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# DM24 to STS-2 Interface

## User's Guide

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# 1 Preliminary Notes

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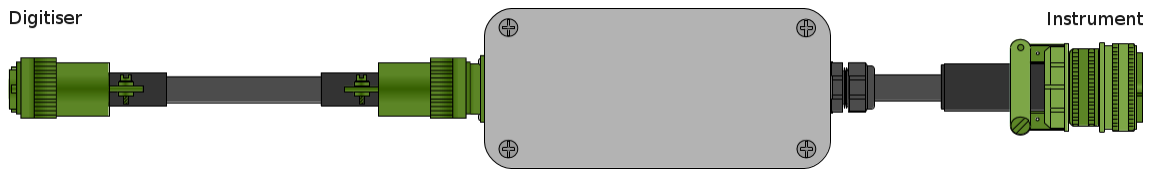
## 1.1 Proprietary Notice

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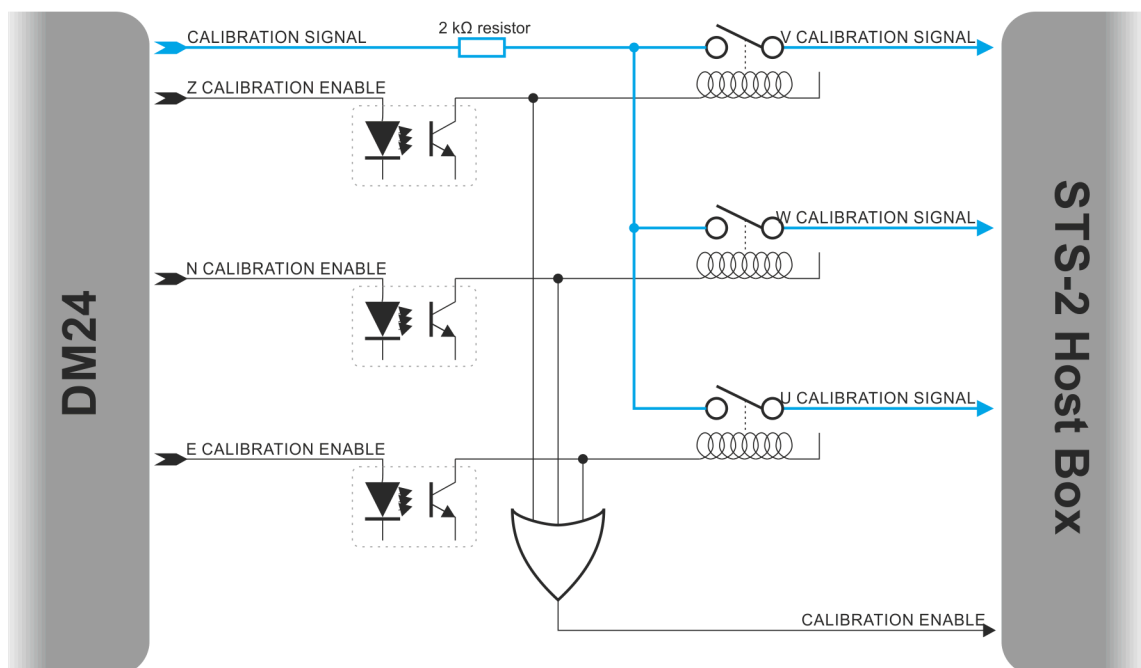
## 2 Introduction

The CMG-ELP-0101 Interface unit allows the connection of a Streckeisen STS-2 Broadband Sensor to any SENSOR input of a CMG-DM24 digitiser.



The power supply inputs, velocity and mass position outputs of the sensor pass through unchanged; the interface unit provides logic to facilitate use of the calibration facilities of the digitiser. The CMG-DM24 has a single calibration signal output and independent calibration enable lines for each component. The STS-2, however, has a single calibration enable line and three independent calibration signal inputs.

The logic is indicated in the diagram below:



Because the STS-2 can be over-loaded by high-level calibration signals, a 2 k  $\Omega$  resistor is included in the calibration signal input line. It's value should be taken into account when performing calibration calculations



**Note:** Because this resistor is shared between the channels, it is recommended that the channels be always calibrated individually and never simultaneously.

### 3 Connector pin-outs

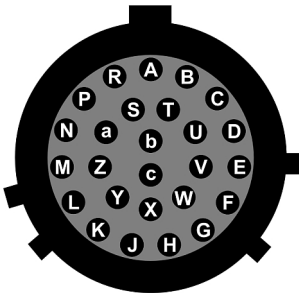
#### 3.1 Digitiser connector

These are standard 26-pin “military-specification” bayonet plugs, conforming to MIL-DTL-26482 (formerly MIL-C-26482). A typical part-number is 02E-16-26P although the initial “02E” varies with manufacturer.

Suitable mating connectors have part-numbers like \*\*\*-16-26S and are available from Amphenol, ITT Cannon and other manufacturers.



Pin	Function	Pin	Function
A	Vertical velocity non-inverting	P	Calibration signal
B	Vertical velocity inverting (-)	R	Vertical calibration enable
C	N/S velocity non-inverting	S	N/S calibration enable
D	N/S velocity inverting (-)	T	E/W calibration enable
E	E/W velocity non-inverting	U	Centre
F	E/W velocity inverting (-)	V	<i>not connected</i>
G	Vertical mass position	W	Unlock
H	<i>not connected</i>	X	Lock
J	N/S mass position	Y	Logic signal ground
K	Busy indicator LED	Z	<i>not connected</i>
L	E/W mass position	a	<i>not connected</i>
M	<i>not connected</i>	b	Power 0 V
N	Signal ground	c	Power output (+ve)



Wiring details for the compatible socket, \*\*\*-16-26S, as seen from the cable end.

### 3.2 Instrument connector

These are standard 24-pin “military-specification” free plugs, conforming to MIL-DTL-5015 (formerly MIL-C-5015). They are selected to mate directly with the “REMOTE” connector on the STS-2’s Host Box.



Pin	Function	Pin	Function
A	Logic signal ground	N	V calibration signal
B	Vertical velocity non-inverting	P	W calibration signal
C	N/S velocity non-inverting	Q	U calibration signal
D	E/W velocity non-inverting	R	PERSW ( <i>not connected</i> )
E	AUTZ (Centre)	S	RET (linked to X)
F	Signal ground	T	U mass position
G	Vertical velocity inverting (-)	U	W mass position
H	N/S velocity inverting (-)	V	V mass position
J	E/W velocity inverting (-)	W	Power input (+ve)
K	CALSW (Calibration enable)	X	Power input (0V) (linked to S)
L	SIGSW (linked to K)	Y	<i>not connected</i>
M	CCOM (Signal ground)	Z	<i>not connected</i>



Wiring details, looking into the pins.

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## 4 Revision History

B	2021-06-28	Updated value of series resistor and added warning about never calibrating multiple simultaneous channels
	2018-02-28	Cosmetic update
	2016-02-11	Face-lift with no major content changes
A	2014-01-15	Initial release