



DS4 Base

DETECTION AND MEASUREMENT AREA SENSOR



Basic version of detection and measurement area sensors designed for simple applications. Reliable performance and ease of use ensure detection and measurement in industrial applications.

- Detection height from 300 to 1500 mm
- 5, 10, 25 mm pitch
- Operating distance up to 13 m
- IO-Link configuration
- Digital and analogue output (0...10 V or 4...20 mA)
- Basic configuration by wire



CODE DESCRIPTION


DS4 - 05 - 300 - B 05 - JA

series	DS4	Area sensors detection and measurement
pitch	05	5 mm
	10	10 mm
	25	25 mm
controlled height	0300	300 mm
	0450	450 mm
	0600	600 mm
	0750	750 mm
	0900	900 mm
	1050	1050 mm
	1200	1200 mm
	1350	1350 mm
	1500	1500 mm
model	B	Model
receiver plug (M12)	05	5 poles
output	JA	Analogue V/A, IO-Link, Digital

TECHNICAL SPECIFICATIONS

DS4 Base

DETECTION/MEASUREMENT AREA SENSORS

	DS4-05-****-B05-JA	DS4-10-****-B05-JA	DS4-25-****-B05-JA
			
GENERAL DATA			
Operating principle	Emitter + Receiver		
Detection capability	10 mm	14 mm	30 mm
MONITORED AREA			
Nominal sensing distance	0.2 ... 5 m	0.2 ... 7 m	0.2 ... 13 m
Controlled height	300 ... 1500 mm		
EMISSION DATA			
Emission	Infrared (850nm)		
INPUT/OUTPUT			
Output type	PNP or NPN or Push-Pull, 0...10V, 4..20 mA IO-Link		
IO-LINK			
IO-Link version	IO-Link V1.1		
Transmission rate	230400 bits/s COM 3		
Minimum cycle time	2 ms		
DeviceID DEC	2		
Process Data input length	32 Bytes		
Process data output l	8 Bits		
HMI/UI			
LED Indicators (TX)	Green (Power ON), Yellow (Emission range) Red (Test, failure), Blue (Emission range)		
LED Indicators (RX)	Green (Power ON), Yellow (Status output, Connection Active) Red (Hardware Errors, module occupied)		
ELECTRICAL DATA			
Supply voltage	19.2 ... 28.8 Vdc		
Maximum No-load absorption	360 mA(emitter and receiver)		
Power consumption - Emitter	≤ 2 W		
Power consumption - Receiver	≤ 5 W		
Maximum DC output voltage drop	2.5 V @ IL=100mA		
Maximum DC load current	100 mA		
MECHANICAL DATA			
Dimensions	35 x 40 x (307.5 ... 1507.5) mm	35 x 40 x (309 ... 1509) mm	
Material	Aluminium / PBT		
Housing material	Aluminium		
Active part material	PMMA		
Connections	M12 5 poles + 200 mm length cable TPU (TX), M12 5 poles + 200 mm length cable TPU (RX) (DS4-**-****B05-JA)		
Weight	1.40 Kg/m (single bar, without package)		
ENVIRONMENTAL DATA			
Operating Temperature	-30 ... 55 °C (without freeze)		
Storage temperature max.	-30 ... 70 °C		
Mechanical Protection	IP65 IP67		
Shocks and vibrations	10 mm / 3g, 5 ... 150 Hz frequency, (EN 60068-2-6 / Class 3M7 IEC TR 60721-4-3); 25g x 6 ms x 600 (EN 60068-2-27 / Class 3M7 IEC TR 60721-4-3)		
Humidity	15 ... 95 % (without freeze)		

AVAILABLE MODELS

Distance between beams	Nominal sensing distance	Output type	Sensitivity adjustment	Response time	Controlled height	Beams number	PNP or NPN or Push-Pull , 0...10V, 4..20mA IO-Link
5 mm	0.2 ... 5 m			2.80 ms	300 mm	60	DS4-05-0300-B05-JA (957650001)
				3.70 ms	450 mm	90	DS4-05-0450-B05-JA (957650002)
				4.60 ms	600 mm	120	DS4-05-0600-B05-JA (957650003)
				5.50 ms	750 mm	150	DS4-05-0750-B05-JA (957650004)
				6.40 ms	900 mm	180	DS4-05-0900-B05-JA (957650005)
				7.30 ms	1050 mm	210	DS4-05-1050-B05-JA (957650006)
				8.20 ms	1200 mm	240	DS4-05-1200-B05-JA (957650007)
				9.10 ms	1350 mm	270	DS4-05-1350-B05-JA (957650008)
				10.00 ms	1500 mm	300	DS4-05-1500-B05-JA (957650009)
10 mm	0.2 ... 7 m	PNP or NPN or Push-Pull , 0...10V, 4..20mA IO-Link	High/Low emission (input emitter)	1.90 ms	300 mm	30	DS4-10-0300-B05-JA (957650048)
				2.35 ms	450 mm	45	DS4-10-0450-B05-JA (957650049)
				2.80 ms	600 mm	60	DS4-10-0600-B05-JA (957650050)
				3.25 ms	750 mm	75	DS4-10-0750-B05-JA (957650051)
				3.70 ms	900 mm	90	DS4-10-0900-B05-JA (957650052)
				4.15 ms	1050 mm	105	DS4-10-1050-B05-JA (957650053)
				4.60 ms	1200 mm	120	DS4-10-1200-B05-JA (957650054)
				5.05 ms	1350 mm	135	DS4-10-1350-B05-JA (957650055)
				5.50 ms	1500 mm	150	DS4-10-1500-B05-JA (957650056)
25 mm	0.2 ... 13 m			1.36 ms	300 mm	12	DS4-25-0300-B05-JA (957650095)
				1.54 ms	450 mm	18	DS4-25-0450-B05-JA (957650096)
				1.72 ms	600 mm	24	DS4-25-0600-B05-JA (957650097)
				1.90 ms	750 mm	30	DS4-25-0750-B05-JA (957650098)
				2.08 ms	900 mm	36	DS4-25-0900-B05-JA (957650099)
				2.26 ms	1050 mm	42	DS4-25-1050-B05-JA (957650100)
				2.44 ms	1200 mm	48	DS4-25-1200-B05-JA (957650101)
				2.62 ms	1350 mm	54	DS4-25-1350-B05-JA (957650102)
				2.80 ms	1500 mm	60	DS4-25-1500-B05-JA (957650103)

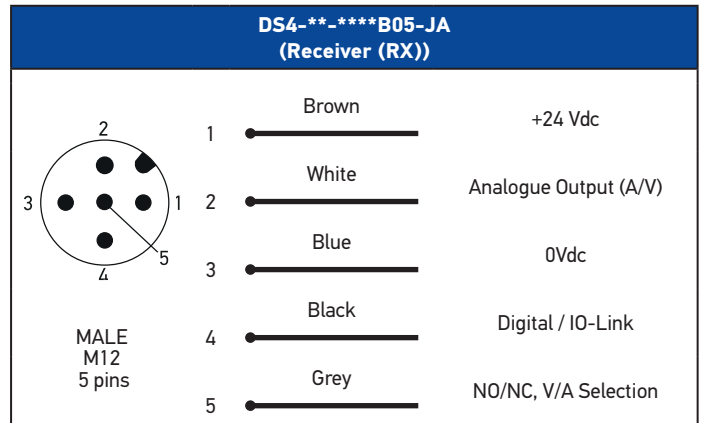
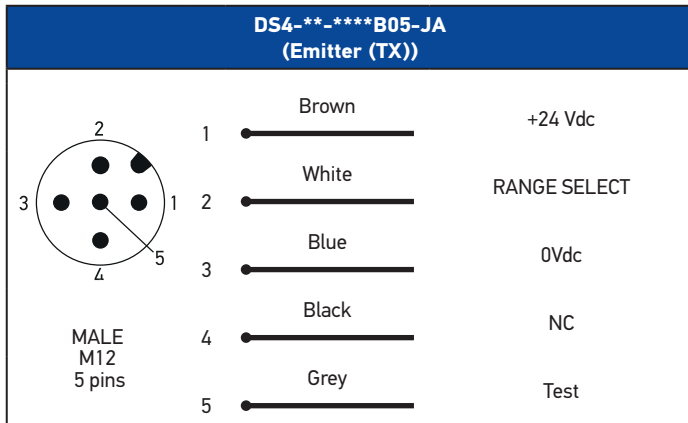
MINIMUM DETECTABLE OBJECT

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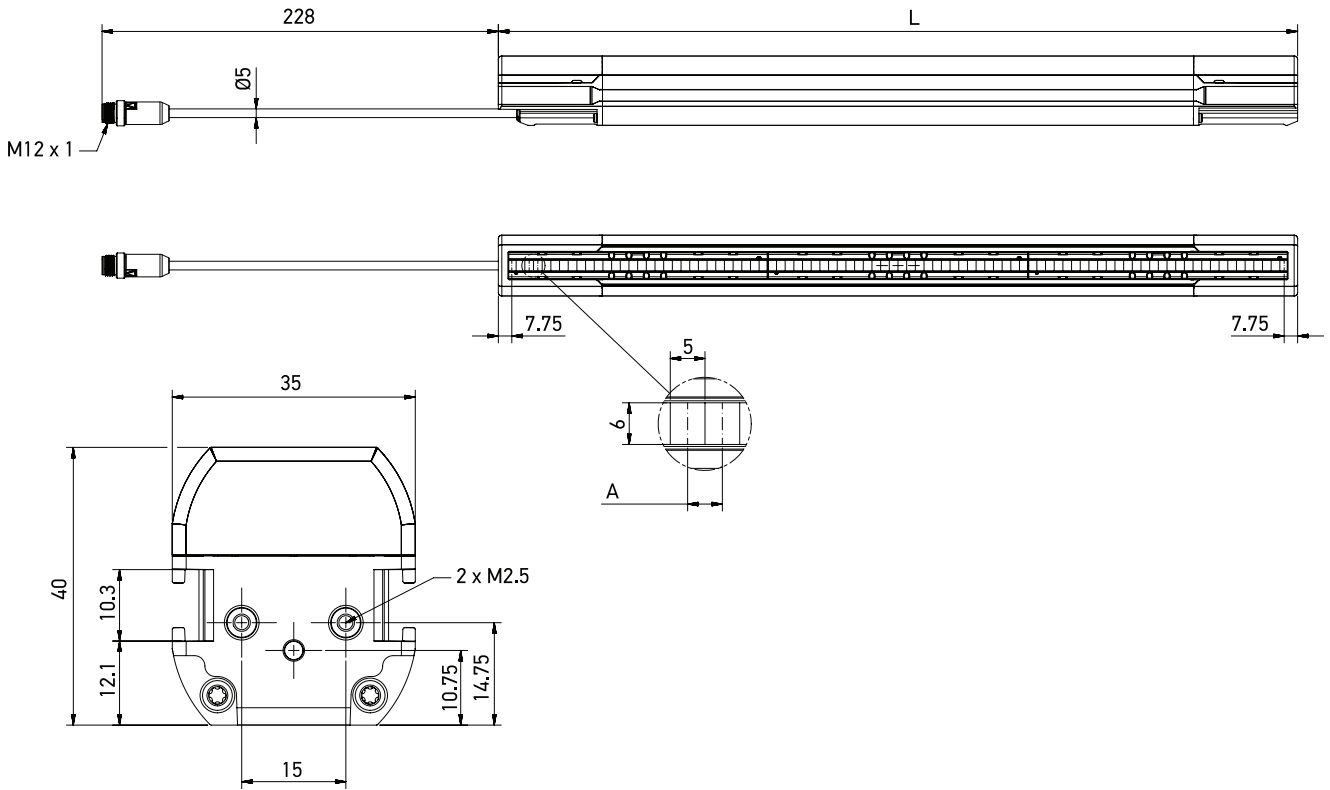
DETECTION/MEASUREMENT AREA SENSORS

	Minimum detectable object	Distance Lo	Distance Hi
DS4-05-****-B05-JA	10 mm	2.5 m	5 m
DS4-10-****-B05-JA	14 mm	4 m	7 m
DS4-25-****-B05-JA	30 mm	7 m	13 m

CONNECTIONS



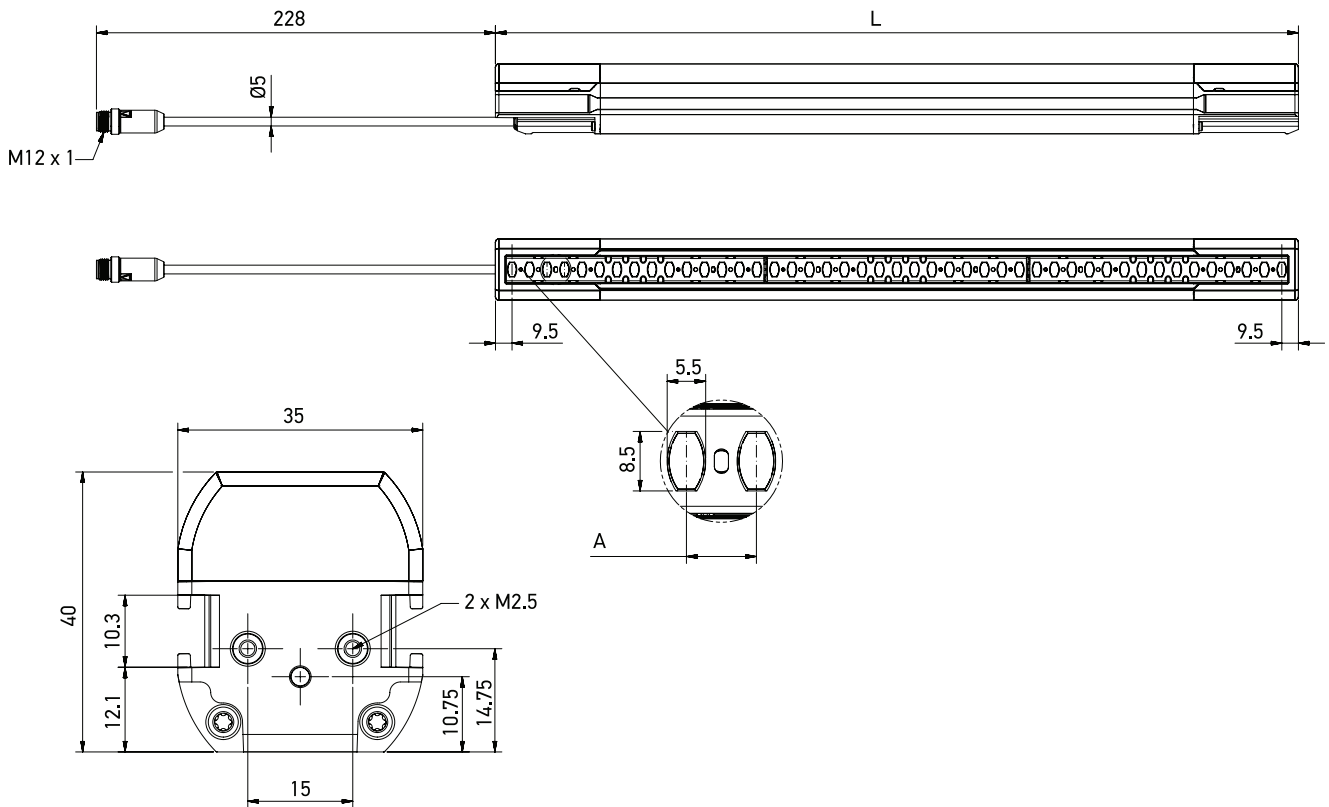
DS4-05-****-B05-JA



(mm)

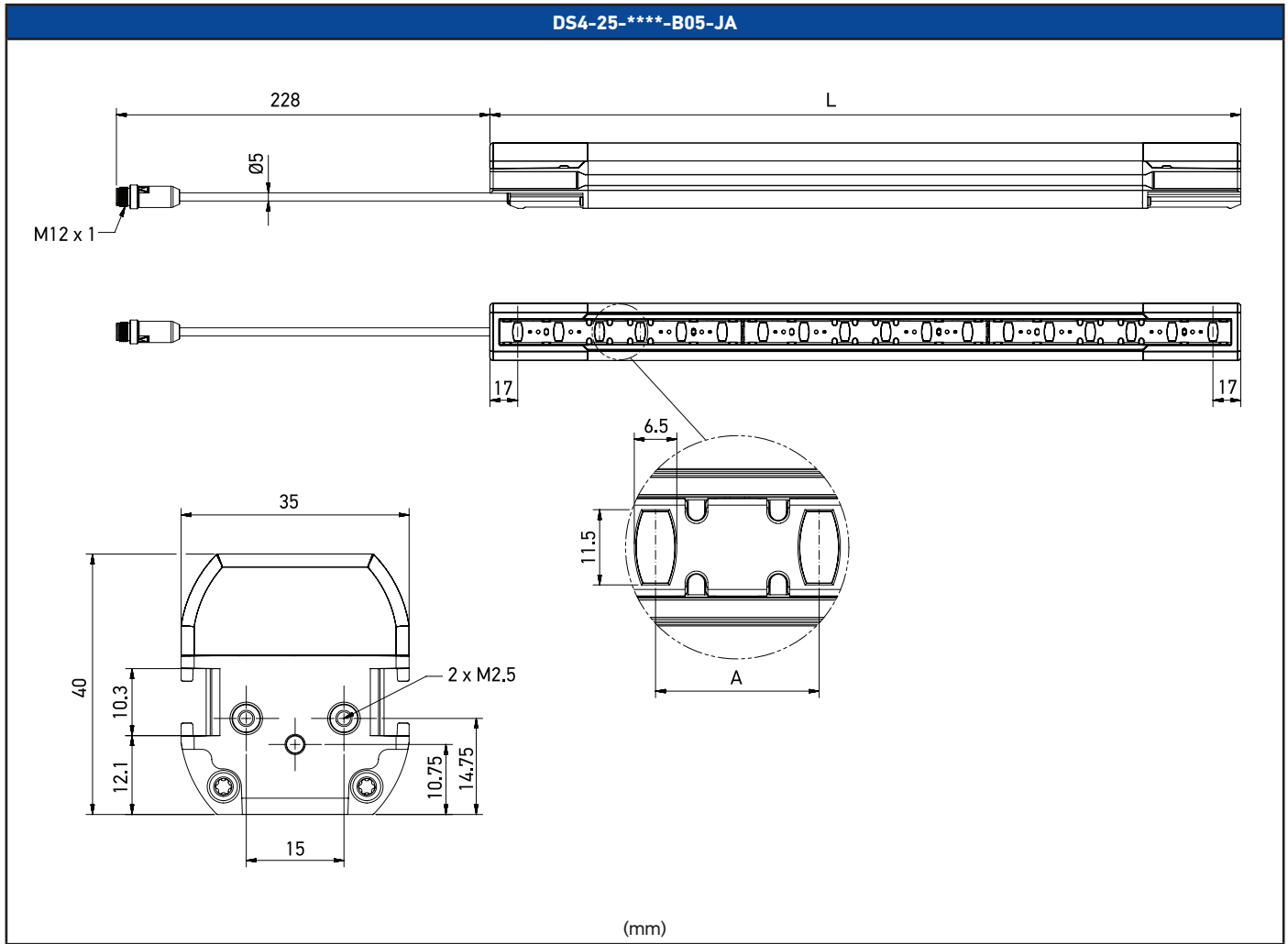
Models	A	L (mm)
DS4-05-0300-B05-JA	Pitch 5	310.5
DS4-05-0450-B05-JA		460.5
DS4-05-0600-B05-JA		610.5
DS4-05-0750-B05-JA		760.5
DS4-05-0900-B05-JA		910.5
DS4-05-1050-B05-JA		1060.5
DS4-05-1200-B05-JA		1210.5
DS4-05-1350-B05-JA		1360.5
DS4-05-1500-B05-JA		1510.5

DS4-10-****-B05-JA



(mm)

Models	A	L (mm)
DS4-10-0300-B05-JA	Pitch 10	309
DS4-10-0450-B05-JA		459
DS4-10-0600-B05-JA		609
DS4-10-0750-B05-JA		759
DS4-10-0900-B05-JA		909
DS4-10-1050-B05-JA		1059
DS4-10-1200-B05-JA		1209
DS4-10-1350-B05-JA		1359
DS4-10-1500-B05-JA		1509



(mm)

Models	A	L (mm)
DS4-25-0300-B05-JA	Pitch 25	309
DS4-25-0450-B05-JA		459
DS4-25-0600-B05-JA		609
DS4-25-0750-B05-JA		759
DS4-25-0900-B05-JA		909
DS4-25-1050-B05-JA		1059
DS4-25-1200-B05-JA		1209
DS4-25-1350-B05-JA		1359
DS4-25-1500-B05-JA		1509

	Model	Description	Article code
Cables	CS-A1-03-U-03	Cable M12 5 poles axial female unshielded 3m UL 2464	95ASE1170
	CS-A1-03-U-05	Cable M12 5 poles axial female unshielded 5m UL 2464	95ASE1180
	CS-H2-03-B-01	Cascade cable for SH4 1 m	95ASE0031
	CS-H2-03-B-03	Cascade cable for SH4 3 m	95ASE0032
	CS-H2-03-B-10	Cascade cable for SH4 10 m	95ASE0033
	CD12M/0H-050A3	Connect.M12-F,5 poles-5m,PVC,Axial	CD12M/0H-050A3
	CD12M/0H-100A3	Connect.M12-F,5 poles-10m,PVC,Axial	CD12M/0H-100A3
	CDP12/0B-010AA	M12-F-Axial, 4p,M12-M-Axial,PVC,1 m	CDP12/0B-010AA
	CDP12/0B-030AA	M12-F-Axial, 4p,M12-M-Axial,PVC,3 m	CDP12/0B-030AA
	CDP12/0B-050AA	M12-F-Axial, 4p,M12-M-Axial,PVC,5 m	CDP12/0B-050AA
	CDP12/0B-100AA	M12-F-Axial, 4p,M12-M-Axial,PVC,10 m	CDP12/0B-100AA
	CV12/0B-00A	Connect.M12-M-Axial,4 p,Field attach.	CV12/0B-00A
	CV12/0B-00B	Connect.M12-M-90°,4 p,Field attach.	CV12/0B-00B
	CV12/0H-00A	Connect.M12-M-Axial,5 p,Field attach.	CV12/0H-00A
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CS-A1-03-U-10	Cable M12 5 poles axial female unshielded 10m UL 2464	95ASE1190
CS-A1-03-U-15	Cable M12 5 poles axial female unshielded 15m UL 2464	95ASE1200	
CS-I1-02-B-03	CS-I1-02-B-03 4p M12-M/M12-F axial 3m bk	95ACC0009	
CS-M1-02-B-03	CS-M1-02-B-03 5p M12-F Lcode axial 3m gr	95ACC0007	
IO-Link masters	CBX-8IOL-PNIO	8P IOL M12 PROFINET MASTER	95ACC8190
	CBX-8IOL-EIP	8P IOL M12 EIP MASTER	95ACC8180
Mounting brackets	ST-KSTD	Metal angled brackets 4 pcs kit for SG/SH4	95ACC1670
	ST-K4OR	Orientable supports 4 pcs kit to be used with ST-KSTD	95ACC1680
	ST-K4AV	Anti vibration supports 4 pcs kit to be used with ST-KSTD	95ACC1700
	ST-K6AV	Anti vibration supports 6 pcs kit to be used with ST-KSTD	95ACC1710
	ST-KP4MP	Plastic angled brackets 4 pcs kit	95ASE1100
	ST-K4ROT-SH	Rotating brackets for SH4 4 pcs	95ASE0042

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