Data movement instruction

FUN50 BDIST	BYTE DISTRIBUTE	FUN50 BDIST

Execution control─EN↑ ─

```
┌─50P.BDIST───
  S :
  N :
  D :
```
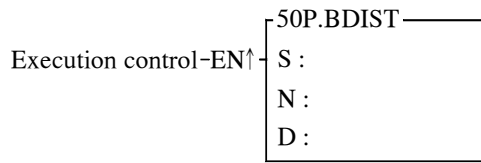
S : Starting address of source register to be distributed

N : Number of bytes to be distributed

D : Registers to store the distributed data

S, N, D may associate with V、Z、P0~P9 index register to serve the indirect addressing application.

Operand \ Range	HR R0 | R3839	ROR R5000 | R8071	DR D0 | D4095	K
S	○	○	○	
N	○	○	○	1~256
D	○	○*	○	

● When execution control "EN" =1 or "EN↑" (P instruction) changes from 0→1, it will perform the byte distribution starting from S, length by N, and then store the results into D registers.

● This instruction will not act if invalid range of length.

● When communicating with intelligent peripheral in binary data format, this instruction may be applied to do byte distribution for data transmission。

Example：

```
  M2      ┌─50P.BDIST ───
──┤ ├─EN↑─ S :  R 1000
          N :  R  999
          D :  R 1500
```

Description：When M2 changes from 0→1, it will perform the byte distribution starting from R1000, the length is assigned by R999, and then store the results into registers starting from R1500.

It is supposed R999=9, the results of distribution will store into R1500～R1508.

S

	High Byte	Low Byte
R1000	Byte-0	Byte-1
R1001	Byte-2	Byte-3
R1002	Byte-4	Byte-5
R1003	Byte-6	Byte-7
R1004	Byte-8	Don't care

D

	High Byte	Low Byte
R1500	00	Byte-0
R1501	00	Byte-1
R1502	00	Byte-2
R1503	00	Byte-3
R1504	00	Byte-4
R1505	00	Byte-5
R1506	00	Byte-6
R1507	00	Byte-7
R1508	00	Byte-8