

NO: SR-104
DATE: April 2021

PRODUCT: T4012 Tongue Switch Series
TYPE: Discontinuation Notice

T4012 TONGUE SWITCH SERIES

Discontinuation Date: March 31st, 2022

Last Order Date: December 31st, 2021



Difference between recommended replacement and discontinued model

Recommended replacement Model	Appearance	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
D4NS	-	-	-	-	-	-	-

- ** : Compatible
- * : The change is almost compatible
- : Not compatible
- : No corresponding specification

Discontinued Product

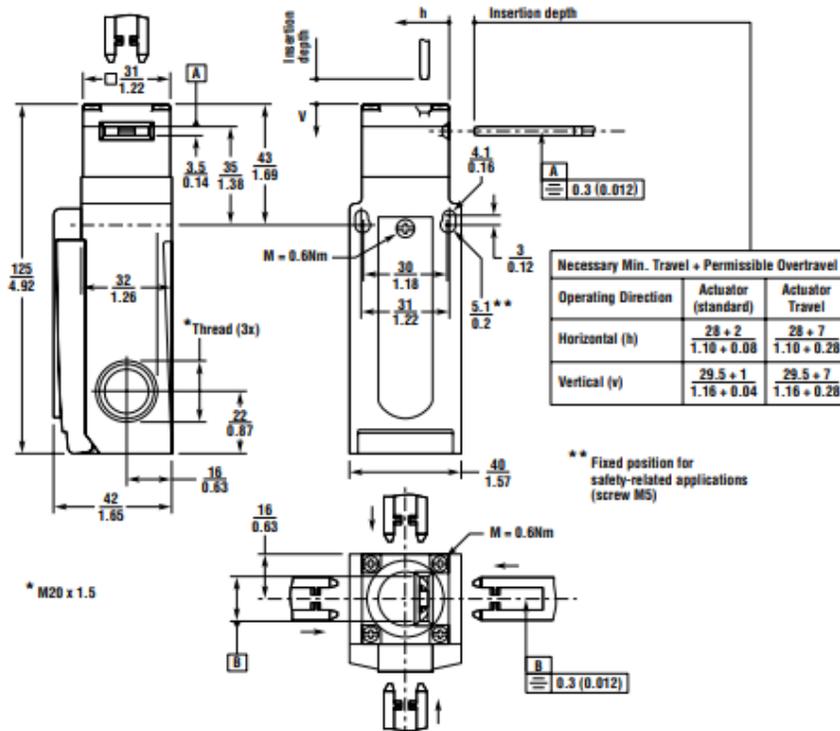
Omron Product Code	Discontinued Model		Recommended
	ORT P/N	Model	Replacement Model
SL0A6024D	44538-2010	T4012-011	D4NS Series
SL0A6021M	44538-0310	T4012-011F1M	D4NS Series
SL0A6045G	44538-6310	T4012-011F1M-SC1	D4NS Series
SL0A6017A	44538-0210	T4012-011F2M	D4NS Series
SL0A6040F	44538-6210	T4012-011F2M-SC1	D4NS Series
SL0A2068D	44538-0010	T4012-011SM	D4NS Series
SL0A6030R	44538-6010	T4012-011SM-SC1	D4NS Series
SL0A1153G	44538-0110	T4012-011TM	D4NS Series
SL0A6035M	44538-6110	T4012-011TM-SC1	D4NS Series
SL0A1098M	44538-2020	T4012-020	D4NS Series
SL0A6029E	44538-4322	T4012-020F1CB-SC1	D4NS Series
SL0A2345D	44538-0320	T4012-020F1M	D4NS Series
SL0A6046E	44538-6320	T4012-020F1M-SC1	D4NS Series
SL0A6018M	44538-0220	T4012-020F2M	D4NS Series
SL0A6041D	44538-6220	T4012-020F2M-SC1	D4NS Series
SL0A1155C	44538-0020	T4012-020SM	D4NS Series
SL0A6031G	44538-6020	T4012-020SM-SC1	D4NS Series
SL0A1154E	44538-0120	T4012-020TM	D4NS Series
SL0A6036H	44538-6120	T4012-020TM-SC1	D4NS Series
SL0A1150B	44538-2040	T4012-022	D4NS Series
SL0A1209F	44538-0340	T4012-022F1M	D4NS Series
SL0A6048A	44538-6340	T4012-022F1M-SC1	D4NS Series

SL0A3769B	44538-0240	T4012-022F2M	D4NS Series
SL0A6043M	44538-6240	T4012-022F2M-SC1	D4NS Series
SL0A6026M	44538-2041	T4012-022QD	D4NS Series
SL0A1187A	44538-0040	T4012-022SM	D4NS Series
SL0A6033C	44538-6040	T4012-022SM-SC1	D4NS Series
SL0A1908B	44538-0140	T4012-022TM	D4NS Series
SL0A6038D	44538-6140	T4012-022TM-SC1	D4NS Series
SL0A1149R	44538-2030	T4012-031	D4NS Series
SL0A6050C	44538-7030	T4012-031-SC1	D4NS Series
SL0A1208H	44538-0330	T4012-031F1M	D4NS Series
SL0A6047C	44538-6330	T4012-031F1M-SC1	D4NS Series
SL0A6019H	44538-0230	T4012-031F2M	D4NS Series
SL0A6042B	44538-6230	T4012-031F2M-SC1	D4NS Series
SL0A1186C	44538-0030	T4012-031SM	D4NS Series
SL0A6032E	44538-6030	T4012-031SM-SC1	D4NS Series
SL0A1185E	44538-0130	T4012-031TM	D4NS Series
SL0A6037F	44538-6130	T4012-031TM-SC1	D4NS Series
SL0A6027R	44538-2050	T4012-040	D4NS Series
SL0A6022H	44538-0350	T4012-040F1M	D4NS Series
SL0A6049M	44538-6350	T4012-040F1M-SC1	D4NS Series
SL0A6020A	44538-0250	T4012-040F2M	D4NS Series
SL0A6044R	44538-6250	T4012-040F2M-SC1	D4NS Series
SL0A1183R	44538-0050	T4012-040SM	D4NS Series
SL0A6034A	44538-6050	T4012-040SM-SC1	D4NS Series
SL0A1182M	44538-0150	T4012-040TM	D4NS Series
SL0A6039B	44538-6150	T4012-040TM-SC1	D4NS Series

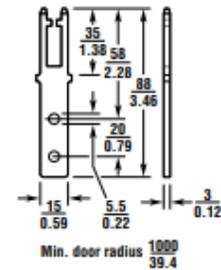
Appearance/Dimensions/Specifications

Discontinued Product

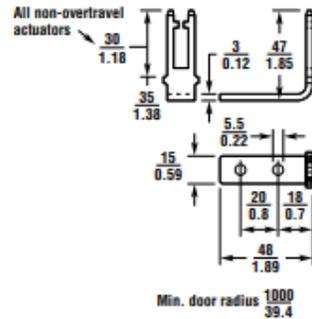
T4012 SERIES



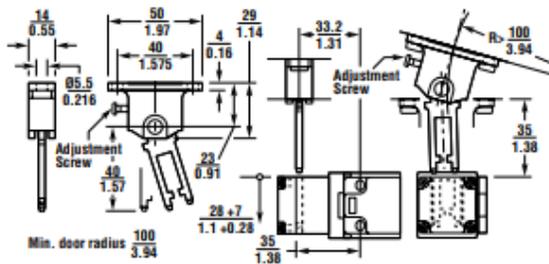
Overtravel Flat Actuator



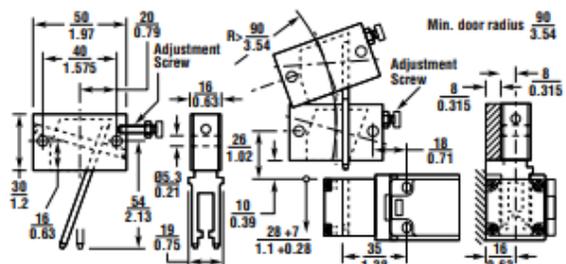
Overtravel 90-Degree Actuator



Flexible 1 Actuator



Flexible 2 Actuator



Discontinued Product

T4012 Specifications

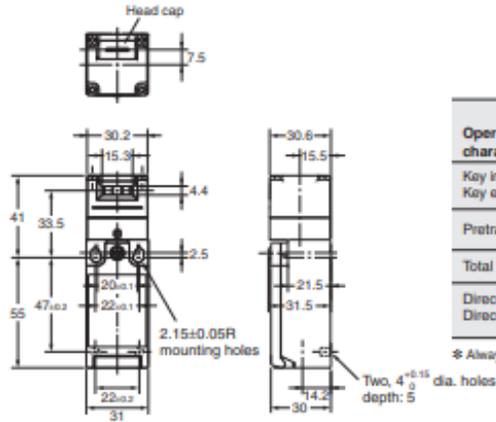
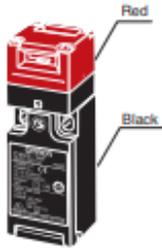
Electrical	All Models
Contact Configurations:	1 N/C + 1 N/O, 2 N/C, 2 N/C + 2 N/O, 3 N/C + 1 N/O, 4 N/C
Safety Contacts:	2 N/C positive break
Switching Ability	AC: 230 V, 4 A
	DC: 24 V, 4 A
Contact Material:	Silver alloy, gold flashed
Auxiliary Contacts:	1 N/O, 2 N/O
Minimum Switching Voltage:	12 V at 10 mA
Minimum Switching Current:	1 mA at 24 V
Mechanical	
Mounting:	Any position
Mounting Hardware:	2 x M5 screws (not supplied)
Actuator Travel for Positive Opening:	5 mm (0.197 in.)
Min Operating Radius:	Approximately 100 mm (3.9 in.) with flex actuator Approximately 1000 mm (39 in.) with flat or 90-degree actuator
Break Contact Min Force:	25 N (5.6 lb.)
Max Actuation Speed:	20 m/min.
Max Actuation Frequency:	112 cycles/min.
Case Material:	Glass-fibre reinforced thermoplastic
Actuator Material:	Stainless steel
Wiring Entry:	3 x M20 conduit with 0.5 in. NPT adapter
Weight:	141 g (5 oz.)
Color:	Black with red lid
Mechanical Life:	2 x 10 ⁶ minimum
Environmental	
Protection:	IP67 (NEMA 6)
Operating Temperature:	-20 to 80°C (-4 to 176°F)
Cleaning:	Water washdown
Compliance	
Standards:	EN1088, EN292, EN60947-5-1, EN60204-1
Approvals/Listings:	CE marked for all applicable directives, UL and C-UL, DGUV
Reliability Data	
per EN ISO 13849-1:	B10d: 2.00E+06

Replacement Product for T4012

D4NS Series

1-Conduit Models

D4NS-1□F
 D4NS-2□F
 D4NS-4□F
 D4NS-2□F-SJ
 D4NS-4□F-SJ

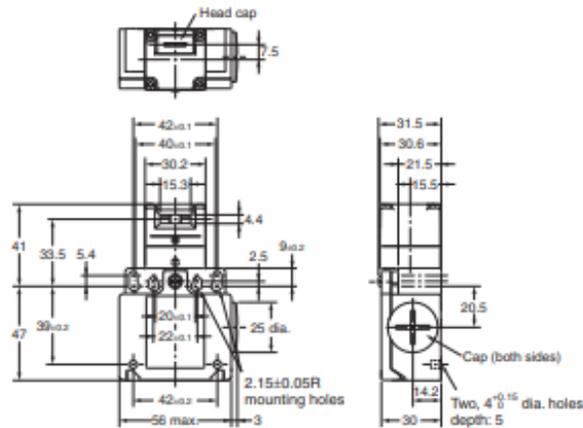
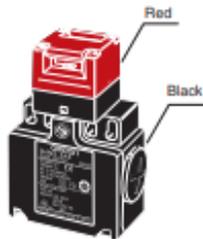


Operating characteristics	Model	D4NS-1□F D4NS-2□F D4NS-4□F	D4NS-2□F-SJ D4NS-4□F-SJ
	Key insertion force		15 N max.
Key extraction force		30 N max.	50 N max.
Pretravel (PT)		6±3 mm	6±3 mm
Total travel (TT)		(28 mm)	(28 mm)
Direct opening force *		60 N min.	80 N min.
Direct opening stroke *		10 mm min.	10 mm min.

* Always maintain the above operating characteristics for safe use.

2-Conduit Models

D4NS-6□F
 D4NS-8□F

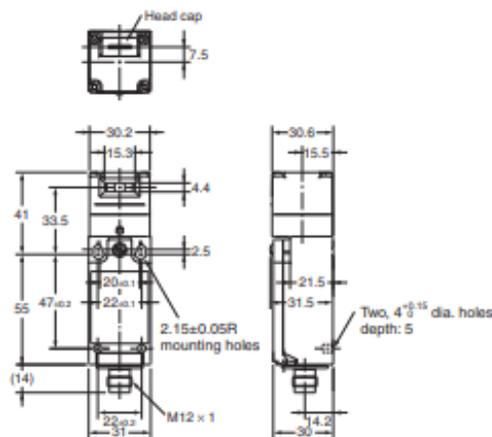
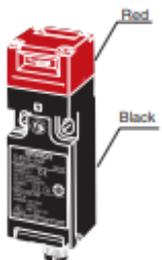


Operating characteristics	Model	D4NS-6□F D4NS-8□F
	Key insertion force	
Key extraction force		30 N max.
Pretravel (PT)		6±3 mm
Total travel (TT)		(28 mm)
Direct opening force *		60 N min.
Direct opening stroke *		10 mm min.

* Always maintain the above operating characteristics for safe use.

1-Conduit Connector Models

D4NS-9□F



Operating characteristics	Model	D4NS-9□F
	Key insertion force	
Key extraction force		30 N max.
Pretravel (PT)		6±3 mm
Total travel (TT)		(28 mm)
Direct opening force *		60 N min.
Direct opening stroke *		10 mm min.

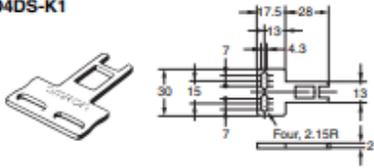
* Always maintain the above operating characteristics for safe use.

Replacement Product for T4012

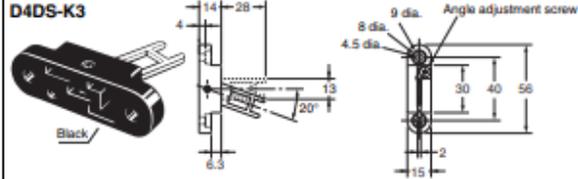
D4NS Series

Operation Keys

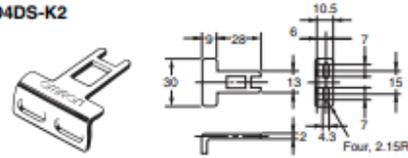
D4DS-K1



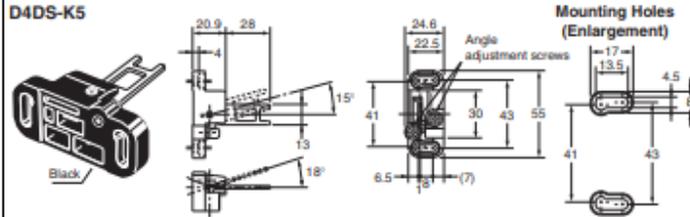
D4DS-K3



D4DS-K2



D4DS-K5

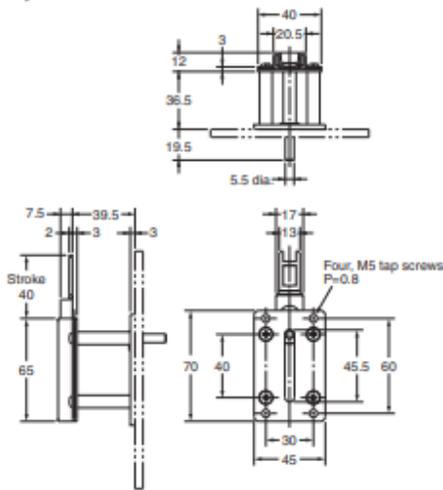


Note: Unless otherwise specified, a tolerance of ± 0.4 mm applies to all dimensions.

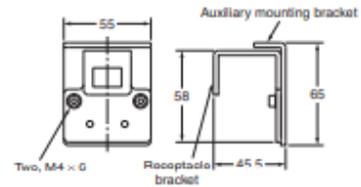
Slide Keys

D4NS-SK01

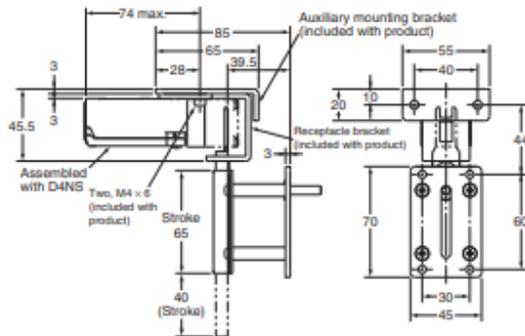
Main Body



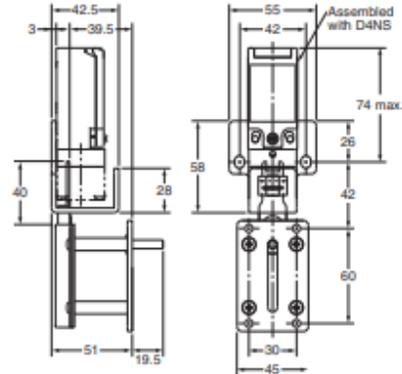
Auxiliary Mounting Bracket and Receptacle Bracket



Switch Mounting Pattern 1



Switch Mounting Pattern 2



Replacement Product for T4012

D4NS Series Specifications

Standards and EC Directives

Conforms to the following EC Directives:

- Machinery Directive
- Low Voltage Directive
- EN50047
- EN60204-1
- EN ISO 14119
- GS-ET-15

Certified Standards

Certification body	Standard	File No.
TÜV SÜD	EN60947-5-1 (certified direct opening)	Consult your OMRON representative for details.
UL #1	UL508, CSA C22.2 No.14	E76675
CQC (CCC)	GB14048.5	2003010305077330
KOSHA #2	EN60947-5-1	Consult your OMRON representative for details.

*1. Certification for CSA C22.2 No. 14 is authorized by the UL mark.
*2. Only certain models have been certified.

Certified Standard Ratings

TÜV (EN60947-5-1), CCC (GB14048.5)

Item	Utilization category	AC-15		DC-13
		3 A	0.27 A	0.27 A
Rated operating current (I _n)		3 A	0.27 A	0.27 A
Rated operating voltage (U _n)		240 V	250 V	250 V

Note: Use a 10 A fuse type gI or gG that conforms to IEC60269 as a short-circuit protection device. This fuse is not built into the Switch.

UL/CSA (UL508, CSA C22.2 No. 14)

A300

Rated voltage	Carry current	Current (A)		Volt-amperes (VA)	
		Make	Break	Make	Break
120 VAC	10 A	60	6	7,200	720
240 VAC		30	3		

Q300

Rated voltage	Carry current	Current (A)		Volt-amperes (VA)	
		Make	Break	Make	Break
125 VDC	2.5 A	0.55	0.55	69	69
250 VDC		0.27	0.27		

Characteristics

Degree of protection #1		IP67 (EN60947-5-1)
Durability #2	Mechanical	<Standard type> 1,000,000 operations min. <High pull-force type> 100,000 operations min.
	Electrical	<Standard type> 500,000 operations min. (3 A resistive load at 250 VAC) *3 300,000 operations min. (10 A resistive load at 250 VAC) <High pull-force type> 100,000 operations min. (10 A resistive load at 250 VAC)
Operating speed		0.05 to 0.5 m/s
Direct opening force #4		<Standard type> 60 N min. <High pull-force type> 80 N min.

Direct opening travel #4		10 mm min.
Contact resistance		25 mΩ max.
Minimum applicable load #5		1 mA resistive load at 5 VDC (N-level reference value)
Rated insulation voltage (U)		300 V
Rated frequency		50/60 Hz
Protection against electric shock		Class II (double insulation)
Pollution degree (operating environment)		3 (EN60947-5-1)
Impulse withstand voltage (EN60947-5-1)	Between terminals of same polarity	2.5 kV
	Between terminals of different polarity	4 kV
	Between each terminal and non-current carrying metallic parts	6 kV
Insulation resistance		100 MΩ min.
Contact gap		2 × 2 mm min.
Vibration resistance	Malfunction	10 to 55 Hz, 0.75 mm single amplitude
	Destruction	1,000 m/s ² min.
Shock resistance	Malfunction	300 m/s ² min.
	Conditional short-circuit current	100 A (EN60947-5-1)
Conventional free air thermal current (I_{th})		10 A (EN60947-5-1)
Ambient operating temperature		-30 to 70°C (with no icing)
Ambient operating humidity		95% max.
Weight		Approx. 96 g (D4NS-1CF)

Note: 1. The above values are initial values.
2. The Switch contacts can be used with either standard loads or microloads. Once the contacts have been used to switch a load, however, they cannot be used to switch smaller loads. The contact surfaces will become rough once they have been used and contact reliability for smaller loads may be reduced.

*1. The degree of protection is tested using the method specified by the standard (EN60947-5-1). Confirm that sealing properties are sufficient for the operating conditions and environment beforehand. Although the switch box is protected from dust or water penetration, do not use the D4NS in places where foreign material may enter through the key hole on the head, otherwise Switch damage or malfunctioning may occur.

*2. The durability is for an ambient temperature of 5 to 35°C and an ambient humidity of 40% to 70%. For more details, consult your OMRON representative.

*3. Do not pass the 3 A, 250 VAC load through more than 2 circuits.

*4. These figures are minimum requirements for safe operation.

*5. This value will vary with the switching frequency, environment, and reliability level. Confirm that correct operation is possible with the actual load beforehand.

Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, product specifications, instructions, and manuals for precautions and necessary information when using products