

Climate  
Control

IMI TA

## TA-Slider 160 KNX



### **Actuators**

Digitally configurable proportional push actuator for  
Bus communication with KNX – 36/45 lbf (160/200 N)

# TA-Slider 160 KNX

Digitally configurable actuators for Bus communication with KNX. A wide range of setup options provide extensive flexibility for on-site parameter adaptation. Fully programmable binary input, relay and adjustable max. stroke of the valve bring new opportunities for advanced hydronic control and balancing.



## Key features

### Fully configurable

More than 100 setup options allow input and output signals, binary input, relay, characteristics and many other parameters to be configured.

### Perfection in connectivity

Dedicated versions allow configuring, controlling and communicating via KNX Bus.

### Easy diagnostics

Reports five different types of errors to allow system faults to be found quickly.

## Technical description

### Functions:

Proportional control  
Stroke detection  
Self-adjusting force  
Mode, status and position indication  
Stroke limitation setting  
Minimum stroke setting  
Valve blockage protection  
Valve clogging detection  
Error safe position  
Diagnostic/Logging

### KNX version:

+ 1 binary input, max. 100 Ω, cable max. 32.8 ft or shielded.

### KNX R24 version:

+ 1 binary input, max. 100 Ω, cable max. 32.8 ft or shielded.  
+ 1 relay, max. 2A, 30 VAC/VDC on resistive load.

### Supply voltage:

Powered by KNX Bus.

### Power consumption:

Typical 216 mW; Maximum 600 mW.

### Input signal:

By KNX Bus.

### Output signal:

By KNX Bus.

### Characteristics:

Linear, EQM 0.25 and inverted EQM 0.25.  
Default setting: Linear.

### Control speed:

254 s/in (10 s/mm)

### Adjusting force:

36/45 lbf (160/200 N)  
Self-adjusting for IMI valves.

### Temperature:

Media temperature: max. 248°F  
Operating environment: 32°F to 122°F (5-95%RH, non-condensing)  
Storage environment: -4°F to 158°F (5-95%RH, non-condensing)

### Ingress protection:

IP54 (all directions)  
(according to EN 60529)

### Protection class:

(according to EN 61140)  
III (SELV)

### Cable:

3.28 ft, 6.56 ft or 16.4 ft.  
Halogen free as option, fire class B2<sub>ca</sub> – s1a, d1, a1 according to EN 50575.  
KNX: type J-YY, 2x2x19 AWG (2x2x0.6 mm<sup>2</sup>).  
KNX R24: type J-YY, 2x2x19 AWG (2x2x0.6 mm<sup>2</sup>) and relay cable type LiYY, 3x22 AWG (3x0.34 mm<sup>2</sup>), with wire end sleeves.

### Stroke:

0.27 in (6.9 mm)  
Automatic detection of the valve lift (stroke detection).

### Noise level:

Max. 30 dBA

### Weight:

0.44 lb

### Connection to valve:

Retainer nut M30x1.5.

### Material:

Cover: PC/ABS GF8  
Housing: PA GF40.  
Swivelling nut: Nickel-plated brass.

### Color:

White RAL 9016, grey RAL 7047.

### Marking:

Label: IMI TA, CE, product name, article No. and technical specification.

### Certification CE:

LV-D. 2014/35/EU: EN 60730-1, -2-14.  
EMC-D. 2014/30/EU: EN 60730-1, -2-14.  
RoHS-D. 2011/65/EU: EN 50581.

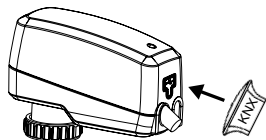
### Product standard:

EN 60730.

## Function

### Setting

The actuator can be set through the KNX ETS software (minimum required ETS version is ETS5.0).  
The programming of the physical address can be carried out without contact by placing a magnet as shown below.



### Calibration/Stroke detection

According to selected settings in the table.

Type of calibration	At power on	After manual override
Both end positions (full)	√ *	√
Fully extended position (fast)	√	√ *
None	√	

\*) Default

**Note:** A calibration refresh can be automatically repeated monthly or weekly.  
Default setting: Off.

### Self-adjusting force

Automatic valve type detection, the force is set to 36 lbf or 45 lbf for IMI TA/IMI Heimeier valves.  
Default setting: On.

### Stroke limitation setting

A maximum stroke smaller than or equal to the detected valve lift can be set to the actuator.  
Default setting: No stroke limitation (100%).

### Minimum stroke setting

The actuator can be set with a minimum stroke below which it will not go (except for calibration).  
For some IMI TA/IMI Heimeier valves, it can also be set to a  $q_{min}$ .  
Default setting: No minimum stroke (0%).

### Valve blockage protection

If no actuation is performed for one week or one month, the actuator will perform one full stroke cycle.  
Default setting: Off.

### Valve clogging detection

If actuation stops before the desired value is reached, the actuator moves back ready to make a new attempt. The actuator will move to the configured error safe position after three attempts.  
Default setting: On.

### Error safe position

Fully extended or retracted position when following errors occur; low power, line break, valve clogging or stroke detection failure.  
Default setting: Fully extended position.

### Diagnostics/logging

Five different errors (low power, signal out of range, valve clogging, stroke detection failure, cyclic timeout) can be reported on KNX Bus. Logged errors will be cleared if the power is disconnected.

### Binary input

If the binary input circuit is open, the actuator will go to a set stroke, switch to a second stroke limitation setting or drive to its full stroke regardless of any limitations for flushing purpose. See also Change-over system detection.  
Default setting: Off

### Change-over system detection

Switching between two different stroke limitation settings by toggling the binary input or via KNX.

### Connection interfaces for KNX Bus communication

Twisted pair; KNX/TP  
More detailed information, please see TA-Slider 160 KNX and KNX R24 protocol implementation documents.

## LED indication

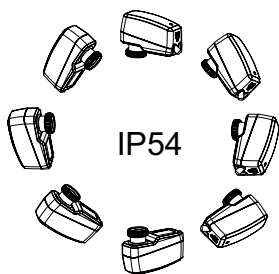
		Status	Red (heating) / Blue (cooling)
	--- --	Fully retracted (actuator stem)	Long pulse - Short pulse
	-- ---	Fully extended (actuator stem)	Short pulse - Long pulse
	--- ---	Intermediate position	Long pulses
	-----	Moving	Short pulses
	-- -- --	Calibrating	2 short pulses
		Manual mode or no power supply	Off

		Error code	Violet
	- - -	Power supply too low	1 pulse
	-- --	Line broken (2-10 V)	2 pulses
	--- ---	Valve clogging or foreign object	3 pulses
	-----	Stroke detection failure	4 pulses

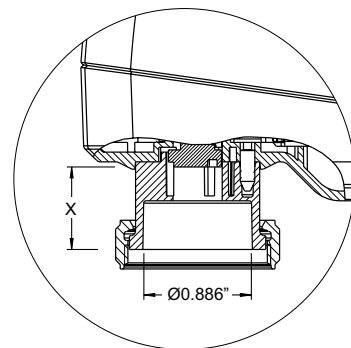
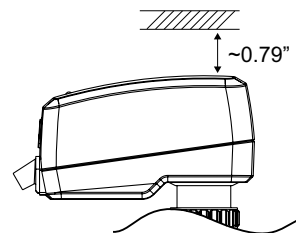
If an error is detected, violet pulses are displayed as the red or blue status lights flash alternately. More detailed information, please see the HyTune app + TA-Dongle.



## Installation



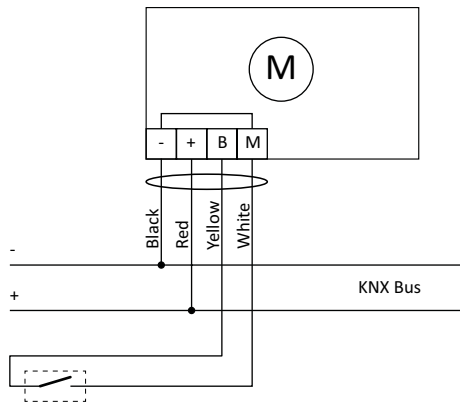
### Note!



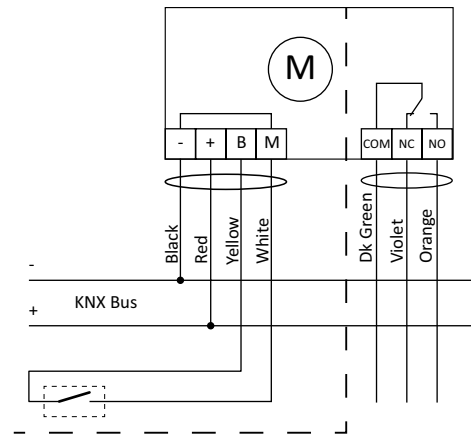
$$X = 0.394'' - 0.665''$$

## Connection diagrams

**TA-Slider 160 KNX**



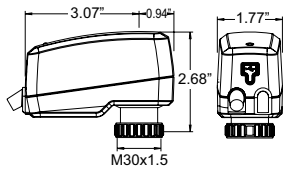
**TA-Slider 160 KNX R24**



**Note:** M terminal is internally connected to KNX “-” Bus wire.

Terminal	Description
M	Neutral for potential free contact
B	Connection for potential free contact (e.g. open window detection), max. 100 Ω, max. 32.8 ft (10 m) cable or shielded
COM	KNX R24 version: Common relay contact, max. 30 VAC/VDC, max. 2A on resistive load.
NC	Normally closed contact for relay
NO	Normally open contact for relay

## Articles - TA-Slider 160 KNX

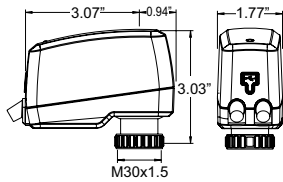


**TA-Slider 160 KNX**  
Twisted pair; KNX/TP

**With binary input**

Cable length	Bus	Article No
3.28 ft. (1 m)	KNX	322224-01001
6.56 ft. (2 m)	KNX	322224-01002
16.4 ft. (5 m)	KNX	322224-01003
<b>With halogen free cable</b>		
3.28 ft. (1 m)	KNX	322224-01004
6.56 ft. (2 m)	KNX	322224-01005
16.4 ft. (5 m)	KNX	322224-01006

## Articles - TA-Slider 160 KNX R24



**TA-Slider 160 KNX R24**  
Twisted pair; KNX/TP

**With binary input and relay 24V**

Cable length	Bus	Article No
3.28 ft. (1 m)	KNX	322224-01301
6.56 ft. (2 m)	KNX	322224-01302
16.4 ft. (5 m)	KNX	322224-01303
<b>With halogen free cable</b>		
3.28 ft. (1 m)	KNX	322224-01304
6.56 ft. (2 m)	KNX	322224-01305
16.4 ft. (5 m)	KNX	322224-01306

## Additional equipment



**Programming magnet**

For programming the physical addresses without contact.

**Article No**

1865-01.433





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