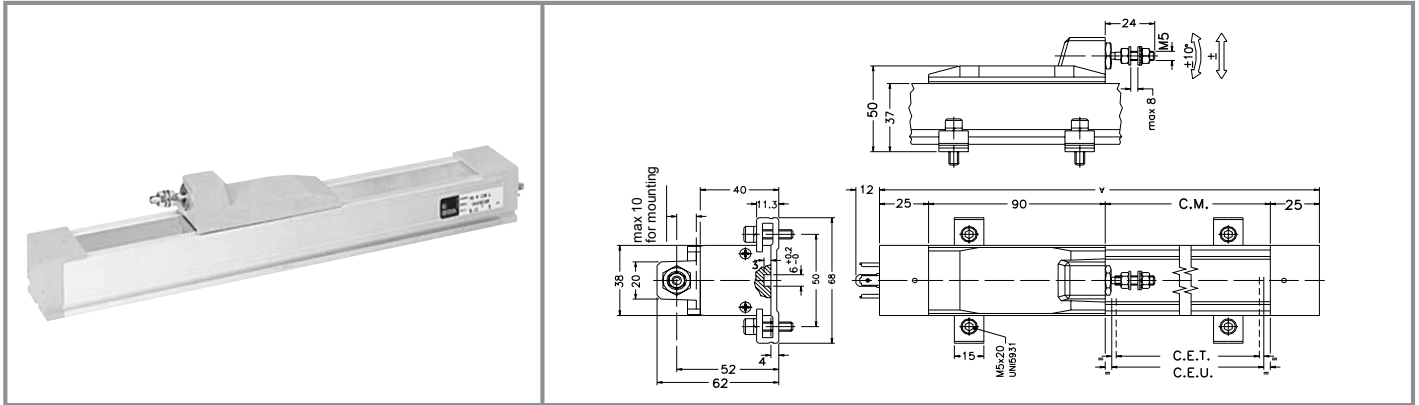


Mechanical / Electrical data																	
stroke (C.E.U.) +3/-0	mm	50	100	130	150	175	200	225	275	300	375	400	450	500	600	750	900
Theoretical electrical stroke (C.E.T.) ± 1	mm	C.E.U. + 3					C.E.U. + 4				380	406	457	508	609	762	914
Resistance (C.E.T.)	kΩ	5					5				5	5	5	5	5	10	10
Mechanical stroke (C.M.)	mm	C.E.U. + 9					C.E.U. + 10				386	412	463	518	619	772	924
Case length (A)	mm	C.E.U. + 62					C.E.U. + 63				439	465	516	571	672	825	977
Power supply		10V typically (60V max.)															

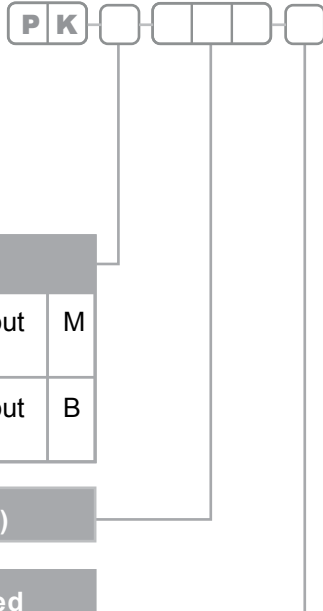
Thermon SA reserves the right to make any kind of design or functional modification without prior notice.

# PK

resistive track linear transducer with slider

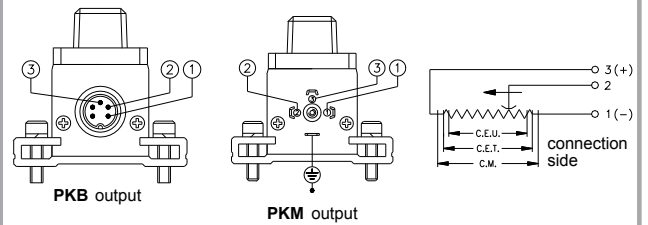


## Order code

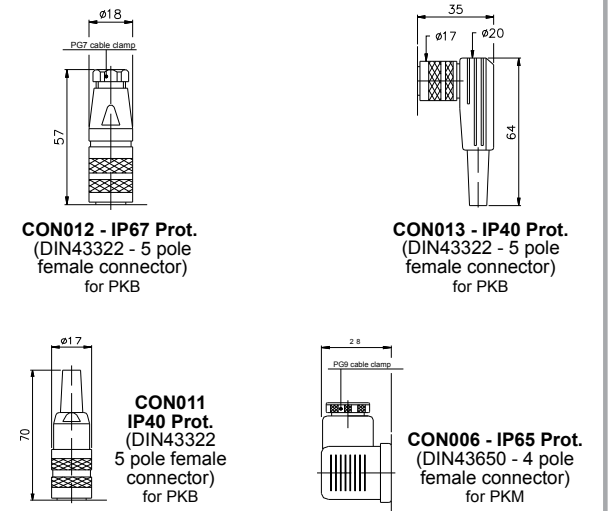


Connector output	
4 pole connector output DIN43650 ISO4400	M
5 pole connector output DIN43322	B
Stroke length (mm)	
Displacement speed	
up to 10m/s	H

## Electrical connections



## Accessories



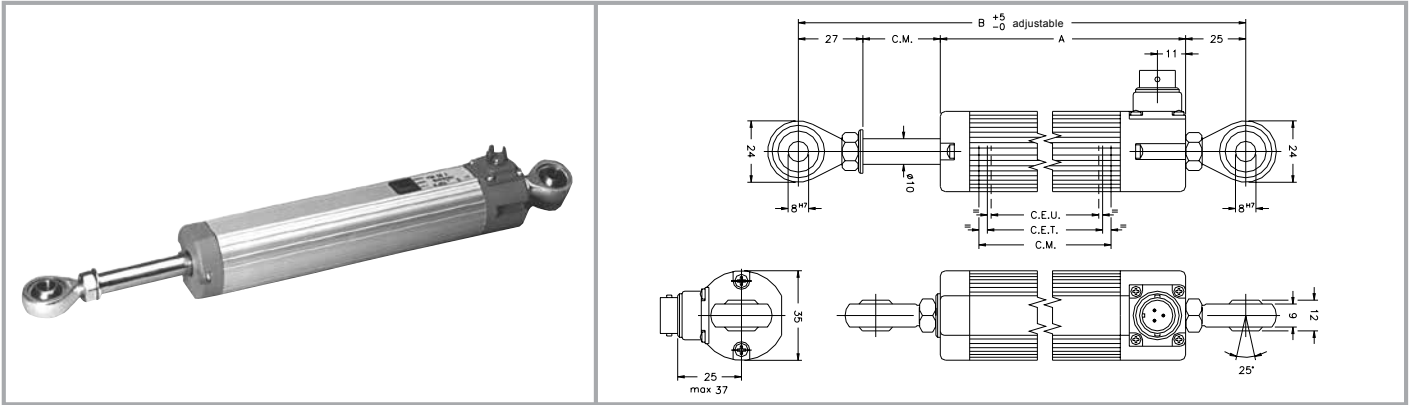
Extraction length of the connector 10mm

Mechanical / Electrical data																		
stroke (C.E.U.) +3/-0	mm	100	130	150	200	225	300	400	450	500	600	750	900	1000	1250	1500	1750	2000
Theoretical electrical stroke (C.E.T.) ± 1	mm	103	133	153	204	229	305	406	458	509	611	763	915	1017	1271	1521	1771	2021
Resistance (C.E.T.)	kΩ	5					10					20						
Mechanical stroke (C.M.)	mm	113	143	163	214	239	315	416	468	519	621	773	925	1027	1281	1531	1781	2031
Case length (A)	mm	253	283	303	354	379	455	556	608	659	761	913	1065	1167	1421	1671	1921	2171

Thermon SA reserves the right to make any kind of design or functional modification without prior notice.

# PC

## resistive track linear transducer



### Order code



Connector output	
3 pole connector output	H
4 pole connector output DIN43650 ISO4400	M
5 pole connector output DIN43322	B
3 pole PVC cable output 3x0,25, tail length=1m	F

### Stroke length (mm)

**Example: PC - M - 275**  
 Displacement transducer model PC, 4 pole connector output DIN43650 - ISO 4400, useful electrical stroke (C.E.U.) 275mm.

### Electrical connections

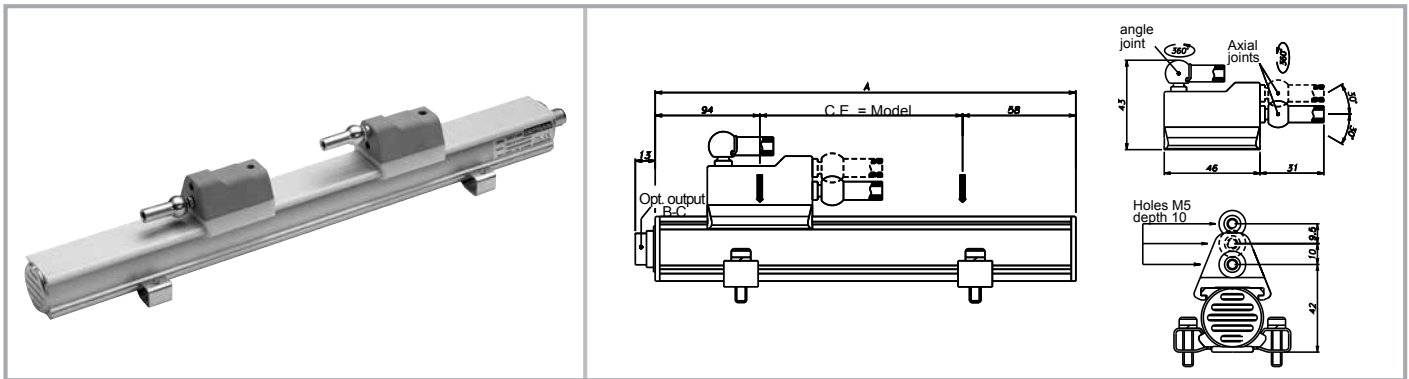
### Accessories

Mechanical / Electrical data																
stroke (C.E.U.) +3/-0	mm	50	100	130	150	175	200	225	275	300	375	400	450	500	600	750
Theoretical electrical stroke (C.E.T.) ± 1	mm	C.E.U. + 3					C.E.U. + 4				380	406	457	508	609	762
Resistance (C.E.T.)	kΩ	5					5				5	5	5	5	5	10
Mechanical stroke (C.M.)	mm	C.E.U. + 9					C.E.U. + 10				386	412	463	518	619	772
Case length (A)	mm	C.E.U. + 129					C.E.U. + 130				512	538	589	664	765	918
Min. distance between ball-joints (B)	mm	C.E.U. + 181					C.E.U. + 182				564	590	641	716	817	970

Thermon SA reserves the right to make any kind of design or functional modification without prior notice.

# MK4 A (contactless)

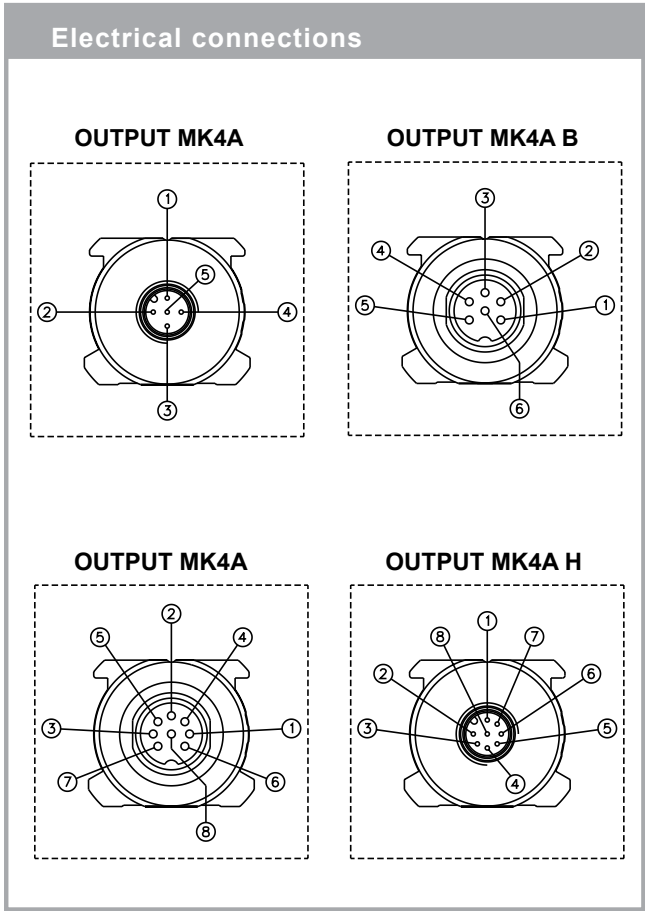
magnetostrictive contactless linear transducer



Order code **M K 4 A** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

<b>Analog output</b>		
<b>Connector output</b>		
M12 5 pin	A	
<b>Available on request</b>		
DIN45322 6-pin	B	
DIN45326 8-pin	C	
M12 8-pin	H	
<b>Stroke length (mm)</b>		

<b>Output</b>		
0,1... 10,1Vdc	1 cursor only for direct output	W
10,1... 0,1Vdc	1 cursor only for inverse output	Z
0... 10Vdc	1 cursor	N
0... 10Vdc	1 cursor, position and speed	P
0... 10Vdc	2 cursors (min. stroke 360mm)	Y
4... 20mA	1 cursor	E
4... 20mA	1 cursor, position and speed	F
4... 20mA	2 cursors (min. stroke 360mm)	H
<b>Available on request</b>		
0... 20mA	1 cursor	B
0... 20mA	1 cursor, position and speed	C
0... 20mA	2 cursor (min. stroke 360mm)	D
0... +5Vdc	1 cursor	K
-5... +5Vdc	1 cursor, position	L
-10... +10Vdc	1 cursor, position	T



**Note: Brackets and cursors are not included and must be ordered separately (see overleaf)**

Mechanical / Electrical data																					
stroke (C.E.U.) +3/-0	mm	50	75	100	130	150	175	200	225	250	300	350	360	400	450	500	550	600	650	700	750
		800	850	900	950	1000	1100	1200	1250	1300	1400	1500	1750	2000	2250	2500	2750	3000	3250	3750	4000
Independent linearity	±%FS	typically 0.02% (max. 0.04%)																			
Max. dimensions (A)	mm	stroke +152																			
Repeatability	mm	< 0,01																			
Hysteresis	mm	< 0,01																			
Sampling time	ms	0.5 (1 for stroke from 300 to 1100) (1.5 for stroke from 1100 to 2000) (2 for stroke >2000) (3 for stroke > 3000)																			

Thermon SA reserves the right to make any kind of design or functional modification without prior notice.

# Accessories for MK4A

## Cursors on request

### Order code

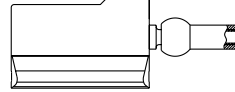


#### Connector output

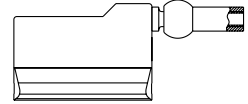
Sliding cursor, axial joint (low)	035
Sliding cursor, axial joint (high)	036
Sliding cursor, angled joint	037
Floating cursor	034

#### number of cursors

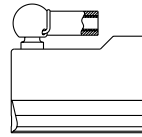
PCUR035



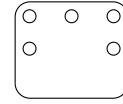
PCUR036



PCUR037



PCUR034



## Brackets on request

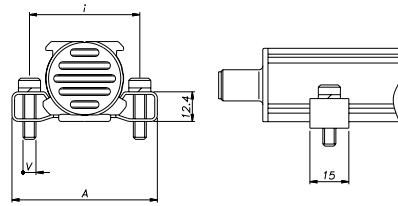
### Order code



#### Brackets

Bracket in stainless steel, ineraxis 42.5mm	090
Bracket in stainless steel, ineraxis 50mm	091

#### number of brackets



Bracket code	interaxis (i)	screw (v)	dimension (A)
PKIT090	42.5	M4	56
PKIT091	50	M5	63.5

## Cable connectors

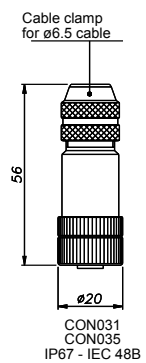
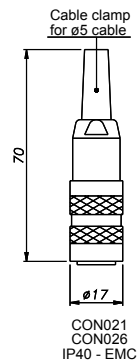
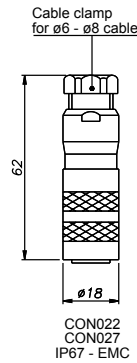
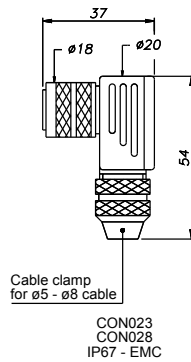
For A-H outputs, M12 thread connector

Codes: **CON031** for 5-pin output (MK4A A)  
**CON035** for 8-pin output (MK4A H)

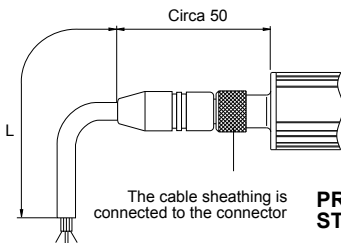
For B-C outputs, M16 thread connector

Codes: **CON021** for 6-pin output (MK4A B)  
**CON022** for 6-pin output (MK4A B)  
**CON023** for 6-pin output (MK4A B)  
**CON026** for 8-pin output (MK4A C)  
**CON027** for 8-pin output (MK4A C)  
**CON028** for 8-pin output (MK4A C)

Connector extraction length: 10mm

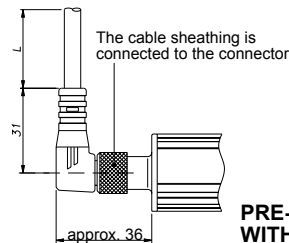


## Pre-assembled cables



### PRE-ASSEMBLED CABLE WITH STRAIGHT CONNECTOR

6-pin cable code		MK4A - B	
Length "L"		CODE	
		straight connector	
2	mt	UCGM-C02CON021	
5	mt	UCGM-C05CON021	
10	mt	UCGM-C10CON021	
15	mt	UCGM-C15CON021	



### PRE-ASSEMBLED CABLE WITH 90° CONNECTOR

6-pin cable code		MK4A - B	
Length "L"		CODE	
		connector 90°	
2	mt	UCGM-C02CON023	
5	mt	UCGM-C05CON023	
10	mt	UCGM-C10CON023	
15	mt	UCGM-C15CON023	