GeMinG Linear Drive

HTA

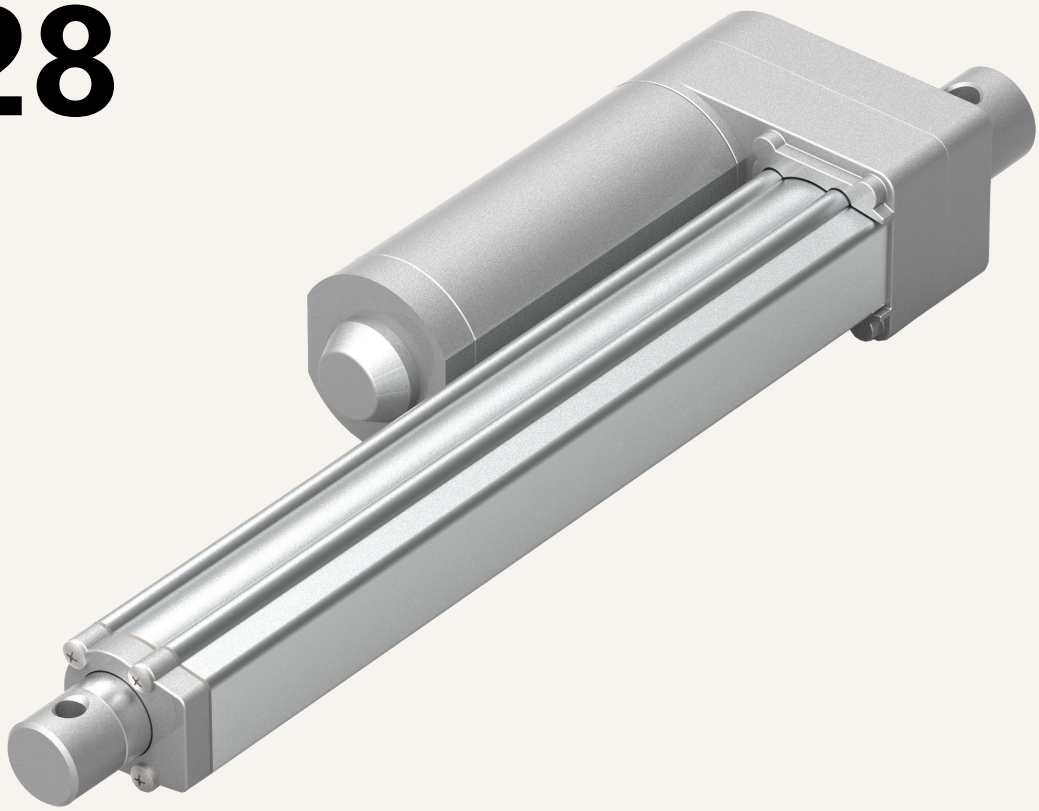
Series
Actuator

GeMinG China LimiteD
www.GeMingag.com

HTA28

Series

Actuator



Product Category

1、Medical

2、furniture

3、Car

Among the many miniature electric linear actuator products, the biggest feature of HTA28 is its low noise and compact installation size, which is especially suitable for installation in X-ray machines or other medical applications. Not only that, it can also be used in furniture or work environments, and can be easily automated through microcomputer control. Actuators used in existing furniture, seats, and various equipment

Functional Overview

Voltage:	12V , 24V DC
Motor Options:	DC Motor
Maximum thrust (pull):	4,500 N / 3,500 N
Slowest speed under load:	5.0mm / s (load 3,500N)
Maximum speed under load:	40 mm / s (load 500N)
Minimum installation size:	Travel + 125mm
Dynamic lateral moment:	30Nm
Static lateral moment:	50Nm
color:	Silver gray, black
Voice:	45~52 DB
Applicable temperature range:	-35°C ~ +65°C
Protection level:	IP67
Screw selection:	Trapezoidal screw
Switch Type:	Built-in limit switch,
Signal options:	Hall sensor, endpoint signal
Control options:	Synchronous control, independent control,
Safety certification:	Comply with ISO9001-2008, CE and RoHS compliant,
High-strength metal zinc alloy gearbox and housing,	

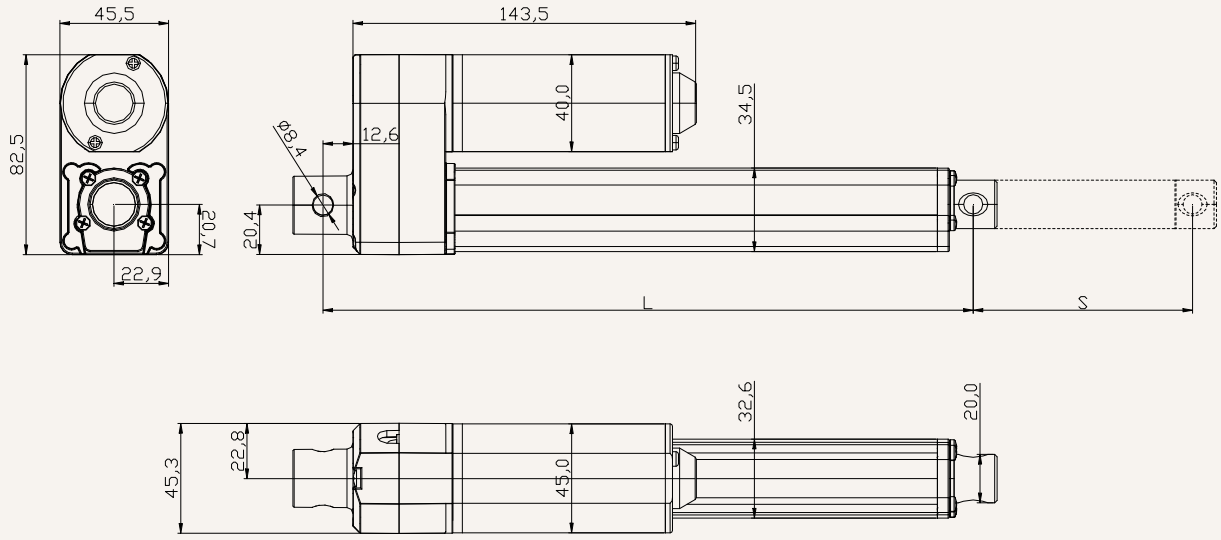
Smart and comfortable move

Maximum utilization of available space The motor system is nicely hidden under the bed.

The system is designed to be placed over the bed for easy cleaning or placement. Innovative solutions

Drawings

Standard size
MM



S: Stroke

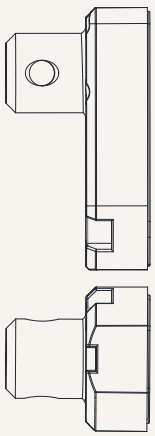
L: Retracted length

L= Stroke +125mm

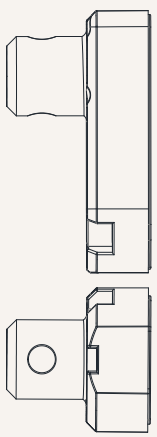
More than 500MM stroke, installation size L= Stroke +140MM

tallation angle (counterclockwise)

0 =0 Degrees

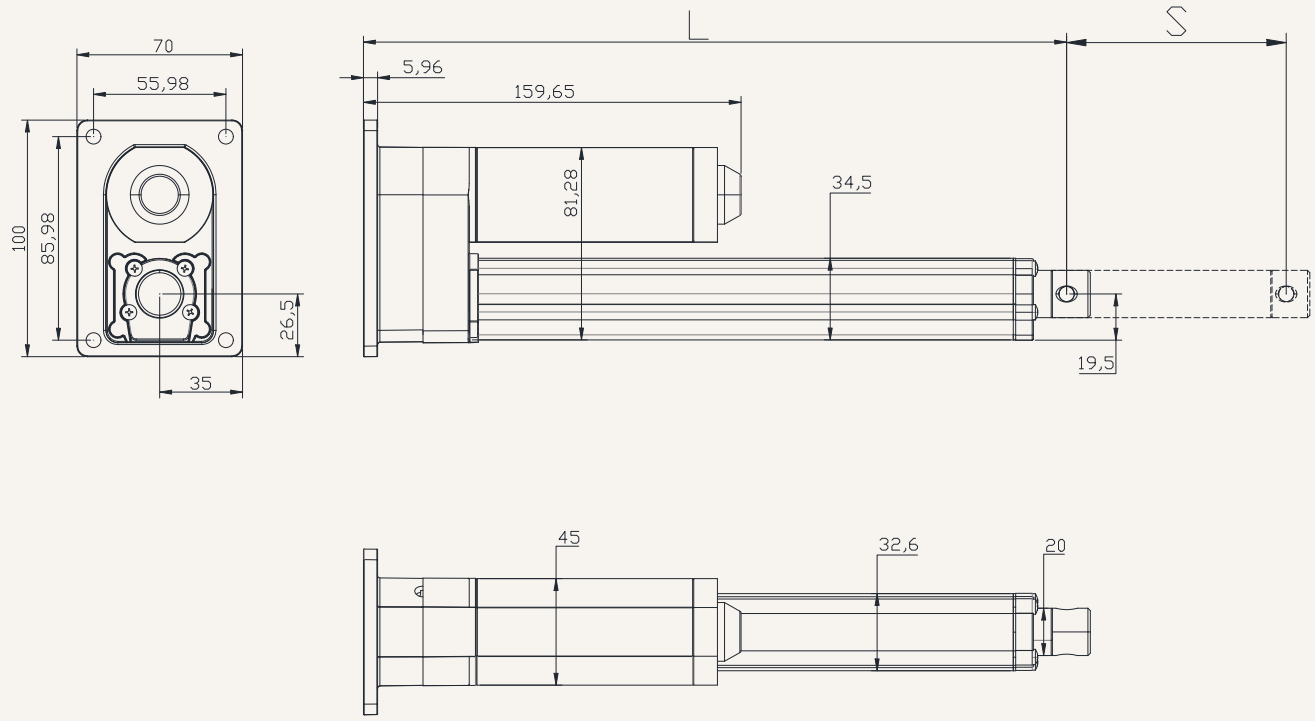


9 =90 Degrees



Drawings

Standard size
MM



S: Stroke

L: Retracted length

L= Stroke +115 mm

More than 500MM stroke, installation size L= Stroke +130MM

load and speed

Code	Rated load Thrust N	Pull N	Self-locking force static conditions static N	Rated load current A	Output speed no load 24V DC mm/s	Rated load 24V DC mm/s
Motor voltage (24V DC Speed ratio 32)						
A	4500	4500	5500	4.1	3.5	2.5
B	4000	4000	4500	4.1	5.5	4.5
C	3000	3000	3000	4.1	8.8	7.0
D	2500	2500	2500	4.1	11	9.0
E	1500	1500	1500	4.1	17	14
Motor voltage (24V DC Speed ratio 29)						
F	3800	3800	4000	4.1	6.5	5.0
G	2200	2200	3000	4.1	13.0	10.0
H	1400	1400	1500	4.1	19.5	16.0
I	1000	1000	1000	4.1	26.0	21.0
J	800	800	800	4.1	39.0	31.5

Remark

1. The speed and current on the upper side are the materials that extend when pushed.

2. For 12V motor, the speed is about the same and the current is about 2 times higher.

3. The current & speed in the table are the test average values in the extension direction under thrust application.

4. The current & speed in the table and graph are the test average values of the GeMinG control box configuration, and there is an error of about 10% depending on the control box model.

(The voltage is about 29V DC at no load, and drops to about 24V DC at rated load)

Stroke: minimum value ≥ 20mm, please refer to the table below for the maximum value of load and stroke

load (N)	Maximum stroke (mm)
2,000	50-200
1,200	201-300
1,000	301-400
800	401-600
500	601-900

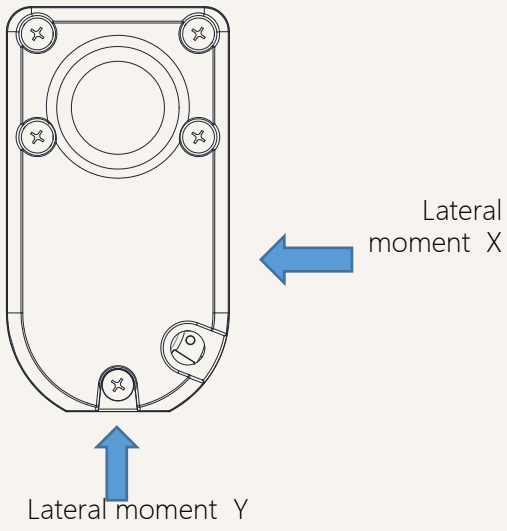
Remark:

Lateral moment Y direction = X*0.8

Static lateral moment = dynamic*2

Dynamic lateral moment (Nm)-X direction

stroke	S+125	S+140
100-200	30	50
300-500	25	40
500-700	20	30
700-900	10	20



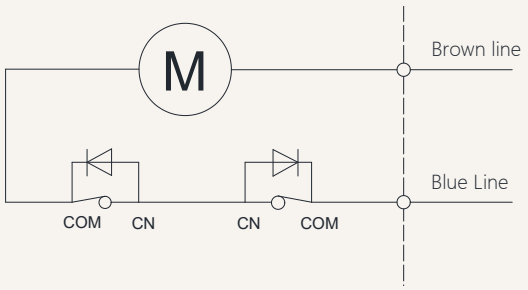
Stroke installation size reference chart

HTA28 Series	stroke ± 2 (mm)				Install ± 2 (mm)				
strokeMM	100	150	200	250	300	350	400	450	500
Install MM	225	275	325	375	425	475	525	575	640
weight KG	1,2	1.4	1.6	1.8	2.1	2.3	2.5	2.7	3.2

Actuator wiring diagram

No signal feedback wiring diagram

Code：N



Wiring Instructions:

1】Brown lead: motor positive +

2】Blue lead: motor negative pole -

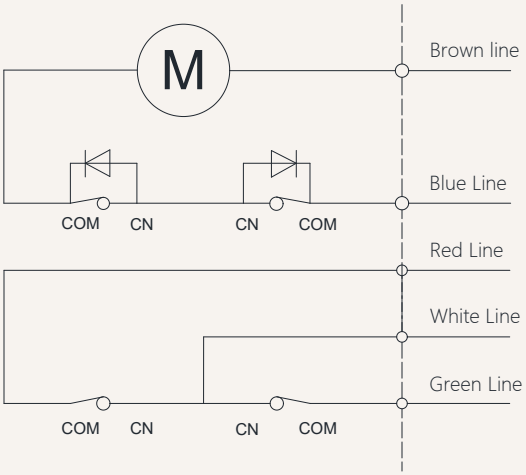
3】When the push rod is extended: the brown wire is positive +, the blue wire is negative -

4】When the push rod is retracted: the blue line is positive +, the brown line is negative -

Actuator wiring diagram Built-in control module

Built-in controller wiring diagram

Code：NY



Wiring Instructions:

1】Brown lead: motor positive +

2】Blue lead: motor negative pole -

3】When the push rod is extended: white line + red line

4】When the push rod retracts: white line + green line

5】White line: control output common line.

6】White and red lines: stretch out,

7】White and green lines: retract,

8】Wireless remote control, use wired control simultaneously.

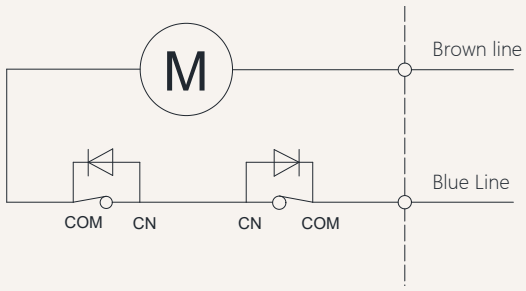
Other signal descriptions

Feedback signal	Description	Function
Active endpoint feedback signal	Voltage with this model	When the push rod reaches the end point, a signal will be fed back. This signal will always exist and will disappear during the operation of the push rod.,
Passive endpoint feedback signal	No voltage	When the push rod reaches the end point, it will feedback a signal. This signal always exists when the input power is not turned off. When the input power is turned off, the signal disappears. The signal will also disappear during the operation.
Note: For other needs, please contact the GeMinG team		

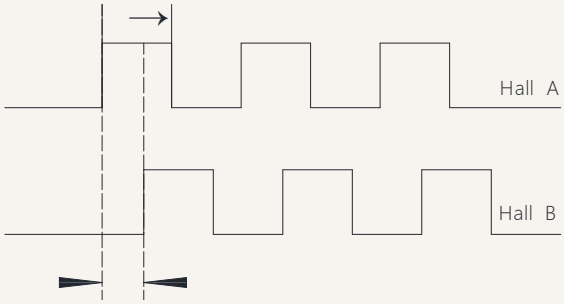
Signal feedback Hall sensor

Hall signal motor circuit diagram

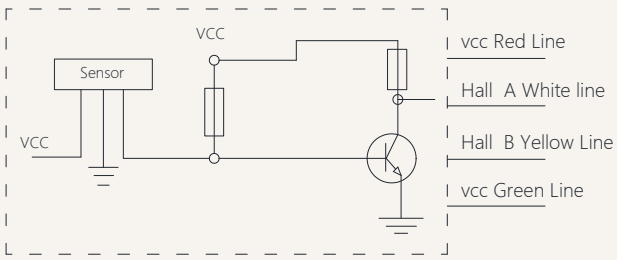
Code: H



Hall signal output waveform diagram



Schematic diagram of the internal circuit of the Hall signal



Wiring Instructions:

1】Brown lead: positive pole of motor +
2】Blue lead: negative pole of motor -
3】Red lead: VCC 5V voltage input +
4】Green lead: GND 5V voltage input -
5】White lead: Hall signal output A
6】Yellow lead: Hall signal output B

Notes:

1) Support dual-channel/single-channel Hall encoder
2) Current-consuming digital output
3) High-speed response frequency from: 0 KHz-100 KHz
4) Applicable temperature range:-40 ℃~+125 ℃

Characteristics	Symbol	Test conditions	MI	RE	M	Unit
Supply voltage	Vcc	----	3.5	---	24	V
Output saturation voltage	Vce/sat	Vcc=14V ; Ic=20mA	---	300	700	MV
Output leakage current	1 cex	Vce=14V ; Vcc=14V	---	<0	10	UA
Input voltage	1 ce	Vcc=20V ; Output open	---	1	10	M
Output fall time	R	Vcc=14V ; RL=820Ω ; CL=20pF	---	0.3	1.5	US

HTA28 Model Description Selection Code Table

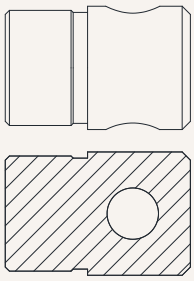
HTA28	-	24	A	***	***	-	O1	O1	0	1	T	A	N	07
①		②	③	④	⑤		⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬

①	Product number	HTA28=60W Motor	HTA28H=90W Motor		
②	Voltage	12=12V DC	24=24V DC	36 = 36V DC	48 = 48V DC
③	Load(n)@Speed (mm/s)	See page 06			
④	Stroke(mm)	See page 06			
⑤	Installation size(mm)	Note: Before selecting a size, please refer to the valid data sheet! See page 05			
⑥	Upper type See page 13	O1 = Regular type. Aperture 8.5mm		O2 = Conventional type. Aperture 10.5mm	
		U1 = slot width 8mm, hole diameter 8.5mm		U2 = slot width 8mm, hole diameter 10.5mm	
		M1 = M12 internal thread, depth 20 mm		M2 = M14 internal thread, depth 20 mm	
		T1 = M12 external thread, length 20mm		T2 = M14 external thread, length 20mm	
		L1 = 8mm width, 8.5mm aperture		L2 = 8mm width, 10.5mm aperture	
		G1 = Spherical plain bearing, bore 10mm		GD = Customization	
⑦	lower type See page 14	O1 = Regular type, hole diameter 8.5mm		O2 = Regular type, hole diameter 10.5mm	
		P1 = T-type, four mounting holes 8.5 mm		KZ = Customized	
⑧	Installation angle (counterclockwise)	0 =0°, Degree		9 =90°, Degree	
⑨	Please refer to the outlet type	12 = 2-core bare wire		25 = 7-core bare wire	
		4 = Four-pin straight plug		6 = Six-pin straight plug	
		7 = Waterproof plug		K = Customized	
⑩	Lead screw options	T = Trapezoidal screw (default preferred)		G=Ball screw	
⑪	Control method	A = No Control	C = ***	Y =***	N=***
		T = Synchronous control	K= Customization		
⑫	Signal output options	N = No signal	H =Hall signal	D=***	U=Active signal
		W=Passive signal	AN=***		
⑬	Cable length	07 = length 0.7 M	10 = length 1.0 M	15 =length 1.5 M	20= length 2.0 M
		30 = length 3.0 M	40 =length 4.0M	50 =length 5.0 M	60= length 6.0M
		70 = length 7.0 M	70 =length 8.0 M	90 =length 9.0 M	00 =Customization

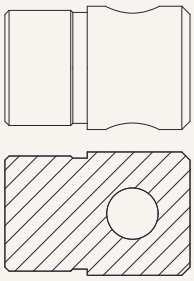
HTA28 Attachment Description Selection Code Table

Upper end form (extended):

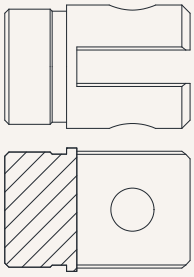
O1=Ordinary type, hole diameter 6.1mm



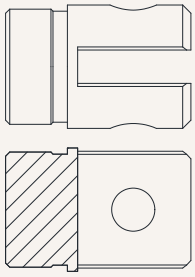
O2=Ordinary type, hole diameter 8.1mm



U1 = groove width 8.1mm, hole diameter 6.1mm



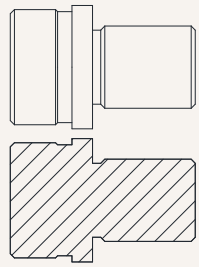
U2 = groove width 8.1mm, hole diameter 8.1mm



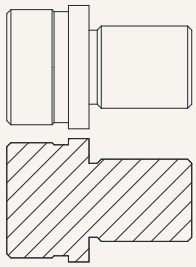
M1 = Type M, M12 thread, depth 20 mm

M2 = Type M, M14 thread, depth 20 mm

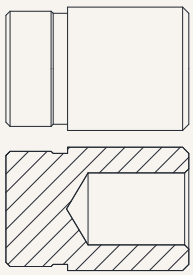
T1 = T-type, M12 thread, length 20mm



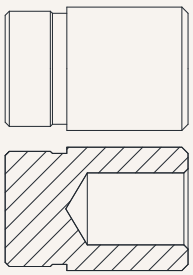
T2 = T-type, M14 thread, length 20mm



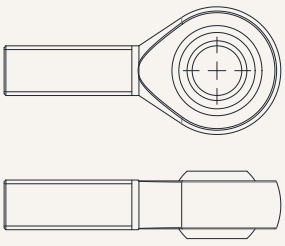
L1 = L shape, width 6mm, aperture 6.1mm



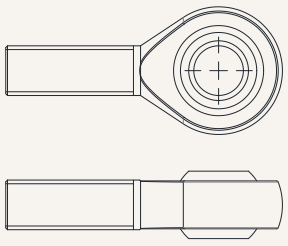
L2 =L shape, width 6mm, aperture 8.1mm



G1 = Spherical bearing, bore 10mm, model GS10



G1 = Spherical bearing, bore 12mm, model GS12

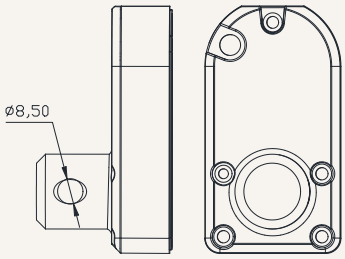


KZ = Customized

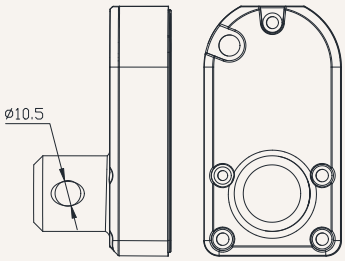
HTA28 Attachment Description Selection Code Table

Tail lower end form:

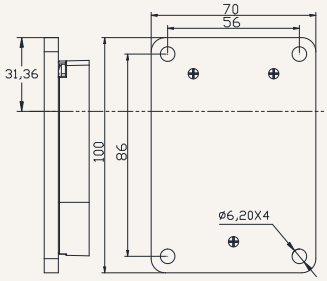
O1 = No slot, aperture 8.5mm



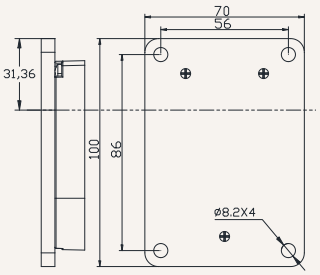
O2= No slot, aperture 10.5mm



P1 = T-type, four mounting holes 6.5 mm

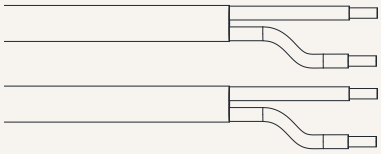


P2 = T-type, four mounting holes 8.5 mm

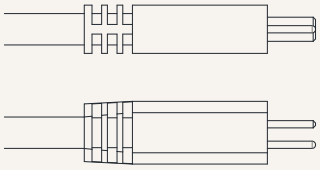


Power Cord Plug Type Code Table

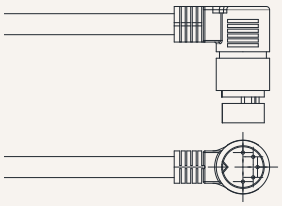
1 = Dare wire



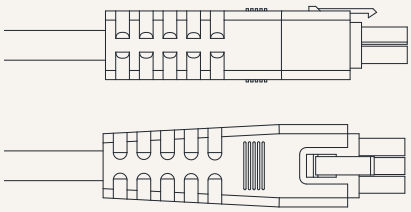
2 = O1 Straight plug



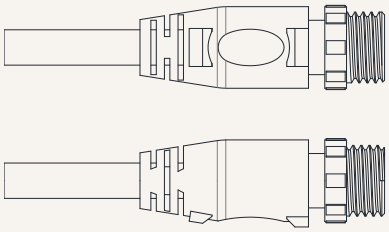
3 = 4-pin angled plug



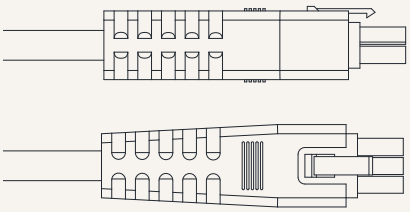
4 = 4-pin straight plug



8 = Waterproof plug



9 = 6-pin straight plug



0 = Customized

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