Steering Servo Communication Protocol

# Received message

## Command messages

CMD\_DISCOVER

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x00 (CAN\_MESSAGETYPE\_COMMAND)

DLC: 2

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CMD\_DISCOVER | 0x90 |

CMD\_MODE

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x00 (CAN\_MESSAGETYPE\_COMMAND)

DLC: 2

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CMD\_MODE | 0xBB |
| 1 | U8 | MODE\_IDLE | 0xB0 |
| MODE\_START | 0x0B |

## Configuration messages

CONF\_NULLPOINT

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x05 (CAN\_MESSAGETYPE\_CONFIG)

DLC: 5

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CONF\_NULLPOINT | 0xCC |

CONF\_MIN\_MAX\_ANGLE

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x05 (CAN\_MESSAGETYPE\_CONFIG)

DLC: 5

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CONF\_MIN\_MAX\_ANGLE | 0xDD |
| 1 | U16 | SET\_MIN\_ANGLE | value |
| 3 | U16 | SET\_MAX\_ANGLE | value |

CONF\_KP\_POS

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x05 (CAN\_MESSAGETYPE\_CONFIG)

DLC: 5

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CONF\_KP\_POS | 0x11 |
| 1 | Float | KP\_POS\_VAL | value |

CONF\_KI\_POS

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x05 (CAN\_MESSAGETYPE\_CONFIG)

DLC: 5

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CONF\_KI\_POS | 0x22 |
| 1 | Float | KI\_POS\_VAL | value |

CONF\_KP\_VIR

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x05 (CAN\_MESSAGETYPE\_CONFIG)

DLC: 5

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CONF\_KP\_VIR | 0x33 |
| 1 | Float | KP\_VIR\_VAL | value |

CONF\_KI\_VIR

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x05 (CAN\_MESSAGETYPE\_CONFIG)

DLC: 5

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | CONF\_KI\_VIR | 0x44 |
| 1 | Float | KI\_VIR\_VAL | value |

## Reference messages

ANGLE\_REF

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x02 (CAN\_MESSAGETYPE\_REFERENCE)

DLC: 2

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | I16 | ANGLE\_REF | value |

# Sent message

## Response messages

RESPONSE\_PING

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x01 (CAN\_MESSAGETYPE\_RESPONSE)

DLC: 1

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | U8 | RESPONSE\_PING | 0x6E |

## Status messages

STATUS\_SERVO

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x04 (CAN\_MESSAGETYPE\_STATUS)

DLC: 1

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | BIT0 | VIR\_OK | value |
| 0 | BIT1 | VIR\_ERROR | value |
| 0 | BIT2 | CTRL\_OK | value |
| 0 | BIT3 | MEAS\_OK | value |
| 0 | BIT4 | HARD\_FAULT | value |

## Measurement message

MEASUREMENT\_SERVO

CAN ID:

Class: 0x0D

Device: 0x01

Type: 0x03 (CAN\_MESSAGETYPE\_MEASURE)

DLC: 6

Data:

| Byte offset | Format | Name | Code |
| --- | --- | --- | --- |
| 0 | int16 | Angle\_val | value |
| 2 | int16 | VIR\_val | value |
| 4 | int16 | rpm\_val | value |