

Applications

- Press Machine
- Cutting Machine
- Injection Molding Machine
- High-risk applications that can lead to serious injury or death
- Safety device in danger zone
- Robotic production line

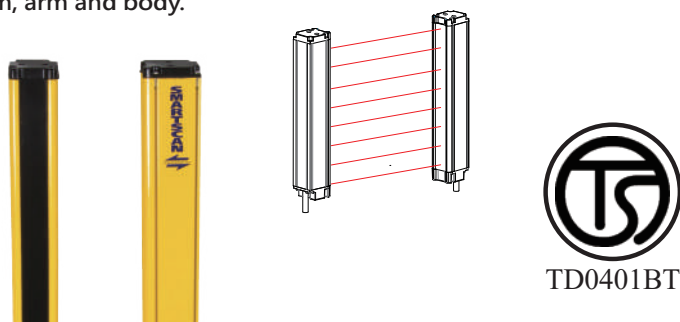
Introduction

The C4 compact series of safety light curtains meet the highest requirements of the latest international safety standards such as ISO 13849-1 PL e and ISO 62061 safety level SIL3, as well as the international safety light curtain standards IEC 61496-1, IEC 61496-2.

All requirements of the highest level TYPE 4, and passed the test and notified of many third-party notified units in Europe, and obtained the certificate of safety machinery device.

Its safety performance level can be applied to all kinds of dangerous machinery such as punching, shearing, folding machines and other working machines, and meet various safety regulations.

The C4 compact series of safety light curtains use the latest electronic and mechanical manufacturing technology, and the exterior structure is small and strong, and the detection dead zone occupied by the upper and lower end caps of the light curtain is reduced. Durable and priced at a lower price than comparable products, it is available in a wide range of models and sizes to meet the safety needs of the operator's finger palm, arm and body.



Property

- Small size, suitable for mechanical compact size design, Strong mechanical compact size design, Strong mechanical rigidity without additional mechanism .
- Excellent safety performance, in line with various international safety standards and specifications, using the latest process technology, the quality of light curtain is stable.
- Comply with international safety protection product series.
Various type, 14mm 、 24mm 、 30mm 、 40mm 、 45mm 、 50mm detection capability.
- Built-in self-diagnosis function and work status indicator.
A seven-segment display with light screen receiving signal strength indication.
(can be installed in the vertical direction of the light curtain to customize the font orientation).
- High performance, price concessions. Easy installation alignment and regulation.
- 14mm and 24mm have both Floating blanking and Beam floating blanking function .

General Specifications

Number of beam	14mm	24mm	30mm	40mm	45mm	50mm
Detection capability	12 ~ 192	6 ~ 96	6 ~ 96	6 ~ 96	4 ~ 48	4 ~ 48
Detection zone(mm)	134 ~ 1934	144 ~ 1944	134 ~ 2430	190 ~ 2440	205 ~ 1965	210 ~ 1970
Operating distance	0.5m ~ 5m	0.5m ~ 5m	0.5m ~ 5m	3m ~ 10m	0.5m ~ 5m	3m ~ 10m
Response time	20msec (Exclude relay switch time)					
Ambient temperature	0°C to +50°C					
IP rating	IP65(Ingress Protection)Ratings					
Status indicator	TX - Status indicator RX - OSSD ON (Green LED) · OSSD OFF (Red LED) · RX receiving status (Yellow LED)					
Power supply	24 VDC ± 10% and 1.5A regulated					
Power consumption	500mA + (OSSD current consumption)					
Connector	M12connector(T type)					
Appearance	Aluminum, yellow powder coating					
Classification	IEC 62061 SIL3 · ISO 13849-1 PL e · IEC 61496-1 TYPE4 / IEC 61496-2 TYPE4					
Input mode	EDM, RESET, Synchronization input, 24VDC / 0V (GND)					
Output mode	OSSD1 & OSSD2 (24 VDC / 500mA Solid-state Electronic), Synchronization output					

C4 Series

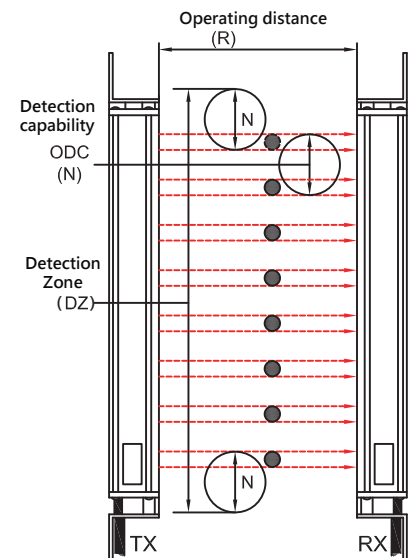
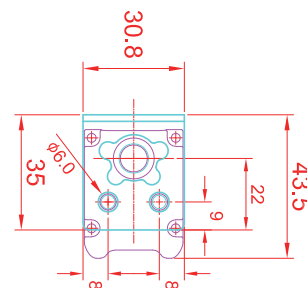
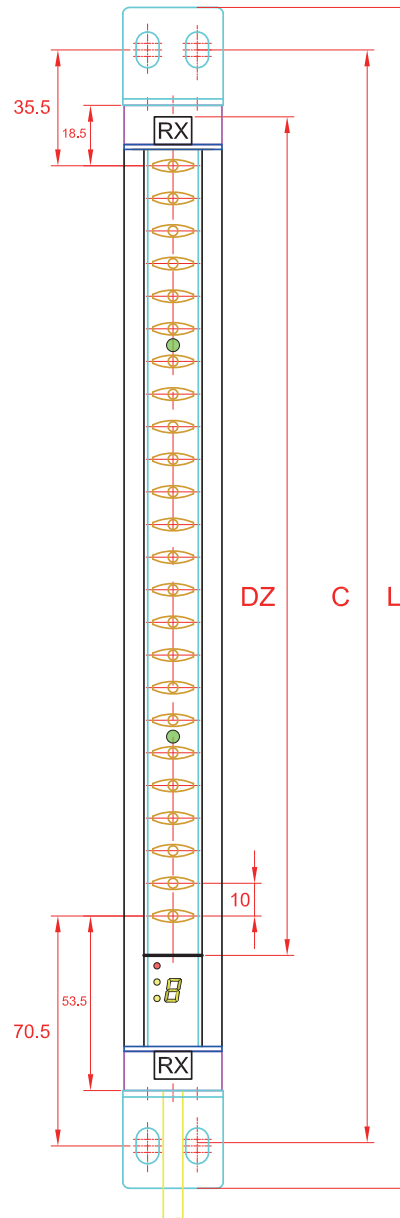
Detection capability ODC (N) 14mm				
Operating distance (R) 0.5m to 5.0m				
Beams	Model	Detection Zone (DZ)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
12	C4-101	134	216	242
24	C4-102	254	336	362
36	C4-103	374	456	482
48	C4-104	494	576	602
60	C4-105	614	697	722
72	C4-106	734	816	842
84	C4-107	854	936	962
96	C4-108	974	1056	1082
108	C4-109	1094	1176	1202
120	C4-110	1214	1296	1322
132	C4-111	1334	1416	1442
144	C4-112	1454	1536	1562
156	C4-113	1574	1656	1682
168	C4-114	1694	1776	1802
180	C4-115	1814	1896	1922
192	C4-116	1934	2016	2042

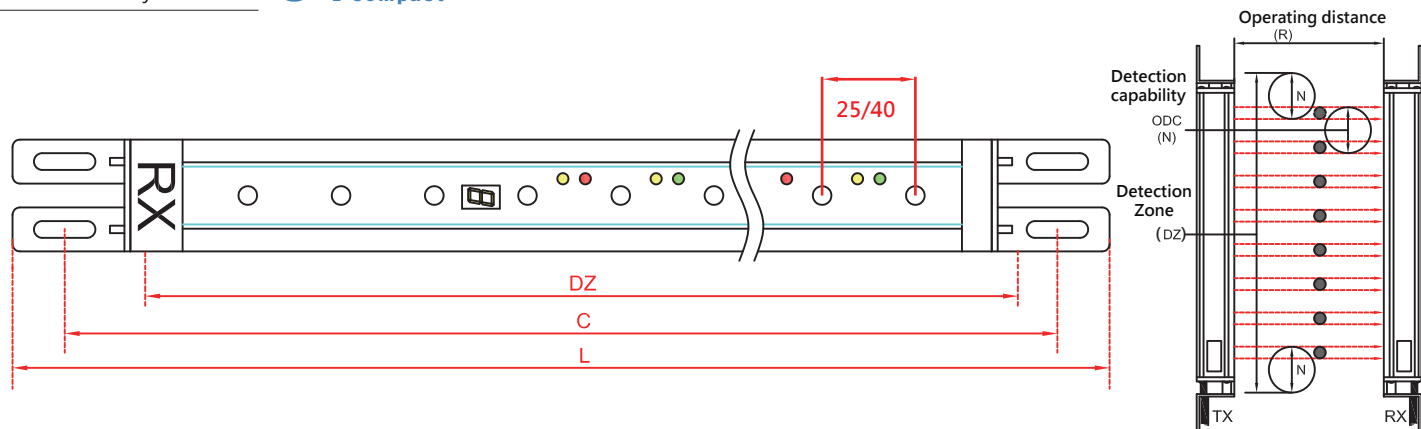
► Built-in floating blanking and beam floating blanking function(P.23)

C4 Series

Detection capability ODC (N) 24mm				
Operating distance (R) 0.5m to 5.0m				
Beams	Model	Detection Zone (DZ)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
6	C4-201	144	216	242
12	C4-202	264	336	362
18	C4-203	384	456	482
24	C4-204	504	576	602
30	C4-205	624	697	722
36	C4-206	744	816	842
42	C4-207	864	936	962
48	C4-208	984	1056	1082
54	C4-209	1104	1176	1202
60	C4-210	1224	1296	1322
66	C4-211	1344	1416	1442
72	C4-212	1464	1536	1562
78	C4-213	1584	1656	1682
84	C4-214	1704	1776	1802
90	C4-215	1824	1896	1922
96	C4-216	1944	2016	2042

► Built-in floating blanking and beam floating blanking function(P.23)





C4B Series

Detection capability ODC30mm			Detection capability ODC 40mm		Dimension content	
Operating distance 0.5m to 5m			Operating distance 3m to 10m			
Beams	Model	Detection Zone (DZ)(mm)	Model	Detection Zone (DZ)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
6	C4B-6	180	C4B-6L	190	212	240
12	C4B-12	330	C4B-12L	340	362	390
18	C4B-18	480	C4B-18L	490	512	540
24	C4B-24	630	C4B-24L	640	662	690
30	C4B-30	780	C4B-30L	790	812	840
36	C4B-36	930	C4B-36L	940	962	990
42	C4B-42	1080	C4B-42L	1090	1112	1140
48	C4B-48	1230	C4B-48L	1240	1262	1290
54	C4B-54	1380	C4B-54L	1390	1412	1440
60	C4B-60	1530	C4B-60L	1540	1562	1590
66	C4B-66	1680	C4B-66L	1690	1712	1740
72	C4B-72	1830	C4B-72L	1840	1862	1890
78	C4B-78	1980	C4B-78L	1990	2012	2040
84	C4B-84	2130	C4B-84L	2140	2162	2190
90	C4B-90	2280	C4B-90L	2290	2312	2340
96	C4B-96	2430	C4B-96L	2440	2462	2490

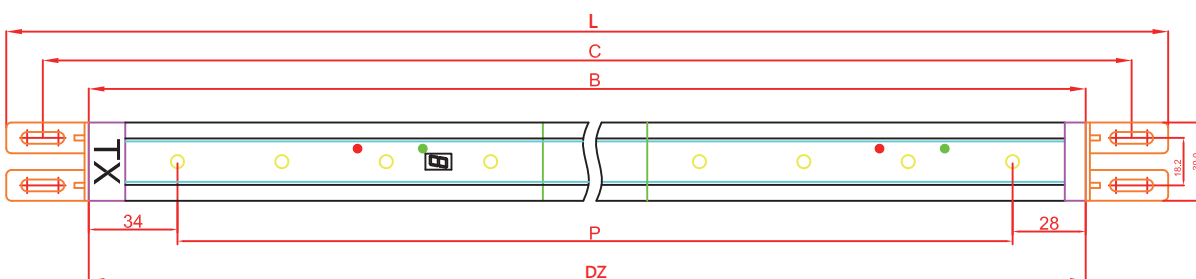
C4A Series

Detection capability ODC 45mm			Detection capability ODC 50mm		Dimension content	
Operating distance(R) 0.5m to 5m			Operating distance 0.5m to 10m			
Beams	Model	Detection Zone (DZ)(mm)	Model	Detection Zone (DZ)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
4	C4A-4	205	C4A-4L	210	217	245
8	C4A-8	365	C4A-8L	370	377	405
12	C4A-12	525	C4A-12L	530	537	565
16	C4A-16	685	C4A-16L	690	697	725
20	C4A-20	845	C4A-20L	850	857	885
24	C4A-24	1005	C4A-24L	1010	1017	1045
28	C4A-28	1165	C4A-28L	1170	1177	1205
32	C4A-32	1325	C4A-32L	1330	1337	1365
36	C4A-36	1485	C4A-36L	1490	1497	1525
40	C4A-40	1645	C4A-40L	1650	1657	1685
44	C4A-44	1805	C4A-44L	1810	1817	1845
48	C4A-48	1965	C4A-48L	1970	1977	2005

Perimeter Series

Detection capability 0.5m to 5m				Detection capability 3m to 10m		Dimension content		
Beams	Beam Pitch (P)(mm)	Model	Detection Zone (DZ)(mm)	Model	Detection Zone (DZ)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
8	500	C4A-125	562	C4A-122	562	562	597	625
8	600	C4A-128	662	C4A-129	662	662	697	725
12	430	C4A-126	962	C4A-123	962	962	997	1025
16	373	C4A-127	1261	C4A-124	1261	1261	1296	1324

► This Perimeter can be matched with Mirror Module and safety light curtains freestanding stand components □ type or L type locality protection (P.18 · P.37)



Electric Wiring

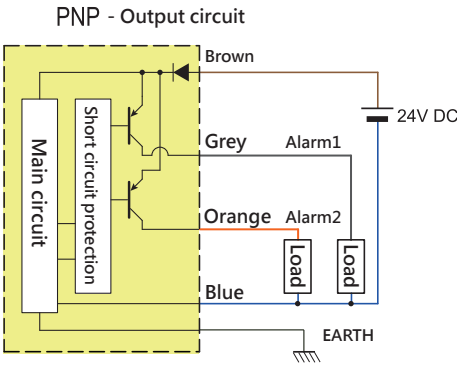
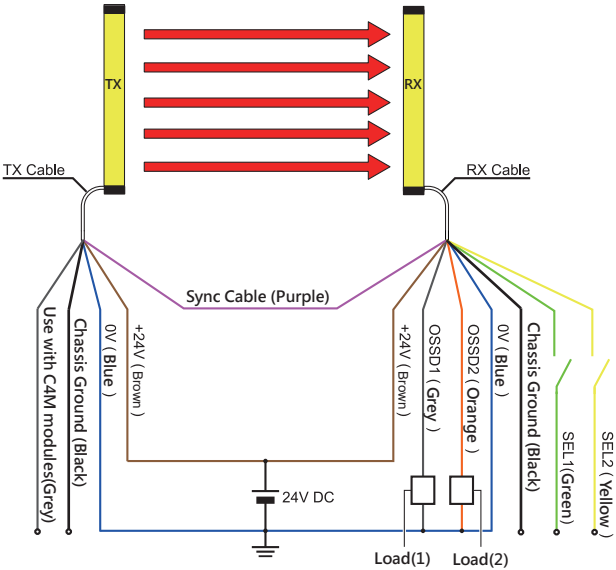
▶ Please refer to the installation manual for detailed.

Input 、Output circuit	
(1)Power :	Vin +24V DC transmitter and receiver(Brown+24V 、 Blue 0V), we suggest using independently power module. It could avoid surging; Ferrite core installs in RX and case connects with Gnd.
(2)Output :	Two groups of transistor(PNP) signal output OSSD1 and OSSD2 ; DC+24V during light curtain normal operation(MAX 500mA).

C4 Series (C4-1XX 、 C4-2XX)

▶ Please refer to the installation manual for detailed.

Auto Reset Mode



Built-in floating / fixed blanking function

Use Wiring by way to Setup	RX :SEL 1(Green)	RX :SEL 2(yellow)
Automatic Reset Mode (normal mode)	connect to 0V DC	connect to 0V DC
1 beam Floating blanking	connect to +24V DC	connect to 0V DC
2 adjacent beam Floating blanking	connect to 0V DC	connect to +24V DC
Record the setting of learn Fixed beam blanking	connect to +24V DC	connect to +24V DC
Erase the memory of learn fixed beam blanking	+24V DC⇒ 0V DC	+24V DC⇒ 0V DC

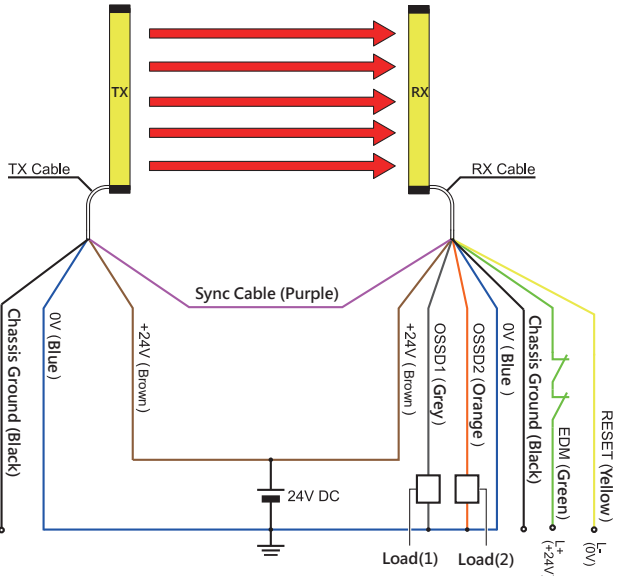
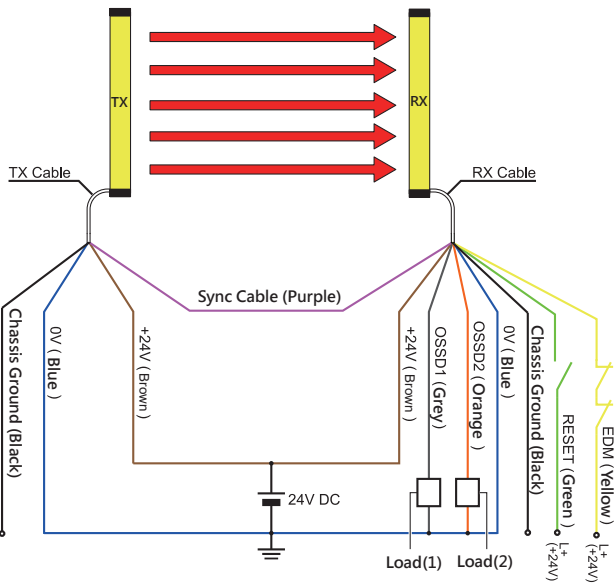
※ Please Security Risk Assessment before use
mask function or inquire Smartscan TW.

▶ Recommend using it with the C4M module. Please contact with Smartscan TW.

C4B 、 C4A Series

▶ Please refer to the installation manual for detailed.

Manual Reset mode Auto Reset Mode



C4M Multifunction Safety Control Module

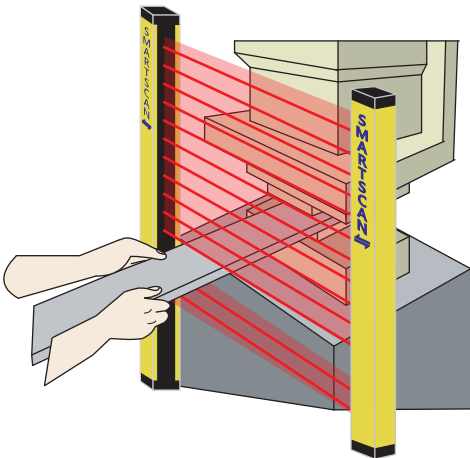
In addition to wiring, C4-1XX and C4-2XX the series can also be paired with the C4M multi-functional safety control module to enable floating blanking and fixed blanking functions. The functions of safety light curtains, floating blanking and fixed blanking can be easily switched with a key, making the processing method safer and more convenient.



General specifications

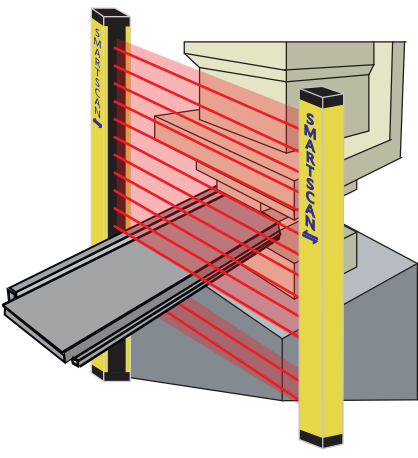
Model No.	C4M-B1	C4M-B2	C4M-F
Used Light curtains No.	1 Set	1 Set	1 Set
Power supply	AC 110V /AC 220V		
Output Voltage	DC 24V		
Signal Input	PNP signal*2		
Safety relay output	Safety RELAY Dry Contact, 2A/2B/1A1B		
Reaction time	20 ms		
Mute	One keys control a set of bypass		
Floating blanking	Key Control Enabled or Disable		
	1 Beam floating blanking	2 adjacent beam floating blanking	1 Beam floating blanking
Fixed blanking	NO such function	NO such function	Key Control Enabled or Disable
inching function	NO	NO	Yes
Coating	175mm*80mm*272mm Yellow Anodizing		

※ For Machine Selection please contact with Smartscan TW.



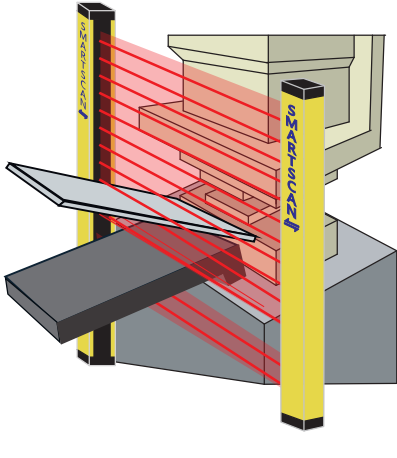
Floating blanking
(Matching C4M-B1 or B2)

Normally, a safety light curtains will output E-stop signal to halt the press operation if an optical axis is blocked. However, this function requires multi-axis light to be blocked before outputting a stop signal. This feature is highly effective in resolving issues when there are moving obstacles within the monitored area.



Beam floating blanking
(Matching C4M-F)

Beacuse still shelter (peripheral devices or material), optical axis caused blackout curtains,therefore by invalidating the setting of the disable a device blackout curtains using Beam floating blanking (Fixed blanking), stamping operations can be carried out without compromising safety.



Beam floating blanking + floating blanking
(Matching C4M-F)

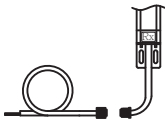
The Beam floating blanking and the Two-axis Light-blocking (Floating Shield) function can be used in combination equipment.

Accessories

C4 Series Connection Cable(ODC 14mm 、24mm)

Connecting Cable Types

M12 Connector Communication Cable



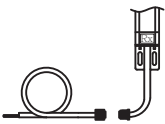
C4 Series-M12 Connection Cable

Cable model	M12 connector cable length	Cable model	M12 connector cable length
C4-S3M-180-RX	C4 series cable 3M(RX)	C4-S3M-180-TX	C4 series cable 3M(TX)
C4-S5M-180-RX	C4 series cable 5M(RX)	C4-S5M-180-TX	C4 series cable 5M(TX)
C4-S10M-180-RX	C4 series cable 10M(RX)	C4-S10M-180-TX	C4 series cable 10M(TX)
C4-S20M-180-RX	C4 series cable 20M(RX)	C4-S20M-180-TX	C4 series cable 20M(TX)

C4A 、C4B Series Connection Cable

Connecting Cable Types

M12 Connector Communication Cable



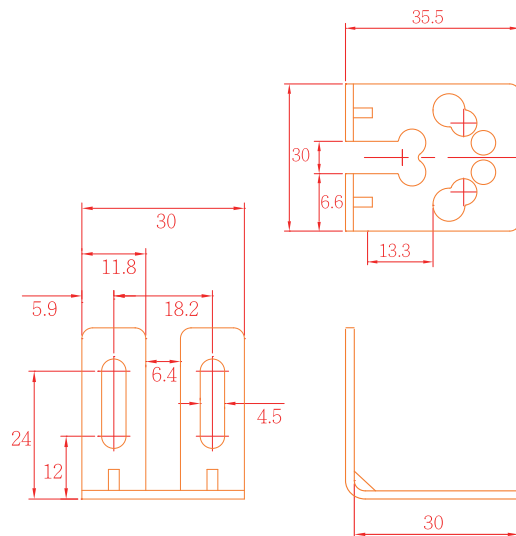
C4 Series-M12 Connection Cable

Cable model	M12 connector cable length	Cable model	M12 connector cable length
C4-3M-180-RX	C4 Series cable 3M(RX)	C4-3M-180-TX	C4 Series cable 3M(TX)
C4-5M-180-RX	C4 Series cable 5M(RX)	C4-5M-180-TX	C4 Series cable 5M(TX)
C4-10M-180-RX	C4 Series cable 10M(RX)	C4-10M-180-TX	C4 Series cable 10M(TX)
C4-20M-180-RX	C4 Series cable 20M(RX)	C4-20M-180-TX	C4 Series cable 20M(TX)

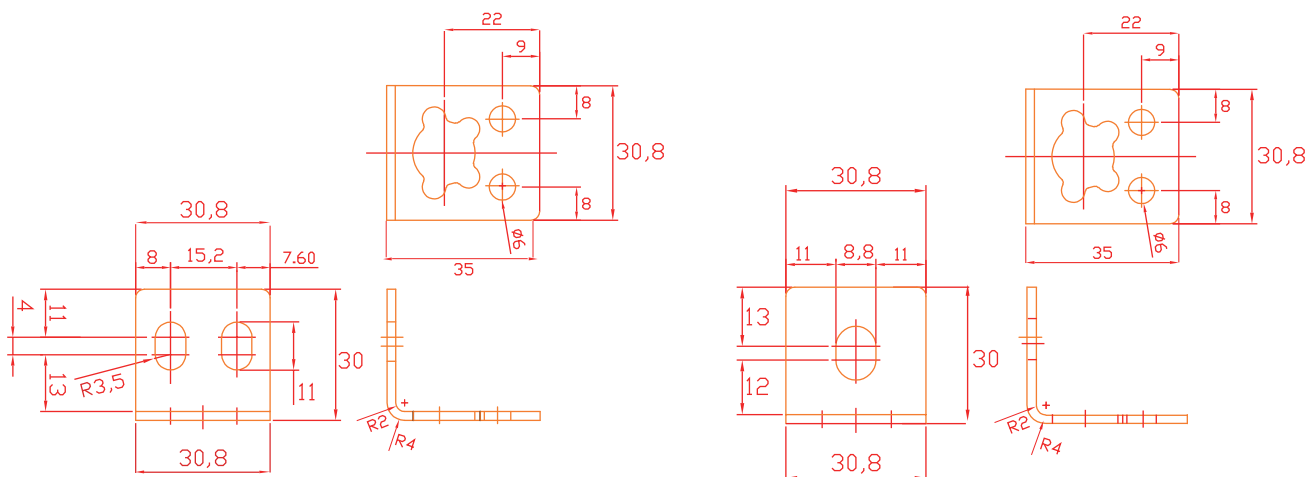
► Other accessory for punch press, please contact with Smartscan TW.

Standard Mounting Bracket

(For C4A, C4B models)



(For models of ODC 14mm, 24mm)



C4 Series

Detection Capability ODC (N) 14mm				
Operating distance (R) 0.5m to 5.0m				
Beams	Model	Detection Zone (DZ)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
12	C4-101	134	253	277
24	C4-102	254	373	397
36	C4-103	374	493	517
48	C4-104	494	613	637
60	C4-105	614	734	757
72	C4-106	734	853	877
84	C4-107	854	973	997
96	C4-108	974	1093	1117
108	C4-109	1094	1213	1237
120	C4-110	1214	1306	1357
132	C4-111	1334	1453	1477
144	C4-112	1454	1573	1597
156	C4-113	1574	1693	1717
168	C4-114	1694	1813	1837
180	C4-115	1814	1933	1957
192	C4-116	1934	2053	2077

► Built-in floating blanking and bean floating blanking function.

C4 Series

Detection Capability ODC (N) 24mm				
Operating distance (R) 0.5m to 5.0m				
Beams	Model	Detection Zone (DZ)(mm)	Install Length (C)(mm)	Assembly Length (L)(mm)
6	C4-201	144	253	277
12	C4-202	264	373	397
18	C4-203	384	493	517
24	C4-204	504	613	637
30	C4-205	624	734	757
36	C4-206	744	853	877
42	C4-207	864	973	997
48	C4-208	984	1093	1117
54	C4-209	1104	1213	1237
60	C4-210	1224	1306	1357
66	C4-211	1344	1453	1477
72	C4-212	1464	1573	1597
78	C4-213	1584	1693	1717
84	C4-214	1704	1813	1837
90	C4-215	1824	1933	1957
96	C4-216	1944	2053	2077

► Built-in floating blanking and bean floating blanking function.

